



*NORTH 60*

---

**ATTACHMENT 8**

**UPDATED ANALYSIS**

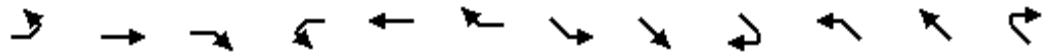
**BRADHURST AVENUE  
BROADWAY / MEMORIAL DRIVE**

2019 Existing Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



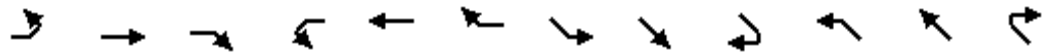
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	0	82	1	14	88	296	768	9	6	1	37	31
Future Volume (vph)	0	82	1	14	88	296	768	9	6	1	37	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	11	12	12	12	14	14	14
Grade (%)		-5%			0%			0%				-4%
Storage Length (ft)	0		0	0		60	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			86			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.999			0.940	
Flt Protected					0.993			0.953			0.999	
Satd. Flow (prot)	0	1854	0	0	1793	1419	0	1708	0	0	1819	0
Flt Permitted					0.953			0.953			0.999	
Satd. Flow (perm)	0	1854	0	0	1721	1419	0	1708	0	0	1819	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)												30
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		502			183			594			399	
Travel Time (s)		11.4			4.2			13.5			9.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	7%	9%	10%	6%	0%	0%	100%	5%	6%
Adj. Flow (vph)	0	91	1	16	98	329	853	10	7	1	41	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	92	0	0	114	329	0	870	0	0	76	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.96	0.96	1.04	1.00	1.00	1.00	0.89	0.89	0.89
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83	35	20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40	40	20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

2019 Existing Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	NA		Perm		NA	pm+ov	Split	NA	Split		NA	
Protected Phases	3	8			4	2	2	2		6	6	
Permitted Phases	8			4		4						
Detector Phase	3	8		4	4	2	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Total Split (s)	10.0	36.0		26.0	26.0	56.0	56.0	56.0		26.0	26.0	
Total Split (%)	8.5%	30.5%		22.0%	22.0%	47.5%	47.5%	47.5%		22.0%	22.0%	
Maximum Green (s)	6.0	30.0		20.0	20.0	50.0	50.0	50.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	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	
Total Lost Time (s)		6.0			6.0	6.0		6.0			6.0	
Lead/Lag	Lead			Lag		Lag						
Lead-Lag Optimize?	Yes			Yes		Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	3.0	3.0	3.0		2.0	2.0	
Recall Mode	None	None		Max	Max	None	None	None		None	None	
v/c Ratio		0.27			0.31	0.28		0.94			0.45	
Control Delay		34.6			34.9	3.2		41.9			36.8	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		34.6			34.9	3.2		41.9			36.8	
Queue Length 50th (ft)		46			58	39		480			27	
Queue Length 95th (ft)		93			112	77		#804			71	
Internal Link Dist (ft)		422			103			514			319	
Turn Bay Length (ft)						60						
Base Capacity (vph)		600			371	1184		921			416	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.15			0.31	0.28		0.94			0.18	

Intersection Summary

Area Type: Other

Cycle Length: 118

Actuated Cycle Length: 93

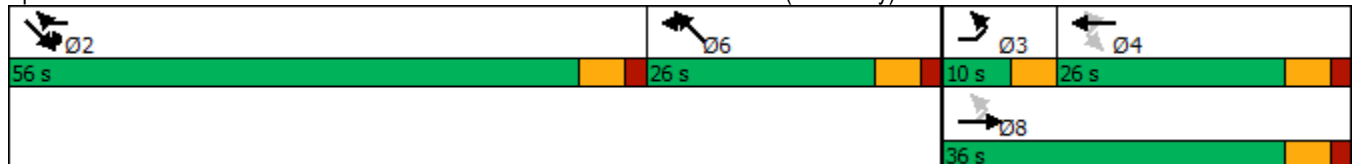
Natural Cycle: 90

Control Type: Actuated-Uncoordinated

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

Queue shown is maximum after two cycles.

Splits and Phases: 17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

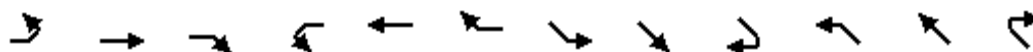


2019 Existing Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



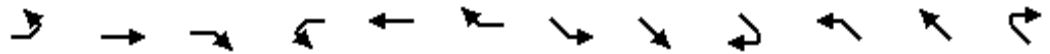
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (veh/h)	0	82	1	14	88	296	768	9	6	1	37	31
Future Volume (veh/h)	0	82	1	14	88	296	768	9	6	1	37	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2022	2022	2022	1837	1837	1752	1900	1900	1900	2062	2062	2062
Adj Flow Rate, veh/h	0	91	1	16	98	329	853	10	7	1	41	34
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	9	9	10	0	0	0	5	5	5
Cap, veh/h	33	554	6	75	376	1102	913	11	7	1	55	46
Arrive On Green	0.00	0.23	0.23	0.23	0.23	0.23	0.52	0.52	0.52	0.05	0.05	0.05
Sat Flow, veh/h	0	1996	22	127	1655	1485	1773	21	15	25	1029	853
Grp Volume(v), veh/h	0	0	92	114	0	329	870	0	0	76	0	0
Grp Sat Flow(s),veh/h/ln	0	0	2018	1782	0	1485	1809	0	0	1907	0	0
Q Serve(g_s), s	0.0	0.0	3.7	0.0	0.0	6.5	39.6	0.0	0.0	3.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	3.7	4.5	0.0	6.5	39.6	0.0	0.0	3.5	0.0	0.0
Prop In Lane	0.00		0.01	0.14		1.00	0.98		0.01	0.01		0.45
Lane Grp Cap(c), veh/h	0	0	0	451	0	1102	932	0	0	102	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.25	0.00	0.30	0.93	0.00	0.00	0.74	0.00	0.00
Avail Cap(c_a), veh/h	0	0	0	451	0	1102	1026	0	0	433	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	28.1	0.0	3.8	20.0	0.0	0.0	41.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.3	0.0	0.7	14.1	0.0	0.0	3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.1	0.0	7.0	18.7	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	29.4	0.0	4.5	34.1	0.0	0.0	45.0	0.0	0.0
LnGrp LOS	A	A	A	C	A	A	C	A	A	D	A	A
Approach Vol, veh/h		92			443			870			76	
Approach Delay, s/veh		0.0			10.9			34.1			45.0	
Approach LOS		A			B			C			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.4		26.0		10.7		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		20.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		41.6		8.5		5.5		5.7				
Green Ext Time (p_c), s		3.8		0.9		0.1		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				25.6								
HCM 6th LOS				C								

2019 Existing Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



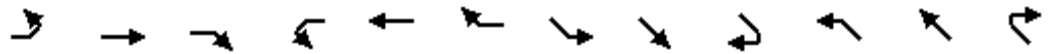
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	0	130	5	28	101	346	439	19	4	1	45	18
Future Volume (vph)	0	130	5	28	101	346	439	19	4	1	45	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	11	12	12	12	14	14	14
Grade (%)		-5%			0%			0%				-4%
Storage Length (ft)	0		0	0		60	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			86			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.995				0.850		0.999			0.961	
Flt Protected					0.989			0.955			0.999	
Satd. Flow (prot)	0	1899	0	0	1942	1501	0	1796	0	0	1957	0
Flt Permitted					0.915			0.955			0.999	
Satd. Flow (perm)	0	1899	0	0	1795	1501	0	1796	0	0	1957	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		2										15
Link Speed (mph)		30			30			30				30
Link Distance (ft)		502			183			594				399
Travel Time (s)		11.4			4.2			13.5				9.1
Confl. Peds. (#/hr)			2	2								
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	0%	0%	0%	4%	1%	0%	0%	0%	2%	0%
Adj. Flow (vph)	0	134	5	29	104	357	453	20	4	1	46	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	133	357	0	477	0	0	66	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.96	0.96	1.04	1.00	1.00	1.00	0.89	0.89	0.89
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83	35	20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40	40	20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

