

Timings

3: NE 167 St & NE 800 Blk

851 NE 167 Street
Existing Condition - AM Peak Hour



Lane Group	EBL	EBT	WBT	SWR	Ø5	Ø7
Lane Configurations						
Traffic Volume (vph)	123	2035	1489	197		
Future Volume (vph)	123	2035	1489	197		
Turn Type	Prot	NA	NA	pt+ov		
Protected Phases	5 7	2	6	7 5	5	7
Permitted Phases						
Detector Phase	5 7	2	6	7 5		
Switch Phase						
Minimum Initial (s)		16.0	16.0		5.0	5.0
Minimum Split (s)		24.0	24.0		24.0	42.0
Total Split (s)		86.0	55.0		31.0	44.0
Total Split (%)		66.2%	42.3%		24%	34%
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		2.0	2.0		2.0	3.0
Lost Time Adjust (s)		0.0	0.0			
Total Lost Time (s)		6.0	6.0			
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode		C-Min	C-Min		None	None
Act Effct Green (s)	28.2	101.3	89.8	27.2		
Actuated g/C Ratio	0.22	0.78	0.69	0.21		
v/c Ratio	0.33	0.53	0.45	0.60		
Control Delay	33.0	7.6	5.0	52.2		
Queue Delay	0.0	0.2	0.0	0.0		
Total Delay	33.0	7.8	5.0	52.2		
LOS	C	A	A	D		
Approach Delay		9.2	5.0			
Approach LOS		A	A			

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 44 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 9.8

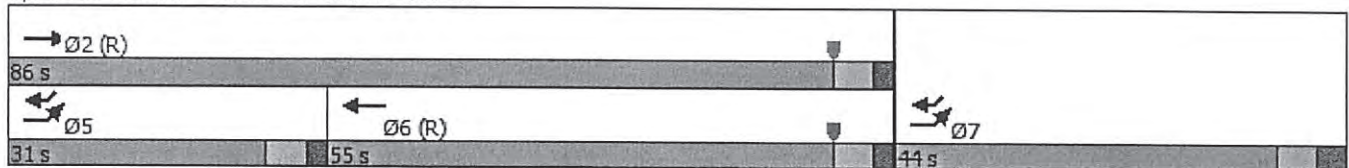
Intersection LOS: A

Intersection Capacity Utilization 52.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: NE 167 St & NE 800 Blk



























Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	126	2077	1549	201
v/c Ratio	0.33	0.53	0.45	0.60
Control Delay	33.0	7.6	5.0	52.2
Queue Delay	0.0	0.2	0.0	0.0
Total Delay	33.0	7.8	5.0	52.2
Queue Length 50th (ft)	100	115	24	153
Queue Length 95th (ft)	m119	368	35	216
Internal Link Dist (ft)		493	885	
Turn Bay Length (ft)	240			
Base Capacity (vph)	643	3922	3468	576
Starvation Cap Reductn	0	752	0	0
Spillback Cap Reductn	0	0	169	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.66	0.47	0.35

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
 4: NE 10 Ave & NE 163 St/NE 167 St

851 NE 167 Street
 Existing Condition - AM Peak Hour

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEU	SEL	SET	SER	NWL	NWT
Lane Configurations												
Traffic Volume (vph)	83	150	46	106	184	11	6	37	1871	62	56	1422
Future Volume (vph)	83	150	46	106	184	11	6	37	1871	62	56	1422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	4.0	8.0	8.0			6.0	7.0		6.0	7.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	0.91		1.00	0.91
Fr _t	1.00	1.00	0.85	1.00	0.99			1.00	1.00		1.00	1.00
Fl _t Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	1845	1568	1752	1830			1752	5012		1752	5029
Fl _t Permitted	0.43	1.00	1.00	0.57	1.00			0.14	1.00		0.07	1.00
Satd. Flow (perm)	797	1845	1568	1056	1830			267	5012		123	5029
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	86	155	47	109	190	11	6	38	1929	64	58	1466
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	2	0	0	1
Lane Group Flow (vph)	86	155	47	109	199	0	0	44	1991	0	58	1478
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Free	Perm	NA		pm+pt	pm+pt	NA		pm+pt	NA
Protected Phases		8			4		5	5	2		1	6
Permitted Phases	8		Free	4			2	2			6	
Actuated Green, G (s)	18.9	18.9	130.0	18.9	18.9			88.7	84.2		91.5	85.6
Effective Green, g (s)	18.9	18.9	130.0	18.9	18.9			88.7	84.2		91.5	85.6
Actuated g/C Ratio	0.15	0.15	1.00	0.15	0.15			0.68	0.65		0.70	0.66
Clearance Time (s)	8.0	8.0		8.0	8.0			6.0	7.0		6.0	7.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.0	1.0		2.0	1.0
Lane Grp Cap (vph)	115	268	1568	153	266			233	3246		160	3311
v/s Ratio Prot		0.08			c0.11			0.01	c0.40		c0.02	0.29
v/s Ratio Perm	0.11		c0.03	0.10				0.12			0.24	
v/c Ratio	0.75	0.58	0.03	0.71	0.75			0.19	0.61		0.36	0.45
Uniform Delay, d1	53.3	51.8	0.0	53.0	53.3			7.2	13.4		9.7	10.7
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.55	1.65		1.00	1.00
Incremental Delay, d2	21.9	2.5	0.0	13.6	10.4			0.1	0.8		0.5	0.4
Delay (s)	75.2	54.3	0.0	66.6	63.7			11.4	22.8		10.2	11.2
Level of Service	E	D	A	E	E			B	C		B	B
Approach Delay (s)		51.7			64.7				22.6			11.1
Approach LOS		D			E				C			B

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: NE 10 Ave & NE 163 St/NE 167 St

851 NE 167 Street
 Existing Condition - AM Peak Hour



Movement	NWR
LANE CONFIGURATIONS	
Traffic Volume (vph)	13
Future Volume (vph)	13
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
FRIT	
FRIT Protected	
Satd. Flow (prot)	
FRIT Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	13
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	3%
TURN TYPE	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Queues

4: NE 10 Ave & NE 163 St/NE 167 St

851 NE 167 Street
Existing Condition - AM Peak Hour



Lane Group	NBL	NBT	NBR	SBL	SBT	SEL	SET	NWL	NWT
Lane Group Flow (vph)	86	155	47	109	201	44	1993	58	1479
v/c Ratio	0.75	0.58	0.03	0.71	0.75	0.18	0.60	0.33	0.44
Control Delay	87.9	59.8	0.0	76.7	69.8	10.0	24.2	10.4	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	59.8	0.0	76.7	69.8	10.0	24.2	10.4	11.7
Queue Length 50th (ft)	70	124	0	89	163	20	631	11	208
Queue Length 95th (ft)	125	186	0	148	236	m32	306	28	288
Internal Link Dist (ft)		197			362		885		231
Turn Bay Length (ft)	90		70	195		210		180	
Base Capacity (vph)	154	355	1568	204	354	321	3295	229	3358
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	0.56	0.44	0.03	0.53	0.57	0.14	0.60	0.25	0.44

Intersection Summary

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

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↗	↕		↗	↕	
Traffic Vol, veh/h	0	3	2	35	3	187	1	489	56	369	852	3
Future Vol, veh/h	0	3	2	35	3	187	1	489	56	369	852	3
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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	3	2	35	3	189	1	494	57	373	861	3

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1860	2162	432	1703	2135	276	864	0	0	551	0	0
Stage 1	1609	1609	-	525	525	-	-	-	-	-	-	-
Stage 2	251	553	-	1178	1610	-	-	-	-	-	-	-
Critical Hdwy	5	5	5	5	5	5	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	168	118	720	197	121	835	768	-	-	1008	-	-
Stage 1	108	161	-	501	525	-	-	-	-	-	-	-
Stage 2	728	510	-	201	160	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	90	74	720	136	76	835	768	-	-	1008	-	-
Mov Cap-2 Maneuver	90	74	-	136	76	-	-	-	-	-	-	-
Stage 1	108	101	-	500	524	-	-	-	-	-	-	-
Stage 2	559	509	-	122	101	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	37.7		22.2			0		3.2		
HCM LOS	E		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	768	-	-	115	432	1008	-	-
HCM Lane V/C Ratio	0.001	-	-	0.044	0.526	0.37	-	-
HCM Control Delay (s)	9.7	-	-	37.7	22.2	10.7	-	-
HCM Lane LOS	A	-	-	E	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	3	1.7	-	-

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	8	0	683	1211	6
Future Vol, veh/h	0	8	0	683	1211	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	8	0	690	1223	6

