













Intersection						
Int Delay, s/veh	21.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	349	33	35	312	130	57
Future Vol, veh/h	349	33	35	312	130	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	125	160	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	80	80
Heavy Vehicles, %	16	10	10	11	7	9
Mvmt Flow	392	37	39	351	163	71
Major/Minor	Minor1	Major1	Major2	Major2	Major2	Major2
Conflicting Flow All	436	39	0	-	39	0
Stage 1	39	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Critical Hdwy	6.56	6.3	-	-	4.17	-
Critical Hdwy Stg 1	5.56	-	-	-	-	-
Critical Hdwy Stg 2	5.56	-	-	-	-	-
Follow-up Hdwy	3.644	3.39	-	-	2.263	-
Pot Cap-1 Maneuver	552	1010	-	0	1539	-
Stage 1	949	-	-	0	-	-
Stage 2	650	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	493	1010	-	-	1539	-
Mov Cap-2 Maneuver	493	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Approach	WB	NB	SB	SB	SB	SB
HCM Control Delay, s	32.8	0	5.3	5.3	5.3	5.3
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT	SBT
Capacity (veh/h)	-	493	1010	1539	-	-
HCM Lane V/C Ratio	-	0.795	0.037	0.106	-	-
HCM Control Delay (s)	-	35.1	8.7	7.6	-	-
HCM Lane LOS	-	E	A	A	-	-
HCM 95th %ile Q(veh)	-	7.4	0.1	0.4	-	-

HCM 6th Signalized Intersection Summary
 5: I-95 SB On-Ramp/I-95 SB Off-Ramp & US 278

Build AM w Impr

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↓	↑↑					↓	↑	↑
Traffic Volume (veh/h)	0	595	52	609	436	0	0	0	0	478	0	118
Future Volume (veh/h)	0	595	52	609	436	0	0	0	0	478	0	118
Initial Q (Q ₀) veh	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
Parking Bus Adj	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	
Adj Sat Flow (veh/h/in)	0	1781	1707	1796	1737	0				1826	1826	1722
Adj Flow Rate (veh/h)	0	717	0	692	495	0				520	0	0
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.92	0.92	0.92
Percent Heavy Veh. %	0	8	13	7	11	0				5	5	12
Cap (veh/h)	0	849		737	2284	0				610	0	
Arrive On Green	0.00	0.25	0.00	0.37	0.69	0.00				0.18	0.00	0.00
Sat Flow (veh/h)	0	3474	1447	1711	3387	0				3478	0	1459
Grp Volume (v) (veh/h)	0	717	0	692	495	0				520	0	0
Grp Sat Flow (s) (veh/h/in)	0	1692	1447	1711	1650	0				1739	0	1459
Q Serve (g_s) s	0.0	20.7	0.0	33.4	5.6	0.0				14.9	0.0	0.0
Cycle Q Clear (g_c) s	0.0	20.7	0.0	33.4	5.6	0.0				14.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap (c) (veh/h)	0	849		737	2284	0				610	0	
V/C Ratio (X)	0.00	0.84		0.94	0.22	0.00				0.85	0.00	
Avail Cap (c_a) (veh/h)	0	1003		882	2714	0				746	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter (f)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d) s/veh	0.0	36.5	0.0	22.7	5.7	0.0				41.0	0.0	0.0
Incr Delay (d ₂) s/veh	0.0	6.1	0.0	16.2	0.1	0.0				8.4	0.0	0.0
Initial Q Delay (d ₃) s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
Wile Back (Q ₀ 50%) (veh/in)	0.0	8.8	0.0	15.0	1.5	0.0				6.8	0.0	0.0
Unsig. Movement Delay (s/veh)												
Ln Grp Delay (d) s/veh	0.0	42.7	0.0	38.9	5.8	0.0				49.4	0.0	0.0
Ln Grp LOS	A	D		D	A	A				D	A	A
Approach Vol (veh/h)		717	A		1187						520	A
Approach Delay (s/veh)		42.7			25.1						49.4	
Approach LOS		D			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc) s	45.3	32.3		25.0		77.6						
Change Period (Y+Rc) s	7.4	6.6		7.0		6.6						
Max Green Setting (G _{max}) s	46.6	30.4		22.0		84.4						
Max Q Clear Time (g_c+I) s	35.4	22.7		16.9		7.6						
Green Ext Time (p_c) s	2.5	3.1		1.1		4.1						

Intersection Summary
 HCM 6th Ctrl Delay 35.5
 HCM 6th LOS D

Notes
 User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for (EBR, SBR) is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↑	↗			
Traffic Vol, veh/h	33	1064	0	0	926	277	94	1	1147	0	0	0
Future Vol, veh/h	33	1064	0	0	926	277	94	1	1147	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	Free	-	-	None
Storage Length	245	-	-	-	-	280	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	82	82	82	92	92	92	92	92	92
Heavy Vehicles, %	12	5	5	5	6	5	18	6	6	2	2	2
Mvmt Flow	39	1252	0	0	1129	338	102	1	1247	0	0	0