2019 Existing Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020

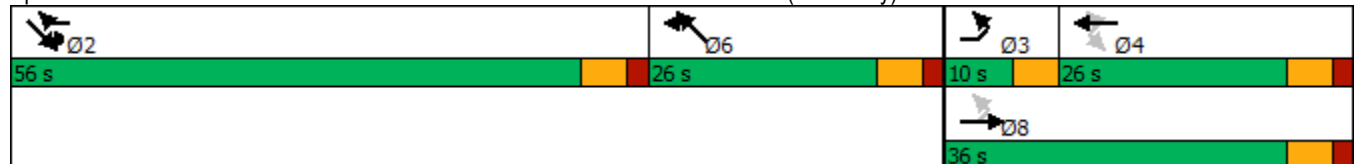


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type		NA		Perm	NA	pm+ov	Split	NA		Split	NA	
Protected Phases	3	8			4	2	2	2		6	6	
Permitted Phases	8			4		4						
Detector Phase	3	8		4	4	2	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Total Split (s)	10.0	36.0		26.0	26.0	56.0	56.0	56.0		26.0	26.0	
Total Split (%)	8.5%	30.5%		22.0%	22.0%	47.5%	47.5%	47.5%		22.0%	22.0%	
Maximum Green (s)	6.0	30.0		20.0	20.0	50.0	50.0	50.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	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	
Total Lost Time (s)		6.0			6.0	6.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0	3.0	3.0	3.0		2.0	2.0	
Recall Mode	None	None		Max	Max	None	None	None		None	None	
v/c Ratio		0.30			0.24	0.30		0.72			0.31	
Control Delay		24.8			24.6	3.9		25.7			30.8	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		24.8			24.6	3.9		25.7			30.8	
Queue Length 50th (ft)		46			44	41		174			21	
Queue Length 95th (ft)		113			110	84		288			64	
Internal Link Dist (ft)		422			103			514			319	
Turn Bay Length (ft)						60						
Base Capacity (vph)		866			545	1464		1333			605	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.16			0.24	0.24		0.36			0.11	

Intersection Summary

Area Type: Other  
 Cycle Length: 118  
 Actuated Cycle Length: 68.8  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

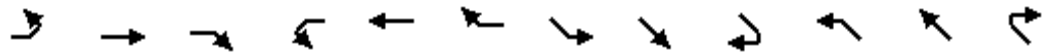


2019 Existing Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



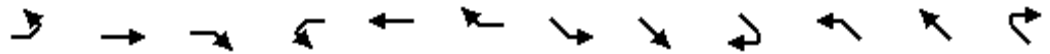
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (veh/h)	0	130	5	28	101	346	439	19	4	1	45	18
Future Volume (veh/h)	0	130	5	28	101	346	439	19	4	1	45	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	1976	1976	1841	1900	1900	1900	2108	2108	2108
Adj Flow Rate, veh/h	0	134	5	29	104	357	453	20	4	1	46	19
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	0	0	4	0	0	0	2	2	2
Cap, veh/h	33	550	21	157	518	1013	557	25	5	2	77	32
Arrive On Green	0.00	0.33	0.33	0.33	0.33	0.33	0.32	0.32	0.32	0.06	0.06	0.06
Sat Flow, veh/h	0	1979	74	261	1584	1555	1720	76	15	30	1396	577
Grp Volume(v), veh/h	0	0	139	133	0	357	477	0	0	66	0	0
Grp Sat Flow(s),veh/h/ln	0	0	2053	1846	0	1555	1811	0	0	2003	0	0
Q Serve(g_s), s	0.0	0.0	5.7	0.0	0.0	6.4	14.8	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	5.7	3.0	0.0	6.4	14.8	0.0	0.0	2.0	0.0	0.0
Prop In Lane	0.00		0.04	0.22		1.00	0.95		0.01	0.02		0.29
Lane Grp Cap(c), veh/h	0	0	0	675	0	1013	586	0	0	110	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.20	0.00	0.35	0.81	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	0	0	0	675	0	1013	1480	0	0	655	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.9	0.0	4.8	19.0	0.0	0.0	28.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	1.0	2.8	0.0	0.0	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.3	0.0	4.2	6.0	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	15.5	0.0	5.8	21.8	0.0	0.0	30.2	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		139			490			477			66	
Approach Delay, s/veh		0.0			8.4			21.8			30.2	
Approach LOS		A			A			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.8		26.0		9.4		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		20.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		16.8		8.4		4.0		7.7				
Green Ext Time (p_c), s		3.0		1.0		0.1		0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				14.1								
HCM 6th LOS				B								

2024 No-Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



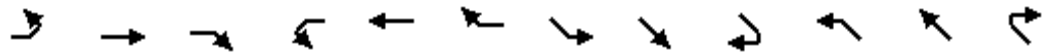
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	0	87	1	15	97	311	806	9	6	1	39	33
Future Volume (vph)	0	87	1	15	97	311	806	9	6	1	39	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	11	12	12	12	14	14	14
Grade (%)		-5%			0%			0%				-4%
Storage Length (ft)	0		0	0		60	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			86			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.999				0.938
Flt Protected					0.993			0.953				0.999
Satd. Flow (prot)	0	1854	0	0	1793	1419	0	1708	0	0	1817	0
Flt Permitted					0.953			0.953				0.999
Satd. Flow (perm)	0	1854	0	0	1721	1419	0	1708	0	0	1817	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)												31
Link Speed (mph)		30			30			30				30
Link Distance (ft)		502			183			594				399
Travel Time (s)		11.4			4.2			13.5				9.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	7%	9%	10%	6%	0%	0%	100%	5%	6%
Adj. Flow (vph)	0	97	1	17	108	346	896	10	7	1	43	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	125	346	0	913	0	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.96	0.96	1.04	1.00	1.00	1.00	0.89	0.89	0.89
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83	35	20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40	40	20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

2024 No-Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type		NA		Perm	NA	pm+ov	Split	NA		Split	NA	
Protected Phases	3	8			4	2	2	2		6	6	
Permitted Phases	8			4		4						
Detector Phase	3	8		4	4	2	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Total Split (s)	10.0	36.0		26.0	26.0	56.0	56.0	56.0		26.0	26.0	
Total Split (%)	8.5%	30.5%		22.0%	22.0%	47.5%	47.5%	47.5%		22.0%	22.0%	
Maximum Green (s)	6.0	30.0		20.0	20.0	50.0	50.0	50.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	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	
Total Lost Time (s)		6.0			6.0	6.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0	3.0	3.0	3.0		2.0	2.0	
Recall Mode	None	None		Max	Max	None	None	None		None	None	
v/c Ratio		0.29			0.34	0.29		0.99			0.47	
Control Delay		35.1			35.5	3.4		52.3			37.4	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		35.1			35.5	3.4		52.3			37.4	
Queue Length 50th (ft)		50			65	42		~555			29	
Queue Length 95th (ft)		98			122	84		#868			75	
Internal Link Dist (ft)		422			103			514			319	
Turn Bay Length (ft)						60						
Base Capacity (vph)		598			370	1182		919			415	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.16			0.34	0.29		0.99			0.20	

