
Appendix F – Existing 2019 Synchro and Sim Traffic Reports

Intersection

Int Delay, s/veh 1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘↗		↘	↑↑	↑↑	↘
Traffic Vol, veh/h	14	82	80	969	953	28
Future Vol, veh/h	14	82	80	969	953	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	97	97	92	92
Heavy Vehicles, %	0	5	4	6	6	7
Mvmt Flow	15	89	82	999	1036	30

Major/Minor

	Minor2	Major1	Major2			
Conflicting Flow All	1700	518	1066	0	-	0
Stage 1	1036	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Critical Hdwy	6.8	7	4.18	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.35	2.24	-	-	-
Pot Cap-1 Maneuver	85	495	638	-	-	-
Stage 1	308	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	74	495	638	-	-	-
Mov Cap-2 Maneuver	74	-	-	-	-	-
Stage 1	268	-	-	-	-	-
Stage 2	479	-	-	-	-	-

Approach

















	EB	NB	SB
HCM Control Delay, s	26.4	0.9	0
HCM LOS	D		

Minor Lane/Major Mvmt

	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	638	-	271	-	-
HCM Lane V/C Ratio	0.129	-	0.385	-	-
HCM Control Delay (s)	11.5	-	26.4	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q(veh)	0.4	-	1.7	-	-

Lanes, Volumes, Timings
2: US 17 & S Causeway Rd

Existing 2019 - MD Peak

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations				 		 	 
Traffic Volume (vph)	121	92	1	1045	93	80	1078
Future Volume (vph)	121	92	1	1045	93	80	1078
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75	0		0	250	
Storage Lanes	1	1	0		1	1	
Taper Length (ft)	100		100			100	
Satd. Flow (prot)	1752	1495	0	3438	1583	1736	3406
Flt Permitted	0.950			0.954		0.233	
Satd. Flow (perm)	1752	1495	0	3280	1583	426	3406
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		91			56		
Link Speed (mph)	40			45			45
Link Distance (ft)	582			691			1150
Travel Time (s)	9.9			10.5			17.4
Peak Hour Factor	0.90	0.90	0.92	0.97	0.97	0.94	0.94
Heavy Vehicles (%)	3%	8%	2%	5%	2%	4%	6%
Shared Lane Traffic (%)							
Lane Group Flow (vph)	134	102	0	1078	96	85	1147
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	R NA	Left	Right	Left	Left
Median Width(ft)	12			16			16
Link Offset(ft)	0			0			0
Crosswalk Width(ft)	16			16			16
Two way Left Turn Lane				Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9		9	15	
Turn Type	Prot	Free	Perm	NA	Free	pm+pt	NA
Protected Phases	4			6		5	2
Permitted Phases		Free	6		Free	2	
Detector Phase	4		6	6		5	2
Switch Phase							
Minimum Initial (s)	8.0		15.0	15.0		6.0	15.0
Minimum Split (s)	34.0		22.0	22.0		15.0	22.0
Total Split (s)	36.0		67.0	67.0		17.0	84.0
Total Split (%)	30.0%		55.8%	55.8%		14.2%	70.0%
Yellow Time (s)	3.6		5.0	5.0		3.6	5.0
All-Red Time (s)	2.3		1.5	1.5		2.3	1.5
Lost Time Adjust (s)	0.0			0.0		0.0	0.0
Total Lost Time (s)	5.9			6.5		5.9	6.5
Lead/Lag			Lead	Lead		Lag	
Lead-Lag Optimize?			Yes	Yes		Yes	
Recall Mode	None		C-Min	C-Min		None	C-Min
Act Effect Green (s)	14.5	120.0		83.5	120.0	94.9	93.1
Actuated g/C Ratio	0.12	1.00		0.70	1.00	0.79	0.78
v/c Ratio	0.63	0.07		0.47	0.06	0.21	0.43
Control Delay	63.0	0.1		10.2	0.1	5.9	5.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	63.0	0.1		10.2	0.1	5.9	5.7

Lanes, Volumes, Timings
2: US 17 & S Causeway Rd

Existing 2019 - MD Peak

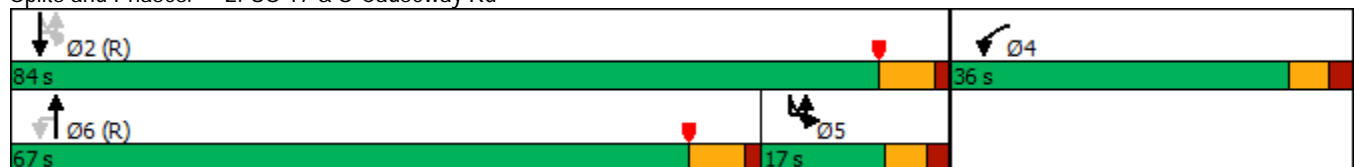


Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
LOS	E	A		B	A	A	A
Approach Delay	35.8			9.3			5.7
Approach LOS	D			A			A
Stops (vph)	114	0		463	0	17	256
Fuel Used(gal)	3	0		13	0	3	38
CO Emissions (g/hr)	220	26		882	29	197	2671
NOx Emissions (g/hr)	43	5		172	6	38	520
VOC Emissions (g/hr)	51	6		204	7	46	619
Dilemma Vehicles (#)	0	0		44	0	0	86
Queue Length 50th (ft)	100	0		192	0	12	96
Queue Length 95th (ft)	159	0		279	0	m29	159
Internal Link Dist (ft)	502			611			1070
Turn Bay Length (ft)		75				250	
Base Capacity (vph)	439	1495		2282	1583	475	2641
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	0.31	0.07		0.47	0.06	0.18	0.43

Intersection Summary



















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 84 (70%), Referenced to phase 2:SBTL and 6:NBTU, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 10.0
 Intersection LOS: A
 Intersection Capacity Utilization 81.2%
 ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: US 17 & S Causeway Rd



Lanes, Volumes, Timings
3: US 17 & Petigru Dr/Alston Rd

Existing 2019 - MD Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	104	13	161	10	25	23	2	105	1215	17	1	30
Future Volume (vph)	104	13	161	10	25	23	2	105	1215	17	1	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		125	0		0		150		0		150
Storage Lanes	0		1	0		0		1		0		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	0	1802	1599	0	1753	0	0	1770	3433	0	0	1645
Flt Permitted		0.697			0.930			0.135				0.210
Satd. Flow (perm)	0	1313	1599	0	1645	0	0	252	3433	0	0	364
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)			191		28				2			
Link Speed (mph)		35			30				45			
Link Distance (ft)		451			511				3678			
Travel Time (s)		8.8			11.6				55.7			
Peak Hour Factor	0.84	0.84	0.84	0.73	0.73	0.73	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	1%	0%	0%	4%	0%	2%	5%	0%	0%	10%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	192	0	80	0	0	114	1311	0	0	33
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	pm+pt	NA		Perm	Perm
Protected Phases		8			4		1	1	6			
Permitted Phases	8		8	4			6	6			2	2
Detector Phase	8	8	8	4	4		1	1	6		2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	15.0		15.0	15.0
Minimum Split (s)	16.0	16.0	16.0	39.0	39.0		17.0	17.0	29.0		30.0	30.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0		17.0	17.0	81.0		64.0	64.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%		14.2%	14.2%	67.5%		53.3%	53.3%
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2		4.3	4.3	4.3		4.3	4.3
All-Red Time (s)	2.6	2.6	2.6	2.6	2.6		2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0			0.0	0.0			0.0
Total Lost Time (s)		5.8	5.8		5.8			6.3	6.3			6.3
Lead/Lag							Lead	Lead			Lag	Lag
Lead-Lag Optimize?							Yes	Yes			Yes	Yes
Recall Mode	None	None	None	None	None		None	None	C-Min		C-Min	C-Min
Act Effect Green (s)		17.8	17.8		17.8			90.1	90.1			73.5
Actuated g/C Ratio		0.15	0.15		0.15			0.75	0.75			0.61
v/c Ratio		0.71	0.48		0.30			0.36	0.51			0.15
Control Delay		67.5	10.0		31.6			6.4	2.1			5.2
Queue Delay		0.0	0.0		0.0			0.0	0.0			0.0
Total Delay		67.5	10.0		31.6			6.4	2.1			5.2

Lanes, Volumes, Timings
 3: US 17 & Petigru Dr/Alston Rd

Existing 2019 - MD Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1228	51
Future Volume (vph)	1228	51
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		375
Storage Lanes		0
Taper Length (ft)		
Satd. Flow (prot)	3438	1583
Flt Permitted		
Satd. Flow (perm)	3438	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		83
Link Speed (mph)	45	
Link Distance (ft)	1754	
Travel Time (s)	26.6	
Peak Hour Factor	0.94	0.94
Heavy Vehicles (%)	5%	2%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1306	54
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	2	
Permitted Phases		2
Detector Phase	2	2
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	30.0	30.0
Total Split (s)	64.0	64.0
Total Split (%)	53.3%	53.3%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.3	6.3
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	C-Min	C-Min
Act Effct Green (s)	73.5	73.5
Actuated g/C Ratio	0.61	0.61
v/c Ratio	0.62	0.05
Control Delay	6.2	0.1
Queue Delay	0.0	0.0
Total Delay	6.2	0.1

Lanes, Volumes, Timings
 3: US 17 & Petigru Dr/Alston Rd

Existing 2019 - MD Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS		E	A		C			A	A			A
Approach Delay		34.2			31.6				2.5			
Approach LOS		C			C				A			
Stops (vph)		109	20		33			15	136			6
Fuel Used(gal)		3	1		1			4	41			0
CO Emissions (g/hr)		196	70		55			257	2855			32
NOx Emissions (g/hr)		38	14		11			50	555			6
VOC Emissions (g/hr)		46	16		13			60	662			7
Dilemma Vehicles (#)		4	0		0			0	12			0
Queue Length 50th (ft)		104	1		36			5	30			4
Queue Length 95th (ft)		150	48		58			19	46			m6
Internal Link Dist (ft)		371			431				3598			
Turn Bay Length (ft)			125					150				150
Base Capacity (vph)		363	580		475			326	2576			223
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		0.38	0.33		0.17			0.35	0.51			0.15

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 40 (33%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 8.0
 Intersection LOS: A
 Intersection Capacity Utilization 80.7%
 ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: US 17 & Petigru Dr/Alston Rd



Lanes, Volumes, Timings
 3: US 17 & Petigru Dr/Alston Rd























Existing 2019 - MD Peak



Lane Group	SBT	SBR
LOS	A	A
Approach Delay	6.0	
Approach LOS	A	
Stops (vph)	239	0
Fuel Used(gal)	19	1
CO Emissions (g/hr)	1294	41
NOx Emissions (g/hr)	252	8
VOC Emissions (g/hr)	300	9
Dilemma Vehicles (#)	38	0
Queue Length 50th (ft)	115	0
Queue Length 95th (ft)	93	m0
Internal Link Dist (ft)	1674	
Turn Bay Length (ft)		375
Base Capacity (vph)	2104	1001
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.62	0.05
Intersection Summary		

Lanes, Volumes, Timings
4: US 17 & Waverly Rd/N Causeway Rd

Existing 2019 - MD Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	54	125	79	52	122	88	1192	81	116	1268	86
Future Volume (vph)	141	54	125	79	52	122	88	1192	81	116	1268	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	0		225	200		300	200		200
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1770	1677	0	0	1845	1425	1687	3471	1538	1805	3438	1583
Flt Permitted	0.552				0.534		0.116			0.130		
Satd. Flow (perm)	1028	1677	0	0	1015	1425	206	3471	1538	247	3438	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		103				158			100			100
Link Speed (mph)		35			25			45				45
Link Distance (ft)		804			625			1754				843
Travel Time (s)		15.7			17.0			26.6				12.8
Peak Hour Factor	0.81	0.81	0.81	0.77	0.77	0.77	0.93	0.93	0.93	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	2%	0%	0%	2%	7%	4%	5%	0%	5%	2%
Parking (#/hr)						0						
Shared Lane Traffic (%)												
Lane Group Flow (vph)	174	221	0	0	171	158	95	1282	87	122	1335	91
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	4	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	25.0	25.0	10.0	25.0	25.0
Minimum Split (s)	47.0	47.0		46.0	46.0	46.0	17.0	32.0	32.0	17.0	34.0	34.0
Total Split (s)	47.0	47.0		47.0	47.0	47.0	17.0	56.0	56.0	17.0	56.0	56.0
Total Split (%)	39.2%	39.2%		39.2%	39.2%	39.2%	14.2%	46.7%	46.7%	14.2%	46.7%	46.7%
Yellow Time (s)	4.4	4.4		4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	3.3	3.3		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.7	7.7			6.4	6.4	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	23.8	23.8			25.1	25.1	75.9	65.8	65.8	75.9	65.8	65.8
Actuated g/C Ratio	0.20	0.20			0.21	0.21	0.63	0.55	0.55	0.63	0.55	0.55
v/c Ratio	0.86	0.53			0.81	0.37	0.37	0.67	0.10	0.42	0.71	0.10
Control Delay	79.5	25.9			71.2	7.7	15.8	17.5	2.8	19.6	10.0	1.0
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Lanes, Volumes, Timings
 4: US 17 & Waverly Rd/N Causeway Rd

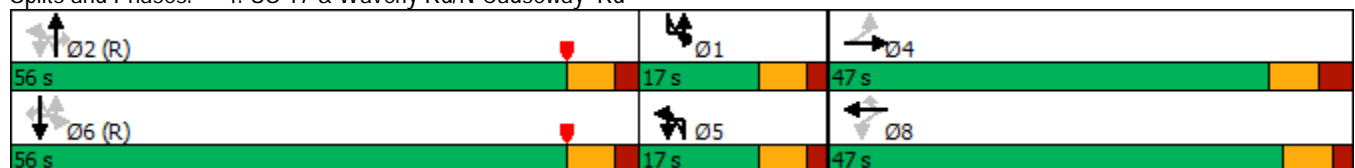
Existing 2019 - MD Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	79.5	25.9			71.2	7.7	15.8	17.5	2.8	19.6	10.0	1.0
LOS	E	C			E	A	B	B	A	B	A	A
Approach Delay		49.5			40.7			16.5			10.2	
Approach LOS		D			D			B			B	
Stops (vph)	134	83			124	15	37	576	7	57	824	8
Fuel Used(gal)	4	3			3	1	2	25	1	7	77	4
CO Emissions (g/hr)	287	182			216	63	122	1746	74	491	5370	312
NOx Emissions (g/hr)	56	35			42	12	24	340	14	96	1045	61
VOC Emissions (g/hr)	67	42			50	15	28	405	17	114	1245	72
Dilemma Vehicles (#)	0	6			0	0	0	57	0	0	2	0
Queue Length 50th (ft)	131	80			127	0	15	198	0	42	400	12
Queue Length 95th (ft)	171	119			156	29	45	350	20	m58	215	m3
Internal Link Dist (ft)		724			545			1674			763	
Turn Bay Length (ft)	125					225	200		300	200		200
Base Capacity (vph)	336	618			343	586	263	1902	888	296	1884	912
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.36			0.50	0.27	0.36	0.67	0.10	0.41	0.71	0.10

Intersection Summary




















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 12 (10%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 19.5
 Intersection LOS: B
 Intersection Capacity Utilization 84.5%
 ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: US 17 & Waverly Rd/N Causeway Rd



Lanes, Volumes, Timings
5: US 17 & Martin Luther King Rd/Brown Ln

Existing 2019 - MD Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	142	1	36	2	0	2	2	13	1382	1	3	0
Future Volume (vph)	142	1	36	2	0	2	2	13	1382	1	3	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0		175		175		200
Storage Lanes	0		1	0		0		1		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	0	1758	1615	0	1728	0	0	1805	3471	1615	0	1805
Flt Permitted		0.719			0.879			0.099				0.134
Satd. Flow (perm)	0	1327	1615	0	1557	0	0	188	3471	1615	0	255
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)			96		96					89		
Link Speed (mph)		40			25				45			
Link Distance (ft)		698			290				6933			
Travel Time (s)		11.9			7.9				105.0			
Peak Hour Factor	0.84	0.84	0.84	0.33	0.33	0.33	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	43	0	12	0	0	15	1425	1	0	3
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				16			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15			9	15		9	9	15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases		8			4		1	1	6		5	5
Permitted Phases	8		8	4			6	6		6	2	2
Detector Phase	8	8	8	4	4		1	1	6	6	5	5
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	15.0	15.0	10.0	10.0
Minimum Split (s)	44.0	44.0	44.0	23.0	23.0		17.0	17.0	23.0	23.0	17.0	17.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0		17.0	17.0	59.0	59.0	17.0	17.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%		14.2%	14.2%	49.2%	49.2%	14.2%	14.2%
Yellow Time (s)	4.4	4.4	4.4	3.0	3.0		4.4	4.4	5.2	5.2	4.4	4.4
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0			0.0	0.0	0.0		0.0
Total Lost Time (s)		6.4	6.4		5.0			6.4	7.2	7.2		6.4
Lead/Lag							Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	None	C-Min	C-Min	None	None
Act Effect Green (s)		20.8	20.8		22.2				85.1	82.3	82.3	83.9
Actuated g/C Ratio		0.17	0.17		0.18				0.71	0.69	0.69	0.70
v/c Ratio		0.74	0.12		0.03				0.06	0.60	0.00	0.01
Control Delay		65.2	0.7		0.2				1.9	3.9	0.0	6.7
Queue Delay		0.0	0.0		0.0				0.0	0.0	0.0	0.0
Total Delay		65.2	0.7		0.2				1.9	3.9	0.0	6.7

Lanes, Volumes, Timings
 5: US 17 & Martin Luther King Rd/Brown Ln

Existing 2019 - MD Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1491	114
Future Volume (vph)	1491	114
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		150
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3438	1553
Flt Permitted		
Satd. Flow (perm)	3438	1553
Right Turn on Red		Yes
Satd. Flow (RTOR)		89
Link Speed (mph)	45	
Link Distance (ft)	6080	
Travel Time (s)	92.1	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	5%	4%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1537	118
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	2	
Permitted Phases		2
Detector Phase	2	2
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	35.0	35.0
Total Split (s)	59.0	59.0
Total Split (%)	49.2%	49.2%
Yellow Time (s)	5.2	5.2
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	7.2	7.2
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	C-Min	C-Min
Act Effct Green (s)	79.1	79.1
Actuated g/C Ratio	0.66	0.66
v/c Ratio	0.68	0.11
Control Delay	17.7	4.5
Queue Delay	0.0	0.0
Total Delay	17.7	4.5

Lanes, Volumes, Timings
 5: US 17 & Martin Luther King Rd/Brown Ln

Existing 2019 - MD Peak

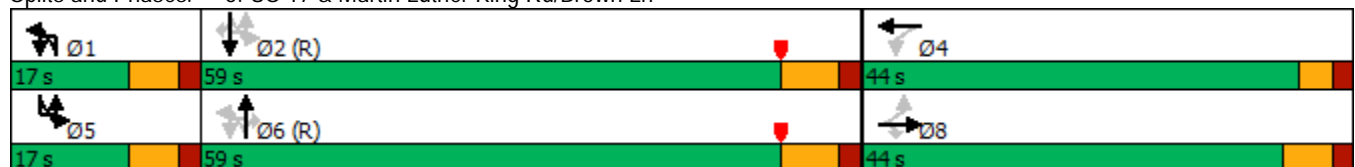


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS		E	A		A			A	A	A		A
Approach Delay		52.2			0.3				3.9			
Approach LOS		D			A				A			
Stops (vph)		132	0		0			2	365	0		2
Fuel Used(gal)		4	0		0			1	75	0		0
CO Emissions (g/hr)		271	12		1			55	5271	4		10
NOx Emissions (g/hr)		53	2		0			11	1025	1		2
VOC Emissions (g/hr)		63	3		0			13	1221	1		2
Dilemma Vehicles (#)		4	0		0			0	5	0		0
Queue Length 50th (ft)		126	0		0			1	58	0		1
Queue Length 95th (ft)		174	0		0			m2	126	m0		4
Internal Link Dist (ft)		618			210				6853			
Turn Bay Length (ft)			150					175		175		200
Base Capacity (vph)		415	571		570			276	2381	1136		315
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		0.41	0.08		0.02			0.05	0.60	0.00		0.01

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 12 (10%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 13.4
 Intersection LOS: B
 Intersection Capacity Utilization 73.4%
 ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: US 17 & Martin Luther King Rd/Brown Ln



Lanes, Volumes, Timings
 5: US 17 & Martin Luther King Rd/Brown Ln

Existing 2019 - MD Peak



Lane Group	SBT	SBR
LOS	B	A
Approach Delay	16.8	
Approach LOS	B	
Stops (vph)	913	17
Fuel Used(gal)	76	5
CO Emissions (g/hr)	5283	337
NOx Emissions (g/hr)	1028	66
VOC Emissions (g/hr)	1224	78
Dilemma Vehicles (#)	62	0
Queue Length 50th (ft)	288	6
Queue Length 95th (ft)	653	42
Internal Link Dist (ft)	6000	
Turn Bay Length (ft)		150
Base Capacity (vph)	2265	1053
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.68	0.11
Intersection Summary		