Major/Minor

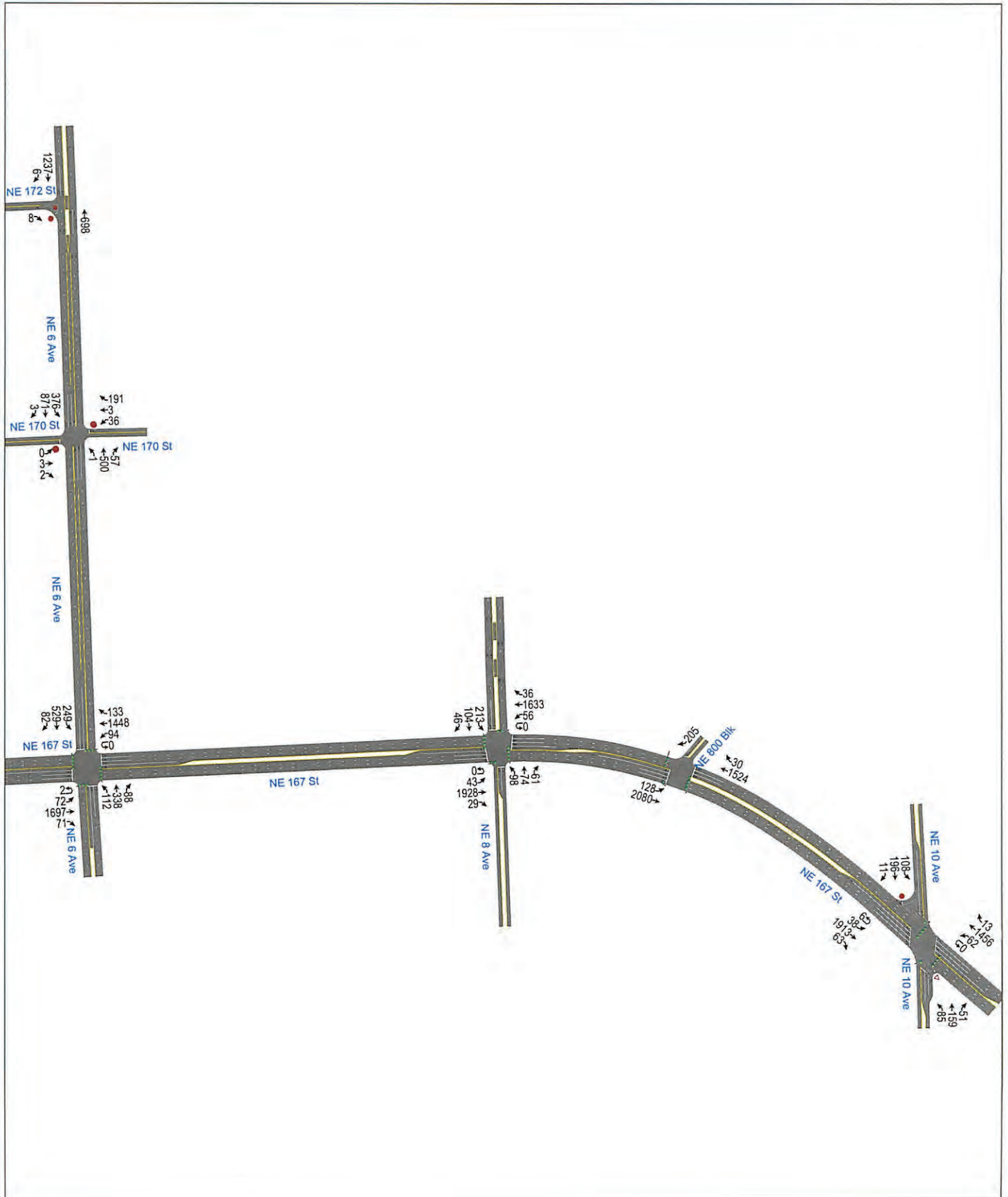
	Minor2	Major1	Major2
Conflicting Flow All	-	615	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.96	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.33	-
Pot Cap-1 Maneuver	0	432	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	432	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	EB	NB	SB
HCM Control Delay, s	13.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt

	NBT EBLn1	SBT	SBR
Capacity (veh/h)	-	432	-
HCM Lane V/C Ratio	-	0.019	-
HCM Control Delay (s)	-	13.5	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.1	-



HCM Signalized Intersection Capacity Analysis

1: NE 6 Ave & NE 167 St

851 NE 167 Street

Future Condition w/o Project - AM Peak Hour



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	72	1697	71	94	1448	133	112	338	88	249	529
Future Volume (vph)	2	72	1697	71	94	1448	133	112	338	88	249	529
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.1		6.0	6.1		6.4	7.4		6.4	7.4
Lane Util. Factor		1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95
Fr _t		1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.98
Fl _t Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1752	5006		1752	4972		1752	3396		1752	3434
Fl _t Permitted		0.08	1.00		0.04	1.00		0.20	1.00		0.18	1.00
Satd. Flow (perm)		139	5006		79	4972		369	3396		333	3434
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	78	1845	77	102	1574	145	122	367	96	271	575
RTOR Reduction (vph)	0	0	2	0	0	5	0	0	12	0	0	6
Lane Group Flow (vph)	0	80	1920	0	102	1714	0	122	451	0	271	658
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA
Protected Phases		5	2		1	6		3	8		7	4
Permitted Phases	5	2			6			8			4	
Actuated Green, G (s)		110.3	101.1		117.1	104.5		47.5	33.5		66.8	46.4
Effective Green, g (s)		110.3	101.1		117.1	104.5		47.5	33.5		66.8	46.4
Actuated g/C Ratio		0.55	0.51		0.59	0.52		0.24	0.17		0.33	0.23
Clearance Time (s)		6.0	6.1		6.0	6.1		6.4	7.4		6.4	7.4
Vehicle Extension (s)		2.0	1.0		2.0	1.0		2.0	2.5		2.0	2.5
Lane Grp Cap (vph)		150	2530		151	2597		184	568		302	796
v/s Ratio Prot		0.02	c0.38		c0.04	0.34		0.05	0.13		c0.12	0.19
v/s Ratio Perm		0.27			c0.35			0.11			c0.18	
v/c Ratio		0.53	0.76		0.68	0.66		0.66	0.79		0.90	0.83
Uniform Delay, d ₁		27.7	39.7		46.9	34.8		63.3	79.9		54.7	73.0
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d ₂		1.8	2.2		9.0	1.3		6.8	7.3		26.5	6.9
Delay (s)		29.5	41.9		55.9	36.1		70.1	87.2		81.3	79.9
Level of Service		C	D		E	D		E	F		F	E
Approach Delay (s)			41.4			37.2			83.6			80.3
Approach LOS			D			D			F			F

Intersection Summary

HCM 2000 Control Delay	51.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	200.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 1: NE 6 Ave & NE 167 St

851 NE 167 Street
 Future Condition w/o Project - AM Peak Hour



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	82
Future Volume (vph)	82
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Fr	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	89
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	3%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
1: NE 6 Ave & NE 167 St

851 NE 167 Street
Future Condition w/o Project - AM Peak Hour



Lane Group	EBU	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	2	72	1697	94	1448	112	338	249	529
Future Volume (vph)	2	72	1697	94	1448	112	338	249	529
Turn Type	custom	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases		5	2	1	6	3	8	7	4
Permitted Phases	5	2		6		8		4	
Detector Phase	5	5	2	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Minimum Split (s)	11.0	11.0	35.1	11.0	35.1	11.4	41.4	11.4	41.4
Total Split (s)	22.0	22.0	96.0	22.0	96.0	26.0	56.0	26.0	56.0
Total Split (%)	11.0%	11.0%	48.0%	11.0%	48.0%	13.0%	28.0%	13.0%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.0	2.1	2.0	2.1	2.0	3.0	2.0	3.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.1	6.0	6.1	6.4	7.4	6.4	7.4
Lead/Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	C-Min	None	None	None	None
Act Effect Green (s)		110.4	101.1	117.2	104.5	48.5	33.5	66.6	46.4
Actuated g/C Ratio		0.55	0.51	0.59	0.52	0.24	0.17	0.33	0.23
v/c Ratio		0.53	0.76	0.67	0.66	0.66	0.80	0.90	0.83
Control Delay		32.8	43.7	61.7	37.6	63.7	87.3	82.9	81.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		32.8	43.7	61.7	37.6	63.7	87.3	82.9	81.5
LOS		C	D	E	D	E	F	F	F
Approach Delay			43.2		38.9		82.4		81.9
Approach LOS			D		D		F		F