Intersection Summary

Area Type: Other

Cycle Length: 118

Actuated Cycle Length: 93.3

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

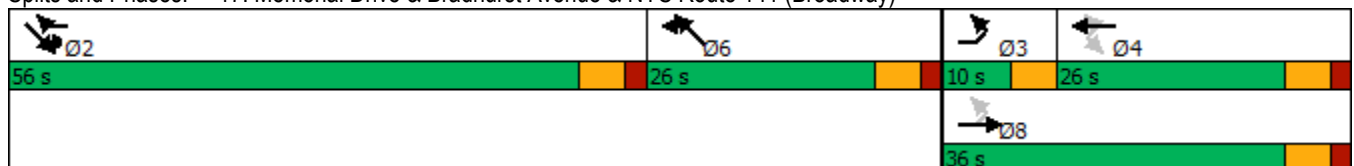
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

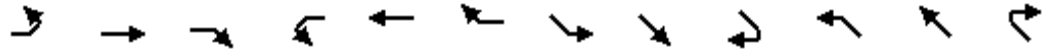


2024 No-Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



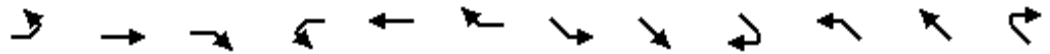
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (veh/h)	0	87	1	15	97	311	806	9	6	1	39	33
Future Volume (veh/h)	0	87	1	15	97	311	806	9	6	1	39	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2022	2022	2022	1837	1837	1752	1900	1900	1900	2062	2062	2062
Adj Flow Rate, veh/h	0	97	1	17	108	346	896	10	7	1	43	37
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	9	9	10	0	0	0	5	5	5
Cap, veh/h	33	555	6	71	364	1108	936	10	7	1	58	50
Arrive On Green	0.00	0.22	0.22	0.22	0.22	0.22	0.53	0.53	0.53	0.06	0.06	0.06
Sat Flow, veh/h	0	1997	21	121	1663	1485	1775	20	14	24	1011	870
Grp Volume(v), veh/h	0	0	98	125	0	346	913	0	0	81	0	0
Grp Sat Flow(s),veh/h/ln	0	0	2018	1784	0	1485	1809	0	0	1904	0	0
Q Serve(g_s), s	0.0	0.0	4.0	0.0	0.0	7.1	44.1	0.0	0.0	3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	4.0	5.2	0.0	7.1	44.1	0.0	0.0	3.8	0.0	0.0
Prop In Lane	0.00		0.01	0.14		1.00	0.98		0.01	0.01		0.46
Lane Grp Cap(c), veh/h	0	0	0	435	0	1108	954	0	0	109	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.29	0.00	0.31	0.96	0.00	0.00	0.74	0.00	0.00
Avail Cap(c_a), veh/h	0	0	0	435	0	1108	989	0	0	416	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	30.0	0.0	3.8	20.6	0.0	0.0	42.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7	0.0	0.7	18.8	0.0	0.0	3.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.5	0.0	7.9	21.8	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	31.6	0.0	4.6	39.4	0.0	0.0	46.2	0.0	0.0
LnGrp LOS	A	A	A	C	A	A	D	A	A	D	A	A
Approach Vol, veh/h		98			471			913				81
Approach Delay, s/veh		0.0			11.8			39.4				46.2
Approach LOS		A			B			D				D
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.3		26.0		11.2		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		20.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		46.1		9.1		5.8		6.0				
Green Ext Time (p_c), s		2.2		1.0		0.2		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				28.9								
HCM 6th LOS				C								

2024 No-Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



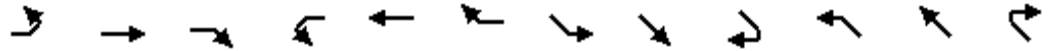
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	0	142	5	29	108	363	461	20	4	1	47	19
Future Volume (vph)	0	142	5	29	108	363	461	20	4	1	47	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	11	12	12	12	14	14	14
Grade (%)		-5%			0%			0%				-4%
Storage Length (ft)	0		0	0		60	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			86			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.996				0.850		0.999			0.961	
Flt Protected					0.989			0.955			0.999	
Satd. Flow (prot)	0	1901	0	0	1942	1501	0	1796	0	0	1957	0
Flt Permitted					0.914			0.955			0.999	
Satd. Flow (perm)	0	1901	0	0	1793	1501	0	1796	0	0	1957	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		1										15
Link Speed (mph)		30			30			30				30
Link Distance (ft)		502			183			594				399
Travel Time (s)		11.4			4.2			13.5				9.1
Confl. Peds. (#/hr)			2	2								
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	0%	0%	0%	4%	1%	0%	0%	0%	2%	0%
Adj. Flow (vph)	0	146	5	30	111	374	475	21	4	1	48	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	151	0	0	141	374	0	500	0	0	69	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.96	0.96	1.04	1.00	1.00	1.00	0.89	0.89	0.89
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83	35	20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40	40	20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

2024 No-Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020

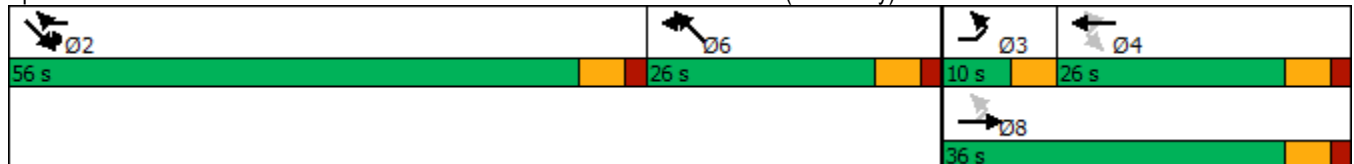


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type		NA		Perm	NA	pm+ov	Split	NA		Split	NA	
Protected Phases	3	8			4	2	2	2		6	6	
Permitted Phases	8			4		4						
Detector Phase	3	8		4	4	2	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Total Split (s)	10.0	36.0		26.0	26.0	56.0	56.0	56.0		26.0	26.0	
Total Split (%)	8.5%	30.5%		22.0%	22.0%	47.5%	47.5%	47.5%		22.0%	22.0%	
Maximum Green (s)	6.0	30.0		20.0	20.0	50.0	50.0	50.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	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	
Total Lost Time (s)		6.0			6.0	6.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0	3.0	3.0	3.0		2.0	2.0	
Recall Mode	None	None		Max	Max	None	None	None		None	None	
v/c Ratio		0.33			0.26	0.31		0.73			0.33	
Control Delay		26.4			25.8	4.0		25.9			32.2	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		26.4			25.8	4.0		25.9			32.2	
Queue Length 50th (ft)		52			49	44		186			23	
Queue Length 95th (ft)		127			121	89		306			68	
Internal Link Dist (ft)		422			103			514			319	
Turn Bay Length (ft)						60						
Base Capacity (vph)		849			534	1448		1312			593	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.18			0.26	0.26		0.38			0.12	

Intersection Summary

Area Type: Other  
 Cycle Length: 118  
 Actuated Cycle Length: 70.4  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