Major/Minor	Major1	Major2				Minor1
Conflicting Flow All	1129	0	-	-	0	1895
Stage 1	-	-	-	-	-	1330
Stage 2	-	-	-	-	-	565
Critical Hdwy	4.34	-	-	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	6.16
Critical Hdwy Stg 2	-	-	-	-	-	6.16
Follow-up Hdwy	2.32	-	-	-	-	3.68
Pot Cap-1 Maneuver	560	-	0	0	-	51
Stage 1	-	-	0	0	-	184
Stage 2	-	-	0	0	-	490
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	560	-	-	-	-	47
Mov Cap-2 Maneuver	-	-	-	-	-	130
Stage 1	-	-	-	-	-	171
Stage 2	-	-	-	-	-	490

Approach	EB	WB	NB
HCM Control Delay, s	0.4	0	96.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	130	-	560	-	-	-
HCM Lane V/C Ratio	0.794	-	0.069	-	-	-
HCM Control Delay (s)	96.1	0	11.9	-	-	-
HCM Lane LOS	F	A	B	-	-	-
HCM 95th %ile Q(veh)	48	-	0.2	-	-	-

Notes
 ~ Volume exceeds capacity \$ Delay exceeds 300s * Computation Not Defined † All major volume in platoon

Intersection						
Int Delay s/veh	69.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	224	41	500	422	59	329
Future Vol, veh/h	224	41	500	422	59	329
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	100	-	-
Veh in Median Storage #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	93	93	87	87
Heavy Vehicles, %	8	8	7	6	7	8
Mvmt Flow	356	65	538	454	68	378

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1052	538	0
Stage 1	538	-	-
Stage 2	514	-	-
Critical Hdwy	6.48	6.28	4.17
Critical Hdwy Stg 1	5.48	-	-
Critical Hdwy Stg 2	5.48	-	-
Follow-up Hdwy	3.572	3.372	2.263
Pot Cap-1 Maneuver	~244	532	678
Stage 1	573	-	-
Stage 2	588	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	~213	532	678
Mov Cap-2 Maneuver	~213	-	-
Stage 1	573	-	-
Stage 2	513	-	-

Approach	WB	NB	SB
HCM Control Delay, s	306.8	0	1.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	213	532	678	-
HCM Lane V/C Ratio	-	-	1.669	0.122	0.1	-
HCM Control Delay (s)	-	-	360.6	12.7	10.8	0
HCM Lane LOS	-	-	F	B	B	A
HCM 95th %tile Q(veh)	-	-	23.5	0.4	0.3	-

Notes

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

Intersection						
Int Delay s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵	↵	↵		↵	↵
Traffic Vol. veh/h	8	31	309	25	104	205
Future Vol. veh/h	8	31	309	25	104	205
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	100	-	-	150	-
Veh in Median Storage #	0	-	0	-	-	0
Grade %	0	-	0	-	-	0
Peak Hour Factor	90	90	89	89	85	85
Heavy Vehicles %	20	20	9	20	20	13
Mvmt Flow	9	34	347	28	122	241

Major/Minor	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	846	361	0	0	375
Stage 1	361	-	-	-	-
Stage 2	485	-	-	-	-
Critical Hdwy	6.6	6.4	-	-	4.3
Critical Hdwy Stg 1	5.6	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-
Follow-up Hdwy	3.68	3.48	-	-	2.38
Pot Cap-1 Maneuver	310	645	-	-	1091
Stage 1	667	-	-	-	-
Stage 2	583	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	275	645	-	-	1091
Mov Cap-2 Maneuver	275	-	-	-	-
Stage 1	667	-	-	-	-
Stage 2	518	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay s	12.5	0	2.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBL1	WBL2	SBL	SBT
Capacity (veh/h)	-	-	275	645	1091	-
HCM Lane V/C Ratio	-	-	0.032	0.053	0.112	-
HCM Control Delay (s)	-	-	18.5	10.9	8.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %ile Q(veh)	-	-	0.1	0.2	0.4	-

Intersection						
Int Delay s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑		↑	↑
Traffic Vol. veh/h	8	31	314	26	104	301
Future Vol. veh/h	8	31	314	26	104	301
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	100	-	-	150	-
Veh in Median Storage #	0	-	0	-	-	0
Grade %	0	-	0	-	-	0
Peak Hour Factor	90	90	89	89	85	85
Heavy Vehicles %	20	20	9	20	20	13
Mvmt Flow	9	34	353	29	122	354
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	966	368	0	0	382	0
Stage 1	368	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Critical Hdwy	6.6	6.4	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.48	-	-	2.38	-
Pot Cap-1 Maneuver	262	639	-	-	1085	-
Stage 1	662	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Platoon blocked %	-	-	-	-	-	-
Mov Cap-1 Maneuver	233	639	-	-	1085	-
Mov Cap-2 Maneuver	233	-	-	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay s	13.7	0	2.2			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	233	639	1085	-
HCM Lane V/C Ratio	-	-	0.038	0.054	0.113	-
HCM Control Delay (s)	-	-	21.1	11	8.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %ile Q (veh)	-	-	0.1	0.2	0.4	-