Intersection Summary

Cycle Length: 200
 Actuated Cycle Length: 200
 Offset: 181 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 52.8
 Intersection Capacity Utilization 87.1%
 Analysis Period (min) 15

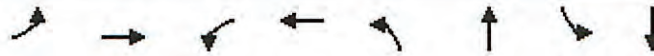
Intersection LOS: D
 ICU Level of Service E

Splits and Phases: 1: NE 6 Ave & NE 167 St



Queues
1: NE 6 Ave & NE 167 St

851 NE 167 Street
Future Condition w/o Project - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	80	1922	102	1719	122	463	271	664
v/c Ratio	0.53	0.76	0.67	0.66	0.66	0.80	0.90	0.83
Control Delay	32.8	43.7	61.7	37.6	63.7	87.3	82.9	81.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	43.7	61.7	37.6	63.7	87.3	82.9	81.5
Queue Length 50th (ft)	44	754	76	601	113	307	277	433
Queue Length 95th (ft)	79	883	155	733	164	340	#483	510
Internal Link Dist (ft)		1120		1241		270		985
Turn Bay Length (ft)	295		245		200		200	
Base Capacity (vph)	209	2531	180	2601	235	836	301	854
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	0.38	0.76	0.57	0.66	0.52	0.55	0.90	0.78

Intersection Summary

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

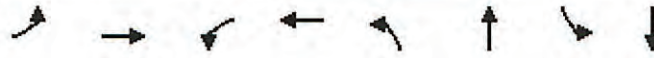
HCM 6th Signalized Intersection Summary
 2: NE 8 Ave & NE 167 St

851 NE 167 Street
 Future Condition w/o Project - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	1928	29	56	1633	36	98	74	61	213	104	46
Future Volume (veh/h)	43	1928	29	56	1633	36	98	74	61	213	104	46
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	44	1967	30	57	1666	37	100	76	62	217	106	47
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	224	3053	47	188	3043	68	211	90	74	230	144	64
Arrive On Green	0.03	0.59	0.59	0.03	0.60	0.60	0.06	0.10	0.10	0.09	0.12	0.12
Sat Flow, veh/h	1767	5140	78	1767	5099	113	1767	945	771	1767	1218	540
Grp Volume(v), veh/h	44	1292	705	57	1103	600	100	0	138	217	0	153
Grp Sat Flow(s),veh/h/ln	1767	1689	1841	1767	1689	1835	1767	0	1717	1767	0	1758
Q Serve(g_s), s	1.2	32.7	32.8	1.6	25.4	25.4	6.6	0.0	10.3	11.3	0.0	10.9
Cycle Q Clear(g_c), s	1.2	32.7	32.8	1.6	25.4	25.4	6.6	0.0	10.3	11.3	0.0	10.9
Prop In Lane	1.00		0.04	1.00		0.06	1.00		0.45	1.00		0.31
Lane Grp Cap(c), veh/h	224	2006	1094	188	2016	1095	211	0	164	230	0	208
V/C Ratio(X)	0.20	0.64	0.64	0.30	0.55	0.55	0.47	0.00	0.84	0.95	0.00	0.74
Avail Cap(c_a), veh/h	292	2006	1094	251	2016	1095	251	0	251	230	0	257
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)	0.54	0.54	0.54	0.88	0.88	0.88	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.3	17.4	17.4	14.9	15.7	15.7	48.9	0.0	57.8	52.1	0.0	55.3
Incr Delay (d2), s/veh	0.1	0.9	1.6	0.3	0.9	1.7	0.6	0.0	12.1	43.9	0.0	7.3
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	0.5	12.3	13.7	0.6	9.7	10.7	2.9	0.0	5.0	4.5	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	18.2	19.0	15.2	16.6	17.4	49.5	0.0	69.9	96.0	0.0	62.6
LnGrp LOS	B	B	B	B	B	B	D	A	E	F	A	E
Approach Vol, veh/h		2041			1760			238				370
Approach Delay, s/veh		18.4			16.9			61.3				82.2
Approach LOS		B			B			E				F
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	83.2	14.1	22.4	10.0	83.6	17.0	19.4				
Change Period (Y+Rc), s	6.0	6.0	* 5.7	7.0	6.0	6.0	* 5.7	7.0				
Max Green Setting (Gmax), s	9.0	66.0	* 11	19.0	9.0	66.0	* 11	19.0				
Max Q Clear Time (g_c+I1), s	3.6	34.8	8.6	12.9	3.2	27.4	13.3	12.3				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.2	0.0	1.3	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			25.4									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings
2: NE 8 Ave & NE 167 St

851 NE 167 Street
Future Condition w/o Project - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	43	1928	56	1633	98	74	213	104
Future Volume (vph)	43	1928	56	1633	98	74	213	104
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Minimum Split (s)	11.0	31.0	11.0	31.0	10.7	26.0	10.7	26.0
Total Split (s)	15.0	72.0	15.0	72.0	17.0	26.0	17.0	26.0
Total Split (%)	11.5%	55.4%	11.5%	55.4%	13.1%	20.0%	13.1%	20.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.7	4.0	3.7	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	5.7	7.0	5.7	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Act Effct Green (s)	76.7	71.8	77.6	72.2	24.5	13.3	35.2	19.5
Actuated g/C Ratio	0.59	0.55	0.60	0.56	0.19	0.10	0.27	0.15
v/c Ratio	0.27	0.72	0.40	0.61	0.37	0.69	0.68	0.55
Control Delay	14.8	25.2	19.2	22.3	39.1	62.8	50.4	54.0
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	14.8	25.2	19.2	22.5	39.1	62.8	50.4	54.0
LOS	B	C	B	C	D	E	D	D
Approach Delay		25.0		22.4		52.8		51.9
Approach LOS		C		C		D		D

Intersection Summary

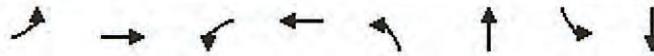
Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 52 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 27.7
 Intersection LOS: C
 Intersection Capacity Utilization 81.5%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: NE 8 Ave & NE 167 St



Queues
2: NE 8 Ave & NE 167 St

851 NE 167 Street
Future Condition w/o Project - AM Peak Hour



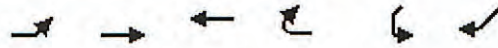
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	44	1997	57	1703	100	138	217	153
v/c Ratio	0.27	0.72	0.40	0.61	0.37	0.69	0.68	0.55
Control Delay	14.8	25.2	19.2	22.3	39.1	62.8	50.4	54.0
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	14.8	25.2	19.2	22.5	39.1	62.8	50.4	54.0
Queue Length 50th (ft)	14	475	15	461	63	92	147	107
Queue Length 95th (ft)	30	560	31	520	110	157	#252	184
Internal Link Dist (ft)		1241		493		490		175
Turn Bay Length (ft)	205		140		80			
Base Capacity (vph)	205	2816	177	2821	294	273	317	293
Starvation Cap Reductn	0	0	0	309	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	0.71	0.32	0.68	0.34	0.51	0.68	0.52

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
 3: NE 167 St & NE 800 Blk

851 NE 167 Street
 Future Condition w/o Project - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↙	↑↑↑	↑↑↑			↘
Traffic Volume (vph)	128	2080	1524	30	0	205
Future Volume (vph)	128	2080	1524	30	0	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0			7.0
Lane Util. Factor	1.00	0.91	0.91			1.00
Frt	1.00	1.00	1.00			0.86
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1752	5036	5021			1596
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	1752	5036	5021			1596
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	131	2122	1555	31	0	209
RTOR Reduction (vph)	0	0	1	0	0	2
Lane Group Flow (vph)	131	2122	1585	0	0	207
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA			pt+ov
Protected Phases	5 7	2	6			7 5
Permitted Phases						
Actuated Green, G (s)	28.9	100.6	89.1			28.9
Effective Green, g (s)	21.9	100.6	89.1			28.9
Actuated g/C Ratio	0.17	0.77	0.69			0.22
Clearance Time (s)		6.0	6.0			
Vehicle Extension (s)		1.0	1.0			
Lane Grp Cap (vph)	295	3897	3441			354
v/s Ratio Prot	0.07	c0.42	0.32			c0.13
v/s Ratio Perm						
v/c Ratio	0.44	0.54	0.46			0.58
Uniform Delay, d1	48.6	5.7	9.4			45.2
Progression Factor	0.72	1.31	0.48			1.00
Incremental Delay, d2	0.3	0.4	0.4			1.6
Delay (s)	35.4	7.9	4.9			46.8
Level of Service	D	A	A			D
Approach Delay (s)		9.5	4.9		46.8	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Timings
3: NE 167 St & NE 800 Blk