Lanes, Volumes, Timings
6: US 17 & Driveway/Litchfield Dr

Existing 2019 - MD Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	8	5	14	116	4	90	7	1401	103	3	93	1470
Future Volume (vph)	8	5	14	116	4	90	7	1401	103	3	93	1470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	0		175		200	
Storage Lanes	1		0	0		1	0		1		1	
Taper Length (ft)	100			100			100				100	
Satd. Flow (prot)	1805	1601	0	0	1713	1583	0	3472	1583	0	1771	3438
Flt Permitted	0.668				0.713			0.944			0.091	
Satd. Flow (perm)	1269	1601	0	0	1281	1583	0	3277	1583	0	170	3438
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)		21				150			92			
Link Speed (mph)		25			25			45				45
Link Distance (ft)		264			791			6080				400
Travel Time (s)		7.2			21.6			92.1				6.1
Peak Hour Factor	0.68	0.68	0.68	0.86	0.86	0.86	0.99	0.99	0.99	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	7%	6%	0%	2%	0%	4%	2%	0%	2%	5%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	28	0	0	140	105	0	1422	104	0	105	1615
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	R NA	Left	Left
Median Width(ft)		12			12			36				36
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Turn Type	Perm	NA		Perm	NA	Free	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases		4			8			2		1	1	6
Permitted Phases	4			8		Free	2		2	6	6	
Detector Phase	4	4		8	8		2	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		15.0	15.0	15.0	8.0	8.0	15.0
Minimum Split (s)	43.0	43.0		15.0	15.0		21.0	21.0	21.0	15.0	15.0	21.0
Total Split (s)	43.0	43.0		43.0	43.0		52.0	52.0	52.0	15.0	15.0	67.0
Total Split (%)	39.1%	39.1%		39.1%	39.1%		47.3%	47.3%	47.3%	13.6%	13.6%	60.9%
Yellow Time (s)	3.2	3.2		3.2	3.2		4.3	4.3	4.3	3.6	3.6	4.3
All-Red Time (s)	3.2	3.2		3.2	3.2		1.5	1.5	1.5	2.3	2.3	1.5
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	6.4	6.4			6.4			5.8	5.8		5.9	5.8
Lead/Lag							Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		Min	Min	Min	None	None	Min
Act Effect Green (s)	14.7	14.7		14.7	86.5			48.5	48.5		59.4	59.5
Actuated g/C Ratio	0.17	0.17		0.17	1.00			0.56	0.56		0.69	0.69
v/c Ratio	0.06	0.10		0.65	0.07			0.77	0.11		0.39	0.68
Control Delay	30.0	16.1		47.6	0.1			20.9	3.9		10.7	10.5
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	30.0	16.1		47.6	0.1			20.9	3.9		10.7	10.5

Lanes, Volumes, Timings
 6: US 17 & Driveway/Litchfield Dr

Existing 2019 - MD Peak

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	17
Future Volume (vph)	17
Ideal Flow (vphpl)	1900
Storage Length (ft)	75
Storage Lanes	1
Taper Length (ft)	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	34
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.91
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	19
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	21.0
Total Split (s)	67.0
Total Split (%)	60.9%
Yellow Time (s)	4.3
All-Red Time (s)	1.5
Lost Time Adjust (s)	0.0
Total Lost Time (s)	5.8
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	Min
Act Effct Green (s)	59.5
Actuated g/C Ratio	0.69
v/c Ratio	0.02
Control Delay	1.1
Queue Delay	0.0
Total Delay	1.1

Lanes, Volumes, Timings
6: US 17 & Driveway/Litchfield Dr

Existing 2019 - MD Peak



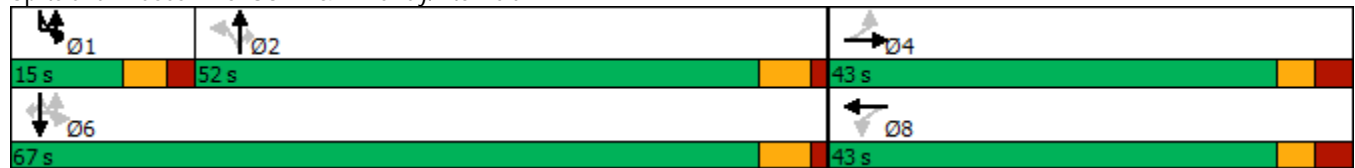
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
LOS	C	B			D	A		C	A		B	B
Approach Delay		20.3			27.3			19.7				10.4
Approach LOS		C			C			B				B
Stops (vph)	8	9			106	0		1030	15		33	814
Fuel Used(gal)	0	0			2	1		74	4		1	17
CO Emissions (g/hr)	7	10			166	42		5199	303		61	1195
NOx Emissions (g/hr)	1	2			32	8		1012	59		12	232
VOC Emissions (g/hr)	2	2			39	10		1205	70		14	277
Dilemma Vehicles (#)	0	0			0	0		80	0		0	74
Queue Length 50th (ft)	6	3			72	0		319	3		16	233
Queue Length 95th (ft)	15	17			127	0		#526	30		48	396
Internal Link Dist (ft)		184			711			6000				320
Turn Bay Length (ft)						200			175		200	
Base Capacity (vph)	539	693			545	1583		1837	928		286	2445
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	0.02	0.04			0.26	0.07		0.77	0.11		0.37	0.66

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 86.5
 Natural Cycle: 110
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 15.7
 Intersection LOS: B
 Intersection Capacity Utilization 103.2%
 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.

Splits and Phases: 6: US 17 & Driveway/Litchfield Dr





Lane Group	SBR
LOS	A
Approach Delay	
Approach LOS	
Stops (vph)	1
Fuel Used(gal)	0
CO Emissions (g/hr)	4
NOx Emissions (g/hr)	1
VOC Emissions (g/hr)	1
Dilemma Vehicles (#)	0
Queue Length 50th (ft)	0
Queue Length 95th (ft)	5
Internal Link Dist (ft)	
Turn Bay Length (ft)	75
Base Capacity (vph)	1158
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.02
Intersection Summary	

Intersection							
Int Delay, s/veh	7.5						
Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗		↘	↑↑↑	↙	↗
Traffic Vol, veh/h	41	54	2	33	1475	1524	56
Future Vol, veh/h	41	54	2	33	1475	1524	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	25	-	50	-	-	100
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	77	77	95	95	95	91	91
Heavy Vehicles, %	0	0	0	3	4	5	2
Mvmt Flow	53	70	2	35	1553	1675	62

Major/Minor	Minor2	Major1			Major2		
Conflicting Flow All	2370	838	1675	1737	0	-	0
Stage 1	1675	-	-	-	-	-	-
Stage 2	695	-	-	-	-	-	-
Critical Hdwy	6.25	6.9	6.4	4.16	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-	-
Follow-up Hdwy	3.65	3.3	2.5	2.23	-	-	-
Pot Cap-1 Maneuver	~ 43	314	124	354	-	-	-
Stage 1	138	-	-	-	-	-	-
Stage 2	432	-	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	~ 38	314	311	311	-	-	-
Mov Cap-2 Maneuver	~ 38	-	-	-	-	-	-
Stage 1	122	-	-	-	-	-	-
Stage 2	432	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	205.7	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	311	-	38	314	-	-
HCM Lane V/C Ratio	0.118	-	1.401	0.223	-	-
HCM Control Delay (s)	18.1	-	450.6	19.7	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	5.5	0.8	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
8: US 17 & Willbrook Blvd/Retreat Beach Cir

Existing 2019 - MD Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	253	72	181	66	52	25	2	212	1199	34	1	32
Future Volume (vph)	253	72	181	66	52	25	2	212	1199	34	1	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100		325		300		325
Storage Lanes	1		0	1		1		1		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	1770	1661	0	1770	1863	1553	0	1787	3438	1568	0	1754
Flt Permitted	0.460			0.501				0.069				0.113
Satd. Flow (perm)	857	1661	0	933	1863	1553	0	130	3438	1568	0	209
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		92				231				177		
Link Speed (mph)		35			25				45			
Link Distance (ft)		910			323				939			
Travel Time (s)		17.7			8.8				14.2			
Peak Hour Factor	0.89	0.89	0.89	0.83	0.83	0.83	0.93	0.93	0.93	0.93	0.90	0.90
Heavy Vehicles (%)	2%	0%	3%	2%	2%	4%	0%	1%	5%	3%	0%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	284	284	0	80	63	30	0	230	1289	37	0	37
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				24			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	pm+pt	NA		pm+pt	NA	Free	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	7	4		3	8		5	5	2		1	1
Permitted Phases	4			8		Free	2	2		2	6	6
Detector Phase	7	4		3	8		5	5	2	2	1	1
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	6.0	20.0	20.0	6.0	6.0
Minimum Split (s)	15.0	38.0		15.0	15.0		15.0	15.0	27.0	27.0	15.0	15.0
Total Split (s)	24.0	38.0		15.0	29.0		18.0	18.0	62.0	62.0	15.0	15.0
Total Split (%)	18.5%	29.2%		11.5%	22.3%		13.8%	13.8%	47.7%	47.7%	11.5%	11.5%
Yellow Time (s)	3.6	3.6		3.6	3.6		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	2.3	2.3		2.3	2.3		2.1	2.1	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.4	6.4	6.4		6.4
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None	Min	Min	Min	Min
Act Effect Green (s)	32.6	21.2		19.4	12.5	116.2		69.3	57.6	57.6		60.2
Actuated g/C Ratio	0.28	0.18		0.17	0.11	1.00		0.60	0.50	0.50		0.52
v/c Ratio	0.75	0.75		0.37	0.32	0.02		0.94	0.76	0.04		0.18
Control Delay	48.2	43.6		35.9	53.0	0.0		76.5	29.3	0.1		14.2
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	48.2	43.6		35.9	53.0	0.0		76.5	29.3	0.1		14.2

Lanes, Volumes, Timings
 8: US 17 & Willbrook Blvd/Retreat Beach Cir

Existing 2019 - MD Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1236	189
Future Volume (vph)	1236	189
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		225
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3406	1599
Flt Permitted		
Satd. Flow (perm)	3406	1599
Right Turn on Red		Yes
Satd. Flow (RTOR)		231
Link Speed (mph)	45	
Link Distance (ft)	433	
Travel Time (s)	6.6	
Peak Hour Factor	0.90	0.90
Heavy Vehicles (%)	6%	1%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1373	210
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	24	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Free
Protected Phases	6	
Permitted Phases		Free
Detector Phase	6	
Switch Phase		
Minimum Initial (s)	20.0	
Minimum Split (s)	27.0	
Total Split (s)	59.0	
Total Split (%)	45.4%	
Yellow Time (s)	4.3	
All-Red Time (s)	2.1	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.4	
Lead/Lag	Lag	
Lead-Lag Optimize?		
Recall Mode	Max	
Act Effct Green (s)	53.0	116.2
Actuated g/C Ratio	0.46	1.00
v/c Ratio	0.88	0.13
Control Delay	38.5	0.2
Queue Delay	0.0	0.0
Total Delay	38.5	0.2

Lanes, Volumes, Timings
 8: US 17 & Willbrook Blvd/Retreat Beach Cir

Existing 2019 - MD Peak



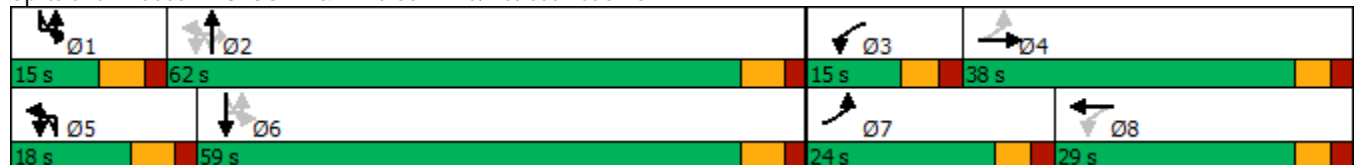
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS	D	D		D	D	A		E	C	A		B
Approach Delay		45.9			35.9				35.6			
Approach LOS		D			D				D			
Stops (vph)	205	161		52	45	0		119	938	0		16
Fuel Used(gal)	6	5		1	1	0		11	56	1		1
CO Emissions (g/hr)	398	358		60	61	5		794	3879	73		68
NOx Emissions (g/hr)	77	70		12	12	1		155	755	14		13
VOC Emissions (g/hr)	92	83		14	14	1		184	899	17		16
Dilemma Vehicles (#)	0	8		0	0	0		0	43	0		0
Queue Length 50th (ft)	181	143		45	46	0		124	412	0		11
Queue Length 95th (ft)	262	237		76	82	0		#327	604	0		30
Internal Link Dist (ft)		830			243				859			
Turn Bay Length (ft)						100		325		300		325
Base Capacity (vph)	389	528		224	373	1553		244	1704	866		226
Starvation Cap Reductn	0	0		0	0	0		0	0	0		0
Spillback Cap Reductn	0	0		0	0	0		0	0	0		0
Storage Cap Reductn	0	0		0	0	0		0	0	0		0
Reduced v/c Ratio	0.73	0.54		0.36	0.17	0.02		0.94	0.76	0.04		0.16

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 116.2
 Natural Cycle: 125
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 36.0
 Intersection LOS: D
 Intersection Capacity Utilization 88.1%
 ICU Level of Service E
 Analysis Period (min) 15

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

Splits and Phases: 8: US 17 & Willbrook Blvd/Retreat Beach Cir



Lanes, Volumes, Timings
 8: US 17 & Willbrook Blvd/Retreat Beach Cir

















Existing 2019 - MD Peak



Lane Group	SBT	SBR
LOS	D	A
Approach Delay	33.0	
Approach LOS	C	
Stops (vph)	1029	0
Fuel Used(gal)	48	4
CO Emissions (g/hr)	3330	269
NOx Emissions (g/hr)	648	52
VOC Emissions (g/hr)	772	62
Dilemma Vehicles (#)	51	0
Queue Length 50th (ft)	497	0
Queue Length 95th (ft)	#751	0
Internal Link Dist (ft)	353	
Turn Bay Length (ft)		225
Base Capacity (vph)	1554	1599
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.88	0.13
Intersection Summary		

Lanes, Volumes, Timings
9: US 17 & N Boyle Rd

Existing 2019 - MD Peak

							
Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations			 			 	 
Traffic Volume (vph)	108	34	1436	122	10	22	1333
Future Volume (vph)	108	34	1436	122	10	22	1333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0		300		200	
Storage Lanes	1	1		1		1	
Taper Length (ft)	100					100	
Satd. Flow (prot)	1752	1568	3438	1568	0	1698	3438
Flt Permitted	0.950					0.088	
Satd. Flow (perm)	1752	1568	3438	1568	0	157	3438
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		38		131			
Link Speed (mph)	25		45				45
Link Distance (ft)	607		2702				2343
Travel Time (s)	16.6		40.9				35.5
Peak Hour Factor	0.89	0.89	0.93	0.93	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	5%	3%	0%	9%	5%
Shared Lane Traffic (%)							
Lane Group Flow (vph)	121	38	1544	131	0	33	1389
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	R NA	Left	Left
Median Width(ft)	12		24				24
Link Offset(ft)	0		0				0
Crosswalk Width(ft)	16		16				16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	9	15	
Turn Type	Prot	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases	8		2		1	1	6
Permitted Phases		8		2	6	6	
Detector Phase	8	8	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	8.0	8.0	24.0	24.0	6.0	6.0	24.0
Minimum Split (s)	15.0	15.0	30.0	30.0	15.0	15.0	30.0
Total Split (s)	18.0	18.0	57.0	57.0	15.0	15.0	72.0
Total Split (%)	20.0%	20.0%	63.3%	63.3%	16.7%	16.7%	80.0%
Yellow Time (s)	3.0	3.0	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	3.3	3.3	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.3	6.3	5.7	5.7		5.7	5.7
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	Min	Min	None	None	Min
Act Effect Green (s)	10.5	10.5	46.9	46.9		51.0	52.8
Actuated g/C Ratio	0.15	0.15	0.67	0.67		0.73	0.75
v/c Ratio	0.46	0.14	0.67	0.12		0.13	0.54
Control Delay	39.1	13.4	12.7	1.9		4.4	5.9
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	39.1	13.4	12.7	1.9		4.4	5.9

Lanes, Volumes, Timings
 9: US 17 & N Boyle Rd

Existing 2019 - MD Peak



Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
LOS	D	B	B	A		A	A
Approach Delay	33.0		11.9				5.9
Approach LOS	C		B				A
Stops (vph)	91	12	870	10		10	514
Fuel Used(gal)	2	0	44	3		1	28
CO Emissions (g/hr)	124	22	3060	186		45	1977
NOx Emissions (g/hr)	24	4	595	36		9	385
VOC Emissions (g/hr)	29	5	709	43		10	458
Dilemma Vehicles (#)	0	0	74	0		0	62
Queue Length 50th (ft)	58	0	294	0		4	144
Queue Length 95th (ft)	116	27	397	21		11	194
Internal Link Dist (ft)	527		2622				2263
Turn Bay Length (ft)	75			300		200	
Base Capacity (vph)	317	315	2621	1227		336	2986
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	0.38	0.12	0.59	0.11		0.10	0.47

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 70
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 10.3
 Intersection LOS: B
 Intersection Capacity Utilization 66.3%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 9: US 17 & N Boyle Rd



Intersection														
Int Delay, s/veh	26.7													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↖	↕			↖	↕	↗
Traffic Vol, veh/h	29	3	8	8	3	29	3	2	1396	15	2	32	1359	54
Future Vol, veh/h	29	3	8	8	3	29	3	2	1396	15	2	32	1359	54
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	300	-	0	-	-	-	-	250	-	-	-	250	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	83	83	83	71	71	71	95	95	95	95	93	93	93	93
Heavy Vehicles, %	3	0	25	0	0	0	0	50	5	0	0	6	5	2
Mvmt Flow	35	4	10	11	4	41	3	2	1469	16	2	34	1461	58

Major/Minor	Minor2		Minor1		Major1			Major2						
Conflicting Flow All	2280	3028	731	2292	3078	743	1461	1519	0	0	1485	1485	0	0
Stage 1	1533	1533	-	1487	1487	-	-	-	-	-	-	-	-	-
Stage 2	747	1495	-	805	1591	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.5	7.4	7.5	6.5	6.9	6.4	5.1	-	-	6.4	4.22	-	-
Critical Hdwy Stg 1	6.56	5.5	-	6.5	5.5	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.5	-	6.5	5.5	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4	3.55	3.5	4	3.3	2.5	2.7	-	-	2.5	2.26	-	-
Pot Cap-1 Maneuver	~ 21	13	317	22	12	362	171	260	-	-	165	430	-	-
Stage 1	121	180	-	133	190	-	-	-	-	-	-	-	-	-
Stage 2	369	188	-	347	169	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	~ 12	11	317	15	11	362	195	195	-	-	388	388	-	-
Mov Cap-2 Maneuver	~ 12	11	-	15	11	-	-	-	-	-	-	-	-	-
Stage 1	118	163	-	130	185	-	-	-	-	-	-	-	-	-
Stage 2	312	183	-	298	153	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, \$	1306.1		\$ 361.4		0.1		0.4	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	195	-	-	12	317	45	388	-	-
HCM Lane V/C Ratio	0.027	-	-	3.213	0.03	1.252	0.094	-	-
HCM Control Delay (s)	24	-	-	\$ 1628.5	16.7	\$ 361.4	15.2	-	-
HCM Lane LOS	C	-	-	F	C	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.8	0.1	5.4	0.3	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection							
Int Delay, s/veh	4.5						
Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	↑↑	↑↑	↑
Traffic Vol, veh/h	19	24	3	22	1621	1389	26
Future Vol, veh/h	19	24	3	22	1621	1389	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	325	-	-	500
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	72	72	96	96	96	94	94
Heavy Vehicles, %	0	4	0	9	4	5	0
Mvmt Flow	26	33	3	23	1689	1478	28

Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	2375	739	1478	1506	0	-	0
Stage 1	1478	-	-	-	-	-	-
Stage 2	897	-	-	-	-	-	-
Critical Hdwy	6.8	6.98	6.4	4.28	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-	-
Follow-up Hdwy	3.5	3.34	2.5	2.29	-	-	-
Pot Cap-1 Maneuver	30	355	166	408	-	-	-
Stage 1	179	-	-	-	-	-	-
Stage 2	363	-	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	28	355	341	341	-	-	-
Mov Cap-2 Maneuver	28	-	-	-	-	-	-
Stage 1	165	-	-	-	-	-	-
Stage 2	363	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	243.5	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	341	-	58	-	-
HCM Lane V/C Ratio	0.076	-	1.03	-	-
HCM Control Delay (s)	16.4	-	243.5	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.2	-	4.8	-	-

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑			↑↑				
Traffic Vol, veh/h	0	0	0	0	98	21	0	1443	0	0	0	0
Future Vol, veh/h	0	0	0	0	98	21	0	1443	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16979	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	90	90	90	96	96	96	98	98	98
Heavy Vehicles, %	2	2	2	0	1	0	2	4	2	2	2	2
Mvmt Flow	0	0	0	0	109	23	0	1503	0	0	0	0

Major/Minor	Minor1	Major1				
Conflicting Flow All	-	1503	752	-	0	-
Stage 1	-	1503	-	-	-	-
Stage 2	-	0	-	-	-	-
Critical Hdwy	-	6.52	6.9	-	-	-
Critical Hdwy Stg 1	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	4.01	3.3	-	-	-
Pot Cap-1 Maneuver	0	122	357	0	-	0
Stage 1	0	185	-	0	-	0
Stage 2	0	-	-	0	-	0
Platoon blocked, %						-
Mov Cap-1 Maneuver	-	0	357	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-
Stage 1	-	0	-	-	-	-
Stage 2	-	0	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	6.9	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBTWBLn1
Capacity (veh/h)	- 2023
HCM Lane V/C Ratio	- 0.065
HCM Control Delay (s)	- 6.9
HCM Lane LOS	- A
HCM 95th %tile Q(veh)	- 0.2

Intersection

Int Delay, s/veh	44.1													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↑↑	↗		↕	↑↑	↗
Traffic Vol, veh/h	20	0	31	9	5	21	2	20	1477	18	16	43	1356	18
Future Vol, veh/h	20	0	31	9	5	21	2	20	1477	18	16	43	1356	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	275	-	250	-	200	-	250
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	85	85	85	88	88	88	95	95	95	95	97	97	97	97
Heavy Vehicles, %	5	0	0	0	0	5	0	0	4	0	0	5	5	6
Mvmt Flow	24	0	36	10	6	24	2	21	1555	19	16	44	1398	19