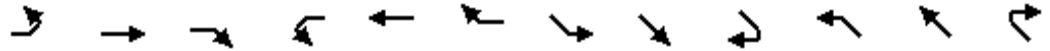


2024 No-Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



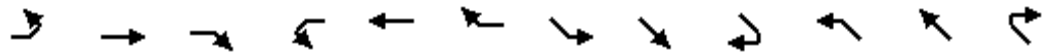
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (veh/h)	0	142	5	29	108	363	461	20	4	1	47	19
Future Volume (veh/h)	0	142	5	29	108	363	461	20	4	1	47	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	1976	1976	1841	1900	1900	1900	2108	2108	2108
Adj Flow Rate, veh/h	0	146	5	30	111	374	475	21	4	1	48	20
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	0	0	4	0	0	0	2	2	2
Cap, veh/h	33	552	19	150	510	1022	578	26	5	2	78	32
Arrive On Green	0.00	0.32	0.32	0.32	0.32	0.32	0.34	0.34	0.34	0.06	0.06	0.06
Sat Flow, veh/h	0	1986	68	251	1595	1555	1721	76	14	29	1393	580
Grp Volume(v), veh/h	0	0	151	141	0	374	500	0	0	69	0	0
Grp Sat Flow(s),veh/h/ln	0	0	2054	1846	0	1555	1811	0	0	2002	0	0
Q Serve(g_s), s	0.0	0.0	6.2	0.0	0.0	6.8	15.8	0.0	0.0	2.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	6.2	3.3	0.0	6.8	15.8	0.0	0.0	2.1	0.0	0.0
Prop In Lane	0.00		0.03	0.21		1.00	0.95		0.01	0.01		0.29
Lane Grp Cap(c), veh/h	0	0	0	661	0	1022	609	0	0	112	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.21	0.00	0.37	0.82	0.00	0.00	0.62	0.00	0.00
Avail Cap(c_a), veh/h	0	0	0	661	0	1022	1449	0	0	641	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	15.6	0.0	4.9	19.0	0.0	0.0	28.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	1.0	2.8	0.0	0.0	2.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.5	0.0	4.7	6.4	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	16.3	0.0	5.9	21.9	0.0	0.0	30.9	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		151			515			500				69
Approach Delay, s/veh		0.0			8.7			21.9				30.9
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		26.0		9.5		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		20.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		17.8		8.8		4.1		8.2				
Green Ext Time (p_c), s		3.2		1.1		0.1		0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				14.2								
HCM 6th LOS				B								

2024 Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



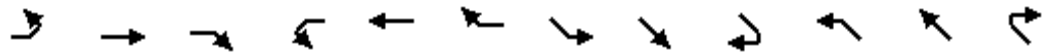
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	0	98	1	15	118	311	806	9	6	1	39	33
Future Volume (vph)	0	98	1	15	118	311	806	9	6	1	39	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	11	12	12	12	14	14	14
Grade (%)		-5%			0%			0%				-4%
Storage Length (ft)	0		0	0		60	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			86			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.999			0.938	
Flt Protected					0.994			0.953			0.999	
Satd. Flow (prot)	0	1854	0	0	1794	1419	0	1708	0	0	1817	0
Flt Permitted					0.959			0.953			0.999	
Satd. Flow (perm)	0	1854	0	0	1731	1419	0	1708	0	0	1817	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)												31
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		502			183			594			399	
Travel Time (s)		11.4			4.2			13.5			9.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	7%	9%	10%	6%	0%	0%	100%	5%	6%
Adj. Flow (vph)	0	109	1	17	131	346	896	10	7	1	43	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	148	346	0	913	0	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.96	0.96	1.04	1.00	1.00	1.00	0.89	0.89	0.89
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83	35	20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40	40	20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

2024 Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020

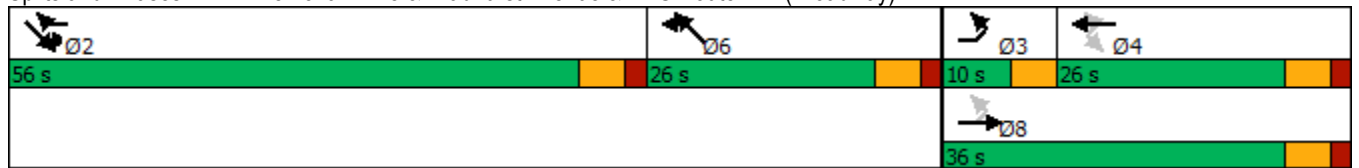


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type		NA		Perm	NA	pm+ov	Split	NA		Split	NA	
Protected Phases	3	8			4	2	2	2		6	6	
Permitted Phases	8			4		4						
Detector Phase	3	8		4	4	2	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Total Split (s)	10.0	36.0		26.0	26.0	56.0	56.0	56.0		26.0	26.0	
Total Split (%)	8.5%	30.5%		22.0%	22.0%	47.5%	47.5%	47.5%		22.0%	22.0%	
Maximum Green (s)	6.0	30.0		20.0	20.0	50.0	50.0	50.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	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	
Total Lost Time (s)		6.0			6.0	6.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0	3.0	3.0	3.0		2.0	2.0	
Recall Mode	None	None		Max	Max	None	None	None		None	None	
v/c Ratio		0.33			0.40	0.29		0.99			0.47	
Control Delay		35.7			36.6	3.4		52.3			37.4	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		35.7			36.6	3.4		52.3			37.4	
Queue Length 50th (ft)		56			78	42		~555			29	
Queue Length 95th (ft)		109			142	84		#868			75	
Internal Link Dist (ft)		422			103			514			319	
Turn Bay Length (ft)						60						
Base Capacity (vph)		598			372	1182		919			415	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.18			0.40	0.29		0.99			0.20	

Intersection Summary

Area Type: Other  
 Cycle Length: 118  
 Actuated Cycle Length: 93.3  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

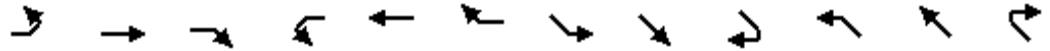


2024 Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



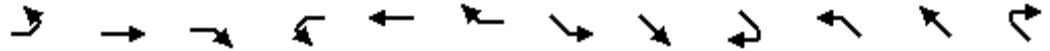
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (veh/h)	0	98	1	15	118	311	806	9	6	1	39	33
Future Volume (veh/h)	0	98	1	15	118	311	806	9	6	1	39	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2022	2022	2022	1837	1837	1752	1900	1900	1900	2062	2062	2062
Adj Flow Rate, veh/h	0	109	1	17	131	346	896	10	7	1	43	37
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	9	9	10	0	0	0	5	5	5
Cap, veh/h	33	556	5	65	371	1108	936	10	7	1	58	50
Arrive On Green	0.00	0.22	0.22	0.22	0.22	0.22	0.53	0.53	0.53	0.06	0.06	0.06
Sat Flow, veh/h	0	2000	18	97	1696	1485	1775	20	14	24	1011	870
Grp Volume(v), veh/h	0	0	110	148	0	346	913	0	0	81	0	0
Grp Sat Flow(s),veh/h/ln	0	0	2018	1793	0	1485	1809	0	0	1904	0	0
Q Serve(g_s), s	0.0	0.0	4.5	0.0	0.0	7.1	44.1	0.0	0.0	3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	4.5	6.3	0.0	7.1	44.1	0.0	0.0	3.8	0.0	0.0
Prop In Lane	0.00		0.01	0.11		1.00	0.98		0.01	0.01		0.46
Lane Grp Cap(c), veh/h	0	0	0	436	0	1108	954	0	0	109	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.34	0.00	0.31	0.96	0.00	0.00	0.74	0.00	0.00
Avail Cap(c_a), veh/h	0	0	0	436	0	1108	989	0	0	416	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	30.4	0.0	3.8	20.6	0.0	0.0	42.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.7	18.8	0.0	0.0	3.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.0	0.0	7.9	21.8	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.5	0.0	4.6	39.4	0.0	0.0	46.2	0.0	0.0
LnGrp LOS	A	A	A	C	A	A	D	A	A	D	A	A
Approach Vol, veh/h		110			494			913				81
Approach Delay, s/veh		0.0			12.9			39.4				46.2
Approach LOS		A			B			D				D
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.3		26.0		11.2		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		20.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		46.1		9.1		5.8		6.5				
Green Ext Time (p_c), s		2.2		1.0		0.2		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				28.8								
HCM 6th LOS				C								