Intersection						
Int Delay, s/veh	9.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↑	↘	↑
Traffic Vol, veh/h	274	132	84	330	57	37
Future Vol, veh/h	274	132	84	330	57	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	125	160	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	81	81	80	80
Heavy Vehicles, %	7	5	4	13	15	15
Mvmt Flow	308	148	104	407	71	46

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	292	104	0	-	104
Stage 1	104	-	-	-	-
Stage 2	188	-	-	-	-
Critical Hdwy	6.47	6.25	-	-	4.25
Critical Hdwy Stg 1	5.47	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-
Follow-up Hdwy	3.563	3.345	-	-	2.335
Pot Cap-1 Maneuver	688	943	-	0	1410
Stage 1	908	-	-	0	-
Stage 2	832	-	-	0	-
Platoon blocked, %					
Mov Cap-1 Maneuver	654	943	-	-	1410
Mov Cap-2 Maneuver	654	-	-	-	-
Stage 1	908	-	-	-	-
Stage 2	790	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	4.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	654	943	1410
HCM Lane V/C Ratio	-	0.471	0.157	0.051
HCM Control Delay (s)	-	15.3	9.5	7.7
HCM Lane LOS	-	C	A	A
HCM 95th %ile Q(veh)	-	2.5	0.6	0.2

HCM 6th Signalized Intersection Summary
 5: I-95 SB On-Ramp/I-95 SB Off-Ramp & US 278

Build PM w Impr

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	318	136	1076	431	0	0	0	0	310	4	76
Future Volume (veh/h)	0	318	136	1076	431	0	0	0	0	310	4	76
Initial Q (Qb) veh	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
Parking Bus Adj	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	
Adj Sat Flow (veh/h/s)	0	1737	1693	1826	1796	0				1841	1841	1781
Adj Flow Rate (veh/h)	0	361	0	1223	490	0				377	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.83	0.83	0.83
Percent Heavy Veh. %	0	11	14	5	7	0				4	4	8
Cap (veh/h)	0	401		1148	2716	0				398	0	
Arrive On Green	0.00	0.12	0.00	0.62	0.80	0.00				0.11	0.00	0.00
Sat Flow (veh/h)	0	3387	1434	1739	3503	0				3506	0	1510
Grp Volume (v) (veh/h)	0	361	0	1223	490	0				377	0	0
Grp Sat Flow (s) (veh/h/s)	0	1650	1434	1739	1706	0				1753	0	1510
Q Serve (g_s) s	0.0	16.2	0.0	93.6	5.1	0.0				16.0	0.0	0.0
Cycle Q Clear (g_c) s	0.0	16.2	0.0	93.6	5.1	0.0				16.0	0.0	0.0
Prcp In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap (c) (veh/h)	0	401		1148	2716	0				398	0	
V/C Ratio (X)	0.00	0.90		1.07	0.18	0.00				0.95	0.00	
Avail Cap (c_a) (veh/h)	0	405		1148	2720	0				398	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter (I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d) s/veh	0.0	64.9	0.0	23.6	3.6	0.0				66.0	0.0	0.0
Incr Delay (d2) s/veh	0.0	22.5	0.0	45.8	0.0	0.0				33.7	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
%ile Back Of Q (50%) (veh/h)	0.0	7.9	0.0	47.8	1.4	0.0				8.9	0.0	0.0
Unsig. Movement Delay s/veh												
LnGrp Delay (d) s/veh	0.0	87.3	0.0	69.4	3.7	0.0				99.7	0.0	0.0
LnGrp LOS	A	F		F	A	A				F	A	
Approach Vol (veh/h)		361	A		1713						377	A
Approach Delay s/veh		87.3			50.6						99.7	
Approach LOS		F			D						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc) s	101.0	24.8		24.0		125.8						
Change Period (Y+Rc) s	7.4	6.6		7.0		6.6						
Max Green Setting (Gmax) s	93.6	18.4		17.0		119.4						
Max Q Clear Time (g_c+1) s	95.6	18.2		18.0		7.1						
Green Ext Time (g_e) s	0.0	0.1		0.0		4.1						
Intersection Summary												
HCM 6th Q Delay	63.6											
HCM 6th LOS	E											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for (EBR, SBR) is excluded from calculations of the approach delay and intersection delay.												