Major/Minor	Minor2		Minor1		Major1			Major2						
Conflicting Flow All	2345	3138	699	2420	3138	778	1398	1417	0	0	1555	1574	0	0
Stage 1	1518	1518	-	1601	1601	-	-	-	-	-	-	-	-	-
Stage 2	827	1620	-	819	1537	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.5	6.9	7.5	6.5	7	6.4	4.1	-	-	6.4	4.2	-	-
Critical Hdwy Stg 1	6.6	5.5	-	6.5	5.5	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.5	-	6.5	5.5	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4	3.3	3.5	4	3.35	2.5	2.2	-	-	2.5	2.25	-	-
Pot Cap-1 Maneuver	~ 18	11	387	17	11	333	187	487	-	-	148	401	-	-
Stage 1	121	183	-	113	167	-	-	-	-	-	-	-	-	-
Stage 2	326	163	-	340	179	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	~ 6	8	387	12	8	333	417	417	-	-	265	265	-	-
Mov Cap-2 Maneuver	~ 6	8	-	12	8	-	-	-	-	-	-	-	-	-
Stage 1	114	141	-	107	158	-	-	-	-	-	-	-	-	-
Stage 2	276	154	-	237	138	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB			
HCM Control Delay, \$	1862.1		668.6		0.2			0.9			
HCM LOS	F		F								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	417	-	-	15	24	265	-	-
HCM Lane V/C Ratio	0.056	-	-	4	1.657	0.23	-	-
HCM Control Delay (s)	14.1	-	-	\$ 1862.1	\$ 668.6	22.6	-	-
HCM Lane LOS	B	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	8.3	5	0.9	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	45.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↕↑		↕↔	
Traffic Vol, veh/h	43	12	13	1576	1460	42
Future Vol, veh/h	43	12	13	1576	1460	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	95	95	95	95
Heavy Vehicles, %	5	8	0	4	5	2
Mvmt Flow	62	17	14	1659	1537	44

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	2417	791	1581	0	0
Stage 1	1559	-	-	-	-
Stage 2	858	-	-	-	-
Critical Hdwy	6.9	7.06	4.1	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-
Follow-up Hdwy	3.55	3.38	2.2	-	-
Pot Cap-1 Maneuver	~ 26	320	422	-	-
Stage 1	154	-	-	-	-
Stage 2	368	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	~ 15	320	422	-	-
Mov Cap-2 Maneuver	~ 15	-	-	-	-
Stage 1	89	-	-	-	-
Stage 2	368	-	-	-	-





















Approach	EB	NB	SB
HCM Control Delay, \$1848.6		3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	422	-	19	-	-
HCM Lane V/C Ratio	0.032	-	4.195	-	-
HCM Control Delay (s)	13.8	2.9	1848.6	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.1	-	10.4	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
15: US 17 & Wachesaw Rd

Existing 2019 - MD Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	121	53	128	52	56	54	1	152	1430	43	5	36
Future Volume (vph)	121	53	128	52	56	54	1	152	1430	43	5	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0		225		250		200
Storage Lanes	1		0	1		0		1		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	1752	1675	0	1736	1727	0	0	1736	3471	1538	0	1758
Flt Permitted	0.667			0.553				0.085				0.108
Satd. Flow (perm)	1230	1675	0	1010	1727	0	0	155	3471	1538	0	200
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		129			51					89		
Link Speed (mph)		35			30				45			
Link Distance (ft)		703			621				601			
Travel Time (s)		13.7			14.1				9.1			
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.98	0.98	0.98	0.98	0.95	0.95
Heavy Vehicles (%)	3%	0%	2%	4%	0%	4%	0%	4%	4%	5%	0%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	199	0	67	141	0	0	156	1459	44	0	43
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				24			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	Perm	NA		Perm	NA		pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases		4			8		5	5	2		1	1
Permitted Phases	4			8			2	2		2	6	6
Detector Phase	4	4		8	8		5	5	2	2	1	1
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0	15.0	15.0	8.0	8.0
Minimum Split (s)	49.0	49.0		49.0	49.0		15.0	15.0	22.0	22.0	15.0	15.0
Total Split (s)	49.0	49.0		49.0	49.0		15.0	15.0	46.0	46.0	15.0	15.0
Total Split (%)	44.5%	44.5%		44.5%	44.5%		13.6%	13.6%	41.8%	41.8%	13.6%	13.6%
Yellow Time (s)	3.6	3.6		3.6	3.6		3.2	3.2	4.3	4.3	3.2	3.2
All-Red Time (s)	3.2	3.2		3.2	3.2		2.0	2.0	1.7	1.7	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Lost Time (s)	6.8	6.8		6.8	6.8			5.2	6.0	6.0		5.2
Lead/Lag							Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None	Max	Max	None	None
Act Effect Green (s)	14.7	14.7		14.7	14.7			53.3	47.0	47.0		49.0
Actuated g/C Ratio	0.18	0.18		0.18	0.18			0.65	0.57	0.57		0.60
v/c Ratio	0.61	0.49		0.37	0.40			0.56	0.74	0.05		0.16
Control Delay	43.0	15.8		35.4	22.5			21.9	18.8	0.6		7.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Delay	43.0	15.8		35.4	22.5			21.9	18.8	0.6		7.3

Lanes, Volumes, Timings
15: US 17 & Wachesaw Rd

Existing 2019 - MD Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1321	61
Future Volume (vph)	1321	61
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		500
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3438	1538
Flt Permitted		
Satd. Flow (perm)	3438	1538
Right Turn on Red		Yes
Satd. Flow (RTOR)		89
Link Speed (mph)	45	
Link Distance (ft)	2571	
Travel Time (s)	39.0	
Peak Hour Factor	0.95	0.95
Heavy Vehicles (%)	5%	5%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1391	64
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	24	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	22.0	22.0
Total Split (s)	46.0	46.0
Total Split (%)	41.8%	41.8%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.7	1.7
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?		
Recall Mode	Max	Max
Act Effct Green (s)	40.2	40.2
Actuated g/C Ratio	0.49	0.49
v/c Ratio	0.83	0.08
Control Delay	24.6	2.0
Queue Delay	0.0	0.0
Total Delay	24.6	2.0

Lanes, Volumes, Timings
15: US 17 & Wachesaw Rd

Existing 2019 - MD Peak



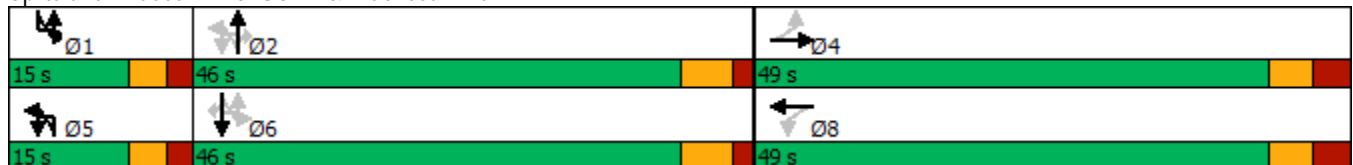
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS	D	B		D	C			C	B	A		A
Approach Delay		26.7			26.6				18.6			
Approach LOS		C			C				B			
Stops (vph)	106	61		43	59			76	995	1		16
Fuel Used(gal)	2	2		1	1			2	23	0		1
CO Emissions (g/hr)	173	137		60	95			156	1638	13		66
NOx Emissions (g/hr)	34	27		12	19			30	319	3		13
VOC Emissions (g/hr)	40	32		14	22			36	380	3		15
Dilemma Vehicles (#)	0	8		0	0			0	68	0		0
Queue Length 50th (ft)	63	31		31	40			29	317	0		6
Queue Length 95th (ft)	120	90		58	74			102	#543	4		21
Internal Link Dist (ft)		623			541				521			
Turn Bay Length (ft)	150			150				225		250		200
Base Capacity (vph)	634	926		521	915			290	1985	917		310
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	0.21	0.21		0.13	0.15			0.54	0.74	0.05		0.14

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 82.1
 Natural Cycle: 110
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 21.6
 Intersection LOS: C
 Intersection Capacity Utilization 84.2%
 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: 15: US 17 & Wachesaw Rd



Lanes, Volumes, Timings
 15: US 17 & Wachesaw Rd





















Existing 2019 - MD Peak



Lane Group	SBT	SBR
LOS	C	A
Approach Delay	23.1	
Approach LOS	C	
Stops (vph)	1040	4
Fuel Used(gal)	42	1
CO Emissions (g/hr)	2908	76
NOx Emissions (g/hr)	566	15
VOC Emissions (g/hr)	674	18
Dilemma Vehicles (#)	78	0
Queue Length 50th (ft)	305	0
Queue Length 95th (ft)	#525	13
Internal Link Dist (ft)	2491	
Turn Bay Length (ft)		500
Base Capacity (vph)	1681	797
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.83	0.08
Intersection Summary		

Lanes, Volumes, Timings
16: US 17 & Bellamy Ave

Existing 2019 - MD Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	169	65	58	34	51	60	2	41	1426	63	1	90
Future Volume (vph)	169	65	58	34	51	60	2	41	1426	63	1	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		0		250		300		250
Storage Lanes	1		0	1		0		1		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	1770	1693	0	1805	1746	0	0	1733	3610	1615	0	1805
Flt Permitted	0.453			0.423				0.106				0.102
Satd. Flow (perm)	844	1693	0	804	1746	0	0	193	3610	1615	0	194
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		25			33					103		
Link Speed (mph)		35			35				45			
Link Distance (ft)		700			738				2571			
Travel Time (s)		13.6			14.4				39.0			
Peak Hour Factor	0.87	0.87	0.87	0.77	0.77	0.77	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	0%	9%	0%	0%	0%	7%	4%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	194	142	0	44	144	0	0	45	1485	66	0	95
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				24			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	7	4		3	8		5	5	2		1	1
Permitted Phases	4			8			2	2		2	6	6
Detector Phase	7	4		3	8		5	5	2	2	1	1
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	6.0	18.0	18.0	6.0	6.0
Minimum Split (s)	15.0	36.0		15.0	36.0		15.0	15.0	24.0	24.0	15.0	15.0
Total Split (s)	19.0	40.0		15.0	36.0		15.0	15.0	89.0	89.0	16.0	16.0
Total Split (%)	11.9%	25.0%		9.4%	22.5%		9.4%	9.4%	55.6%	55.6%	10.0%	10.0%
Yellow Time (s)	3.6	3.6		3.6	3.6		3.2	3.2	4.3	4.3	3.2	3.2
All-Red Time (s)	2.7	2.7		2.7	2.7		2.3	2.3	1.5	1.5	2.3	2.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.5	5.8	5.8		5.5
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	None	C-Min	C-Min	None	None
Act Effect Green (s)	30.3	19.6		26.9	15.7			107.2	99.7	99.7		110.0
Actuated g/C Ratio	0.19	0.12		0.17	0.10			0.67	0.62	0.62		0.69
v/c Ratio	0.83	0.62		0.21	0.72			0.23	0.66	0.06		0.44
Control Delay	90.9	67.4		52.0	72.6			15.7	22.6	0.7		13.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Delay	90.9	67.4		52.0	72.6			15.7	22.6	0.7		13.3

Lanes, Volumes, Timings
16: US 17 & Bellamy Ave

Existing 2019 - MD Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1417	105
Future Volume (vph)	1417	105
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		300
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3438	1615
Flt Permitted		
Satd. Flow (perm)	3438	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		103
Link Speed (mph)	45	
Link Distance (ft)	1323	
Travel Time (s)	20.0	
Peak Hour Factor	0.96	0.96
Heavy Vehicles (%)	5%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1476	109
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	24	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	18.0	18.0
Minimum Split (s)	24.0	24.0
Total Split (s)	90.0	90.0
Total Split (%)	56.3%	56.3%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.8	5.8
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	C-Min	C-Min
Act Effct Green (s)	102.9	102.9
Actuated g/C Ratio	0.64	0.64
v/c Ratio	0.67	0.10
Control Delay	9.3	0.6
Queue Delay	0.0	0.0
Total Delay	9.3	0.6

Lanes, Volumes, Timings
16: US 17 & Bellamy Ave

Existing 2019 - MD Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS	F	E		D	E			B	C	A		B
Approach Delay		80.9			67.8				21.5			
Approach LOS		F			E				C			
Stops (vph)	186	97		28	82			15	907	1		22
Fuel Used(gal)	5	3		1	3			1	42	1		1
CO Emissions (g/hr)	376	214		53	199			73	2910	75		91
NOx Emissions (g/hr)	73	42		10	39			14	566	15		18
VOC Emissions (g/hr)	87	50		12	46			17	674	17		21
Dilemma Vehicles (#)	0	3		0	3			0	44	0		0
Queue Length 50th (ft)	181	121		38	115			13	490	0		9
Queue Length 95th (ft)	234	184		58	152			33	714	6		m27
Internal Link Dist (ft)		620			658				2491			
Turn Bay Length (ft)	200			150				250		300		250
Base Capacity (vph)	245	376		211	350			223	2249	1045		241
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	0.79	0.38		0.21	0.41			0.20	0.66	0.06		0.39

Intersection Summary

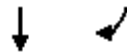
Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 156 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 23.5
 Intersection LOS: C
 Intersection Capacity Utilization 80.4%
 ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: US 17 & Bellamy Ave



Lanes, Volumes, Timings
 16: US 17 & Bellamy Ave






















Existing 2019 - MD Peak



Lane Group	SBT	SBR
LOS	A	A
Approach Delay	8.9	
Approach LOS	A	
Stops (vph)	288	3
Fuel Used(gal)	18	1
CO Emissions (g/hr)	1288	67
NOx Emissions (g/hr)	251	13
VOC Emissions (g/hr)	298	15
Dilemma Vehicles (#)	43	0
Queue Length 50th (ft)	139	0
Queue Length 95th (ft)	173	m6
Internal Link Dist (ft)	1243	
Turn Bay Length (ft)		300
Base Capacity (vph)	2210	1074
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.67	0.10
Intersection Summary		

Lanes, Volumes, Timings
17: US 17 & Riverwood Dr

Existing 2019 - MD Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	160	10	62	23	19	18	6	58	1677	18	5	16
Future Volume (vph)	160	10	62	23	19	18	6	58	1677	18	5	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		50	100		0		200		300		200
Storage Lanes	1		0	1		1		1		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	1805	1633	0	1805	1900	1615	0	1773	3471	1615	0	1653
Flt Permitted	0.738			0.708				0.110				0.073
Satd. Flow (perm)	1402	1633	0	1345	1900	1615	0	205	3471	1615	0	127
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		65				100				60		
Link Speed (mph)		30			30				45			
Link Distance (ft)		502			435				1323			
Travel Time (s)		11.4			9.9				20.0			
Peak Hour Factor	0.95	0.95	0.95	0.65	0.65	0.65	0.96	0.96	0.96	0.96	0.95	0.95
Heavy Vehicles (%)	0%	10%	0%	0%	0%	0%	0%	2%	4%	0%	20%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	76	0	35	29	28	0	66	1747	19	0	22
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				36			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases		4			8		5	5	2		1	1
Permitted Phases	4			8		8	2	2		2	6	6
Detector Phase	4	4		8	8	8	5	5	2	2	1	1
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	6.0	18.0	18.0	6.0	6.0
Minimum Split (s)	37.0	37.0		39.0	39.0	39.0	15.0	15.0	25.0	25.0	15.0	15.0
Total Split (s)	39.0	39.0		39.0	39.0	39.0	15.0	15.0	106.0	106.0	15.0	15.0
Total Split (%)	24.4%	24.4%		24.4%	24.4%	24.4%	9.4%	9.4%	66.3%	66.3%	9.4%	9.4%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.2	3.2	4.3	4.3	3.2	3.2
All-Red Time (s)	2.7	2.7		2.7	2.7	2.7	2.3	2.3	1.8	1.8	2.3	2.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)	6.3	6.3		6.3	6.3	6.3		5.5	6.1	6.1		5.5
Lead/Lag							Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	C-Min	C-Min	None	None
Act Effect Green (s)	24.7	24.7		24.7	24.7	24.7		117.2	115.4	115.4		113.6
Actuated g/C Ratio	0.15	0.15		0.15	0.15	0.15		0.73	0.72	0.72		0.71
v/c Ratio	0.78	0.25		0.17	0.10	0.08		0.31	0.70	0.02		0.14
Control Delay	87.9	17.3		57.9	55.8	0.5		6.2	5.2	0.0		11.3
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	87.9	17.3		57.9	55.8	0.5		6.2	5.2	0.0		11.3

Lanes, Volumes, Timings
17: US 17 & Riverwood Dr

Existing 2019 - MD Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1550	76
Future Volume (vph)	1550	76
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		400
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3438	1568
Flt Permitted		
Satd. Flow (perm)	3438	1568
Right Turn on Red		Yes
Satd. Flow (RTOR)		80
Link Speed (mph)	45	
Link Distance (ft)	646	
Travel Time (s)	9.8	
Peak Hour Factor	0.95	0.95
Heavy Vehicles (%)	5%	3%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1632	80
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	36	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	18.0	18.0
Minimum Split (s)	25.0	25.0
Total Split (s)	106.0	106.0
Total Split (%)	66.3%	66.3%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.8	1.8
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.1	6.1
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	C-Min	C-Min
Act Effct Green (s)	113.0	113.0
Actuated g/C Ratio	0.71	0.71
v/c Ratio	0.67	0.07
Control Delay	16.6	2.2
Queue Delay	0.0	0.0
Total Delay	16.6	2.2

Lanes, Volumes, Timings
17: US 17 & Riverwood Dr

Existing 2019 - MD Peak

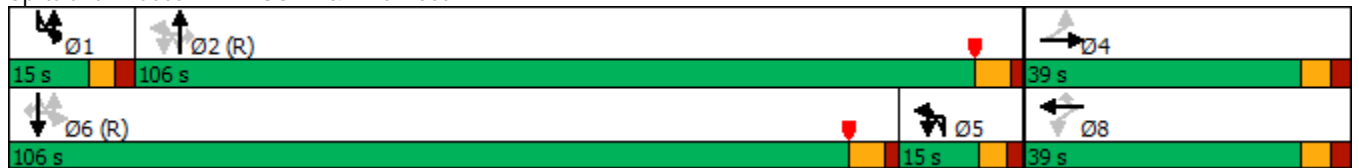


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS	F	B		E	E	A		A	A	A		B
Approach Delay		65.9			39.8				5.2			
Approach LOS		E			D				A			
Stops (vph)	153	17		19	16	0		8	356	0		8
Fuel Used(gal)	5	1		0	0	0		1	21	0		0
CO Emissions (g/hr)	341	61		32	26	4		50	1440	11		16
NOx Emissions (g/hr)	66	12		6	5	1		10	280	2		3
VOC Emissions (g/hr)	79	14		7	6	1		12	334	3		4
Dilemma Vehicles (#)	0	0		0	0	0		0	35	0		0
Queue Length 50th (ft)	171	10		32	26	0		9	193	0		7
Queue Length 95th (ft)	246	57		47	40	0		m12	181	m0		20
Internal Link Dist (ft)		422			355				1243			
Turn Bay Length (ft)	200			100				200		300		200
Base Capacity (vph)	286	385		274	388	409		246	2502	1180		180
Starvation Cap Reductn	0	0		0	0	0		0	0	0		0
Spillback Cap Reductn	0	0		0	0	0		0	0	0		0
Storage Cap Reductn	0	0		0	0	0		0	0	0		0
Reduced v/c Ratio	0.59	0.20		0.13	0.07	0.07		0.27	0.70	0.02		0.12

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 14.6
 Intersection LOS: B
 Intersection Capacity Utilization 84.3%
 ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: US 17 & Riverwood Dr





Lane Group	SBT	SBR
LOS	B	A
Approach Delay	15.9	
Approach LOS	B	
Stops (vph)	866	5
Fuel Used(gal)	23	0
CO Emissions (g/hr)	1574	29
NOx Emissions (g/hr)	306	6
VOC Emissions (g/hr)	365	7
Dilemma Vehicles (#)	48	0
Queue Length 50th (ft)	488	0
Queue Length 95th (ft)	706	21
Internal Link Dist (ft)	566	
Turn Bay Length (ft)		400
Base Capacity (vph)	2427	1130
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.67	0.07
Intersection Summary		

Intersection

Int Delay, s/veh 69.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↘	↕	↗		↘	↕	↗
Traffic Vol, veh/h	12	0	24	12	0	67	2	9	1864	36	10	56	1647	24
Future Vol, veh/h	12	0	24	12	0	67	2	9	1864	36	10	56	1647	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	-	None	-	-	-	Free
Storage Length	-	-	0	-	-	-	-	0	-	0	-	200	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	75	75	75	71	71	71	98	98	98	98	97	97	97	97
Heavy Vehicles, %	0	0	0	8	0	0	0	3	3	0	0	5	4	0
Mvmt Flow	16	0	32	17	0	94	2	9	1902	37	10	58	1698	25

Major/Minor	Minor2		Minor1		Major1			Major2						
Conflicting Flow All	2807	3795	849	2909	3758	951	1698	1698	0	0	1902	1939	0	0
Stage 1	1834	1834	-	1924	1924	-	-	-	-	-	-	-	-	-
Stage 2	973	1961	-	985	1834	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.66	6.5	6.9	6.4	4.16	-	-	6.4	4.2	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.66	5.5	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.66	5.5	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.58	4	3.3	2.5	2.23	-	-	2.5	2.25	-	-
Pot Cap-1 Maneuver	~ 9	4	308	~ 6	4	264	120	367	-	-	88	287	-	0
Stage 1	80	128	-	64	115	-	-	-	-	-	-	-	-	0
Stage 2	275	111	-	255	128	-	-	-	-	-	-	-	-	0
Platoon blocked, %									-	-			-	
Mov Cap-1 Maneuver	~ 4	2	308	~ 4	2	264	259	259	-	-	190	190	-	-
Mov Cap-2 Maneuver	~ 4	2	-	~ 4	2	-	-	-	-	-	-	-	-	-
Stage 1	77	82	-	61	110	-	-	-	-	-	-	-	-	-
Stage 2	169	106	-	147	82	-	-	-	-	-	-	-	-	-


























Approach	EB	WB	NB	SB
HCM Control Delay, \$1018.9		\$ 1964.2	0.1	1.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT
Capacity (veh/h)	259	-	-	4	308	24	190	-
HCM Lane V/C Ratio	0.043	-	-	4	0.104	4.636	0.358	-
HCM Control Delay (s)	19.6	-	-	\$ 3020.7	\$ 1964.2	34.1	-	-
HCM Lane LOS	C	-	-	F	C	F	D	-
HCM 95th %tile Q(veh)	0.1	-	-	3.3	0.3	13.9	1.5	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
19: US 17 & Burgess Rd/Sunnyside Ave