2024 Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



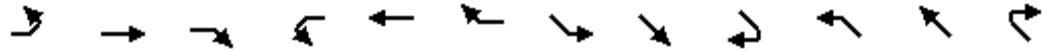
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	0	165	5	29	122	363	461	20	4	1	47	19
Future Volume (vph)	0	165	5	29	122	363	461	20	4	1	47	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	11	12	12	12	14	14	14
Grade (%)		-5%			0%			0%				-4%
Storage Length (ft)	0		0	0		60	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			86			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.996				0.850		0.999			0.961	
Flt Protected					0.990			0.955			0.999	
Satd. Flow (prot)	0	1901	0	0	1944	1501	0	1796	0	0	1957	0
Flt Permitted					0.916			0.955			0.999	
Satd. Flow (perm)	0	1901	0	0	1797	1501	0	1796	0	0	1957	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		1										15
Link Speed (mph)		30			30			30				30
Link Distance (ft)		502			183			594				399
Travel Time (s)		11.4			4.2			13.5				9.1
Confl. Peds. (#/hr)			2	2								
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	0%	0%	0%	4%	1%	0%	0%	0%	2%	0%
Adj. Flow (vph)	0	170	5	30	126	374	475	21	4	1	48	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	175	0	0	156	374	0	500	0	0	69	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.96	0.96	1.04	1.00	1.00	1.00	0.89	0.89	0.89
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83	35	20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40	40	20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

2024 Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020

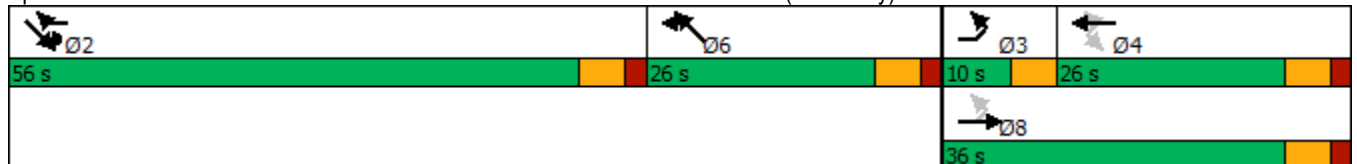


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type		NA		Perm	NA	pm+ov	Split	NA		Split	NA	
Protected Phases	3	8			4	2	2	2		6	6	
Permitted Phases	8			4		4						
Detector Phase	3	8		4	4	2	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Total Split (s)	10.0	36.0		26.0	26.0	56.0	56.0	56.0		26.0	26.0	
Total Split (%)	8.5%	30.5%		22.0%	22.0%	47.5%	47.5%	47.5%		22.0%	22.0%	
Maximum Green (s)	6.0	30.0		20.0	20.0	50.0	50.0	50.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	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	
Total Lost Time (s)		6.0			6.0	6.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0	3.0	3.0	3.0		2.0	2.0	
Recall Mode	None	None		Max	Max	None	None	None		None	None	
v/c Ratio		0.31			0.29	0.31		0.73			0.33	
Control Delay		25.7			26.0	4.0		25.9			32.2	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		25.7			26.0	4.0		25.9			32.2	
Queue Length 50th (ft)		61			54	44		186			23	
Queue Length 95th (ft)		145			132	89		306			68	
Internal Link Dist (ft)		422			103			514			319	
Turn Bay Length (ft)						60						
Base Capacity (vph)		849			535	1448		1312			593	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.21			0.29	0.26		0.38			0.12	

Intersection Summary

Area Type: Other  
 Cycle Length: 118  
 Actuated Cycle Length: 70.4  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

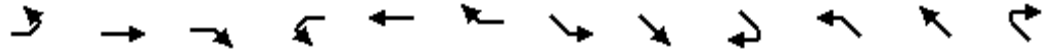


2024 Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



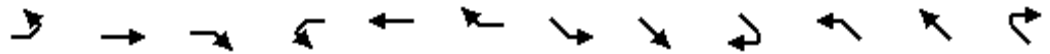
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (veh/h)	0	165	5	29	122	363	461	20	4	1	47	19
Future Volume (veh/h)	0	165	5	29	122	363	461	20	4	1	47	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	1976	1976	1841	1900	1900	1900	2108	2108	2108
Adj Flow Rate, veh/h	0	170	5	30	126	374	475	21	4	1	48	20
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	0	0	4	0	0	0	2	2	2
Cap, veh/h	33	555	16	138	525	1022	578	26	5	2	78	32
Arrive On Green	0.00	0.32	0.32	0.32	0.32	0.32	0.34	0.34	0.34	0.06	0.06	0.06
Sat Flow, veh/h	0	1997	59	216	1641	1555	1721	76	14	29	1393	580
Grp Volume(v), veh/h	0	0	175	156	0	374	500	0	0	69	0	0
Grp Sat Flow(s),veh/h/ln	0	0	2056	1857	0	1555	1811	0	0	2002	0	0
Q Serve(g_s), s	0.0	0.0	7.3	0.0	0.0	6.8	15.8	0.0	0.0	2.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	7.3	3.6	0.0	6.8	15.8	0.0	0.0	2.1	0.0	0.0
Prop In Lane	0.00		0.03	0.19		1.00	0.95		0.01	0.01		0.29
Lane Grp Cap(c), veh/h	0	0	0	663	0	1022	609	0	0	112	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.24	0.00	0.37	0.82	0.00	0.00	0.62	0.00	0.00
Avail Cap(c_a), veh/h	0	0	0	663	0	1022	1449	0	0	641	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	15.7	0.0	4.9	19.0	0.0	0.0	28.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	1.0	2.8	0.0	0.0	2.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.7	0.0	4.7	6.4	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	16.5	0.0	5.9	21.9	0.0	0.0	30.9	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		175			530			500				69
Approach Delay, s/veh		0.0			9.0			21.9				30.9
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		26.0		9.5		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		20.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		17.8		8.8		4.1		9.3				
Green Ext Time (p_c), s		3.2		1.1		0.1		0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				14.0								
HCM 6th LOS				B								

2039 No-Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



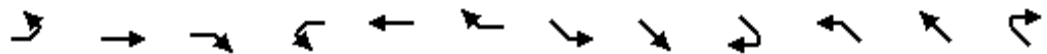
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Volume (vph)	0	87	1	15	97	311	806	9	6	1	39	33
Future Volume (vph)	0	87	1	15	97	311	806	9	6	1	39	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	11	12	12	12	14	14	14
Grade (%)		-5%			0%			0%				-4%
Storage Length (ft)	0		0	0		60	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			86			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.999			0.938	
Flt Protected					0.993			0.953			0.999	
Satd. Flow (prot)	0	1854	0	0	1793	1419	0	1708	0	0	1817	0
Flt Permitted					0.953			0.953			0.999	
Satd. Flow (perm)	0	1854	0	0	1721	1419	0	1708	0	0	1817	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)												31
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		502			183			594			399	
Travel Time (s)		11.4			4.2			13.5			9.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	7%	9%	10%	6%	0%	0%	100%	5%	6%
Adj. Flow (vph)	0	97	1	17	108	346	896	10	7	1	43	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	125	346	0	913	0	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.96	0.96	1.04	1.00	1.00	1.00	0.89	0.89	0.89
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83	35	20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40	40	20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