851 NE 167 Street
Future Condition w/o Project - AM Peak Hour



Lane Group	EBL	EBT	WBT	SWR	Ø5	Ø7
Lane Configurations	↘	↑↑↑	↑↑↑	↗		
Traffic Volume (vph)	128	2080	1524	205		
Future Volume (vph)	128	2080	1524	205		
Turn Type	Prot	NA	NA	pt+ov		
Protected Phases	5 7	2	6	7 5	5	7
Permitted Phases						
Detector Phase	5 7	2	6	7 5		
Switch Phase						
Minimum Initial (s)		16.0	16.0		5.0	5.0
Minimum Split (s)		24.0	24.0		24.0	42.0
Total Split (s)		86.0	55.0		31.0	44.0
Total Split (%)		66.2%	42.3%		24%	34%
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		2.0	2.0		2.0	3.0
Lost Time Adjust (s)		0.0	0.0			
Total Lost Time (s)		6.0	6.0			
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode		C-Min	C-Min		None	None
Act Effct Green (s)	28.9	100.6	89.1	27.9		
Actuated g/C Ratio	0.22	0.77	0.69	0.21		
v/c Ratio	0.34	0.54	0.46	0.61		
Control Delay	31.3	8.8	5.2	52.1		
Queue Delay	0.0	0.2	0.0	0.0		
Total Delay	31.3	9.0	5.3	52.1		
LOS	C	A	A	D		
Approach Delay		10.3	5.3			
Approach LOS		B	A			

Intersection Summary
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 10.5
 Intersection Capacity Utilization 53.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 3: NE 167 St & NE 800 Blk



Queues
3: NE 167 St & NE 800 Blk

851 NE 167 Street
Future Condition w/o Project - AM Peak Hour

























Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	131	2122	1586	209
v/c Ratio	0.34	0.54	0.46	0.61
Control Delay	31.3	8.8	5.2	52.1
Queue Delay	0.0	0.2	0.0	0.0
Total Delay	31.3	9.0	5.3	52.1
Queue Length 50th (ft)	103	123	26	160
Queue Length 95th (ft)	m114	389	41	222
Internal Link Dist (ft)		493	885	
Turn Bay Length (ft)	240			
Base Capacity (vph)	652	3897	3441	583
Starvation Cap Reductn	0	846	0	0
Spillback Cap Reductn	0	0	184	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.70	0.49	0.36

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
 4: NE 10 Ave & NE 163 St/NE 167 St

851 NE 167 Street
 Future Condition w/o Project - AM Peak Hour

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEU	SEL	SET	SER	NWL	NWT
Lane Configurations												
Traffic Volume (vph)	85	159	51	108	196	11	6	38	1913	63	62	1456
Future Volume (vph)	85	159	51	108	196	11	6	38	1913	63	62	1456
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	4.0	8.0	8.0			6.0	7.0		6.0	7.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	0.91		1.00	0.91
Frt	1.00	1.00	0.85	1.00	0.99			1.00	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	1845	1568	1752	1830			1752	5012		1752	5029
Flt Permitted	0.41	1.00	1.00	0.55	1.00			0.14	1.00		0.06	1.00
Satd. Flow (perm)	754	1845	1568	1018	1830			254	5012		113	5029
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	164	53	111	202	11	6	39	1972	65	64	1501
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	2	0	0	1
Lane Group Flow (vph)	88	164	53	111	211	0	0	45	2035	0	64	1513
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Free	Perm	NA		pm+pt	pm+pt	NA		pm+pt	NA
Protected Phases		8			4		5	5	2		1	6
Permitted Phases	8		Free	4			2	2			6	
Actuated Green, G (s)	19.7	19.7	130.0	19.7	19.7			87.6	83.1		91.0	84.8
Effective Green, g (s)	19.7	19.7	130.0	19.7	19.7			87.6	83.1		91.0	84.8
Actuated g/C Ratio	0.15	0.15	1.00	0.15	0.15			0.67	0.64		0.70	0.65
Clearance Time (s)	8.0	8.0		8.0	8.0			6.0	7.0		6.0	7.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.0	1.0		2.0	1.0
Lane Grp Cap (vph)	114	279	1568	154	277			223	3203		157	3280
v/s Ratio Prot		0.09			0.12			0.01	c0.41		c0.02	0.30
v/s Ratio Perm	c0.12		c0.03	0.11				0.13			0.27	
v/c Ratio	0.77	0.59	0.03	0.72	0.76			0.20	0.64		0.41	0.46
Uniform Delay, d1	53.0	51.4	0.0	52.5	52.9			7.7	14.2		10.9	11.2
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.46	1.51		1.00	1.00
Incremental Delay, d2	26.1	2.6	0.0	14.4	11.3			0.1	0.8		0.6	0.5
Delay (s)	79.1	54.0	0.0	66.9	64.2			11.4	22.4		11.5	11.7
Level of Service	E	D	A	E	E			B	C		B	B
Approach Delay (s)		51.8			65.1				22.1			11.7
Approach LOS		D			E				C			B

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: NE 10 Ave & NE 163 St/NE 167 St

851 NE 167 Street
 Future Condition w/o Project - AM Peak Hour



Movement	NWR
Approach Configurations	
Traffic Volume (vph)	13
Future Volume (vph)	13
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Fr _t	
Fl _t Protected	
Satd. Flow (prot)	
Fl _t Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	13
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	3%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d ₁	
Progression Factor	
Incremental Delay, d ₂	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings

4: NE 10 Ave & NE 163 St/NE 167 St

851 NE 167 Street

Future Condition w/o Project - AM Peak Hour



Lane Group	NBL	NBT	NBR	SBL	SBT	SEU	SEL	SET	NWL	NWT
Lane Configurations										
Traffic Volume (vph)	85	159	51	108	196	6	38	1913	62	1456
Future Volume (vph)	85	159	51	108	196	6	38	1913	62	1456
Turn Type	Perm	NA	Free	Perm	NA	pm+pt	pm+pt	NA	pm+pt	NA
Protected Phases		8			4	5	5	2	1	6
Permitted Phases	8		Free	4		2	2		6	
Detector Phase	8	8		4	4	5	5	2	1	6
Switch Phase										
Minimum Initial (s)	7.0	7.0		7.0	7.0	5.0	5.0	7.0	5.0	7.0
Minimum Split (s)	33.0	33.0		33.0	33.0	11.0	11.0	32.0	11.0	32.0
Total Split (s)	33.0	33.0		33.0	33.0	17.0	17.0	80.0	17.0	80.0
Total Split (%)	25.4%	25.4%		25.4%	25.4%	13.1%	13.1%	61.5%	13.1%	61.5%
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)	4.0	4.0		4.0	4.0	2.0	2.0	3.0	2.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0		8.0	8.0			6.0	7.0	6.0
Lead/Lag						Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	None	C-Min
Act Effect Green (s)	19.7	19.7	130.0	19.7	19.7		89.8	84.3	93.1	85.9
Actuated g/C Ratio	0.15	0.15	1.00	0.15	0.15		0.69	0.65	0.72	0.66
v/c Ratio	0.77	0.59	0.03	0.72	0.76		0.19	0.63	0.37	0.46
Control Delay	91.5	59.1	0.0	76.7	69.4		10.1	23.8	13.4	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	91.5	59.1	0.0	76.7	69.4		10.1	23.8	13.4	12.3
LOS	F	E	A	E	E		B	C	B	B
Approach Delay		58.2			71.9			23.5		12.3
Approach LOS		E			E			C		B

Intersection Summary










Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 26 (20%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 25.5
 Intersection LOS: C
 Intersection Capacity Utilization 83.5%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 4: NE 10 Ave & NE 163 St/NE 167 St



Queues
4: NE 10 Ave & NE 163 St/NE 167 St

851 NE 167 Street
Future Condition w/o Project - AM Peak Hour

									
Lane Group	NBL	NBT	NBR	SBL	SBT	SEL	SET	NWL	NWT
Lane Group Flow (vph)	88	164	53	111	213	45	2037	64	1514
v/c Ratio	0.77	0.59	0.03	0.72	0.76	0.19	0.63	0.37	0.46
Control Delay	91.5	59.1	0.0	76.7	69.4	10.1	23.8	13.4	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.5	59.1	0.0	76.7	69.4	10.1	23.8	13.4	12.3
Queue Length 50th (ft)	72	130	0	90	173	19	643	13	220
Queue Length 95th (ft)	129	194	0	150	246	m32	305	37	304
Internal Link Dist (ft)		197			362		885		231
Turn Bay Length (ft)	90		70	195		210		180	
Base Capacity (vph)	147	358	1568	197	357	311	3254	222	3325
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	0.60	0.46	0.03	0.56	0.60	0.14	0.63	0.29	0.46