Existing 2019 - MD Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations	 							 	 			
Traffic Volume (vph)	224	112	325	28	122	75	4	354	1525	49	19	90
Future Volume (vph)	224	112	325	28	122	75	4	354	1525	49	19	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	225		250	150		75		350		350		250
Storage Lanes	1		1	1		1		2		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	3367	1863	1538	1805	1810	1599	0	3401	3471	1615	0	1776
Flt Permitted	0.950			0.950				0.950				0.067
Satd. Flow (perm)	3367	1863	1538	1805	1810	1599	0	3401	3471	1615	0	125
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)			198			145				60		
Link Speed (mph)		35			35				45			
Link Distance (ft)		603			870				809			
Travel Time (s)		11.7			16.9				12.3			
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	2%	5%	0%	5%	1%	0%	3%	4%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	257	129	374	33	144	88	0	365	1556	50	0	111
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		24			12				24			
Link Offset(ft)		0			0				1			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA	pt+ov	Prot	pm+pt
Protected Phases	3	8		7	4		1	1	6	6 7	5	5
Permitted Phases			8			4						2
Detector Phase	3	8	8	7	4	4	1	1	6	6 7	5	5
Switch Phase												
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	8.0	6.0	6.0	25.0		6.0	6.0
Minimum Split (s)	15.0	46.0	46.0	15.0	46.0	46.0	15.0	15.0	31.0		15.0	15.0
Total Split (s)	18.0	49.0	49.0	15.0	46.0	46.0	21.0	21.0	71.0		15.0	15.0
Total Split (%)	12.0%	32.7%	32.7%	10.0%	30.7%	30.7%	14.0%	14.0%	47.3%		10.0%	10.0%
Yellow Time (s)	4.0	3.6	3.6	4.0	3.6	3.6	3.5	3.5	4.3		3.5	3.5
All-Red Time (s)	2.9	2.4	2.4	2.9	2.4	2.4	1.7	1.7	1.4		1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0
Total Lost Time (s)	6.9	6.0	6.0	6.9	6.0	6.0		5.2	5.7			5.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag		Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	Max		None	None
Act Effect Green (s)	11.2	26.7	26.7	7.3	20.0	20.0		15.9	66.8	81.0		68.7
Actuated g/C Ratio	0.09	0.20	0.20	0.06	0.15	0.15		0.12	0.51	0.62		0.53
v/c Ratio	0.90	0.34	0.79	0.33	0.52	0.24		0.88	0.88	0.05		0.63
Control Delay	91.5	47.6	36.1	71.3	56.6	1.8		80.0	36.4	2.7		40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	91.5	47.6	36.1	71.3	56.6	1.8		80.0	36.4	2.7		40.8

Lanes, Volumes, Timings
 19: US 17 & Burgess Rd/Sunnyside Ave

Existing 2019 - MD Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1398	314
Future Volume (vph)	1398	314
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3471	1583
Flt Permitted		
Satd. Flow (perm)	3471	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		186
Link Speed (mph)	45	
Link Distance (ft)	1053	
Travel Time (s)	16.0	
Peak Hour Factor	0.98	0.98
Heavy Vehicles (%)	4%	2%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1427	320
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	24	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	2	
Permitted Phases		2
Detector Phase	2	2
Switch Phase		
Minimum Initial (s)	25.0	25.0
Minimum Split (s)	31.0	31.0
Total Split (s)	65.0	65.0
Total Split (%)	43.3%	43.3%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.4	1.4
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	Max	Max
Act Effct Green (s)	59.6	59.6
Actuated g/C Ratio	0.46	0.46
v/c Ratio	0.90	0.39
Control Delay	42.7	11.8
Queue Delay	0.0	0.0
Total Delay	42.7	11.8

Lanes, Volumes, Timings
 19: US 17 & Burgess Rd/Sunnyside Ave

Existing 2019 - MD Peak

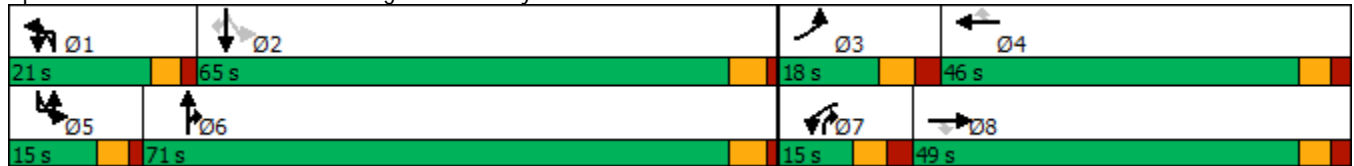


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS	F	D	D	E	E	A		F	D	A		D
Approach Delay		56.8			40.3				43.6			
Approach LOS		E			D				D			
Stops (vph)	195	91	154	26	106	0		316	1235	4		59
Fuel Used(gal)	7	2	5	1	3	0		12	35	0		2
CO Emissions (g/hr)	462	158	347	54	208	35		814	2424	23		167
NOx Emissions (g/hr)	90	31	68	11	40	7		158	472	5		32
VOC Emissions (g/hr)	107	37	80	13	48	8		189	562	5		39
Dilemma Vehicles (#)	0	3	0	0	3	0		0	50	0		0
Queue Length 50th (ft)	111	97	152	27	113	0		156	586	0		37
Queue Length 95th (ft)	#212	151	254	65	168	0		#288	#945	16		#128
Internal Link Dist (ft)		523			790				729			
Turn Bay Length (ft)	225		250	150		75		350		350		250
Base Capacity (vph)	287	616	641	112	557	592		413	1776	1035		191
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0		0
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0		0
Storage Cap Reductn	0	0	0	0	0	0		0	0	0		0
Reduced v/c Ratio	0.90	0.21	0.58	0.29	0.26	0.15		0.88	0.88	0.05		0.58

Intersection Summary

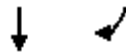
Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 130.5
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 43.1
 Intersection LOS: D
 Intersection Capacity Utilization 93.8%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 19: US 17 & Burgess Rd/Sunnyside Ave



Lanes, Volumes, Timings
 19: US 17 & Burgess Rd/Sunnyside Ave

Existing 2019 - MD Peak



Lane Group	SBT	SBR
LOS	D	B
Approach Delay	37.3	
Approach LOS	D	
Stops (vph)	1173	87
Fuel Used(gal)	36	4
CO Emissions (g/hr)	2537	279
NOx Emissions (g/hr)	494	54
VOC Emissions (g/hr)	588	65
Dilemma Vehicles (#)	52	0
Queue Length 50th (ft)	561	64
Queue Length 95th (ft)	#885	166
Internal Link Dist (ft)	973	
Turn Bay Length (ft)		
Base Capacity (vph)	1584	823
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.90	0.39
Intersection Summary		

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	56	7	6	58	33	11	94	14	25	74	31
Future Vol, veh/h	30	56	7	6	58	33	11	94	14	25	74	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	83	83	83	86	86	86
Heavy Vehicles, %	0	4	0	0	0	3	9	2	0	0	0	3
Mvmt Flow	33	61	8	7	63	36	13	113	17	29	86	36

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	359	318	104	345	328	122	122	0	0	130	0	0
Stage 1	162	162	-	148	148	-	-	-	-	-	-	-
Stage 2	197	156	-	197	180	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.54	6.2	7.1	6.5	6.23	4.19	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.54	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.54	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.036	3.3	3.5	4	3.327	2.281	-	-	2.2	-	-
Pot Cap-1 Maneuver	600	595	956	613	594	926	1423	-	-	1468	-	-
Stage 1	845	760	-	859	779	-	-	-	-	-	-	-
Stage 2	809	765	-	809	754	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	516	577	956	546	576	926	1423	-	-	1468	-	-
Mov Cap-2 Maneuver	516	577	-	546	576	-	-	-	-	-	-	-
Stage 1	837	744	-	850	771	-	-	-	-	-	-	-
Stage 2	707	757	-	721	738	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.6		11.5		0.7		1.4	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1423	-	-	572	658	1468	-
HCM Lane V/C Ratio	0.009	-	-	0.177	0.16	0.02	-
HCM Control Delay (s)	7.6	0	-	12.6	11.5	7.5	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.6	0.6	0.1	-

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕			↕	
Traffic Vol, veh/h	12	32	11	122	24	107	10	133	163	107	141	11
Future Vol, veh/h	12	32	11	122	24	107	10	133	163	107	141	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	35	12	133	26	116	11	145	177	116	153	12
Number of Lanes	0	1	0	1	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	10.7	11	13.6	14.6
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	22%	100%	0%	41%
Vol Thru, %	0%	45%	58%	0%	18%	54%
Vol Right, %	0%	55%	20%	0%	82%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	296	55	122	131	259
LT Vol	10	0	12	122	0	107
Through Vol	0	133	32	0	24	141
RT Vol	0	163	11	0	107	11
Lane Flow Rate	11	322	60	133	142	282
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.019	0.496	0.112	0.253	0.228	0.477
Departure Headway (Hd)	6.452	5.555	6.759	6.864	5.776	6.095
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	554	647	528	522	621	591
Service Time	4.198	3.3	4.827	4.614	3.525	4.141
HCM Lane V/C Ratio	0.02	0.498	0.114	0.255	0.229	0.477
HCM Control Delay	9.3	13.7	10.7	11.9	10.2	14.6
HCM Lane LOS	A	B	B	B	B	B
HCM 95th-tile Q	0.1	2.8	0.4	1	0.9	2.6

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	44	57	25	17	29	9	18	91	15	2	51	15
Future Vol, veh/h	44	57	25	17	29	9	18	91	15	2	51	15
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	49	64	28	19	33	10	20	102	17	2	57	17
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	7.9	8.3	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	35%	31%	3%
Vol Thru, %	73%	45%	53%	75%
Vol Right, %	12%	20%	16%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	124	126	55	68
LT Vol	18	44	17	2
Through Vol	91	57	29	51
RT Vol	15	25	9	15
Lane Flow Rate	139	142	62	76
Geometry Grp	1	1	1	1
Degree of Util (X)	0.171	0.174	0.077	0.093
Departure Headway (Hd)	4.409	4.412	4.514	4.397
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	815	814	794	816
Service Time	2.428	2.431	2.537	2.419
HCM Lane V/C Ratio	0.171	0.174	0.078	0.093
HCM Control Delay	8.3	8.4	7.9	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.6	0.2	0.3

Intersection						
Int Delay, s/veh	8.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘↗		↘	↑↑	↑↑	↘
Traffic Vol, veh/h	16	89	159	1174	1228	32
Future Vol, veh/h	16	89	159	1174	1228	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	1	0	3	2	0
Mvmt Flow	18	98	175	1290	1349	35
















Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	2344	675	1384	0	0
Stage 1	1349	-	-	-	-
Stage 2	995	-	-	-	-
Critical Hdwy	6.8	6.92	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.31	2.2	-	-
Pot Cap-1 Maneuver	31	399	501	-	-
Stage 1	210	-	-	-	-
Stage 2	323	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	20	399	501	-	-
Mov Cap-2 Maneuver	20	-	-	-	-
Stage 1	137	-	-	-	-
Stage 2	323	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	202.5	1.9	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	501	-	103	-	-
HCM Lane V/C Ratio	0.349	-	1.12	-	-
HCM Control Delay (s)	16	-	202.5	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	1.5	-	7.4	-	-

Lanes, Volumes, Timings
2: US 17 & S Causeway Rd

Existing 2019 - PM Peak

							
Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations			 				 
Traffic Volume (vph)	142	74	1261	109	2	67	1295
Future Volume (vph)	142	74	1261	109	2	67	1295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75		0		250	
Storage Lanes	1	1		1		1	
Taper Length (ft)	100					100	
Satd. Flow (prot)	1787	1599	3505	1599	0	1754	3539
Flt Permitted	0.950					0.153	
Satd. Flow (perm)	1787	1599	3505	1599	0	282	3539
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		62		54			
Link Speed (mph)	40		45				45
Link Distance (ft)	582		691				1150
Travel Time (s)	9.9		10.5				17.4
Peak Hour Factor	0.84	0.84	0.93	0.93	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	3%	1%	0%	3%	2%
Shared Lane Traffic (%)							
Lane Group Flow (vph)	169	88	1356	117	0	80	1506
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	R NA	Left	Left
Median Width(ft)	12		16				16
Link Offset(ft)	0		0				0
Crosswalk Width(ft)	16		16				16
Two way Left Turn Lane			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	9	15	
Turn Type	Prot	Free	NA	Free	pm+pt	pm+pt	NA
Protected Phases	4		6		5	5	2
Permitted Phases		Free		Free	2	2	
Detector Phase	4		6		5	5	2
Switch Phase							
Minimum Initial (s)	8.0		15.0		6.0	6.0	15.0
Minimum Split (s)	34.0		22.0		15.0	15.0	24.0
Total Split (s)	34.0		71.0		15.0	15.0	86.0
Total Split (%)	28.3%		59.2%		12.5%	12.5%	71.7%
Yellow Time (s)	3.6		5.0		3.6	3.6	5.0
All-Red Time (s)	2.3		1.5		2.3	2.3	1.5
Lost Time Adjust (s)	0.0		0.0			0.0	0.0
Total Lost Time (s)	5.9		6.5			5.9	6.5
Lead/Lag			Lead		Lag	Lag	
Lead-Lag Optimize?			Yes		Yes	Yes	
Recall Mode	None		C-Min		None	None	C-Min
Act Effect Green (s)	16.6	120.0	80.2	120.0		92.6	91.0
Actuated g/C Ratio	0.14	1.00	0.67	1.00		0.77	0.76
v/c Ratio	0.68	0.06	0.58	0.07		0.26	0.56
Control Delay	62.8	0.1	13.5	0.1		11.1	10.9
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	62.8	0.1	13.5	0.1		11.1	10.9

Lanes, Volumes, Timings
2: US 17 & S Causeway Rd

Existing 2019 - PM Peak

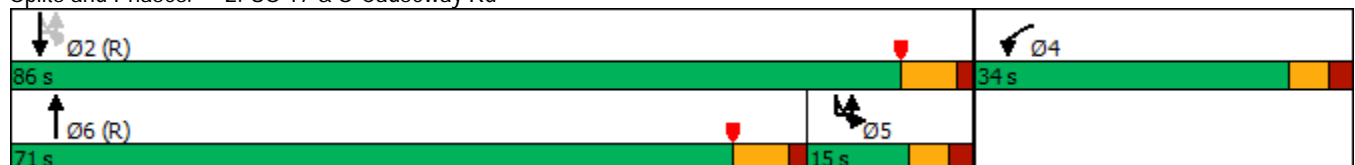


Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
LOS	E	A	B	A		B	B
Approach Delay	41.3		12.5				10.9
Approach LOS	D		B				B
Stops (vph)	131	0	675	0		23	537
Fuel Used(gal)	4	0	18	0		3	50
CO Emissions (g/hr)	256	20	1225	34		182	3505
NOx Emissions (g/hr)	50	4	238	7		35	682
VOC Emissions (g/hr)	59	5	284	8		42	812
Dilemma Vehicles (#)	0	0	52	0		0	83
Queue Length 50th (ft)	126	0	282	0		22	241
Queue Length 95th (ft)	176	0	431	0		m34	287
Internal Link Dist (ft)	502		611				1070
Turn Bay Length (ft)		75				250	
Base Capacity (vph)	418	1599	2343	1599		333	2683
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	0.40	0.06	0.58	0.07		0.24	0.56

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 56 (47%), Referenced to phase 2:SBTL and 6:NBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 13.9
 Intersection LOS: B
 Intersection Capacity Utilization 63.0%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: US 17 & S Causeway Rd



Lanes, Volumes, Timings
3: US 17 & Petigru Dr/Alston Rd

Existing 2019 - PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	92	16	138	31	12	33	104	1322	23	1	41	1370
Future Volume (vph)	92	16	138	31	12	33	104	1322	23	1	41	1370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		125	0		0	150		0		150	
Storage Lanes	0		1	0		0	1		0		1	
Taper Length (ft)	100			100			100				100	
Satd. Flow (prot)	0	1792	1615	0	1729	0	1805	3496	0	0	1770	3505
Flt Permitted		0.675			0.742		0.099				0.189	
Satd. Flow (perm)	0	1261	1615	0	1309	0	188	3496	0	0	352	3505
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)			157		32			3				
Link Speed (mph)		35			30			45				45
Link Distance (ft)		451			511			3678				1754
Travel Time (s)		8.8			11.6			55.7				26.6
Peak Hour Factor	0.88	0.88	0.88	0.79	0.79	0.79	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	0%	0%	3%	0%	3%	0%	0%	2%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	123	157	0	96	0	109	1416	0	0	46	1489
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	R NA	Left	Left
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	Perm	NA
Protected Phases		8			4		1	6				2
Permitted Phases	8		8	4			6			2	2	
Detector Phase	8	8	8	4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	15.0		15.0	15.0	15.0
Minimum Split (s)	16.0	16.0	16.0	39.0	39.0		17.0	29.0		30.0	30.0	30.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0		17.0	81.0		64.0	64.0	64.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%		14.2%	67.5%		53.3%	53.3%	53.3%
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	2.6	2.6	2.6	2.6	2.6		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		5.8	5.8		5.8		6.3	6.3			6.3	6.3
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min		C-Min	C-Min	C-Min
Act Effect Green (s)		16.7	16.7		16.7		91.2	91.2			74.4	74.4
Actuated g/C Ratio		0.14	0.14		0.14		0.76	0.76			0.62	0.62
v/c Ratio		0.70	0.44		0.46		0.38	0.53			0.21	0.69
Control Delay		69.3	10.4		37.6		12.6	2.1			11.7	11.4
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		69.3	10.4		37.6		12.6	2.1			11.7	11.4

Lanes, Volumes, Timings
 3: US 17 & Petigru Dr/Alston Rd

Existing 2019 - PM Peak

Lane Group	SBR
Lane Configurations	7
Traffic Volume (vph)	37
Future Volume (vph)	37
Ideal Flow (vphpl)	1900
Storage Length (ft)	375
Storage Lanes	0
Taper Length (ft)	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	83
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.92
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	40
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Turn Type	Perm
Protected Phases	
Permitted Phases	2
Detector Phase	2
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	30.0
Total Split (s)	64.0
Total Split (%)	53.3%
Yellow Time (s)	4.3
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.3
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	74.4
Actuated g/C Ratio	0.62
v/c Ratio	0.04
Control Delay	0.7
Queue Delay	0.0
Total Delay	0.7

Lanes, Volumes, Timings
 3: US 17 & Petigru Dr/Alston Rd

Existing 2019 - PM Peak



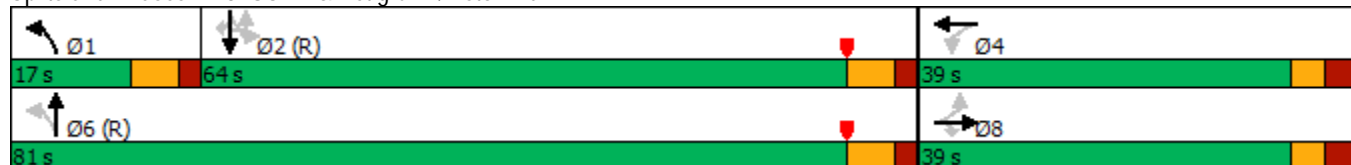
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
LOS		E	B		D		B	A			B	B
Approach Delay		36.3			37.6			2.9				11.2
Approach LOS		D			D			A				B
Stops (vph)		101	18		44		26	214			11	409
Fuel Used(gal)		3	1		1		4	45			1	24
CO Emissions (g/hr)		184	61		79		269	3173			50	1669
NOx Emissions (g/hr)		36	12		15		52	617			10	325
VOC Emissions (g/hr)		43	14		18		62	735			12	387
Dilemma Vehicles (#)		3	0		0		0	6			0	79
Queue Length 50th (ft)		92	0		46		8	13			8	144
Queue Length 95th (ft)		146	53		78		34	20			m19	248
Internal Link Dist (ft)		371			431			3598				1674
Turn Bay Length (ft)			125				150				150	
Base Capacity (vph)		348	560		385		291	2657			218	2173
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		0.35	0.28		0.25		0.37	0.53			0.21	0.69

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 24 (20%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 10.3
 Intersection LOS: B
 Intersection Capacity Utilization 76.4%
 ICU Level of Service D
 Analysis Period (min) 15

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

Splits and Phases: 3: US 17 & Petigru Dr/Alston Rd

























Lane Group	SBR
LOS	A
Approach Delay	
Approach LOS	
Stops (vph)	1
Fuel Used(gal)	0
CO Emissions (g/hr)	31
NOx Emissions (g/hr)	6
VOC Emissions (g/hr)	7
Dilemma Vehicles (#)	0
Queue Length 50th (ft)	0
Queue Length 95th (ft)	m2
Internal Link Dist (ft)	
Turn Bay Length (ft)	375
Base Capacity (vph)	1033
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.04
Intersection Summary	

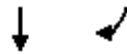
Lanes, Volumes, Timings
4: US 17 & Waverly Rd/N Causeway Rd

Existing 2019 - PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	94	36	93	82	42	80	1	83	1339	52	7	99
Future Volume (vph)	94	36	93	82	42	80	1	83	1339	52	7	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	0		225		200		300		200
Storage Lanes	1		0	0		1		1		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	1787	1647	0	0	1827	1568	0	1770	3505	1615	0	1805
Flt Permitted	0.568				0.645			0.103				0.119
Satd. Flow (perm)	1069	1647	0	0	1217	1568	0	192	3505	1615	0	226
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		109				94				100		
Link Speed (mph)		35			25				45			
Link Distance (ft)		804			625				1754			
Travel Time (s)		15.7			17.0				26.6			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95	0.95	0.93	0.93
Heavy Vehicles (%)	1%	0%	4%	1%	0%	3%	0%	2%	3%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	151	0	0	145	94	0	88	1409	55	0	114
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases		4			8		5	5	2		1	1
Permitted Phases	4			8		8	2	2		2	6	6
Detector Phase	4	4		8	8	8	5	5	2	2	1	1
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	25.0	25.0	10.0	10.0
Minimum Split (s)	47.0	47.0		46.0	46.0	46.0	17.0	17.0	32.0	32.0	17.0	17.0
Total Split (s)	47.0	47.0		47.0	47.0	47.0	17.0	17.0	56.0	56.0	17.0	17.0
Total Split (%)	39.2%	39.2%		39.2%	39.2%	39.2%	14.2%	14.2%	46.7%	46.7%	14.2%	14.2%
Yellow Time (s)	4.4	4.4		4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	3.3	3.3		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)	7.7	7.7			6.4	6.4		6.3	6.3	6.3		6.3
Lead/Lag							Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	C-Max	C-Max	None	None
Act Effect Green (s)	17.2	17.2		18.5	18.5			82.5	72.4	72.4		83.8
Actuated g/C Ratio	0.14	0.14		0.15	0.15			0.69	0.60	0.60		0.70
v/c Ratio	0.73	0.46		0.78	0.29			0.33	0.67	0.05		0.39
Control Delay	74.1	18.9		74.1	10.3			8.9	9.7	0.1		12.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Delay	74.1	18.9		74.1	10.3			8.9	9.7	0.1		12.0