2039 No-Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type		NA		Perm	NA	pm+ov	Split	NA		Split	NA	
Protected Phases	3	8			4	2	2	2		6	6	
Permitted Phases	8			4		4						
Detector Phase	3	8		4	4	2	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Total Split (s)	10.0	36.0		26.0	26.0	56.0	56.0	56.0		26.0	26.0	
Total Split (%)	8.5%	30.5%		22.0%	22.0%	47.5%	47.5%	47.5%		22.0%	22.0%	
Maximum Green (s)	6.0	30.0		20.0	20.0	50.0	50.0	50.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	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	
Total Lost Time (s)		6.0			6.0	6.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0	3.0	3.0	3.0		2.0	2.0	
Recall Mode	None	None		Max	Max	None	None	None		None	None	
v/c Ratio		0.29			0.34	0.29		0.99			0.47	
Control Delay		35.1			35.5	3.4		52.3			37.4	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		35.1			35.5	3.4		52.3			37.4	
Queue Length 50th (ft)		50			65	42		~555			29	
Queue Length 95th (ft)		98			122	84		#868			75	
Internal Link Dist (ft)		422			103			514			319	
Turn Bay Length (ft)						60						
Base Capacity (vph)		598			370	1182		919			415	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.16			0.34	0.29		0.99			0.20	

Intersection Summary

Area Type: Other

Cycle Length: 118

Actuated Cycle Length: 93.3

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

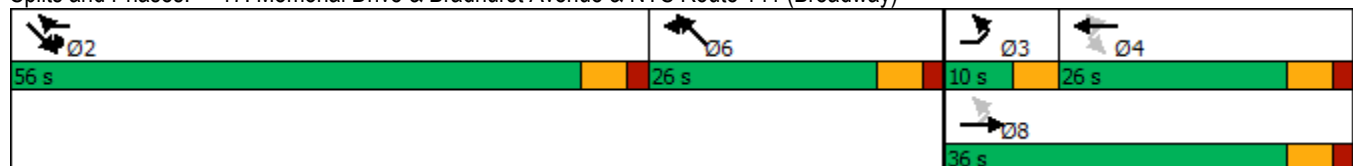
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

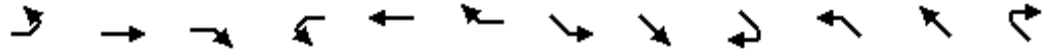


2039 No-Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



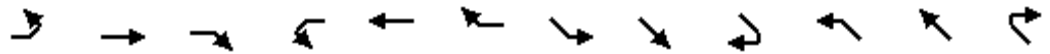
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (veh/h)	0	87	1	15	97	311	806	9	6	1	39	33
Future Volume (veh/h)	0	87	1	15	97	311	806	9	6	1	39	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2022	2022	2022	1837	1837	1752	1900	1900	1900	2062	2062	2062
Adj Flow Rate, veh/h	0	97	1	17	108	346	896	10	7	1	43	37
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	9	9	10	0	0	0	5	5	5
Cap, veh/h	33	555	6	71	364	1108	936	10	7	1	58	50
Arrive On Green	0.00	0.22	0.22	0.22	0.22	0.22	0.53	0.53	0.53	0.06	0.06	0.06
Sat Flow, veh/h	0	1997	21	121	1663	1485	1775	20	14	24	1011	870
Grp Volume(v), veh/h	0	0	98	125	0	346	913	0	0	81	0	0
Grp Sat Flow(s),veh/h/ln	0	0	2018	1784	0	1485	1809	0	0	1904	0	0
Q Serve(g_s), s	0.0	0.0	4.0	0.0	0.0	7.1	44.1	0.0	0.0	3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	4.0	5.2	0.0	7.1	44.1	0.0	0.0	3.8	0.0	0.0
Prop In Lane	0.00		0.01	0.14		1.00	0.98		0.01	0.01		0.46
Lane Grp Cap(c), veh/h	0	0	0	435	0	1108	954	0	0	109	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.29	0.00	0.31	0.96	0.00	0.00	0.74	0.00	0.00
Avail Cap(c_a), veh/h	0	0	0	435	0	1108	989	0	0	416	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	30.0	0.0	3.8	20.6	0.0	0.0	42.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7	0.0	0.7	18.8	0.0	0.0	3.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.5	0.0	7.9	21.8	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	31.6	0.0	4.6	39.4	0.0	0.0	46.2	0.0	0.0
LnGrp LOS	A	A	A	C	A	A	D	A	A	D	A	A
Approach Vol, veh/h		98			471			913				81
Approach Delay, s/veh		0.0			11.8			39.4				46.2
Approach LOS		A			B			D				D
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.3		26.0		11.2		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		20.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		46.1		9.1		5.8		6.0				
Green Ext Time (p_c), s		2.2		1.0		0.2		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				28.9								
HCM 6th LOS				C								

2039 No-Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



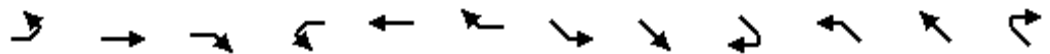
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	0	142	5	29	108	363	461	20	4	1	47	19
Future Volume (vph)	0	142	5	29	108	363	461	20	4	1	47	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	11	12	12	12	14	14	14
Grade (%)		-5%			0%			0%				-4%
Storage Length (ft)	0		0	0		60	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			86			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.996				0.850		0.999			0.961	
Flt Protected					0.989			0.955			0.999	
Satd. Flow (prot)	0	1901	0	0	1942	1501	0	1796	0	0	1957	0
Flt Permitted					0.914			0.955			0.999	
Satd. Flow (perm)	0	1901	0	0	1793	1501	0	1796	0	0	1957	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		1										15
Link Speed (mph)		30			30			30				30
Link Distance (ft)		502			183			594				399
Travel Time (s)		11.4			4.2			13.5				9.1
Confl. Peds. (#/hr)			2	2								
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	0%	0%	0%	4%	1%	0%	0%	0%	2%	0%
Adj. Flow (vph)	0	146	5	30	111	374	475	21	4	1	48	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	151	0	0	141	374	0	500	0	0	69	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.96	0.96	1.04	1.00	1.00	1.00	0.89	0.89	0.89
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83	35	20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40	40	20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

2039 No-Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type		NA		Perm	NA	pm+ov	Split	NA		Split	NA	
Protected Phases	3	8			4	2	2	2		6	6	
Permitted Phases	8			4		4						
Detector Phase	3	8		4	4	2	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Total Split (s)	10.0	36.0		26.0	26.0	56.0	56.0	56.0		26.0	26.0	
Total Split (%)	8.5%	30.5%		22.0%	22.0%	47.5%	47.5%	47.5%		22.0%	22.0%	
Maximum Green (s)	6.0	30.0		20.0	20.0	50.0	50.0	50.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	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	
Total Lost Time (s)		6.0			6.0	6.0		6.0			6.0	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	2.0	2.0		2.0	2.0	3.0	3.0	3.0		2.0	2.0	
Recall Mode	None	None		Max	Max	None	None	None		None	None	
v/c Ratio		0.33			0.26	0.31		0.73			0.33	
Control Delay		26.4			25.8	4.0		25.9			32.2	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		26.4			25.8	4.0		25.9			32.2	
Queue Length 50th (ft)		52			49	44		186			23	
Queue Length 95th (ft)		127			121	89		306			68	
Internal Link Dist (ft)		422			103			514			319	
Turn Bay Length (ft)						60						
Base Capacity (vph)		849			534	1448		1312			593	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.18			0.26	0.26		0.38			0.12	