Intersection Summary

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

Intersection

Int Delay, s/veh 4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	0	3	2	36	3	191	1	500	57	376	871	3
Future Vol, veh/h	0	3	2	36	3	191	1	500	57	376	871	3
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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	3	2	36	3	193	1	505	58	380	880	3

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1898	2207	442	1738	2179	282	883	0	0	563	0	0
Stage 1	1642	1642	-	536	536	-	-	-	-	-	-	-
Stage 2	256	565	-	1202	1643	-	-	-	-	-	-	-
Critical Hdwy	5	5	5	5	5	5	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	161	112	713	190	116	830	756	-	-	998	-	-
Stage 1	103	155	-	494	519	-	-	-	-	-	-	-
Stage 2	723	504	-	194	154	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	84	69	713	129	72	830	756	-	-	998	-	-
Mov Cap-2 Maneuver	84	69	-	129	72	-	-	-	-	-	-	-
Stage 1	103	96	-	494	518	-	-	-	-	-	-	-
Stage 2	551	503	-	116	95	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	40		23.9			0		3.3		
HCM LOS	E		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	756	-	-	108	418	998	-	-
HCM Lane V/C Ratio	0.001	-	-	0.047	0.556	0.381	-	-
HCM Control Delay (s)	9.8	-	-	40	23.9	10.8	-	-
HCM Lane LOS	A	-	-	E	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	3.3	1.8	-	-

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		7		↑↑	↑↑	
Traffic Vol, veh/h	0	8	0	698	1237	6
Future Vol, veh/h	0	8	0	698	1237	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	8	0	705	1249	6

Major/Minor

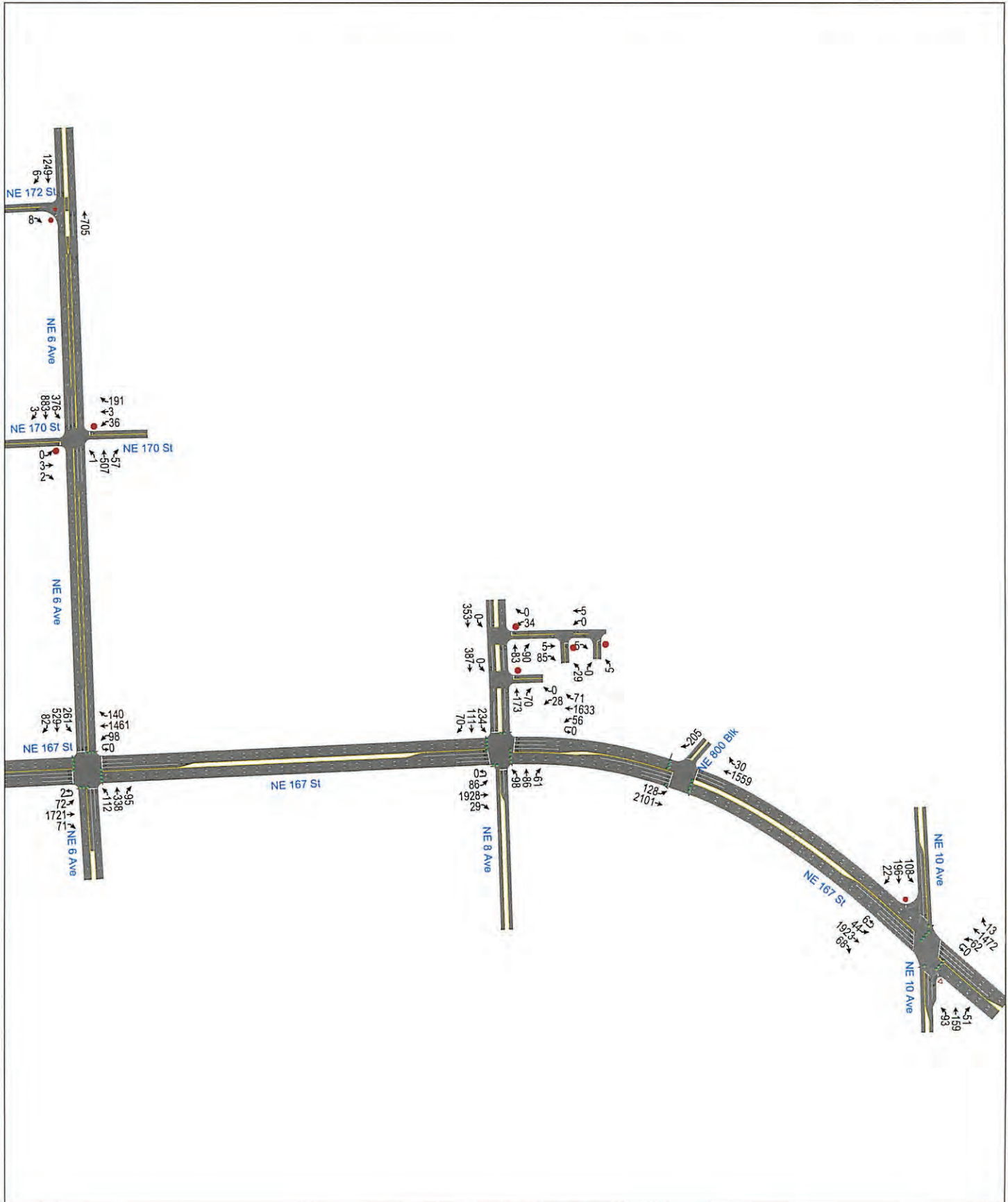
	Minor2	Major1	Major2
Conflicting Flow All	- 628	- 0	- 0
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -
Critical Hdwy	- 6.96	- -	- -
Critical Hdwy Stg 1	- -	- -	- -
Critical Hdwy Stg 2	- -	- -	- -
Follow-up Hdwy	- 3.33	- -	- -
Pot Cap-1 Maneuver	0 423	0 -	- -
Stage 1	0 -	0 -	- -
Stage 2	0 -	0 -	- -
Platoon blocked, %			- -
Mov Cap-1 Maneuver	- 423	- -	- -
Mov Cap-2 Maneuver	- -	- -	- -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -

Approach

	EB	NB	SB
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt

	NBT EBLn1	SBT	SBR
Capacity (veh/h)	- 423	- -	- -
HCM Lane V/C Ratio	- 0.019	- -	- -
HCM Control Delay (s)	- 13.7	- -	- -
HCM Lane LOS	- B	- -	- -
HCM 95th %tile Q(veh)	- 0.1	- -	- -























HCM Signalized Intersection Capacity Analysis

1: NE 6 Ave & NE 167 St

851 NE 167 Street

Future Condition w/ Project - AM Peak Hour

													
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	
Lane Configurations													
Traffic Volume (vph)	2	72	1721	71	98	1461	140	112	338	95	261	529	
Future Volume (vph)	2	72	1721	71	98	1461	140	112	338	95	261	529	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0	6.1		6.0	6.1		6.4	7.4		6.4	7.4	
Lane Util. Factor		1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt		1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1752	5006		1752	4970		1752	3390		1752	3434	
Flt Permitted		0.07	1.00		0.04	1.00		0.23	1.00		0.18	1.00	
Satd. Flow (perm)		129	5006		72	4970		417	3390		326	3434	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	2	78	1871	77	107	1588	152	122	367	103	284	575	
RTOR Reduction (vph)	0	0	2	0	0	5	0	0	14	0	0	6	
Lane Group Flow (vph)	0	80	1946	0	107	1735	0	122	456	0	284	658	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	
Turn Type	custom	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		5	2		1	6		3	8		7	4	
Permitted Phases	5	2			6			8			4		
Actuated Green, G (s)		108.2	98.8		115.4	102.4		47.8	33.8		68.7	48.3	
Effective Green, g (s)		108.2	98.8		115.4	102.4		47.8	33.8		68.7	48.3	
Actuated g/C Ratio		0.54	0.49		0.58	0.51		0.24	0.17		0.34	0.24	
Clearance Time (s)		6.0	6.1		6.0	6.1		6.4	7.4		6.4	7.4	
Vehicle Extension (s)		2.0	1.0		2.0	1.0		2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)		146	2472		150	2544		193	572		315	829	
v/s Ratio Prot		0.03	c0.39		c0.05	c0.35		0.04	0.13		c0.13	0.19	
v/s Ratio Perm		0.27			0.36			0.11			c0.18		
v/c Ratio		0.55	0.79		0.71	0.68		0.63	0.80		0.90	0.79	
Uniform Delay, d1		29.4	41.9		53.9	36.6		62.9	79.8		53.8	71.2	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.2	2.6		12.5	1.5		4.9	7.4		26.8	5.1	
Delay (s)		31.7	44.5		66.4	38.1		67.8	87.2		80.6	76.3	
Level of Service		C	D		E	D		E	F		F	E	
Approach Delay (s)			44.0			39.7			83.2			77.6	
Approach LOS			D			D			F			E	
Intersection Summary													
HCM 2000 Control Delay			52.7									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.84										
Actuated Cycle Length (s)			200.0									Sum of lost time (s)	25.9
Intersection Capacity Utilization			88.7%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 1: NE 6 Ave & NE 167 St