Lanes, Volumes, Timings
 4: US 17 & Waverly Rd/N Causeway Rd

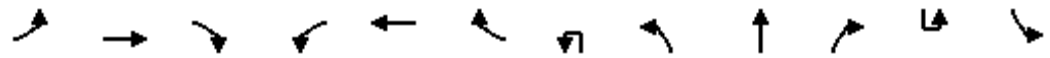
Existing 2019 - PM Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1390	69
Future Volume (vph)	1390	69
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		200
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3539	1615
Flt Permitted		
Satd. Flow (perm)	3539	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		100
Link Speed (mph)	45	
Link Distance (ft)	843	
Travel Time (s)	12.8	
Peak Hour Factor	0.93	0.93
Heavy Vehicles (%)	2%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1495	74
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	24	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	25.0	25.0
Minimum Split (s)	34.0	34.0
Total Split (s)	56.0	56.0
Total Split (%)	46.7%	46.7%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.3	6.3
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	C-Max	C-Max
Act Effct Green (s)	75.6	75.6
Actuated g/C Ratio	0.63	0.63
v/c Ratio	0.67	0.07
Control Delay	4.4	0.1
Queue Delay	0.0	0.0
Total Delay	4.4	0.1

Lanes, Volumes, Timings
 4: US 17 & Waverly Rd/N Causeway Rd

Existing 2019 - PM Peak

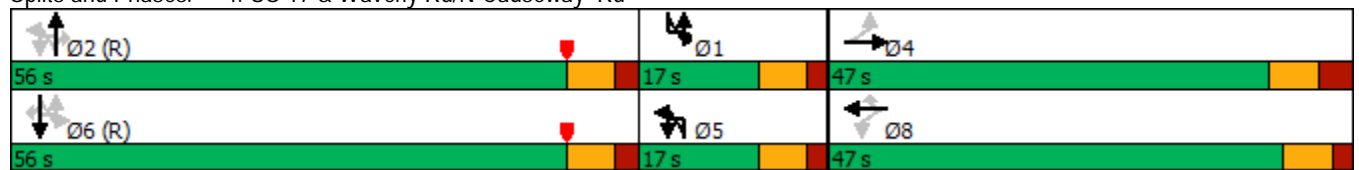


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS	E	B			E	B		A	A	A		B
Approach Delay		42.3			49.0			9.3				
Approach LOS		D			D			A				
Stops (vph)	88	36			116	14		25	503	0		35
Fuel Used(gal)	3	2			3	1		1	24	1		6
CO Emissions (g/hr)	183	105			207	45		99	1688	41		423
NOx Emissions (g/hr)	36	21			40	9		19	328	8		82
VOC Emissions (g/hr)	43	24			48	10		23	391	10		98
Dilemma Vehicles (#)	0	4			0	0		0	44	0		0
Queue Length 50th (ft)	83	29			109	0		7	136	0		6
Queue Length 95th (ft)	130	77			159	38		29	176	m0		m37
Internal Link Dist (ft)		724			545			1674				
Turn Bay Length (ft)	125					225		200		300		200
Base Capacity (vph)	350	612			411	592		273	2113	1013		299
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	0.32	0.25			0.35	0.16		0.32	0.67	0.05		0.38

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 16 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 12.1
 Intersection LOS: B
 Intersection Capacity Utilization 85.7%
 ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: US 17 & Waverly Rd/N Causeway Rd



Lanes, Volumes, Timings
 4: US 17 & Waverly Rd/N Causeway Rd




















Existing 2019 - PM Peak



Lane Group	SBT	SBR
LOS	A	A
Approach Delay	4.7	
Approach LOS	A	
Stops (vph)	297	0
Fuel Used(gal)	75	3
CO Emissions (g/hr)	5250	244
NOx Emissions (g/hr)	1021	47
VOC Emissions (g/hr)	1217	56
Dilemma Vehicles (#)	5	0
Queue Length 50th (ft)	20	0
Queue Length 95th (ft)	26	m0
Internal Link Dist (ft)	763	
Turn Bay Length (ft)		200
Base Capacity (vph)	2230	1054
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.67	0.07
Intersection Summary		

Lanes, Volumes, Timings
5: US 17 & Martin Luther King Rd/Brown Ln

Existing 2019 - PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	144	1	31	5	0	1	2	26	1527	1	5	3
Future Volume (vph)	144	1	31	5	0	1	2	26	1527	1	5	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0		175		175		200
Storage Lanes	0		1	0		0		1		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	0	1793	1615	0	1789	0	0	1805	3505	1615	0	1805
Flt Permitted		0.722			0.812			0.087				0.098
Satd. Flow (perm)	0	1358	1615	0	1517	0	0	165	3505	1615	0	186
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)			96		96					89		
Link Speed (mph)		40			25				45			
Link Distance (ft)		698			290				6933			
Travel Time (s)		11.9			7.9				105.0			
Peak Hour Factor	0.76	0.76	0.76	0.75	0.75	0.75	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	41	0	8	0	0	29	1591	1	0	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				16			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases		8			4		1	1	6		5	5
Permitted Phases	8		8	4			6	6		6	2	2
Detector Phase	8	8	8	4	4		1	1	6	6	5	5
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	15.0	15.0	10.0	10.0
Minimum Split (s)	44.0	44.0	44.0	23.0	23.0		17.0	17.0	23.0	23.0	17.0	17.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0		17.0	17.0	59.0	59.0	17.0	17.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%		14.2%	14.2%	49.2%	49.2%	14.2%	14.2%
Yellow Time (s)	4.4	4.4	4.4	3.0	3.0		4.4	4.4	5.2	5.2	4.4	4.4
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0			0.0	0.0	0.0		0.0
Total Lost Time (s)		6.4	6.4		5.0			6.4	7.2	7.2		6.4
Lead/Lag							Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	None	C-Min	C-Min	None	None
Act Effect Green (s)		22.2	22.2		23.6			83.7	80.9	80.9		81.2
Actuated g/C Ratio		0.18	0.18		0.20			0.70	0.67	0.67		0.68
v/c Ratio		0.76	0.11		0.02			0.12	0.67	0.00		0.03
Control Delay		64.5	0.6		0.2			2.6	5.9	0.0		7.4
Queue Delay		0.0	0.0		0.0			0.0	0.0	0.0		0.0
Total Delay		64.5	0.6		0.2			2.6	5.9	0.0		7.4

Lanes, Volumes, Timings
 5: US 17 & Martin Luther King Rd/Brown Ln

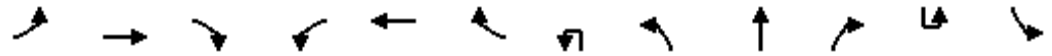
Existing 2019 - PM Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1479	126
Future Volume (vph)	1479	126
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		150
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		89
Link Speed (mph)	45	
Link Distance (ft)	6080	
Travel Time (s)	92.1	
Peak Hour Factor	0.96	0.96
Heavy Vehicles (%)	2%	2%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1541	131
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	2	
Permitted Phases		2
Detector Phase	2	2
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	35.0	35.0
Total Split (s)	59.0	59.0
Total Split (%)	49.2%	49.2%
Yellow Time (s)	5.2	5.2
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	7.2	7.2
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	C-Min	C-Min
Act Effct Green (s)	74.4	74.4
Actuated g/C Ratio	0.62	0.62
v/c Ratio	0.70	0.13
Control Delay	20.7	5.7
Queue Delay	0.0	0.0
Total Delay	20.7	5.7

Lanes, Volumes, Timings
5: US 17 & Martin Luther King Rd/Brown Ln

Existing 2019 - PM Peak

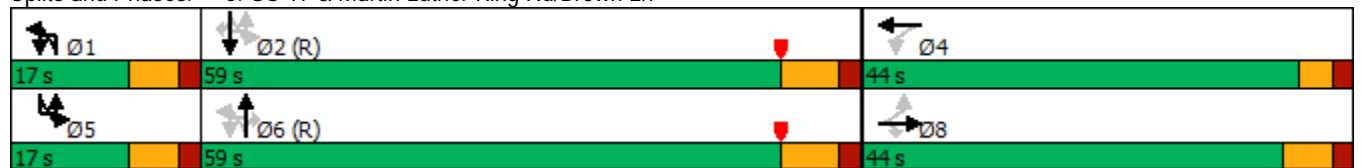


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS		E	A		A			A	A	A		A
Approach Delay		53.1			0.2				5.8			
Approach LOS		D			A				A			
Stops (vph)		133	0		0			3	430	0		3
Fuel Used(gal)		4	0		0			1	84	0		0
CO Emissions (g/hr)		271	11		1			102	5890	4		26
NOx Emissions (g/hr)		53	2		0			20	1146	1		5
VOC Emissions (g/hr)		63	2		0			24	1365	1		6
Dilemma Vehicles (#)		5	0		0			0	3	0		0
Queue Length 50th (ft)		141	0		0			2	59	0		2
Queue Length 95th (ft)		168	0		0			m4	#771	m0		8
Internal Link Dist (ft)		618			210				6853			
Turn Bay Length (ft)			150					175		175		200
Base Capacity (vph)		425	571		557			260	2363	1118		269
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		0.45	0.07		0.01			0.11	0.67	0.00		0.03

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 16 (13%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 15.4
 Intersection LOS: B
 Intersection Capacity Utilization 74.4%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: US 17 & Martin Luther King Rd/Brown Ln



Lanes, Volumes, Timings
 5: US 17 & Martin Luther King Rd/Brown Ln





















Existing 2019 - PM Peak



Lane Group	SBT	SBR
LOS	C	A
Approach Delay	19.5	
Approach LOS	B	
Stops (vph)	988	23
Fuel Used(gal)	77	5
CO Emissions (g/hr)	5375	378
NOx Emissions (g/hr)	1046	74
VOC Emissions (g/hr)	1246	88
Dilemma Vehicles (#)	61	0
Queue Length 50th (ft)	461	14
Queue Length 95th (ft)	658	50
Internal Link Dist (ft)	6000	
Turn Bay Length (ft)		150
Base Capacity (vph)	2192	1014
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.70	0.13
Intersection Summary		

Lanes, Volumes, Timings
6: US 17 & Driveway/Litchfield Dr

Existing 2019 - PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	2	13	97	0	105	12	1510	82	1	59	1523
Future Volume (vph)	10	2	13	97	0	105	12	1510	82	1	59	1523
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	0		175		200	
Storage Lanes	1		0	0		1	0		1		1	
Taper Length (ft)	100			100			100				100	
Satd. Flow (prot)	1805	1651	0	0	1787	1615	0	3506	1615	0	1805	3539
Flt Permitted	0.687				0.737			0.931			0.069	
Satd. Flow (perm)	1305	1651	0	0	1386	1615	0	3264	1615	0	131	3539
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)		25				137			85			
Link Speed (mph)		25			25			45				45
Link Distance (ft)		264			791			6080				400
Travel Time (s)		7.2			21.6			92.1				6.1
Peak Hour Factor	0.48	0.48	0.48	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	3%	0%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	31	0	0	109	118	0	1654	89	0	65	1655
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	R NA	Left	Left
Median Width(ft)		12			12			36				36
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Turn Type	Perm	NA		Perm	NA	Free	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases		4			8			2		1	1	6
Permitted Phases	4			8		Free	2		2	6	6	
Detector Phase	4	4		8	8		2	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		15.0	15.0	15.0	8.0	8.0	15.0
Minimum Split (s)	43.0	43.0		15.0	15.0		21.0	21.0	21.0	15.0	15.0	21.0
Total Split (s)	43.0	43.0		43.0	43.0		62.0	62.0	62.0	15.0	15.0	77.0
Total Split (%)	35.8%	35.8%		35.8%	35.8%		51.7%	51.7%	51.7%	12.5%	12.5%	64.2%
Yellow Time (s)	3.2	3.2		3.2	3.2		4.3	4.3	4.3	3.6	3.6	4.3
All-Red Time (s)	3.2	3.2		3.2	3.2		1.5	1.5	1.5	2.3	2.3	1.5
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	6.4	6.4			6.4			5.8	5.8		5.9	5.8
Lead/Lag							Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		Min	Min	Min	None	None	Min
Act Effect Green (s)	12.8	12.8		12.8	95.4		59.4	59.4	59.4		70.3	70.4
Actuated g/C Ratio	0.13	0.13		0.13	1.00		0.62	0.62	0.62		0.74	0.74
v/c Ratio	0.12	0.13		0.59	0.07		0.81	0.09	0.09		0.27	0.63
Control Delay	37.0	17.6		51.6	0.1		20.1	2.7	2.7		7.0	8.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	37.0	17.6		51.6	0.1		20.1	2.7	2.7		7.0	8.0

Lanes, Volumes, Timings
 6: US 17 & Driveway/Litchfield Dr

Existing 2019 - PM Peak

Lane Group	SBR
Lane Configurations	7
Traffic Volume (vph)	9
Future Volume (vph)	9
Ideal Flow (vphpl)	1900
Storage Length (ft)	75
Storage Lanes	1
Taper Length (ft)	
Satd. Flow (prot)	1455
Flt Permitted	
Satd. Flow (perm)	1455
Right Turn on Red	Yes
Satd. Flow (RTOR)	31
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.92
Heavy Vehicles (%)	11%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	10
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	21.0
Total Split (s)	77.0
Total Split (%)	64.2%
Yellow Time (s)	4.3
All-Red Time (s)	1.5
Lost Time Adjust (s)	0.0
Total Lost Time (s)	5.8
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	Min
Act Effct Green (s)	70.4
Actuated g/C Ratio	0.74
v/c Ratio	0.01
Control Delay	0.2
Queue Delay	0.0
Total Delay	0.2

Lanes, Volumes, Timings
 6: US 17 & Driveway/Litchfield Dr

Existing 2019 - PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
LOS	D	B			D	A		C	A		A	A
Approach Delay		25.4			24.8			19.2				7.9
Approach LOS		C			C			B				A
Stops (vph)	10	6			88	0		1101	9		17	700
Fuel Used(gal)	0	0			2	1		80	3		0	15
CO Emissions (g/hr)	10	8			141	50		5592	237		32	1059
NOx Emissions (g/hr)	2	2			27	10		1088	46		6	206
VOC Emissions (g/hr)	2	2			33	11		1296	55		7	245
Dilemma Vehicles (#)	0	0			0	0		78	0		0	66
Queue Length 50th (ft)	11	3			63	0		402	1		9	215
Queue Length 95th (ft)	17	9			116	0		#621	22		24	348
Internal Link Dist (ft)		184			711			6000				320
Turn Bay Length (ft)						200			175		200	
Base Capacity (vph)	501	649			532	1615		2031	1037		256	2643
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	0.04	0.05			0.20	0.07		0.81	0.09		0.25	0.63

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 95.4
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 14.5
 Intersection LOS: B
 Intersection Capacity Utilization 76.3%
 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: 6: US 17 & Driveway/Litchfield Dr





Lane Group	SBR
LOS	A
Approach Delay	
Approach LOS	
Stops (vph)	0
Fuel Used(gal)	0
CO Emissions (g/hr)	2
NOx Emissions (g/hr)	0
VOC Emissions (g/hr)	0
Dilemma Vehicles (#)	0
Queue Length 50th (ft)	0
Queue Length 95th (ft)	1
Internal Link Dist (ft)	
Turn Bay Length (ft)	75
Base Capacity (vph)	1094
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.01
Intersection Summary	

Intersection								
Int Delay, s/veh	5							
Movement	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations	↖	↗		↘ ↗ ↘	↑↑↑		↖ ↗	↗
Traffic Vol, veh/h	33	32	1	31	1597	1	1559	49
Future Vol, veh/h	33	32	1	31	1597	1	1559	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	-	None
Storage Length	0	25	-	50	-	-	-	100
Veh in Median Storage, #	0	-	-	-	0	-	0	-
Grade, %	0	-	-	-	0	-	0	-
Peak Hour Factor	86	86	95	95	95	93	93	93
Heavy Vehicles, %	0	3	0	0	3	0	2	2
Mvmt Flow	38	37	1	33	1681	1	1676	53

Major/Minor	Minor2	Major1			Major2			
Conflicting Flow All	2418	838	1676	1729	0	1227	-	0
Stage 1	1678	-	-	-	-	-	-	-
Stage 2	740	-	-	-	-	-	-	-
Critical Hdwy	6.25	6.96	6.4	4.1	-	5.6	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-	-	-
Follow-up Hdwy	3.65	3.33	2.5	2.2	-	2.3	-	-
Pot Cap-1 Maneuver	40	307	124	370	-	335	-	-
Stage 1	137	-	-	-	-	-	-	-
Stage 2	408	-	-	-	-	-	-	-
Platoon blocked, %					-	-	-	-
Mov Cap-1 Maneuver	~ 33	307	345	345	-	335	-	-
Mov Cap-2 Maneuver	~ 33	-	-	-	-	-	-	-
Stage 1	123	-	-	-	-	-	-	-
Stage 2	372	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	208.2	0.3	0.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	345	-	33	307	-	-
HCM Lane V/C Ratio	0.098	-	1.163	0.121	-	-
HCM Control Delay (s)	16.6	-	392.4	18.3	0.7	-
HCM Lane LOS	C	-	F	C	A	-
HCM 95th %tile Q(veh)	0.3	-	4.1	0.4	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
8: US 17 & Willbrook Blvd/Retreat Beach Cir

Existing 2019 - PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	219	53	145	78	54	55	166	1388	36	1	31	1312
Future Volume (vph)	219	53	145	78	54	55	166	1388	36	1	31	1312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	325		300		325	
Storage Lanes	1		0	1		1	1		1		1	
Taper Length (ft)	100			100			100				100	
Satd. Flow (prot)	1787	1655	0	1787	1900	1583	1787	3539	1568	0	1805	3539
Flt Permitted	0.453			0.581			0.084				0.087	
Satd. Flow (perm)	852	1655	0	1093	1900	1583	158	3539	1568	0	165	3539
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)		112				196			138			
Link Speed (mph)		35			25			45				45
Link Distance (ft)		910			323			939				433
Travel Time (s)		17.7			8.8			14.2				6.6
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.97	0.97	0.97	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	3%	1%	0%	2%	1%	2%	3%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	241	217	0	83	57	59	171	1431	37	0	34	1396
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	R NA	Left	Left
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Turn Type	pm+pt	NA		pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	1	6
Permitted Phases	4			8		Free	2		2	6	6	
Detector Phase	7	4		3	8		5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	20.0	20.0	6.0	6.0	20.0
Minimum Split (s)	15.0	38.0		15.0	15.0		15.0	27.0	27.0	15.0	15.0	27.0
Total Split (s)	18.0	38.0		15.0	35.0		15.0	52.0	52.0	15.0	15.0	52.0
Total Split (%)	15.0%	31.7%		12.5%	29.2%		12.5%	43.3%	43.3%	12.5%	12.5%	43.3%
Yellow Time (s)	3.6	3.6		3.6	3.6		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	2.3	2.3		2.3	2.3		2.1	2.1	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.9	5.9		5.9	5.9		6.4	6.4	6.4		6.4	6.4
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	Min	Min	Min	Min	Max
Act Effect Green (s)	23.6	14.3		17.8	10.9	99.1	56.4	47.7	47.7		52.7	45.9
Actuated g/C Ratio	0.24	0.14		0.18	0.11	1.00	0.57	0.48	0.48		0.53	0.46
v/c Ratio	0.76	0.65		0.32	0.27	0.04	0.74	0.84	0.04		0.17	0.85
Control Delay	47.4	29.8		31.2	44.7	0.0	40.0	29.7	0.1		11.8	31.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	47.4	29.8		31.2	44.7	0.0	40.0	29.7	0.1		11.8	31.4

Lanes, Volumes, Timings
 8: US 17 & Willbrook Blvd/Retreat Beach Cir

Existing 2019 - PM Peak

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	201
Future Volume (vph)	201
Ideal Flow (vphpl)	1900
Storage Length (ft)	225
Storage Lanes	1
Taper Length (ft)	
Satd. Flow (prot)	1599
Flt Permitted	
Satd. Flow (perm)	1599
Right Turn on Red	Yes
Satd. Flow (RTOR)	196
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Heavy Vehicles (%)	1%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	214
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Turn Type	Free
Protected Phases	
Permitted Phases	Free
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Act Effct Green (s)	99.1
Actuated g/C Ratio	1.00
v/c Ratio	0.13
Control Delay	0.2
Queue Delay	0.0
Total Delay	0.2

Lanes, Volumes, Timings
 8: US 17 & Willbrook Blvd/Retreat Beach Cir

Existing 2019 - PM Peak



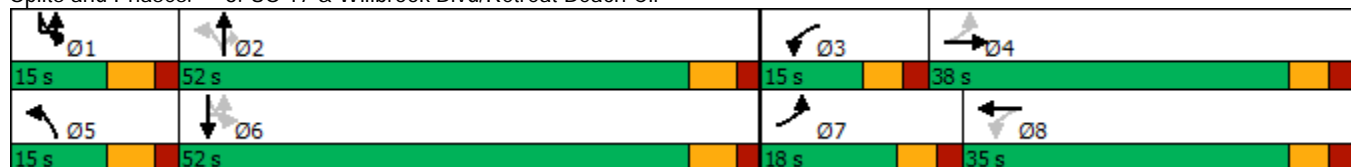
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
LOS	D	C		C	D	A	D	C	A		B	C
Approach Delay		39.1			25.8			30.1				26.9
Approach LOS		D			C			C				C
Stops (vph)	186	92		59	47	0	83	1114	0		15	1076
Fuel Used(gal)	5	3		1	1	0	7	65	1		1	48
CO Emissions (g/hr)	346	222		65	57	11	522	4524	77		64	3387
NOx Emissions (g/hr)	67	43		13	11	2	101	880	15		12	659
VOC Emissions (g/hr)	80	52		15	13	2	121	1049	18		15	785
Dilemma Vehicles (#)	0	7		0	0	0	0	54	0		0	64
Queue Length 50th (ft)	129	64		40	35	0	55	413	0		8	412
Queue Length 95th (ft)	202	142		78	73	0	#183	#648	0		24	#629
Internal Link Dist (ft)		830			243			859				353
Turn Bay Length (ft)						100	325		300		325	
Base Capacity (vph)	318	615		264	561	1583	232	1704	826		234	1638
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.76	0.35		0.31	0.10	0.04	0.74	0.84	0.04		0.15	0.85