Intersection Summary

Area Type: Other

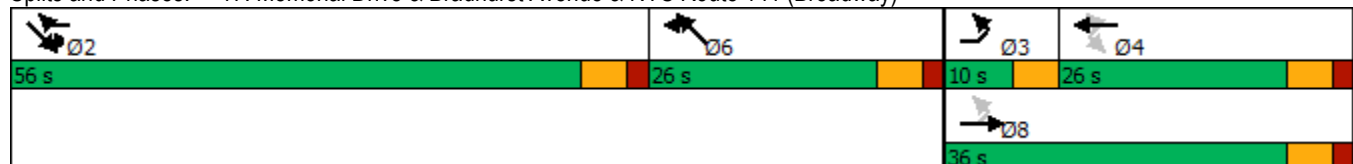
Cycle Length: 118

Actuated Cycle Length: 70.4

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

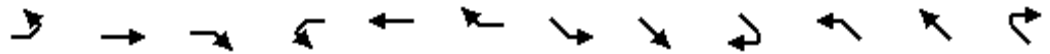


2039 No-Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



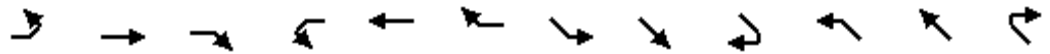
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (veh/h)	0	142	5	29	108	363	461	20	4	1	47	19
Future Volume (veh/h)	0	142	5	29	108	363	461	20	4	1	47	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	1976	1976	1841	1900	1900	1900	2108	2108	2108
Adj Flow Rate, veh/h	0	146	5	30	111	374	475	21	4	1	48	20
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	0	0	4	0	0	0	2	2	2
Cap, veh/h	33	552	19	150	510	1022	578	26	5	2	78	32
Arrive On Green	0.00	0.32	0.32	0.32	0.32	0.32	0.34	0.34	0.34	0.06	0.06	0.06
Sat Flow, veh/h	0	1986	68	251	1595	1555	1721	76	14	29	1393	580
Grp Volume(v), veh/h	0	0	151	141	0	374	500	0	0	69	0	0
Grp Sat Flow(s),veh/h/ln	0	0	2054	1846	0	1555	1811	0	0	2002	0	0
Q Serve(g_s), s	0.0	0.0	6.2	0.0	0.0	6.8	15.8	0.0	0.0	2.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	6.2	3.3	0.0	6.8	15.8	0.0	0.0	2.1	0.0	0.0
Prop In Lane	0.00		0.03	0.21		1.00	0.95		0.01	0.01		0.29
Lane Grp Cap(c), veh/h	0	0	0	661	0	1022	609	0	0	112	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.21	0.00	0.37	0.82	0.00	0.00	0.62	0.00	0.00
Avail Cap(c_a), veh/h	0	0	0	661	0	1022	1449	0	0	641	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	15.6	0.0	4.9	19.0	0.0	0.0	28.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	1.0	2.8	0.0	0.0	2.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.5	0.0	4.7	6.4	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	16.3	0.0	5.9	21.9	0.0	0.0	30.9	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		151			515			500				69
Approach Delay, s/veh		0.0			8.7			21.9				30.9
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		26.0		9.5		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		20.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		17.8		8.8		4.1		8.2				
Green Ext Time (p_c), s		3.2		1.1		0.1		0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				14.2								
HCM 6th LOS				B								

2039 Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



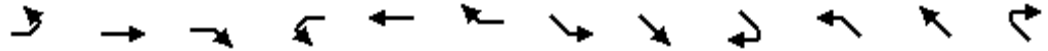
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	0	113	1	15	164	311	806	9	6	1	39	33
Future Volume (vph)	0	113	1	15	164	311	806	9	6	1	39	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	11	12	12	12	14	14	14
Grade (%)		-5%			0%			0%				-4%
Storage Length (ft)	0		0	0		60	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			86			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.999			0.938	
Flt Protected					0.996			0.953			0.999	
Satd. Flow (prot)	0	1854	0	0	1797	1419	0	1708	0	0	1817	0
Flt Permitted					0.967			0.953			0.999	
Satd. Flow (perm)	0	1854	0	0	1745	1419	0	1708	0	0	1817	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)												31
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		502			183			594			399	
Travel Time (s)		11.4			4.2			13.5			9.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	7%	9%	10%	6%	0%	0%	100%	5%	6%
Adj. Flow (vph)	0	126	1	17	182	346	896	10	7	1	43	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	127	0	0	199	346	0	913	0	0	81	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.96	0.96	1.04	1.00	1.00	1.00	0.89	0.89	0.89
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83	35	20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40	40	20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

2039 Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020

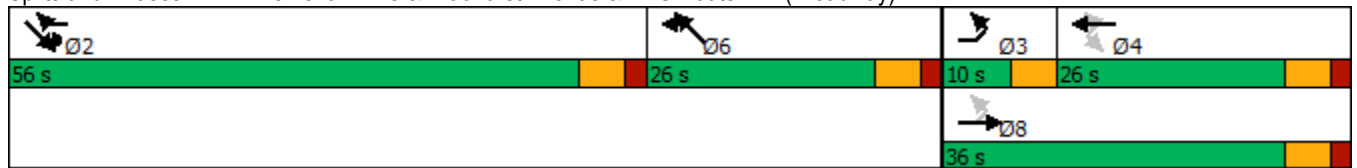


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type		NA		Perm	NA	pm+ov	Split	NA		Split	NA	
Protected Phases	3	8			4	2	2	2		6	6	
Permitted Phases	8			4		4						
Detector Phase	3	8		4	4	2	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Total Split (s)	10.0	36.0		26.0	26.0	56.0	56.0	56.0		26.0	26.0	
Total Split (%)	8.5%	30.5%		22.0%	22.0%	47.5%	47.5%	47.5%		22.0%	22.0%	
Maximum Green (s)	6.0	30.0		20.0	20.0	50.0	50.0	50.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	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	
Total Lost Time (s)		6.0			6.0	6.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0	3.0	3.0	3.0		2.0	2.0	
Recall Mode	None	None		Max	Max	None	None	None		None	None	
v/c Ratio		0.32			0.53	0.29		0.99			0.47	
Control Delay		35.0			39.7	3.4		52.3			37.4	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		35.0			39.7	3.4		52.3			37.4	
Queue Length 50th (ft)		66			108	42		~555			29	
Queue Length 95th (ft)		123			186	84		#868			75	
Internal Link Dist (ft)		422			103			514			319	
Turn Bay Length (ft)						60						
Base Capacity (vph)		598			375	1182		919			415	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.21			0.53	0.29		0.99			0.20	

Intersection Summary

Area Type: Other  
 Cycle Length: 118  
 Actuated Cycle Length: 93.3  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