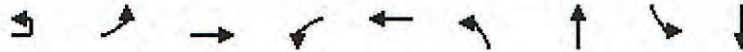
851 NE 167 Street
 Future Condition w/ Project - AM Peak Hour



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	82
Future Volume (vph)	82
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frts	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	89
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	3%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
1: NE 6 Ave & NE 167 St

851 NE 167 Street
Future Condition w/ Project - AM Peak Hour



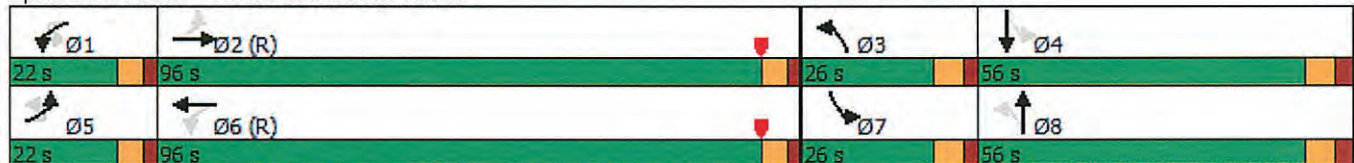
Lane Group	EBU	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	2	72	1721	98	1461	112	338	261	529
Future Volume (vph)	2	72	1721	98	1461	112	338	261	529
Turn Type	custom	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases		5	2	1	6	3	8	7	4
Permitted Phases	5	2		6		8		4	
Detector Phase	5	5	2	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Minimum Split (s)	11.0	11.0	35.1	11.0	35.1	11.4	41.4	11.4	41.4
Total Split (s)	22.0	22.0	96.0	22.0	96.0	26.0	56.0	26.0	56.0
Total Split (%)	11.0%	11.0%	48.0%	11.0%	48.0%	13.0%	28.0%	13.0%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.0	2.1	2.0	2.1	2.0	3.0	2.0	3.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.1	6.0	6.1	6.4	7.4	6.4	7.4
Lead/Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	C-Min	None	None	None	None
Act Effect Green (s)		108.3	98.8	115.5	102.4	48.8	33.8	68.6	48.3
Actuated g/C Ratio		0.54	0.49	0.58	0.51	0.24	0.17	0.34	0.24
v/c Ratio		0.55	0.79	0.71	0.68	0.63	0.80	0.90	0.80
Control Delay		36.2	46.1	71.3	39.3	60.4	87.2	81.5	78.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		36.2	46.1	71.3	39.3	60.4	87.2	81.5	78.0
LOS		D	D	E	D	E	F	F	E
Approach Delay			45.7		41.2		81.6		79.0
Approach LOS			D		D		F		E

Intersection Summary

Cycle Length: 200
 Actuated Cycle Length: 200
 Offset: 181 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 53.9
 Intersection Capacity Utilization 88.7%
 Analysis Period (min) 15

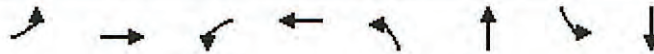
Intersection LOS: D
 ICU Level of Service E

Splits and Phases: 1: NE 6 Ave & NE 167 St



Queues
1: NE 6 Ave & NE 167 St

851 NE 167 Street
Future Condition w/ Project - AM Peak Hour




























Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	80	1948	107	1740	122	470	284	664
v/c Ratio	0.55	0.79	0.71	0.68	0.63	0.80	0.90	0.80
Control Delay	36.2	46.1	71.3	39.3	60.4	87.2	81.5	78.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	46.1	71.3	39.3	60.4	87.2	81.5	78.0
Queue Length 50th (ft)	46	802	90	637	110	311	285	422
Queue Length 95th (ft)	85	902	169	749	164	344	#529	510
Internal Link Dist (ft)		1120		1241		270		985
Turn Bay Length (ft)	295		245		200		200	
Base Capacity (vph)	203	2475	176	2549	244	836	315	865
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.79	0.61	0.68	0.50	0.56	0.90	0.77

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
2: NE 8 Ave & NE 167 St

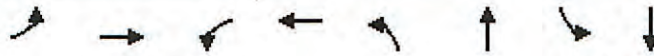
851 NE 167 Street
Future Condition w/ Project - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	86	1928	29	56	1633	71	98	86	61	234	111	70
Future Volume (vph)	86	1928	29	56	1633	71	98	86	61	234	111	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.7	7.0		5.7	7.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Fr _t	1.00	1.00		1.00	0.99		1.00	0.94		1.00	0.94	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	5025		1752	5005		1752	1730		1752	1738	
Fl _t Permitted	0.07	1.00		0.06	1.00		0.64	1.00		0.35	1.00	
Satd. Flow (perm)	129	5025		111	5005		1183	1730		651	1738	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	88	1967	30	57	1666	72	100	88	62	239	113	71
RTOR Reduction (vph)	0	1	0	0	3	0	0	21	0	0	17	0
Lane Group Flow (vph)	88	1996	0	57	1735	0	100	129	0	239	167	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	75.7	68.5		72.1	66.7		23.9	14.1		37.1	21.6	
Effective Green, g (s)	75.7	68.5		72.1	66.7		23.9	14.1		37.1	21.6	
Actuated g/C Ratio	0.58	0.53		0.55	0.51		0.18	0.11		0.29	0.17	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.7	7.0		5.7	7.0	
Vehicle Extension (s)	2.0	1.0		2.0	1.0		2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	165	2647		129	2567		260	187		332	288	
v/s Ratio Prot	c0.03	c0.40		0.02	0.35		0.03	0.07		c0.10	0.10	
v/s Ratio Perm	0.28			0.23			0.04			c0.11		
v/c Ratio	0.53	0.75		0.44	0.68		0.38	0.69		0.72	0.58	
Uniform Delay, d ₁	17.7	24.1		19.4	23.6		45.9	55.9		38.8	50.0	
Progression Factor	1.00	1.00		1.15	1.04		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	1.7	2.0		0.8	1.3		0.3	9.8		6.1	2.5	
Delay (s)	19.3	26.2		23.1	25.8		46.3	65.6		45.0	52.5	
Level of Service	B	C		C	C		D	E		D	D	
Approach Delay (s)		25.9			25.7			57.9			48.2	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Timings
2: NE 8 Ave & NE 167 St

851 NE 167 Street
Future Condition w/ Project - AM Peak Hour

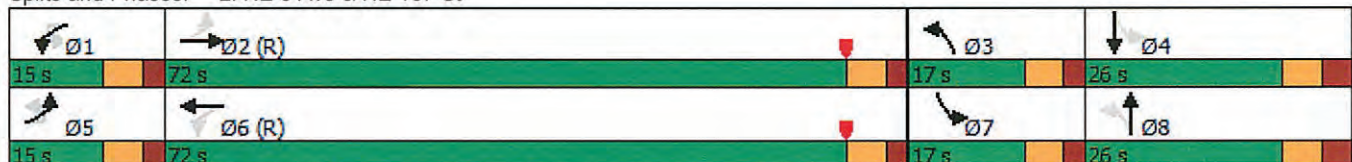


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↕↕↕	↔	↕↕↕	↖	↗	↖	↗
Traffic Volume (vph)	86	1928	56	1633	98	86	234	111
Future Volume (vph)	86	1928	56	1633	98	86	234	111
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Minimum Split (s)	11.0	31.0	11.0	31.0	10.7	26.0	10.7	26.0
Total Split (s)	15.0	72.0	15.0	72.0	17.0	26.0	17.0	26.0
Total Split (%)	11.5%	55.4%	11.5%	55.4%	13.1%	20.0%	13.1%	20.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.7	4.0	3.7	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	5.7	7.0	5.7	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Act Effct Green (s)	75.9	69.7	73.1	66.7	25.2	14.1	37.3	21.6
Actuated g/C Ratio	0.58	0.54	0.56	0.51	0.19	0.11	0.29	0.17
v/c Ratio	0.54	0.74	0.40	0.68	0.37	0.72	0.72	0.60
Control Delay	27.3	27.0	22.8	26.8	37.9	66.0	51.0	53.4
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	27.3	27.0	22.8	27.1	37.9	66.0	51.0	53.4
LOS	C	C	C	C	D	E	D	D
Approach Delay		27.0		27.0		54.7		52.0
Approach LOS		C		C		D		D