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 99.1
 Natural Cycle: 115
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 29.6
 Intersection LOS: C
 Intersection Capacity Utilization 84.8%
 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: US 17 & Willbrook Blvd/Retreat Beach Cir






















Lane Group	SBR
LOS	A
Approach Delay	
Approach LOS	
Stops (vph)	0
Fuel Used(gal)	4
CO Emissions (g/hr)	286
NOx Emissions (g/hr)	56
VOC Emissions (g/hr)	66
Dilemma Vehicles (#)	0
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0
Internal Link Dist (ft)	
Turn Bay Length (ft)	225
Base Capacity (vph)	1599
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.13
Intersection Summary	

Lanes, Volumes, Timings
9: US 17 & N Boyle Rd

Existing 2019 - PM Peak

								
Lane Group	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations				 			 	 
Traffic Volume (vph)	86	35	4	1625	82	7	23	1439
Future Volume (vph)	86	35	4	1625	82	7	23	1439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	0		300		200	
Storage Lanes	1	1	0		1		1	
Taper Length (ft)	100		100				100	
Satd. Flow (prot)	1805	1568	0	3610	1583	0	1777	3610
Flt Permitted	0.950			0.952			0.073	
Satd. Flow (perm)	1805	1568	0	3437	1583	0	137	3610
Right Turn on Red		Yes			Yes			
Satd. Flow (RTOR)		36			88			
Link Speed (mph)	25			45				45
Link Distance (ft)	607			2702				2343
Travel Time (s)	16.6			40.9				35.5
Peak Hour Factor	0.98	0.98	0.93	0.93	0.93	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	2%	0%	2%	0%
Shared Lane Traffic (%)								
Lane Group Flow (vph)	88	36	0	1751	88	0	31	1531
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	R NA	Left	Right	R NA	Left	Left
Median Width(ft)	12			24				24
Link Offset(ft)	0			0				0
Crosswalk Width(ft)	16			16				16
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9		9	9	15	
Turn Type	Prot	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases	8			2		1	1	6
Permitted Phases		8	2		2	6	6	
Detector Phase	8	8	2	2	2	1	1	6
Switch Phase								
Minimum Initial (s)	8.0	8.0	24.0	24.0	24.0	6.0	6.0	24.0
Minimum Split (s)	15.0	15.0	30.0	30.0	30.0	15.0	15.0	30.0
Total Split (s)	15.0	15.0	60.0	60.0	60.0	15.0	15.0	75.0
Total Split (%)	16.7%	16.7%	66.7%	66.7%	66.7%	16.7%	16.7%	83.3%
Yellow Time (s)	3.0	3.0	4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	3.3	3.3	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	6.3	6.3		5.7	5.7		5.7	5.7
Lead/Lag			Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?								
Recall Mode	None	None	Min	Min	Min	None	None	Min
Act Effect Green (s)	9.0	9.0		50.8	50.8		54.9	56.7
Actuated g/C Ratio	0.12	0.12		0.70	0.70		0.76	0.79
v/c Ratio	0.39	0.16		0.72	0.08		0.12	0.54
Control Delay	41.1	14.8		12.5	1.8		3.6	4.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	41.1	14.8		12.5	1.8		3.6	4.9

Lanes, Volumes, Timings
9: US 17 & N Boyle Rd

Existing 2019 - PM Peak



Lane Group	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
LOS	D	B		B	A		A	A
Approach Delay	33.4			12.0				4.9
Approach LOS	C			B				A
Stops (vph)	75	13		1003	7		6	494
Fuel Used(gal)	1	0		50	2		1	29
CO Emissions (g/hr)	101	23		3477	125		38	2060
NOx Emissions (g/hr)	20	5		677	24		7	401
VOC Emissions (g/hr)	24	5		806	29		9	478
Dilemma Vehicles (#)	0	0		84	0		0	64
Queue Length 50th (ft)	46	0		344	0		3	143
Queue Length 95th (ft)	93	28		455	16		9	182
Internal Link Dist (ft)	527			2622				2263
Turn Bay Length (ft)	75				300		200	
Base Capacity (vph)	235	235		2645	1239		332	3172
Starvation Cap Reductn	0	0		0	0		0	0
Spillback Cap Reductn	0	0		0	0		0	0
Storage Cap Reductn	0	0		0	0		0	0
Reduced v/c Ratio	0.37	0.15		0.66	0.07		0.09	0.48

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 72.2
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 9.6
 Intersection LOS: A
 Intersection Capacity Utilization 69.3%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 9: US 17 & N Boyle Rd



Intersection													
Int Delay, s/veh	18.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↕↗			↕	↕↗	↗
Traffic Vol, veh/h	33	1	4	5	1	30	4	1668	10	3	27	1438	70
Future Vol, veh/h	33	1	4	5	1	30	4	1668	10	3	27	1438	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	-	None
Storage Length	300	-	0	-	-	-	250	-	-	-	250	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0	-
Peak Hour Factor	95	95	95	90	90	90	96	96	96	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	13	0	2	0	0	0	2	0
Mvmt Flow	35	1	4	6	1	33	4	1738	10	3	28	1482	72

Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	2422	3300	741	2555	3367	874	1554	0	0	1748	1748	0	0
Stage 1	1544	1544	-	1751	1751	-	-	-	-	-	-	-	-
Stage 2	878	1756	-	804	1616	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	7.16	4.1	-	-	6.4	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.43	2.2	-	-	2.5	2.2	-	-
Pot Cap-1 Maneuver	~ 17	9	363	14	8	272	432	-	-	111	364	-	-
Stage 1	122	178	-	91	141	-	-	-	-	-	-	-	-
Stage 2	313	140	-	347	164	-	-	-	-	-	-	-	-
Platoon blocked, %								-	-			-	-
Mov Cap-1 Maneuver	~ 12	8	363	11	7	272	432	-	-	287	287	-	-
Mov Cap-2 Maneuver	~ 12	8	-	11	7	-	-	-	-	-	-	-	-
Stage 1	121	159	-	90	140	-	-	-	-	-	-	-	-
Stage 2	270	139	-	304	146	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, \$	1367.6		192.2		0		0.4	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	432	-	-	12	363	51	287	-	-
HCM Lane V/C Ratio	0.01	-	-	2.982	0.012	0.784	0.108	-	-
HCM Control Delay (s)	13.4	-	-	\$ 1526.7	15	192.2	19	-	-
HCM Lane LOS	B	-	-	F	C	F	C	-	-
HCM 95th %tile Q(veh)	0	-	-	5.4	0	3.2	0.4	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection							
Int Delay, s/veh	7.7						
Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations	Y			X	↑↑	↑↑	↑
Traffic Vol, veh/h	16	21	3	31	1875	1483	20
Future Vol, veh/h	16	21	3	31	1875	1483	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	325	-	-	500
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	71	71	89	89	89	93	93
Heavy Vehicles, %	0	0	0	7	2	2	0
Mvmt Flow	23	30	3	35	2107	1595	22

Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	2725	798	1595	1617	0	-	0
Stage 1	1595	-	-	-	-	-	-
Stage 2	1130	-	-	-	-	-	-
Critical Hdwy	6.8	6.9	6.4	4.24	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.5	2.27	-	-	-
Pot Cap-1 Maneuver	~ 17	333	140	377	-	-	-
Stage 1	155	-	-	-	-	-	-
Stage 2	274	-	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	~ 15	333	323	323	-	-	-
Mov Cap-2 Maneuver	~ 15	-	-	-	-	-	-
Stage 1	137	-	-	-	-	-	-
Stage 2	274	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	551.8	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	323	-	33	-	-
HCM Lane V/C Ratio	0.118	-	1.579	-	-
HCM Control Delay (s)	17.6	-	551.8	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.4	-	5.8	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑			↑↑				
Traffic Vol, veh/h	0	0	0	0	107	9	0	1654	0	0	0	0
Future Vol, veh/h	0	0	0	0	107	9	0	1654	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16979	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	76	76	76	90	90	90	98	98	98
Heavy Vehicles, %	2	2	2	0	3	0	2	3	2	2	2	2
Mvmt Flow	0	0	0	0	141	12	0	1838	0	0	0	0

Major/Minor	Minor1	Major1			
Conflicting Flow All	-	1838	919	-	0
Stage 1	-	1838	-	-	-
Stage 2	-	0	-	-	-
Critical Hdwy	-	6.56	6.9	-	-
Critical Hdwy Stg 1	-	5.56	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	4.03	3.3	-	-
Pot Cap-1 Maneuver	0	~ 74	277	0	-
Stage 1	0	~ 123	-	0	-
Stage 2	0	-	-	0	-
Platoon blocked, %					-
Mov Cap-1 Maneuver	-	0	277	-	-
Mov Cap-2 Maneuver	-	0	-	-	-
Stage 1	-	0	-	-	-
Stage 2	-	0	-	-	-

Approach	WB	NB
HCM Control Delay, s	6.1	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBTWBLn1
Capacity (veh/h)	- 3570
HCM Lane V/C Ratio	- 0.043
HCM Control Delay (s)	- 6.1
HCM Lane LOS	- A
HCM 95th %tile Q(veh)	- 0.1

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection														
Int Delay, s/veh	0.5													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↑↑	↗		↕	↑↑	↗
Traffic Vol, veh/h	24	7	25	11	12	20	2	27	1652	19	13	30	1385	15
Future Vol, veh/h	24	7	25	11	12	20	2	27	1652	19	13	30	1385	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	275	-	250	-	200	-	250
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	82	82	82	57	57	57	92	92	92	92	97	97	97	97
Heavy Vehicles, %	1	0	1	0	0	0	0	19	3	5	0	3	2	0
Mvmt Flow	29	9	30	19	21	35	2	29	1796	21	13	31	1428	15

Major/Minor	Minor2		Minor1		Major1			Major2						
Conflicting Flow All	2487	3395	714	2665	3389	898	1428	1443	0	0	1796	1817	0	0
Stage 1	1516	1516	-	1858	1858	-	-	-	-	-	-	-	-	-
Stage 2	971	1879	-	807	1531	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.5	6.92	7.5	6.5	6.9	6.4	4.48	-	-	6.4	4.16	-	-
Critical Hdwy Stg 1	6.52	5.5	-	6.5	5.5	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.5	-	6.5	5.5	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4	3.31	3.5	4	3.3	2.5	2.39	-	-	2.5	2.23	-	-
Pot Cap-1 Maneuver	~ 15	~ 8	376	~ 11	~ 8	286	179	389	-	-	103	329	-	-
Stage 1	126	184	-	78	125	-	-	-	-	-	-	-	-	-
Stage 2	273	122	-	346	181	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	-	~ 6	376	-	~ 6	286	356	356	-	-	190	190	-	-
Mov Cap-2 Maneuver	-	~ 6	-	-	~ 6	-	-	-	-	-	-	-	-	-
Stage 1	115	141	-	71	114	-	-	-	-	-	-	-	-	-
Stage 2	178	111	-	229	139	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB			
HCM Control Delay, s					0.3			0.9			
HCM LOS	-				-						

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	356	-	-	-	190	-	-
HCM Lane V/C Ratio	0.089	-	-	-	0.233	-	-
HCM Control Delay (s)	16.1	-	-	-	29.7	-	-
HCM Lane LOS	C	-	-	-	D	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-	0.9	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection							
Int Delay, s/veh	27.2						
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations	T		T		T		
Traffic Vol, veh/h	35	8	8	1792	1	1473	48
Future Vol, veh/h	35	8	8	1792	1	1473	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	57	57	94	94	96	96	96
Heavy Vehicles, %	0	0	0	3	0	2	2
Mvmt Flow	61	14	9	1906	1	1534	50

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2532	792	1584	0	1906	- 0
Stage 1	1561	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	6.4	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	2.5	-
Pot Cap-1 Maneuver	~ 23	336	421	-	88	-
Stage 1	162	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 21	336	421	-	88	-
Mov Cap-2 Maneuver	~ 21	-	-	-	-	-
Stage 1	162	-	-	-	-	-
Stage 2	300	-	-	-	-	-





















Approach	EB	NB	SB
HCM Control Delay, \$	1236.7	0.1	2.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	421	-	25	-	-
HCM Lane V/C Ratio	0.02	-	3.018	-	-
HCM Control Delay (s)	13.7	\$	1236.7	2.3	-
HCM Lane LOS	B	A	F	A	-
HCM 95th %tile Q(veh)	0.1	-	9.3	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon





















Lanes, Volumes, Timings
15: US 17 & Wachesaw Rd

Existing 2019 - PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	96	80	120	46	54	60	1	137	1578	80	3	32
Future Volume (vph)	96	80	120	46	54	60	1	137	1578	80	3	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0		225		250		200
Storage Lanes	1		0	1		0		1		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	1770	1715	0	1805	1723	0	0	1787	3505	1599	0	1805
Flt Permitted	0.678			0.372				0.106				0.085
Satd. Flow (perm)	1263	1715	0	707	1723	0	0	199	3505	1599	0	162
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		62			46					76		
Link Speed (mph)		35			30				45			
Link Distance (ft)		703			621				601			
Travel Time (s)		13.7			14.1				9.1			
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.95	0.95	0.95	0.95	0.97	0.97
Heavy Vehicles (%)	2%	2%	0%	0%	0%	3%	0%	1%	3%	1%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	233	0	49	123	0	0	145	1661	84	0	36
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				24			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2		1	2		1	1	2	1	1	1
Detector Template	Left	Thru		Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100		20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA		Perm	NA		pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases		4			8		5	5	2		1	1
Permitted Phases	4			8			2	2		2	6	6
Detector Phase	4	4		8	8		5	5	2	2	1	1
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0	15.0	15.0	8.0	8.0

Lanes, Volumes, Timings
15: US 17 & Wachesaw Rd

Existing 2019 - PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	96	80	120	46	54	60	1	137	1578	80	3	32
Future Volume (vph)	96	80	120	46	54	60	1	137	1578	80	3	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0		225		250		200
Storage Lanes	1		0	1		0		1		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	1770	1715	0	1805	1723	0	0	1787	3505	1599	0	1805
Flt Permitted	0.678			0.372				0.106				0.085
Satd. Flow (perm)	1263	1715	0	707	1723	0	0	199	3505	1599	0	162
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		62			46					76		
Link Speed (mph)		35			30				45			
Link Distance (ft)		703			621				601			
Travel Time (s)		13.7			14.1				9.1			
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.95	0.95	0.95	0.95	0.97	0.97
Heavy Vehicles (%)	2%	2%	0%	0%	0%	3%	0%	1%	3%	1%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	233	0	49	123	0	0	145	1661	84	0	36
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				24			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	Perm	NA		Perm	NA		pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases		4			8		5	5	2		1	1
Permitted Phases	4			8			2	2		2	6	6
Detector Phase	4	4		8	8		5	5	2	2	1	1
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0	15.0	15.0	8.0	8.0
Minimum Split (s)	49.0	49.0		49.0	49.0		15.0	15.0	22.0	22.0	15.0	15.0
Total Split (s)	49.0	49.0		49.0	49.0		15.0	15.0	66.0	66.0	15.0	15.0
Total Split (%)	37.7%	37.7%		37.7%	37.7%		11.5%	11.5%	50.8%	50.8%	11.5%	11.5%
Yellow Time (s)	3.6	3.6		3.6	3.6		3.2	3.2	4.3	4.3	3.2	3.2
All-Red Time (s)	3.2	3.2		3.2	3.2		2.0	2.0	1.7	1.7	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Lost Time (s)	6.8	6.8		6.8	6.8			5.2	6.0	6.0		5.2
Lead/Lag							Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None	Max	Max	None	None
Act Effect Green (s)	16.6	16.6		16.6	16.6			73.5	67.1	67.1		69.0
Actuated g/C Ratio	0.16	0.16		0.16	0.16			0.71	0.64	0.64		0.66
v/c Ratio	0.56	0.72		0.44	0.39			0.51	0.74	0.08		0.15
Control Delay	51.1	42.9		51.7	28.1			14.8	17.7	3.3		6.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Delay	51.1	42.9		51.7	28.1			14.8	17.7	3.3		6.9

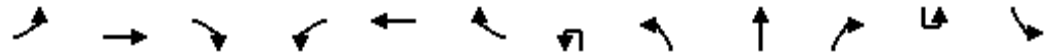
Lanes, Volumes, Timings
15: US 17 & Wachesaw Rd

Existing 2019 - PM Peak

Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1372	69
Future Volume (vph)	1372	69
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		500
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3574	1615
Flt Permitted		
Satd. Flow (perm)	3574	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		76
Link Speed (mph)	45	
Link Distance (ft)	2571	
Travel Time (s)	39.0	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	1%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1414	71
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	24	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	22.0	22.0
Total Split (s)	66.0	66.0
Total Split (%)	50.8%	50.8%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.7	1.7
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?		
Recall Mode	Max	Max
Act Effct Green (s)	60.2	60.2
Actuated g/C Ratio	0.58	0.58
v/c Ratio	0.68	0.07
Control Delay	18.4	2.8
Queue Delay	0.0	0.0
Total Delay	18.4	2.8

Lanes, Volumes, Timings
15: US 17 & Wachesaw Rd

Existing 2019 - PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS	D	D		D	C			B	B	A		A
Approach Delay		45.6			34.8			16.8				
Approach LOS		D			C			B				
Stops (vph)	85	136		41	61			46	1052	10		12
Fuel Used(gal)	2	4		1	2			2	25	0		1
CO Emissions (g/hr)	149	265		65	108			107	1742	34		55
NOx Emissions (g/hr)	29	51		13	21			21	339	7		11
VOC Emissions (g/hr)	34	61		15	25			25	404	8		13
Dilemma Vehicles (#)	0	7		0	0			0	60	0		0
Queue Length 50th (ft)	70	110		30	46			25	420	2		6
Queue Length 95th (ft)	120	179		69	99			79	632	25		19
Internal Link Dist (ft)		623			541				521			
Turn Bay Length (ft)	150			150				225		250		200
Base Capacity (vph)	513	733		287	727			290	2257	1057		265
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	0.22	0.32		0.17	0.17			0.50	0.74	0.08		0.14

Intersection Summary

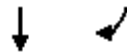
Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	104.1
Natural Cycle:	130
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	20.4
Intersection LOS:	C
Intersection Capacity Utilization:	89.2%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 15: US 17 & Wachesaw Rd



Lanes, Volumes, Timings
 15: US 17 & Wachesaw Rd





















Existing 2019 - PM Peak



Lane Group	SBT	SBR
LOS	B	A
Approach Delay	17.4	
Approach LOS	B	
Stops (vph)	925	7
Fuel Used(gal)	40	1
CO Emissions (g/hr)	2764	89
NOx Emissions (g/hr)	538	17
VOC Emissions (g/hr)	641	21
Dilemma Vehicles (#)	65	0
Queue Length 50th (ft)	326	0
Queue Length 95th (ft)	487	20
Internal Link Dist (ft)	2491	
Turn Bay Length (ft)		500
Base Capacity (vph)	2065	965
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.68	0.07
Intersection Summary		

Lanes, Volumes, Timings
16: US 17 & Bellamy Ave

Existing 2019 - PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	108	45	48	21	50	43	3	39	1626	41	3	57
Future Volume (vph)	108	45	48	21	50	43	3	39	1626	41	3	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		0		250		300		250
Storage Lanes	1		0	1		0		1		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	1752	1752	0	1805	1732	0	0	1725	3539	1583	0	1805
Flt Permitted	0.596			0.570				0.112				0.081
Satd. Flow (perm)	1099	1752	0	1083	1732	0	0	203	3539	1583	0	154
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		30			24					105		
Link Speed (mph)		35			35				45			
Link Distance (ft)		700			738				2571			
Travel Time (s)		13.6			14.4				39.0			
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97
Heavy Vehicles (%)	3%	0%	0%	0%	2%	2%	0%	5%	2%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	102	0	23	101	0	0	45	1767	45	0	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				24			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	7	4		3	8		5	5	2		1	1
Permitted Phases	4			8			2	2		2	6	6
Detector Phase	7	4		3	8		5	5	2	2	1	1
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	6.0	18.0	18.0	6.0	6.0
Minimum Split (s)	15.0	36.0		15.0	36.0		15.0	15.0	24.0	24.0	15.0	15.0
Total Split (s)	15.0	36.0		15.0	36.0		15.0	15.0	94.0	94.0	15.0	15.0
Total Split (%)	9.4%	22.5%		9.4%	22.5%		9.4%	9.4%	58.8%	58.8%	9.4%	9.4%
Yellow Time (s)	3.6	3.6		3.6	3.6		3.2	3.2	4.3	4.3	3.2	3.2
All-Red Time (s)	2.7	2.7		2.7	2.7		2.3	2.3	1.5	1.5	2.3	2.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.5	5.8	5.8		5.5
Lead/Lag	Lag	Lead		Lag	Lead		Lead	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	None	C-Min	C-Min	None	None
Act Effect Green (s)	23.0	17.7		20.9	12.8			111.0	110.7	110.7		112.0
Actuated g/C Ratio	0.14	0.11		0.13	0.08			0.69	0.69	0.69		0.70
v/c Ratio	0.63	0.46		0.13	0.63			0.22	0.72	0.04		0.35
Control Delay	76.9	55.0		55.8	70.7			12.3	19.1	0.1		11.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Delay	76.9	55.0		55.8	70.7			12.3	19.1	0.1		11.9