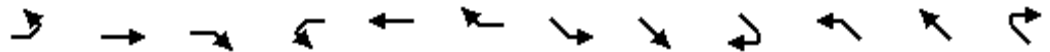


2039 Build Traffic Volumes

Weekday Peak AM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



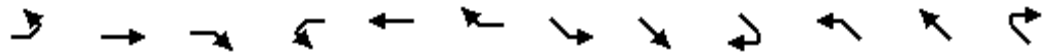
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (veh/h)	0	113	1	15	164	311	806	9	6	1	39	33
Future Volume (veh/h)	0	113	1	15	164	311	806	9	6	1	39	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2022	2022	2022	1837	1837	1752	1900	1900	1900	2062	2062	2062
Adj Flow Rate, veh/h	0	126	1	17	182	346	896	10	7	1	43	37
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	9	9	10	0	0	0	5	5	5
Cap, veh/h	33	556	4	59	378	1108	936	10	7	1	58	50
Arrive On Green	0.00	0.22	0.22	0.22	0.22	0.22	0.53	0.53	0.53	0.06	0.06	0.06
Sat Flow, veh/h	0	2003	16	73	1729	1485	1775	20	14	24	1011	870
Grp Volume(v), veh/h	0	0	127	199	0	346	913	0	0	81	0	0
Grp Sat Flow(s),veh/h/ln	0	0	2019	1802	0	1485	1809	0	0	1904	0	0
Q Serve(g_s), s	0.0	0.0	5.2	0.0	0.0	7.1	44.1	0.0	0.0	3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	5.2	8.7	0.0	7.1	44.1	0.0	0.0	3.8	0.0	0.0
Prop In Lane	0.00		0.01	0.09		1.00	0.98		0.01	0.01		0.46
Lane Grp Cap(c), veh/h	0	0	0	437	0	1108	954	0	0	109	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.46	0.00	0.31	0.96	0.00	0.00	0.74	0.00	0.00
Avail Cap(c_a), veh/h	0	0	0	437	0	1108	989	0	0	416	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	31.3	0.0	3.8	20.6	0.0	0.0	42.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.4	0.0	0.7	18.8	0.0	0.0	3.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.2	0.0	7.9	21.8	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	34.7	0.0	4.6	39.4	0.0	0.0	46.2	0.0	0.0
LnGrp LOS	A	A	A	C	A	A	D	A	A	D	A	A
Approach Vol, veh/h		127			545			913				81
Approach Delay, s/veh		0.0			15.6			39.4				46.2
Approach LOS		A			B			D				D
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.3		26.0		11.2		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		20.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		46.1		10.7		5.8		7.2				
Green Ext Time (p_c), s		2.2		1.1		0.2		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				28.9								
HCM 6th LOS				C								

2039 Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



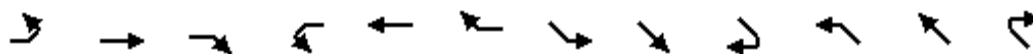
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	0	218	5	29	137	363	461	20	4	1	47	19
Future Volume (vph)	0	218	5	29	137	363	461	20	4	1	47	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	11	12	12	12	14	14	14
Grade (%)		-5%			0%			0%				-4%
Storage Length (ft)	0		0	0		60	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			86			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.997				0.850		0.999			0.961	
Flt Protected					0.991			0.955			0.999	
Satd. Flow (prot)	0	1903	0	0	1946	1501	0	1796	0	0	1957	0
Flt Permitted					0.913			0.955			0.999	
Satd. Flow (perm)	0	1903	0	0	1791	1501	0	1796	0	0	1957	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		1										15
Link Speed (mph)		30			30			30				30
Link Distance (ft)		502			183			594				399
Travel Time (s)		11.4			4.2			13.5				9.1
Confl. Peds. (#/hr)			2	2								
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	0%	0%	0%	4%	1%	0%	0%	0%	2%	0%
Adj. Flow (vph)	0	225	5	30	141	374	475	21	4	1	48	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	0	0	171	374	0	500	0	0	69	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.96	0.96	1.04	1.00	1.00	1.00	0.89	0.89	0.89
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83	35	20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40	40	20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

2039 Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type		NA		Perm	NA	pm+ov	Split	NA		Split	NA	
Protected Phases	3	8			4	2	2	2		6	6	
Permitted Phases	8			4		4						
Detector Phase	3	8		4	4	2	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Total Split (s)	10.0	36.0		26.0	26.0	56.0	56.0	56.0		26.0	26.0	
Total Split (%)	8.5%	30.5%		22.0%	22.0%	47.5%	47.5%	47.5%		22.0%	22.0%	
Maximum Green (s)	6.0	30.0		20.0	20.0	50.0	50.0	50.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	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	
Total Lost Time (s)		6.0			6.0	6.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0	3.0	3.0	3.0		2.0	2.0	
Recall Mode	None	None		Max	Max	None	None	None		None	None	
v/c Ratio		0.40			0.32	0.31		0.73			0.33	
Control Delay		27.0			26.4	4.0		26.1			32.9	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		27.0			26.4	4.0		26.1			32.9	
Queue Length 50th (ft)		83			60	44		186			23	
Queue Length 95th (ft)		193			148	89		318			71	
Internal Link Dist (ft)		422			103			514			319	
Turn Bay Length (ft)						60						
Base Capacity (vph)		844			537	1441		1302			589	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.27			0.32	0.26		0.38			0.12	

Intersection Summary

Area Type: Other

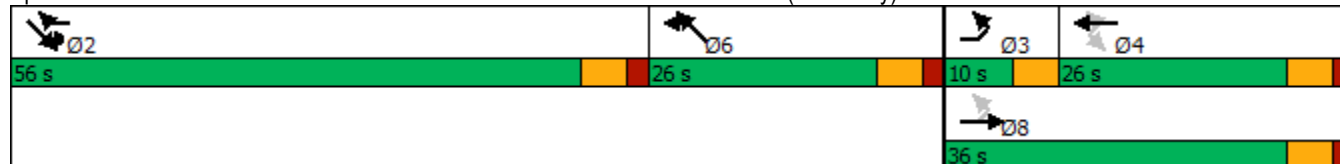
Cycle Length: 118

Actuated Cycle Length: 71.3

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

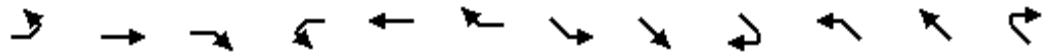


2039 Build Traffic Volumes

Weekday Peak PM Hour

17: Memorial Drive & Bradhurst Avenue & NYS Route 141 (Broadway)

12/02/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (veh/h)	0	218	5	29	137	363	461	20	4	1	47	19
Future Volume (veh/h)	0	218	5	29	137	363	461	20	4	1	47	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	1976	1976	1841	1900	1900	1900	2108	2108	2108
Adj Flow Rate, veh/h	0	225	5	30	141	374	475	21	4	1	48	20
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	0	0	4	0	0	0	2	2	2
Cap, veh/h	33	559	12	119	493	1022	578	26	5	2	78	32
Arrive On Green	0.00	0.32	0.32	0.32	0.32	0.32	0.34	0.34	0.34	0.06	0.06	0.06
Sat Flow, veh/h	0	2014	45	159	1541	1555	1721	76	14	29	1393	580
Grp Volume(v), veh/h	0	0	230	171	0	374	500	0	0	69	0	0
Grp Sat Flow(s),veh/h/ln	0	0	2058	1700	0	1555	1811	0	0	2002	0	0
Q Serve(g_s), s	0.0	0.0	9.8	0.2	0.0	6.8	15.8	0.0	0.0	2.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	9.8	10.0	0.0	6.8	15.8	0.0	0.0	2.1	0.0	0.0
Prop In Lane	0.00		0.02	0.18		1.00	0.95		0.01	0.01		0.29
Lane Grp Cap(c), veh/h	0	0	0	612	0	1022	609	0	0	112	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.28	0.00	0.37	0.82	0.00	0.00	0.62	0.00	0.00
Avail Cap(c_a), veh/h	0	0	0	612	0	1022	1449	0	0	641	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	15.8	0.0	4.9	19.0	0.0	0.0	28.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.1	0.0	1.0	2.8	0.0	0.0	2.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.9	0.0	4.7	6.4	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	17.0	0.0	5.9	21.9	0.0	0.0	30.9	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		230			545			500				69
Approach Delay, s/veh		0.0			9.4			21.9				30.9
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		26.0		9.5		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		20.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		17.8		12.0		4.1		11.8				
Green Ext Time (p_c), s		3.2		1.0		0.1		0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				13.5								
HCM 6th LOS				B								