Intersection Summary

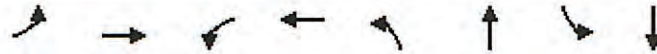
Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 52 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 30.8
 Intersection LOS: C
 Intersection Capacity Utilization 83.9%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: NE 8 Ave & NE 167 St



Queues
2: NE 8 Ave & NE 167 St

851 NE 167 Street
Future Condition w/ Project - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	88	1997	57	1738	100	150	239	184
v/c Ratio	0.54	0.74	0.40	0.68	0.37	0.72	0.72	0.60
Control Delay	27.3	27.0	22.8	26.8	37.9	66.0	51.0	53.4
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	27.3	27.0	22.8	27.1	37.9	66.0	51.0	53.4
Queue Length 50th (ft)	31	504	20	509	60	105	158	125
Queue Length 95th (ft)	69	560	31	546	110	173	#255	216
Internal Link Dist (ft)		1241		493		490		152
Turn Bay Length (ft)	205		140		80			
Base Capacity (vph)	188	2762	178	2663	297	272	332	313
Starvation Cap Reductn	0	0	0	314	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	0.47	0.72	0.32	0.74	0.34	0.55	0.72	0.59

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
 3: NE 167 St & NE 800 Blk

851 NE 167 Street
 Future Condition w/ Project - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↙	↑↑↑	↑↑↑			↗
Traffic Volume (vph)	128	2101	1559	30	0	205
Future Volume (vph)	128	2101	1559	30	0	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0			7.0
Lane Util. Factor	1.00	0.91	0.91			1.00
Frt	1.00	1.00	1.00			0.86
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1752	5036	5021			1596
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	1752	5036	5021			1596
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	131	2144	1591	31	0	209
RTOR Reduction (vph)	0	0	1	0	0	2
Lane Group Flow (vph)	131	2144	1621	0	0	207
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA			pt+ov
Protected Phases	5 7	2	6			7 5
Permitted Phases						
Actuated Green, G (s)	29.0	100.5	89.0			29.0
Effective Green, g (s)	22.0	100.5	89.0			29.0
Actuated g/C Ratio	0.17	0.77	0.68			0.22
Clearance Time (s)		6.0	6.0			
Vehicle Extension (s)		1.0	1.0			
Lane Grp Cap (vph)	296	3893	3437			356
v/s Ratio Prot	0.07	c0.43	0.32			c0.13
v/s Ratio Perm						
v/c Ratio	0.44	0.55	0.47			0.58
Uniform Delay, d1	48.5	5.8	9.5			45.1
Progression Factor	0.70	1.42	0.50			1.00
Incremental Delay, d2	0.3	0.4	0.4			1.6
Delay (s)	34.3	8.7	5.2			46.6
Level of Service	C	A	A			D
Approach Delay (s)		10.1	5.2		46.6	
Approach LOS		B	A		D	

Intersection Summary			
HCM 2000 Control Delay		10.0	HCM 2000 Level of Service B
HCM 2000 Volume to Capacity ratio		0.61	
Actuated Cycle Length (s)		130.0	Sum of lost time (s) 19.0
Intersection Capacity Utilization		54.3%	ICU Level of Service A
Analysis Period (min)		15	
c Critical Lane Group			

Timings
3: NE 167 St & NE 800 Blk

851 NE 167 Street
Future Condition w/ Project - AM Peak Hour

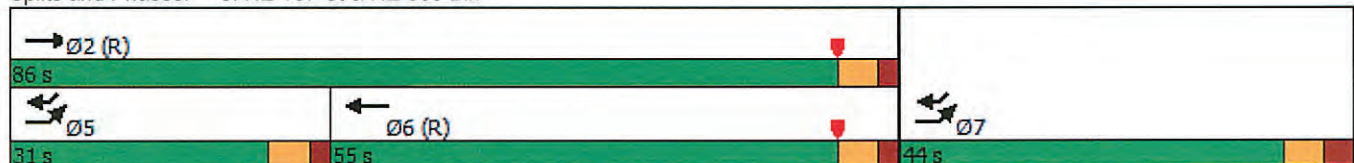


Lane Group	EBL	EBT	WBT	SWR	Ø5	Ø7
Lane Configurations	↖	↑↑↑	↑↑↑	↗		
Traffic Volume (vph)	128	2101	1559	205		
Future Volume (vph)	128	2101	1559	205		
Turn Type	Prot	NA	NA	pt+ov		
Protected Phases	5 7	2	6	7 5	5	7
Permitted Phases						
Detector Phase	5 7	2	6	7 5		
Switch Phase						
Minimum Initial (s)		16.0	16.0		5.0	5.0
Minimum Split (s)		24.0	24.0		24.0	42.0
Total Split (s)		86.0	55.0		31.0	44.0
Total Split (%)		66.2%	42.3%		24%	34%
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		2.0	2.0		2.0	3.0
Lost Time Adjust (s)		0.0	0.0			
Total Lost Time (s)		6.0	6.0			
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode		C-Min	C-Min		None	None
Act Effct Green (s)	29.0	100.5	89.0	28.0		
Actuated g/C Ratio	0.22	0.77	0.68	0.22		
v/c Ratio	0.34	0.55	0.47	0.60		
Control Delay	30.3	9.6	5.5	51.9		
Queue Delay	0.0	0.3	0.0	0.0		
Total Delay	30.3	9.9	5.6	51.9		
LOS	C	A	A	D		
Approach Delay		11.1	5.6			
Approach LOS		B	A			

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 11.0
 Intersection Capacity Utilization 54.3%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 3: NE 167 St & NE 800 Blk



























Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	131	2144	1622	209
v/c Ratio	0.34	0.55	0.47	0.60
Control Delay	30.3	9.6	5.5	51.9
Queue Delay	0.0	0.3	0.0	0.0
Total Delay	30.3	9.9	5.6	51.9
Queue Length 50th (ft)	102	189	36	159
Queue Length 95th (ft)	m114	386	63	222
Internal Link Dist (ft)		493	885	
Turn Bay Length (ft)	240			
Base Capacity (vph)	653	3892	3436	585
Starvation Cap Reductn	0	927	0	0
Spillback Cap Reductn	0	0	330	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.72	0.52	0.36

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
 4: NE 10 Ave & NE 163 St/NE 167 St

851 NE 167 Street
 Future Condition w/ Project - AM Peak Hour

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEU	SEL	SET	SER	NWL	NWT
Lane Configurations												
Traffic Volume (vph)	93	159	51	108	196	22	6	44	1923	68	62	1472
Future Volume (vph)	93	159	51	108	196	22	6	44	1923	68	62	1472
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	4.0	8.0	8.0			6.0	7.0		6.0	7.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	0.91		1.00	0.91
Frt	1.00	1.00	0.85	1.00	0.98			1.00	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	1845	1568	1752	1816			1752	5010		1752	5030
Flt Permitted	0.39	1.00	1.00	0.56	1.00			0.13	1.00		0.06	1.00
Satd. Flow (perm)	723	1845	1568	1034	1816			245	5010		108	5030
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	96	164	53	111	202	23	6	45	1982	70	64	1518
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	2	0	0	0
Lane Group Flow (vph)	96	164	53	111	222	0	0	51	2050	0	64	1531
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Free	Perm	NA		pm+pt	pm+pt	NA		pm+pt	NA
Protected Phases		8			4		5	5	2		1	6
Permitted Phases	8		Free	4			2	2			6	
Actuated Green, G (s)	20.8	20.8	130.0	20.8	20.8			86.8	82.1		89.6	83.5
Effective Green, g (s)	20.8	20.8	130.0	20.8	20.8			86.8	82.1		89.6	83.5
Actuated g/C Ratio	0.16	0.16	1.00	0.16	0.16			0.67	0.63		0.69	0.64
Clearance Time (s)	8.0	8.0		8.0	8.0			6.0	7.0		6.0	7.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.0	1.0		2.0	1.0
Lane Grp Cap (vph)	115	295	1568	165	290			218	3164		151	3230
v/s Ratio Prot		0.09			0.12			0.01	c0.41		c0.02	0.30
v/s Ratio Perm	c0.13		c0.03	0.11				0.15			0.27	
v/c Ratio	0.83	0.56	0.03	0.67	0.76			0.23	0.65		0.42	0.47
Uniform Delay, d1	52.9	50.3	0.0	51.4	52.3			8.1	14.9		11.7	12.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.42	1.44		1.00	1.00
Incremental Delay, d2	37.5	1.8	0.0	9.4	10.9			0.2	0.9		0.7	0.5
Delay (s)	90.5	52.2	0.0	60.8	63.1			11.7	22.3		12.4	12.5
Level of Service	F	D	A	E	E			B	C		B	B
Approach Delay (s)		55.1			62.4				22.1			12.5
Approach LOS		E			E				C			B