Lanes, Volumes, Timings
16: US 17 & Bellamy Ave

Existing 2019 - PM Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1411	56
Future Volume (vph)	1411	56
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		300
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3539	1615
Flt Permitted		
Satd. Flow (perm)	3539	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		103
Link Speed (mph)	45	
Link Distance (ft)	1323	
Travel Time (s)	20.0	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	2%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1455	58
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	24	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	18.0	18.0
Minimum Split (s)	24.0	24.0
Total Split (s)	94.0	94.0
Total Split (%)	58.8%	58.8%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.8	5.8
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	C-Min	C-Min
Act Effct Green (s)	110.5	110.5
Actuated g/C Ratio	0.69	0.69
v/c Ratio	0.60	0.05
Control Delay	3.4	0.1
Queue Delay	0.0	0.0
Total Delay	3.4	0.1

Lanes, Volumes, Timings
16: US 17 & Bellamy Ave

Existing 2019 - PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS	E	E		E	E			B	B	A		B
Approach Delay		66.8			68.0			18.5				
Approach LOS		E			E			B				
Stops (vph)	107	62		18	67			15	999	0		9
Fuel Used(gal)	3	2		0	2			1	46	1		1
CO Emissions (g/hr)	213	138		34	163			68	3207	48		54
NOx Emissions (g/hr)	41	27		7	32			13	624	9		11
VOC Emissions (g/hr)	49	32		8	38			16	743	11		13
Dilemma Vehicles (#)	0	2		0	2			0	51	0		0
Queue Length 50th (ft)	113	74		21	79			14	573	0		6
Queue Length 95th (ft)	170	138		46	141			35	824	0		m17
Internal Link Dist (ft)		620			658				2491			
Turn Bay Length (ft)	200			150				250		300		250
Base Capacity (vph)	202	349		190	341			231	2448	1127		208
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	0.59	0.29		0.12	0.30			0.19	0.72	0.04		0.30

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 4 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 16.7
 Intersection LOS: B
 Intersection Capacity Utilization 72.6%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: US 17 & Bellamy Ave



Lanes, Volumes, Timings
 16: US 17 & Bellamy Ave






















Existing 2019 - PM Peak



Lane Group	SBT	SBR
LOS	A	A
Approach Delay	3.7	
Approach LOS	A	
Stops (vph)	170	0
Fuel Used(gal)	15	0
CO Emissions (g/hr)	1064	34
NOx Emissions (g/hr)	207	7
VOC Emissions (g/hr)	247	8
Dilemma Vehicles (#)	36	0
Queue Length 50th (ft)	76	0
Queue Length 95th (ft)	47	m0
Internal Link Dist (ft)	1243	
Turn Bay Length (ft)		300
Base Capacity (vph)	2445	1147
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.60	0.05
Intersection Summary		

Lanes, Volumes, Timings
17: US 17 & Riverwood Dr

Existing 2019 - PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	144	9	49	19	15	8	7	48	1793	5	2	8
Future Volume (vph)	144	9	49	19	15	8	7	48	1793	5	2	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		50	100		0		200		300		200
Storage Lanes	1		0	1		1		1		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	1805	1607	0	1805	1776	1615	0	1805	3539	1346	0	1805
Flt Permitted	0.742			0.712				0.117				0.050
Satd. Flow (perm)	1410	1607	0	1353	1776	1615	0	222	3539	1346	0	95
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		58				100				60		
Link Speed (mph)		30			30				45			
Link Distance (ft)		502			435				1323			
Travel Time (s)		11.4			9.9				20.0			
Peak Hour Factor	0.84	0.84	0.84	0.62	0.62	0.62	0.93	0.93	0.93	0.93	0.98	0.98
Heavy Vehicles (%)	0%	0%	4%	0%	7%	0%	0%	0%	2%	20%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	171	69	0	31	24	13	0	60	1928	5	0	10
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				36			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases		4			8		5	5	2		1	1
Permitted Phases	4			8		8	2	2		2	6	6
Detector Phase	4	4		8	8	8	5	5	2	2	1	1
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	6.0	18.0	18.0	6.0	6.0
Minimum Split (s)	37.0	37.0		39.0	39.0	39.0	15.0	15.0	25.0	25.0	15.0	15.0
Total Split (s)	39.0	39.0		39.0	39.0	39.0	15.0	15.0	106.0	106.0	15.0	15.0
Total Split (%)	24.4%	24.4%		24.4%	24.4%	24.4%	9.4%	9.4%	66.3%	66.3%	9.4%	9.4%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.2	3.2	4.3	4.3	3.2	3.2
All-Red Time (s)	2.7	2.7		2.7	2.7	2.7	2.3	2.3	1.8	1.8	2.3	2.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)	6.3	6.3		6.3	6.3	6.3		5.5	6.1	6.1		5.5
Lead/Lag							Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	C-Min	C-Min	None	None
Act Effect Green (s)	24.8	24.8		24.8	24.8	24.8		118.5	117.9	117.9		111.4
Actuated g/C Ratio	0.16	0.16		0.16	0.16	0.16		0.74	0.74	0.74		0.70
v/c Ratio	0.78	0.23		0.15	0.09	0.04		0.24	0.74	0.00		0.08
Control Delay	88.2	18.2		57.2	55.4	0.2		5.0	5.8	0.0		11.9
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	88.2	18.2		57.2	55.4	0.2		5.0	5.8	0.0		11.9

Lanes, Volumes, Timings
17: US 17 & Riverwood Dr

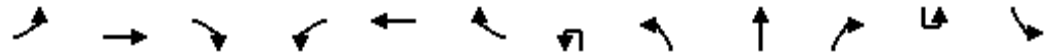
Existing 2019 - PM Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1528	60
Future Volume (vph)	1528	60
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		400
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3539	1615
Flt Permitted		
Satd. Flow (perm)	3539	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		64
Link Speed (mph)	45	
Link Distance (ft)	646	
Travel Time (s)	9.8	
Peak Hour Factor	0.98	0.98
Heavy Vehicles (%)	2%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1559	61
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	36	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	18.0	18.0
Minimum Split (s)	25.0	25.0
Total Split (s)	106.0	106.0
Total Split (%)	66.3%	66.3%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.8	1.8
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.1	6.1
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	C-Min	C-Min
Act Effct Green (s)	110.8	110.8
Actuated g/C Ratio	0.69	0.69
v/c Ratio	0.64	0.05
Control Delay	17.0	2.4
Queue Delay	0.0	0.0
Total Delay	17.0	2.4

Lanes, Volumes, Timings
17: US 17 & Riverwood Dr

Existing 2019 - PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS	F	B		E	E	A		A	A	A		B
Approach Delay		68.1			45.7				5.7			
Approach LOS		E			D				A			
Stops (vph)	136	14		16	13	0		7	497	0		4
Fuel Used(gal)	4	1		0	0	0		1	24	0		0
CO Emissions (g/hr)	307	50		26	20	2		44	1656	3		8
NOx Emissions (g/hr)	60	10		5	4	0		8	322	1		2
VOC Emissions (g/hr)	71	12		6	5	0		10	384	1		2
Dilemma Vehicles (#)	0	0		0	0	0		0	52	0		0
Queue Length 50th (ft)	174	10		28	22	0		6	125	0		3
Queue Length 95th (ft)	230	48		40	33	0		m11	171	m0		12
Internal Link Dist (ft)		422			355				1243			
Turn Bay Length (ft)	200			100				200		300		200
Base Capacity (vph)	288	374		276	362	409		274	2607	1007		167
Starvation Cap Reductn	0	0		0	0	0		0	5	0		0
Spillback Cap Reductn	0	0		0	0	0		0	0	0		0
Storage Cap Reductn	0	0		0	0	0		0	0	0		0
Reduced v/c Ratio	0.59	0.18		0.11	0.07	0.03		0.22	0.74	0.00		0.06

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

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

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 14.7

Intersection LOS: B

Intersection Capacity Utilization 79.8%

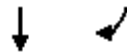
ICU Level of Service D

Analysis Period (min) 15

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

Splits and Phases: 17: US 17 & Riverwood Dr





Lane Group	SBT	SBR
LOS	B	A
Approach Delay	16.4	
Approach LOS	B	
Stops (vph)	841	4
Fuel Used(gal)	22	0
CO Emissions (g/hr)	1548	23
NOx Emissions (g/hr)	301	5
VOC Emissions (g/hr)	359	5
Dilemma Vehicles (#)	48	0
Queue Length 50th (ft)	438	0
Queue Length 95th (ft)	632	18
Internal Link Dist (ft)	566	
Turn Bay Length (ft)		400
Base Capacity (vph)	2463	1143
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.63	0.05
Intersection Summary		

Intersection														
Int Delay, s/veh	203.2													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↘	↕	↗		↘	↕	↗
Traffic Vol, veh/h	24	0	13	6	0	70	2	1	1923	40	9	70	1602	2
Future Vol, veh/h	24	0	13	6	0	70	2	1	1923	40	9	70	1602	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	-	None	-	-	-	Free
Storage Length	-	-	0	-	-	-	-	0	-	0	-	200	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	51	51	51	73	73	73	89	89	89	89	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	1	0	0	3	0	0	3	2	0
Mvmt Flow	47	0	25	8	0	96	2	1	2161	45	9	74	1686	2

Major/Minor	Minor2		Minor1		Major1			Major2						
Conflicting Flow All	2939	4064	843	3176	4019	1081	1686	1686	0	0	2161	2206	0	0
Stage 1	1852	1852	-	2167	2167	-	-	-	-	-	-	-	-	-
Stage 2	1087	2212	-	1009	1852	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.92	6.4	4.1	-	-	6.4	4.16	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.31	2.5	2.2	-	-	2.5	2.23	-	-
Pot Cap-1 Maneuver	~ 7	3	311	~ 4	3	215	122	384	-	-	60	231	-	0
Stage 1	78	125	-	49	87	-	-	-	-	-	-	-	-	0
Stage 2	234	82	-	261	125	-	-	-	-	-	-	-	-	0
Platoon blocked, %									-	-				
Mov Cap-1 Maneuver	~ 2	1	311	~ 2	1	215	152	152	-	-	150	150	-	-
Mov Cap-2 Maneuver	~ 2	1	-	~ 2	1	-	-	-	-	-	-	-	-	-
Stage 1	76	56	-	48	85	-	-	-	-	-	-	-	-	-
Stage 2	127	80	-	107	56	-	-	-	-	-	-	-	-	-































Approach	EB		WB		NB			SB		
HCM Control Delay, \$	8804.5		1928.8		0			2.6		
HCM LOS	F		F							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT
Capacity (veh/h)	152	-	-	2	311	23	150	-
HCM Lane V/C Ratio	0.022	-	-	23.529	0.082	4.527	0.554	-
HCM Control Delay (s)	29.2	-	-	\$ 13564	17	\$ 1928.8	55.6	-
HCM Lane LOS	D	-	-	F	C	F	F	-
HCM 95th %tile Q(veh)	0.1	-	-	7.9	0.3	13.1	2.8	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
19: US 17 & Burgess Rd/Sunnyside Ave

Existing 2019 - PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations	 		 	 		 		 	 	 		 
Traffic Volume (vph)	202	151	253	33	171	139	7	447	1564	17	3	148
Future Volume (vph)	202	151	253	33	171	139	7	447	1564	17	3	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	225		250	150		75		350		350		250
Storage Lanes	1		1	1		1		2		1		1
Taper Length (ft)	100			100				100				100
Satd. Flow (prot)	3433	1881	1583	1805	1900	1599	0	3468	3539	1524	0	1805
Flt Permitted	0.950			0.950				0.950				0.068
Satd. Flow (perm)	3433	1881	1583	1805	1900	1599	0	3468	3539	1524	0	129
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)			221			145				60		
Link Speed (mph)		35			35				45			
Link Distance (ft)		603			870				809			
Travel Time (s)		11.7			16.9				12.3			
Peak Hour Factor	0.92	0.92	0.92	0.84	0.84	0.84	0.97	0.97	0.97	0.97	0.94	0.94
Heavy Vehicles (%)	2%	1%	2%	0%	0%	1%	0%	1%	2%	6%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	220	164	275	39	204	165	0	468	1612	18	0	160
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		24			12				24			
Link Offset(ft)		0			0				1			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA	pt+ov	Prot	pm+pt
Protected Phases	3	8		7	4		1	1	6	6 7	5	5
Permitted Phases			8			4						2
Detector Phase	3	8	8	7	4	4	1	1	6	6 7	5	5
Switch Phase												
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	8.0	6.0	6.0	25.0		6.0	6.0
Minimum Split (s)	15.0	46.0	46.0	15.0	46.0	46.0	15.0	15.0	31.0		15.0	15.0
Total Split (s)	16.0	47.0	47.0	15.0	46.0	46.0	24.0	24.0	73.0		15.0	15.0
Total Split (%)	10.7%	31.3%	31.3%	10.0%	30.7%	30.7%	16.0%	16.0%	48.7%		10.0%	10.0%
Yellow Time (s)	4.0	3.6	3.6	4.0	3.6	3.6	3.5	3.5	4.3		3.5	3.5
All-Red Time (s)	2.9	2.4	2.4	2.9	2.4	2.4	1.7	1.7	1.4		1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0
Total Lost Time (s)	6.9	6.0	6.0	6.9	6.0	6.0		5.2	5.7			5.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag		Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	Max		None	None
Act Effect Green (s)	9.1	23.6	23.6	7.4	19.2	19.2		18.8	67.4	81.7		68.7
Actuated g/C Ratio	0.07	0.18	0.18	0.06	0.15	0.15		0.15	0.52	0.63		0.53
v/c Ratio	0.91	0.48	0.59	0.38	0.73	0.46		0.93	0.87	0.02		0.82
Control Delay	98.7	53.7	16.9	70.8	67.5	14.6		80.6	34.5	0.1		62.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	98.7	53.7	16.9	70.8	67.5	14.6		80.6	34.5	0.1		62.1

Lanes, Volumes, Timings
 19: US 17 & Burgess Rd/Sunnyside Ave

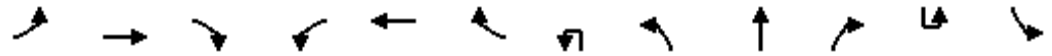
Existing 2019 - PM Peak



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1367	314
Future Volume (vph)	1367	314
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3574	1615
Flt Permitted		
Satd. Flow (perm)	3574	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		189
Link Speed (mph)	45	
Link Distance (ft)	1053	
Travel Time (s)	16.0	
Peak Hour Factor	0.94	0.94
Heavy Vehicles (%)	1%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1454	334
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	24	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Turn Type	NA	Perm
Protected Phases	2	
Permitted Phases		2
Detector Phase	2	2
Switch Phase		
Minimum Initial (s)	25.0	25.0
Minimum Split (s)	31.0	31.0
Total Split (s)	64.0	64.0
Total Split (%)	42.7%	42.7%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.4	1.4
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	Max	Max
Act Effct Green (s)	58.4	58.4
Actuated g/C Ratio	0.45	0.45
v/c Ratio	0.90	0.40
Control Delay	42.3	11.8
Queue Delay	0.0	0.0
Total Delay	42.3	11.8

Lanes, Volumes, Timings
 19: US 17 & Burgess Rd/Sunnyside Ave

Existing 2019 - PM Peak

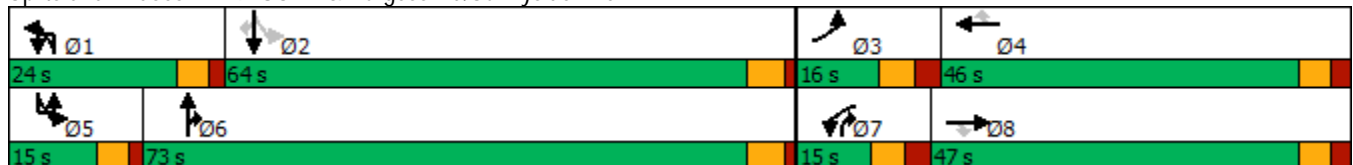


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
LOS	F	D	B	E	E	B		F	C	A		E
Approach Delay		53.3			46.4			44.5				
Approach LOS		D			D			D				
Stops (vph)	177	134	58	31	158	27		405	1293	0		85
Fuel Used(gal)	6	3	2	1	5	1		15	35	0		4
CO Emissions (g/hr)	438	232	168	64	322	104		1039	2465	6		278
NOx Emissions (g/hr)	85	45	33	12	63	20		202	480	1		54
VOC Emissions (g/hr)	102	54	39	15	75	24		241	571	1		64
Dilemma Vehicles (#)	0	4	0	0	5	0		0	59	0		0
Queue Length 50th (ft)	95	129	40	32	165	15		201	603	0		80
Queue Length 95th (ft)	#187	202	131	69	229	64		#330	#827	0		#222
Internal Link Dist (ft)		523			790				729			
Turn Bay Length (ft)	225		250	150		75		350		350		250
Base Capacity (vph)	242	597	653	113	588	595		504	1844	992		195
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0		0
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0		0
Storage Cap Reductn	0	0	0	0	0	0		0	0	0		0
Reduced v/c Ratio	0.91	0.27	0.42	0.35	0.35	0.28		0.93	0.87	0.02		0.82

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 129.3
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 43.6
 Intersection LOS: D
 Intersection Capacity Utilization 91.2%
 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: 19: US 17 & Burgess Rd/Sunnyside Ave



Lanes, Volumes, Timings
 19: US 17 & Burgess Rd/Sunnyside Ave

Existing 2019 - PM Peak



Lane Group	SBT	SBR
LOS	D	B
Approach Delay	38.7	
Approach LOS	D	
Stops (vph)	1177	91
Fuel Used(gal)	36	4
CO Emissions (g/hr)	2499	282
NOx Emissions (g/hr)	486	55
VOC Emissions (g/hr)	579	65
Dilemma Vehicles (#)	51	0
Queue Length 50th (ft)	579	73
Queue Length 95th (ft)	#814	163
Internal Link Dist (ft)	973	
Turn Bay Length (ft)		
Base Capacity (vph)	1613	832
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.90	0.40
Intersection Summary		

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	51	6	15	58	56	11	164	14	21	95	43
Future Vol, veh/h	25	51	6	15	58	56	11	164	14	21	95	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	88	88	88	81	81	81	90	90	90
Heavy Vehicles, %	4	0	0	0	0	2	0	1	0	0	1	0
Mvmt Flow	26	53	6	17	66	64	14	202	17	23	106	48

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	480	423	130	445	439	211	154	0	0	219	0	0
Stage 1	176	176	-	239	239	-	-	-	-	-	-	-
Stage 2	304	247	-	206	200	-	-	-	-	-	-	-
Critical Hdwy	7.14	6.5	6.2	7.1	6.5	6.22	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.14	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.14	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4	3.3	3.5	4	3.318	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	493	526	925	527	515	829	1439	-	-	1362	-	-
Stage 1	821	757	-	769	711	-	-	-	-	-	-	-
Stage 2	701	706	-	801	739	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	400	510	925	471	500	829	1439	-	-	1362	-	-
Mov Cap-2 Maneuver	400	510	-	471	500	-	-	-	-	-	-	-
Stage 1	812	743	-	761	703	-	-	-	-	-	-	-
Stage 2	580	698	-	725	725	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14		12.9		0.4		1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1439	-	-	485	599	1362	-
HCM Lane V/C Ratio	0.009	-	-	0.174	0.245	0.017	-
HCM Control Delay (s)	7.5	0	-	14	12.9	7.7	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.6	1	0.1	-

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕			↕	
Traffic Vol, veh/h	9	24	10	110	37	102	16	144	127	75	126	11
Future Vol, veh/h	9	24	10	110	37	102	16	144	127	75	126	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	10	26	11	118	40	110	17	155	137	81	135	12
Number of Lanes	0	1	0	1	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	10	10.5	12.1	12.5
HCM LOS	A	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	21%	100%	0%	35%
Vol Thru, %	0%	53%	56%	0%	27%	59%
Vol Right, %	0%	47%	23%	0%	73%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	271	43	110	139	212
LT Vol	16	0	9	110	0	75
Through Vol	0	144	24	0	37	126
RT Vol	0	127	10	0	102	11
Lane Flow Rate	17	291	46	118	149	228
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.03	0.438	0.082	0.216	0.231	0.375
Departure Headway (Hd)	6.253	5.416	6.413	6.581	5.554	5.917
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	573	664	558	546	647	609
Service Time	3.983	3.145	4.458	4.314	3.287	3.947
HCM Lane V/C Ratio	0.03	0.438	0.082	0.216	0.23	0.374
HCM Control Delay	9.2	12.3	10	11.1	10	12.5
HCM Lane LOS	A	B	A	B	A	B
HCM 95th-tile Q	0.1	2.2	0.3	0.8	0.9	1.7

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	60	72	40	17	29	17	12	130	20	6	81	7
Future Vol, veh/h	60	72	40	17	29	17	12	130	20	6	81	7
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	72	87	48	20	35	20	14	157	24	7	98	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	8.4	9.3	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	35%	27%	6%
Vol Thru, %	80%	42%	46%	86%
Vol Right, %	12%	23%	27%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	162	172	63	94
LT Vol	12	60	17	6
Through Vol	130	72	29	81
RT Vol	20	40	17	7
Lane Flow Rate	195	207	76	113
Geometry Grp	1	1	1	1
Degree of Util (X)	0.252	0.268	0.101	0.15
Departure Headway (Hd)	4.651	4.653	4.778	4.777
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	769	769	746	747
Service Time	2.698	2.697	2.833	2.829
HCM Lane V/C Ratio	0.254	0.269	0.102	0.151
HCM Control Delay	9.3	9.4	8.4	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	1.1	0.3	0.5

SimTraffic Simulation Summary

Existing 2019 - MD Peak

Summary of All Intervals

Start Time	11:20
End Time	12:30
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	12980
Vehs Exited	12644
Starting Vehs	891
Ending Vehs	1227
Travel Distance (mi)	37961
Travel Time (hr)	1184.6
Total Delay (hr)	322.0
Total Stops	17772
Fuel Used (gal)	1202.2

Interval #0 Information Seeding

Start Time	11:20
End Time	11:30
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	11:30
End Time	12:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	12980
Vehs Exited	12644
Starting Vehs	891
Ending Vehs	1227
Travel Distance (mi)	37961
Travel Time (hr)	1184.6
Total Delay (hr)	322.0
Total Stops	17772
Fuel Used (gal)	1202.2

Queuing and Blocking Report
Existing 2019 - MD Peak

Intersection: 1: US 17 & Kings River Rd

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	280	133
Average Queue (ft)	92	38
95th Queue (ft)	225	81
Link Distance (ft)	431	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: US 17 & S Causeway Rd

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	UT	T	UL	T	T
Maximum Queue (ft)	216	175	252	197	94	241	240
Average Queue (ft)	81	6	100	60	48	68	80
95th Queue (ft)	159	58	191	158	84	164	177
Link Distance (ft)	503		684	684		1061	1061
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		75			250		
Storage Blk Time (%)	13					0	
Queuing Penalty (veh)	12					0	

Intersection: 3: US 17 & Petigru Dr/Alston Rd

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	UL	T	TR	UL	T	T	R
Maximum Queue (ft)	195	217	70	132	311	251	51	256	252	53
Average Queue (ft)	86	51	34	44	64	70	18	76	83	10
95th Queue (ft)	154	111	66	94	167	165	42	177	189	33
Link Distance (ft)	393		460		3609	3609		1691	1691	1691
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		125		150			150			
Storage Blk Time (%)	6	0		0	1			1		
Queuing Penalty (veh)	9	0		0	1			0		

Queuing and Blocking Report
Existing 2019 - MD Peak

Intersection: 4: US 17 & Waverly Rd/N Causeway Rd

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	UL	T	T	R	UL	T	T	R
Maximum Queue (ft)	168	199	177	299	383	381	62	300	481	492	294
Average Queue (ft)	96	89	98	82	189	201	19	77	165	168	26
95th Queue (ft)	154	157	163	193	353	358	49	182	333	340	112
Link Distance (ft)		740	568		1691	1691			780	780	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	125			200			300	200			200
Storage Blk Time (%)	7	3			9	3			5	6	
Queuing Penalty (veh)	13	4			8	2			6	5	

Intersection: 5: US 17 & Martin Luther King Rd/Brown Ln

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	UL	T	T	R	UL	T	T	R
Maximum Queue (ft)	198	47	21	46	299	354	18	31	285	296	250
Average Queue (ft)	117	20	2	8	145	153	1	3	99	107	15
95th Queue (ft)	183	43	12	30	262	275	6	17	214	227	90
Link Distance (ft)	640		228		6862	6862			6014	6014	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		150		175			175	200			150
Storage Blk Time (%)	3				4	4			1	2	
Queuing Penalty (veh)	1				1	0			0	3	

Intersection: 6: US 17 & Driveway/Litchfield Dr

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	LT	T	R	UL	T	T	R
Maximum Queue (ft)	49	46	111	295	300	275	96	283	263	175
Average Queue (ft)	8	9	56	136	140	25	52	84	103	8
95th Queue (ft)	30	31	96	249	256	104	87	195	216	61
Link Distance (ft)	195	195	722	6014	6014			298	298	
Upstream Blk Time (%)								0		
Queuing Penalty (veh)								0		
Storage Bay Dist (ft)						175	200			75
Storage Blk Time (%)					3			0	6	
Queuing Penalty (veh)					4			0	1	

Queuing and Blocking Report
Existing 2019 - MD Peak

Intersection: 7: US 17 & Country Club Dr

Movement	EB	EB	NB	SB	SB
Directions Served	L	R	UL	UT	T
Maximum Queue (ft)	134	125	98	30	83
Average Queue (ft)	49	40	33	3	3
95th Queue (ft)	115	83	78	17	27
Link Distance (ft)	468			183	183
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		25	50		
Storage Blk Time (%)	55	27	9		0
Queuing Penalty (veh)	30	11	43		0

Intersection: 8: US 17 & Willbrook Blvd/Retreat Beach Cir

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB	B89
Directions Served	L	TR	L	T	UL	T	T	UL	T	T	R	T
Maximum Queue (ft)	317	241	116	134	415	450	433	70	474	439	325	244
Average Queue (ft)	154	104	49	45	119	240	264	20	256	257	65	15
95th Queue (ft)	249	228	94	92	228	380	388	54	403	411	279	107
Link Distance (ft)	856	856	269	269		874	874		368	368		2623
Upstream Blk Time (%)									4	5		
Queuing Penalty (veh)									32	36		
Storage Bay Dist (ft)					325			325			225	
Storage Blk Time (%)				2		2	6		5	14		
Queuing Penalty (veh)				0		5	2		2	27		

Intersection: 8: US 17 & Willbrook Blvd/Retreat Beach Cir

Movement	B89
Directions Served	T
Maximum Queue (ft)	242
Average Queue (ft)	15
95th Queue (ft)	106
Link Distance (ft)	2623
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
Existing 2019 - MD Peak

Intersection: 9: US 17 & N Boyle Rd

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	UT	T	R	UL	T	T
Maximum Queue (ft)	134	95	232	248	66	71	120	139
Average Queue (ft)	62	26	111	117	20	24	59	78
95th Queue (ft)	115	69	197	210	51	60	121	139
Link Distance (ft)		531	2623	2623			2268	2268
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	75				300	200		
Storage Blk Time (%)	6	0						
Queuing Penalty (veh)	2	0						

Intersection: 10: US 17 & Sandy Island/Trace Dr

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	UL	UL
Maximum Queue (ft)	137	50	96	42	23
Average Queue (ft)	38	6	37	1	13
95th Queue (ft)	93	29	70	14	29
Link Distance (ft)		630	417		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	300			250	250
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: US 17 & Wesley Rd

Movement	EB	NB
Directions Served	LR	UL
Maximum Queue (ft)	110	62
Average Queue (ft)	38	18
95th Queue (ft)	84	51
Link Distance (ft)	823	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		325
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
Existing 2019 - MD Peak

Intersection: 12: US 17 & US 17 BUS

Movement	WB
Directions Served	TR
Maximum Queue (ft)	149
Average Queue (ft)	61
95th Queue (ft)	116
Link Distance (ft)	317
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: US 17 & Pendergrass Ave

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	UL	R	UL
Maximum Queue (ft)	186	187	21	19	105
Average Queue (ft)	74	33	8	1	35
95th Queue (ft)	155	112	23	6	88
Link Distance (ft)	852	554			
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			275	250	200
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 14: US 17 & Wesley Rd

Movement	EB	NB	NB
Directions Served	LR	LT	T
Maximum Queue (ft)	193	222	186
Average Queue (ft)	59	37	20
95th Queue (ft)	139	144	101
Link Distance (ft)	965	4990	4990
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
Existing 2019 - MD Peak

Intersection: 15: US 17 & Wachesaw Rd

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	UL	T	T	R	UL	T	T	R
Maximum Queue (ft)	95	127	66	149	324	546	551	350	299	665	687	73
Average Queue (ft)	64	69	25	46	83	219	232	27	32	307	320	22
95th Queue (ft)	102	128	54	100	202	420	435	129	121	537	556	55
Link Distance (ft)		634		553		546	546			2463	2463	
Upstream Blk Time (%)						0	0					
Queuing Penalty (veh)						0	1					
Storage Bay Dist (ft)	150		150		225			250	200			500
Storage Blk Time (%)				0		9	8			18	2	
Queuing Penalty (veh)				0		13	4			7	1	

Intersection: 16: US 17 & Bellamy Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	UL	T	T	UL	T	T	R
Maximum Queue (ft)	297	329	66	241	349	525	470	92	503	530	7
Average Queue (ft)	152	106	19	92	26	166	168	34	115	123	0
95th Queue (ft)	239	209	47	173	134	401	388	76	335	345	2
Link Distance (ft)		623		659		2463	2463		1223	1223	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		150		250			250			300
Storage Blk Time (%)	5	0		3		6	6		4	3	
Queuing Penalty (veh)	7	0		1		3	3		3	3	

Intersection: 17: US 17 & Riverwood Dr

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	T	UL	T	T	R	UL	T	T	R
Maximum Queue (ft)	282	298	66	73	299	550	586	26	71	609	584	500
Average Queue (ft)	144	63	22	20	51	146	159	3	19	184	198	33
95th Queue (ft)	247	171	56	55	139	369	404	15	58	441	471	239
Link Distance (ft)		414		362		1223	1223			570	570	
Upstream Blk Time (%)										1	1	
Queuing Penalty (veh)										6	5	
Storage Bay Dist (ft)	200		100		200			300	200			400
Storage Blk Time (%)	10	0				5	3			7	5	
Queuing Penalty (veh)	7	0				3	1			1	4	

Queuing and Blocking Report
Existing 2019 - MD Peak

Intersection: 18: US 17 & Driveway/Macklen Ave

Movement	EB	WB	NB	SB
Directions Served	LT	LTR	UL	UL
Maximum Queue (ft)	51	219	71	114
Average Queue (ft)	20	63	14	47
95th Queue (ft)	50	154	42	94
Link Distance (ft)	269	1123	392	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			200	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 19: US 17 & Burgess Rd/Sunnyside Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	L	T	L	T	R	UL	L	T	T	R	UL
Maximum Queue (ft)	213	231	182	96	140	122	217	450	478	446	53	350
Average Queue (ft)	115	157	57	44	92	16	132	173	281	280	17	113
95th Queue (ft)	198	222	127	83	138	72	204	337	432	408	47	312
Link Distance (ft)		536	536		805				748	748		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	225			150		75	350	350			350	250
Storage Blk Time (%)	0	0			28	1			3	3		
Queuing Penalty (veh)	0	0			29	1			9	1		

Intersection: 19: US 17 & Burgess Rd/Sunnyside Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	623	644	118
Average Queue (ft)	362	335	4
95th Queue (ft)	578	532	39
Link Distance (ft)	986	986	986
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	23		
Queuing Penalty (veh)	25		

Queuing and Blocking Report
Existing 2019 - MD Peak

Intersection: 20: Kings River Rd & Hagley Dr/Tyson Rd

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	78	77	27
Average Queue (ft)	31	33	1
95th Queue (ft)	53	55	9
Link Distance (ft)	372	319	216
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 21: Kings River Rd & Waverly Rd

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	L	TR	LTR
Maximum Queue (ft)	55	42	34	22	207	108
Average Queue (ft)	27	24	13	5	64	55
95th Queue (ft)	52	40	27	21	125	85
Link Distance (ft)	527		466		491	454
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100		175		
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 22: Murrells Inlet Rd & Macklen Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	63	51	56	53
Average Queue (ft)	34	25	33	29
95th Queue (ft)	53	39	47	41
Link Distance (ft)	1123	413	569	581
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report Existing 2019 - MD Peak

Intersection: 27: US 17

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 57: US 17

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 74: US 17 & US 17 BUS

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Queuing and Blocking Report Existing 2019 - MD Peak

Intersection: 75: US 17 BUS

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 76: US 17 & US 17 BUS

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 200: US 17

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	209	227
Average Queue (ft)	7	10
95th Queue (ft)	69	77
Link Distance (ft)	392	392
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report Existing 2019 - MD Peak

Intersection: 201: US 17

Movement	SB
Directions Served	T
Maximum Queue (ft)	698
Average Queue (ft)	23
95th Queue (ft)	230
Link Distance (ft)	748
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 401

SimTraffic Simulation Summary Existing 2019 - PM Peak

Summary of All Intervals

Start Time	3:50
End Time	5:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	13259
Vehs Exited	12784
Starting Vehs	839
Ending Vehs	1314
Travel Distance (mi)	39321
Travel Time (hr)	1248.1
Total Delay (hr)	352.3
Total Stops	16887
Fuel Used (gal)	1227.1

Interval #0 Information Seeding

Start Time	3:50
End Time	4:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	13259
Vehs Exited	12784
Starting Vehs	839
Ending Vehs	1314
Travel Distance (mi)	39321
Travel Time (hr)	1248.1
Total Delay (hr)	352.3
Total Stops	16887
Fuel Used (gal)	1227.1

Queuing and Blocking Report
Existing 2019 - PM Peak

Intersection: 1: US 17 & Kings River Rd

Movement	EB	NB	NB
Directions Served	LR	L	T
Maximum Queue (ft)	465	234	287
Average Queue (ft)	316	72	10
95th Queue (ft)	545	143	95
Link Distance (ft)	431		652
Upstream Blk Time (%)	38		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		200	
Storage Blk Time (%)		2	
Queuing Penalty (veh)		10	

Intersection: 2: US 17 & S Causeway Rd

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	T	UL	T	T
Maximum Queue (ft)	241	172	215	209	96	248	272
Average Queue (ft)	104	6	123	97	42	99	110
95th Queue (ft)	182	57	209	201	82	212	218
Link Distance (ft)	503		684	684		1061	1061
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		75			250		
Storage Blk Time (%)	31					0	
Queuing Penalty (veh)	23					0	

Intersection: 3: US 17 & Petigru Dr/Alston Rd

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	UL	T	T	R
Maximum Queue (ft)	135	87	154	92	204	274	90	424	446	51
Average Queue (ft)	88	56	58	45	82	93	22	147	160	10
95th Queue (ft)	146	88	116	79	180	209	62	304	323	33
Link Distance (ft)	393		460		3609	3609		1691	1691	1691
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		125		150			150			
Storage Blk Time (%)	5				2			7		
Queuing Penalty (veh)	6				2			3		

Queuing and Blocking Report
Existing 2019 - PM Peak

Intersection: 4: US 17 & Waverly Rd/N Causeway Rd

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	UL	T	T	R	UL	T	T	R
Maximum Queue (ft)	112	137	263	299	383	409	26	300	337	378	300
Average Queue (ft)	64	61	94	75	127	150	9	93	114	129	20
95th Queue (ft)	96	116	178	168	258	278	27	211	275	301	109
Link Distance (ft)		740	568		1691	1691			780	780	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	125			200			300	200			200
Storage Blk Time (%)	0	1	1		2	1		1	3	5	
Queuing Penalty (veh)	0	1	1		2	0		5	4	3	

Intersection: 5: US 17 & Martin Luther King Rd/Brown Ln

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	UL	T	T	UL	T	T	R
Maximum Queue (ft)	157	25	21	68	204	230	30	225	242	53
Average Queue (ft)	94	12	5	18	107	115	8	110	126	14
95th Queue (ft)	150	31	18	42	204	211	28	209	227	43
Link Distance (ft)	640		228		6862	6862		6014	6014	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		150		175			200			150
Storage Blk Time (%)	0				1	2		1	4	
Queuing Penalty (veh)	0				0	0		0	6	

Intersection: 6: US 17 & Driveway/Litchfield Dr

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	LT	T	R	UL	T	T	R
Maximum Queue (ft)	28	25	108	303	286	44	72	241	226	31
Average Queue (ft)	3	13	53	103	117	12	31	80	89	3
95th Queue (ft)	17	32	96	220	234	35	62	189	204	18
Link Distance (ft)	195	195	722	6014	6014			298	298	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)						175	200			75
Storage Blk Time (%)					2			0	7	
Queuing Penalty (veh)					2			0	1	

Queuing and Blocking Report
Existing 2019 - PM Peak

Intersection: 7: US 17 & Country Club Dr

Movement	EB	EB	NB	SB	SB
Directions Served	L	R	UL	UT	T
Maximum Queue (ft)	46	70	52	29	30
Average Queue (ft)	21	20	19	1	1
95th Queue (ft)	47	46	49	10	10
Link Distance (ft)	468			183	183
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		25	50		
Storage Blk Time (%)	29	15	3		
Queuing Penalty (veh)	9	5	17		

Intersection: 8: US 17 & Willbrook Blvd/Retreat Beach Cir

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	TR	L	T	L	T	T	UL	T	T	R	
Maximum Queue (ft)	227	138	117	96	424	538	527	71	394	430	325	
Average Queue (ft)	114	56	54	53	84	257	281	21	229	256	43	
95th Queue (ft)	179	114	100	92	201	422	446	53	349	390	225	
Link Distance (ft)	856	856	269	269		874	874		368	368		
Upstream Blk Time (%)									1	1		
Queuing Penalty (veh)									4	9		
Storage Bay Dist (ft)					325				325			
Storage Blk Time (%)					2	3	7			2	12	
Queuing Penalty (veh)					1	5	3			1	24	

Intersection: 9: US 17 & N Boyle Rd

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	UT	T	R	UL	T	T
Maximum Queue (ft)	82	82	250	288	53	74	196	166
Average Queue (ft)	43	23	93	108	13	25	68	81
95th Queue (ft)	74	58	203	241	38	59	153	148
Link Distance (ft)		531	2623	2623			2268	2268
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	75				300	200		
Storage Blk Time (%)	2	0		0			0	
Queuing Penalty (veh)	1	0		0			0	

Queuing and Blocking Report
Existing 2019 - PM Peak

Intersection: 10: US 17 & Sandy Island/Trace Dr

Movement	EB	EB	WB	NB	NB	SB
Directions Served	LT	R	LTR	L	TR	UL
Maximum Queue (ft)	137	28	100	20	8	48
Average Queue (ft)	39	4	26	2	0	16
95th Queue (ft)	92	19	66	11	3	39
Link Distance (ft)		630	417		2268	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	300			250		250
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 11: US 17 & Wesley Rd

Movement	EB	NB
Directions Served	LR	UL
Maximum Queue (ft)	108	45
Average Queue (ft)	48	14
95th Queue (ft)	100	38
Link Distance (ft)	823	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		325
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: US 17 & US 17 BUS

Movement	WB
Directions Served	TR
Maximum Queue (ft)	314
Average Queue (ft)	104
95th Queue (ft)	247
Link Distance (ft)	317
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
Existing 2019 - PM Peak

Intersection: 13: US 17 & Pendergrass Ave

Movement	EB	WB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	UL	T	UL	T	R
Maximum Queue (ft)	297	281	57	18	19	16	20
Average Queue (ft)	139	135	15	1	11	1	1
95th Queue (ft)	304	292	44	6	22	5	7
Link Distance (ft)	852	554		1060		4990	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			275		200		250
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 14: US 17 & Wesley Rd

Movement	EB	NB	NB
Directions Served	LR	LT	T
Maximum Queue (ft)	322	247	210
Average Queue (ft)	134	12	9
95th Queue (ft)	292	87	74
Link Distance (ft)	965	4990	4990
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 15: US 17 & Wachesaw Rd

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	UL	T	T	R	UL	T	T	R
Maximum Queue (ft)	146	213	66	128	115	393	419	350	299	476	483	53
Average Queue (ft)	78	94	27	57	61	208	211	31	37	277	284	12
95th Queue (ft)	131	164	58	121	107	363	357	132	155	480	481	35
Link Distance (ft)		634		553		546	546			2463	2463	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150		150		225			250	200			500
Storage Blk Time (%)	1	2				5	4			14	0	
Queuing Penalty (veh)	1	2				7	3			5	0	

Queuing and Blocking Report
Existing 2019 - PM Peak

Intersection: 16: US 17 & Bellamy Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	UL	T	T	R	UL	T	T
Maximum Queue (ft)	245	224	88	137	48	478	460	399	84	195	270
Average Queue (ft)	94	65	20	75	13	119	126	13	19	53	62
95th Queue (ft)	169	144	56	129	39	317	317	132	56	162	189
Link Distance (ft)		623		659		2463	2463			1223	1223
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		150		250			300	250		
Storage Blk Time (%)	0	1		0		2	2				
Queuing Penalty (veh)	0	1		0		1	1				

Intersection: 17: US 17 & Riverwood Dr

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	UL	T	T	UL	T	T
Maximum Queue (ft)	267	298	50	76	134	265	291	28	571	571
Average Queue (ft)	129	36	12	19	37	101	108	10	167	182
95th Queue (ft)	222	122	36	54	90	239	253	29	493	499
Link Distance (ft)		414		362		1223	1223		570	570
Upstream Blk Time (%)									1	1
Queuing Penalty (veh)									9	8
Storage Bay Dist (ft)	200		100		200			200		
Storage Blk Time (%)	2					2	0		7	5
Queuing Penalty (veh)	1					1	0		1	3

Intersection: 18: US 17 & Driveway/Macklen Ave

Movement	EB	WB	NB	NB	SB
Directions Served	LT	LTR	UL	R	UL
Maximum Queue (ft)	200	563	52	21	135
Average Queue (ft)	117	277	3	1	54
95th Queue (ft)	203	563	22	7	102
Link Distance (ft)	269	1123	392	392	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				200	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Existing 2019 - PM Peak

Intersection: 19: US 17 & Burgess Rd/Sunnyside Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	L	T	L	T	R	UL	L	T	T	R	UL
Maximum Queue (ft)	226	276	223	94	226	175	259	450	573	567	450	350
Average Queue (ft)	141	184	91	37	123	40	163	249	336	346	22	117
95th Queue (ft)	227	262	181	77	196	149	247	478	549	551	154	255
Link Distance (ft)		536	536		805				748	748		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	225			150		75	350	350			350	250
Storage Blk Time (%)	0	3			40	1			8	12		
Queuing Penalty (veh)	0	3			68	1			36	2		

Intersection: 19: US 17 & Burgess Rd/Sunnyside Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	464	415	155
Average Queue (ft)	322	301	5
95th Queue (ft)	426	404	51
Link Distance (ft)	986	986	986
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	19		
Queuing Penalty (veh)	29		

Intersection: 20: Kings River Rd & Hagley Dr/Tyson Rd

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	50	55	26
Average Queue (ft)	28	33	1
95th Queue (ft)	45	48	9
Link Distance (ft)	372	319	217
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
Existing 2019 - PM Peak

Intersection: 21: Kings River Rd & Waverly Rd

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	L	TR	LTR
Maximum Queue (ft)	31	43	56	22	134	81
Average Queue (ft)	26	21	19	7	56	49
95th Queue (ft)	44	33	41	23	87	73
Link Distance (ft)	527		466		491	454
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100		175		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 22: Murrells Inlet Rd & Macklen Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	55	50	54	30
Average Queue (ft)	36	25	34	29
95th Queue (ft)	54	47	47	38
Link Distance (ft)	1123	413	569	581
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 27: US 17

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Queuing and Blocking Report Existing 2019 - PM Peak

Intersection: 57: US 17

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 74: US 17 & US 17 BUS

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 75: US 17 BUS

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Queuing and Blocking Report Existing 2019 - PM Peak

Intersection: 76: US 17 & US 17 BUS

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 200: US 17

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	111	97
Average Queue (ft)	7	6
95th Queue (ft)	48	45
Link Distance (ft)	392	392
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 201: US 17

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 329