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: NE 10 Ave & NE 163 St/NE 167 St

851 NE 167 Street
 Future Condition w/ Project - AM Peak Hour



Movement	NWR
Input	
Approach Configurations	
Traffic Volume (vph)	13
Future Volume (vph)	13
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Fr _t	
Fl _t Protected	
Satd. Flow (prot)	
Fl _t Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	13
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	3%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d ₁	
Progression Factor	
Incremental Delay, d ₂	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
4: NE 10 Ave & NE 163 St/NE 167 St

851 NE 167 Street
Future Condition w/ Project - AM Peak Hour

Lane Group	NBL	NBT	NBR	SBL	SBT	SEU	SEL	SET	NWL	NWT	
Lane Configurations											
Traffic Volume (vph)	93	159	51	108	196	6	44	1923	62	1472	
Future Volume (vph)	93	159	51	108	196	6	44	1923	62	1472	
Turn Type	Perm	NA	Free	Perm	NA	pm+pt	pm+pt	NA	pm+pt	NA	
Protected Phases		8			4	5	5	2	1	6	
Permitted Phases	8		Free	4		2	2		6		
Detector Phase	8	8		4	4	5	5	2	1	6	
Switch Phase											
Minimum Initial (s)	7.0	7.0		7.0	7.0	5.0	5.0	7.0	5.0	7.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	11.0	11.0	32.0	11.0	32.0	
Total Split (s)	33.0	33.0		33.0	33.0	17.0	17.0	80.0	17.0	80.0	
Total Split (%)	25.4%	25.4%		25.4%	25.4%	13.1%	13.1%	61.5%	13.1%	61.5%	
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)	4.0	4.0		4.0	4.0	2.0	2.0	3.0	2.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	
Total Lost Time (s)	8.0	8.0		8.0	8.0			6.0	7.0	6.0	
Lead/Lag						Lead	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Min	None	C-Min	
Act Effect Green (s)	20.8	20.8	130.0	20.8	20.8		89.0	83.3	91.8	84.7	
Actuated g/C Ratio	0.16	0.16	1.00	0.16	0.16		0.68	0.64	0.71	0.65	
v/c Ratio	0.83	0.56	0.03	0.67	0.77		0.22	0.64	0.39	0.47	
Control Delay	100.0	56.6	0.0	70.1	67.7		10.8	23.8	15.2	13.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	100.0	56.6	0.0	70.1	67.7		10.8	23.8	15.2	13.1	
LOS	F	E	A	E	E		B	C	B	B	
Approach Delay		60.3			68.5			23.5		13.2	
Approach LOS		E			E			C		B	

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 26 (20%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 25.9
 Intersection Capacity Utilization 84.5%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service E

Splits and Phases: 4: NE 10 Ave & NE 163 St/NE 167 St



Queues

4: NE 10 Ave & NE 163 St/NE 167 St

851 NE 167 Street

Future Condition w/ Project - AM Peak Hour



Lane Group	NBL	NBT	NBR	SBL	SBT	SEL	SET	NWL	NWT
Lane Group Flow (vph)	96	164	53	111	225	51	2052	64	1531
v/c Ratio	0.83	0.56	0.03	0.67	0.77	0.22	0.64	0.39	0.47
Control Delay	100.0	56.6	0.0	70.1	67.7	10.8	23.8	15.2	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.0	56.6	0.0	70.1	67.7	10.8	23.8	15.2	13.1
Queue Length 50th (ft)	80	129	0	89	181	18	430	13	230
Queue Length 95th (ft)	#142	189	0	146	253	m36	313	42	327
Internal Link Dist (ft)		197			362		885		231
Turn Bay Length (ft)	90		70	195		210		180	
Base Capacity (vph)	143	365	1568	205	363	302	3232	218	3278
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	0.67	0.45	0.03	0.54	0.62	0.17	0.63	0.29	0.47

Intersection Summary

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.

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↑	↑↑		↑	↑↑	
Traffic Vol, veh/h	0	3	2	36	3	191	1	507	57	376	883	3
Future Vol, veh/h	0	3	2	36	3	191	1	507	57	376	883	3
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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	3	2	36	3	193	1	512	58	380	892	3

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1914	2226	448	1751	2198	285	895	0	0	570	0	0
Stage 1	1654	1654	-	543	543	-	-	-	-	-	-	-
Stage 2	260	572	-	1208	1655	-	-	-	-	-	-	-
Critical Hdwy	5	5	5	5	5	5	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	158	110	709	188	113	828	748	-	-	992	-	-
Stage 1	101	153	-	489	515	-	-	-	-	-	-	-
Stage 2	719	500	-	193	152	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	82	68	709	127	70	828	748	-	-	992	-	-
Mov Cap-2 Maneuver	82	68	-	127	70	-	-	-	-	-	-	-
Stage 1	101	94	-	489	514	-	-	-	-	-	-	-
Stage 2	547	500	-	115	94	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	40.3		24.4		0		3.2	
HCM LOS	E		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	748	-	-	107	413	992	-	-
HCM Lane V/C Ratio	0.001	-	-	0.047	0.563	0.383	-	-
HCM Control Delay (s)	9.8	-	-	40.3	24.4	10.9	-	-
HCM Lane LOS	A	-	-	E	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	3.4	1.8	-	-

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↗	
Traffic Vol, veh/h	0	8	0	705	1249	6
Future Vol, veh/h	0	8	0	705	1249	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	8	0	712	1262	6

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	634	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.96	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.33	-
Pot Cap-1 Maneuver	0	419	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	419	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	-	419	-
HCM Lane V/C Ratio	-	0.019	-
HCM Control Delay (s)	-	13.8	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.1	-

Intersection

Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	¶¶		↑↑			¶¶
Traffic Vol, veh/h	28	0	173	70	0	387
Future Vol, veh/h	28	0	173	70	0	387
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	0	188	76	0	421

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	437	132	0	0	264
Stage 1	226	-	-	-	-
Stage 2	211	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	548	893	-	-	1297
Stage 1	790	-	-	-	-
Stage 2	804	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	548	893	-	-	1297
Mov Cap-2 Maneuver	548	-	-	-	-
Stage 1	790	-	-	-	-
Stage 2	804	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	548	1297
HCM Lane V/C Ratio	-	-	0.056	-
HCM Control Delay (s)	-	-	12	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection

Int Delay, s/veh 0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓			↔
Traffic Vol, veh/h	34	0	83	90	0	353
Future Vol, veh/h	34	0	83	90	0	353
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	0	90	98	0	384

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	331	94	0
Stage 1	139	-	-
Stage 2	192	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	638	944	-
Stage 1	873	-	-
Stage 2	822	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	638	944	-
Mov Cap-2 Maneuver	638	-	-
Stage 1	873	-	-
Stage 2	822	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	638	1384
HCM Lane V/C Ratio	-	-	0.058	-
HCM Control Delay (s)	-	-	11	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection

Int Delay, s/veh 2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	5	85	0	5	29	0
Future Vol, veh/h	5	85	0	5	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	92	0	5	32	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	97	0	56
Stage 1	-	-	-	-	51
Stage 2	-	-	-	-	5
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1496	-	952
Stage 1	-	-	-	-	971
Stage 2	-	-	-	-	1018
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1496	-	952
Mov Cap-2 Maneuver	-	-	-	-	952
Stage 1	-	-	-	-	971
Stage 2	-	-	-	-	1018

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	952	-	-	1496	-
HCM Lane V/C Ratio	0.033	-	-	-	-
HCM Control Delay (s)	8.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-