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖			↖↖	↖		↖	↖			
Traffic Vol, veh/h	93	539	0	0	1453	437	32	2	743	0	0	0
Future Vol, veh/h	93	539	0	0	1455	437	32	2	743	0	0	0
Conflicting Peds, #/hr	2	0	2	2	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	Free	-	-	None
Storage Length	245	-	-	-	-	280	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	92	92	92	89	89	89	92	92	92
Heavy Vehicles, %	13	6	4	3	3	3	18	2	2	2	2	2
Mvmt Flow	116	674	0	0	1582	475	36	2	835	0	0	0

Major/Minor	Major1	Major2		Minor1			
Conflicting Flow All	1584	0	-	0	1697	2490	-
Stage 1	-	-	-	-	906	906	-
Stage 2	-	-	-	-	791	1584	-
Critical Hdwy	4.36	-	-	-	7.16	6.54	-
Critical Hdwy Stg 1	-	-	-	-	6.16	5.54	-
Critical Hdwy Stg 2	-	-	-	-	6.16	5.54	-
Follow-up Hdwy	2.33	-	-	-	3.68	4.02	-
Pot Cap-1 Maneuver	363	-	0	0	70	29	0
Stage 1	-	-	0	0	318	353	0
Stage 2	-	-	0	0	369	167	0
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	363	-	-	-	48	0	-
Mov Cap-2 Maneuver	-	-	-	-	128	0	-
Stage 1	-	-	-	-	216	0	-
Stage 2	-	-	-	-	369	0	-

Approach	EB	WB	NB
HCM Control Delay, s	2.9	0	44.7
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	128	-	363	-	-	-
HCM Lane V/C Ratio	0.298	-	0.32	-	-	-
HCM Control Delay (s)	44.7	0	19.5	-	-	-
HCM Lane LOS	E	A	C	-	-	-
HCM 95th %ile Q(veh)	1.2	-	1.4	-	-	-

Intersection						
Int Delay s/veh	18.1					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↖	↑	↑	↓	↓
Traffic Vol, veh/h	333	10	273	240	4	368
Future Vol, veh/h	333	10	273	240	4	368
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	100	-	-
Veh in Median Storage #	0	-	0	-	-	0
Grade %	0	-	0	-	-	0
Peak Hour Factor	92	92	83	83	90	90
Heavy Vehicles, %	3	3	5	4	8	10
Mvmt Flow	362	11	329	289	4	409

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	746	329	0	0	618
Stage 1	329	-	-	-	-
Stage 2	417	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.18
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.272
Pot Cap-1 Maneuver	380	710	-	-	934
Stage 1	727	-	-	-	-
Stage 2	663	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	378	710	-	-	934
Mov Cap-2 Maneuver	378	-	-	-	-
Stage 1	727	-	-	-	-
Stage 2	659	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	68	0	0.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBL1	WBL2	SBL	SBT
Capacity (veh/h)	-	-	378	710	934	-
HCM Lane V/C Ratio	-	-	0.958	0.015	0.005	-
HCM Control Delay (s)	-	-	69.7	10.7	8.9	0
HCM Lane LOS	-	-	F	B	A	A
HCM 95th %ile C (veh)	-	-	10.7	0	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↘		↘	↗
Traffic Vol, veh/h	25	99	225	9	37	261
Future Vol, veh/h	25	99	225	9	37	261
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	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	80	80	94	94
Heavy Vehicles, %	20	20	3	20	20	9
Mvmt Flow	28	110	281	11	39	278

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	643	287	0
Stage 1	287	-	-
Stage 2	356	-	-
Critical Hdwy	6.6	6.4	-
Critical Hdwy Stg 1	5.6	-	-
Critical Hdwy Stg 2	5.6	-	-
Follow-up Hdwy	3.68	3.48	-
Pot Cap-1 Maneuver	411	711	-
Stage 1	722	-	-
Stage 2	671	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	397	711	-
Mov Cap-2 Maneuver	397	-	-
Stage 1	722	-	-
Stage 2	649	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	1
HCM LOS	B		













Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	397	711	1174	-
HCM Lane V/C Ratio	-	-	0.07	0.155	0.034	-
HCM Control Delay (s)	-	-	14.7	11	8.2	-
HCM Lane LOS	-	-	B	B	A	-
HCM 95th %ile Q(veh)	-	-	0.2	0.5	0.1	-

Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕		↘	↗
Traffic Vol, veh/h	25	99	315	9	37	273
Future Vol, veh/h	25	99	315	9	37	273
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	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	80	80	94	94
Heavy Vehicles, %	20	20	3	20	20	9
Mvmt Flow	28	110	394	11	39	290
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	768	400	0	0	405	0
Stage 1	400	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Critical Hdwy	5.6	6.4	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.48	-	-	2.38	-
Pot Cap-1 Maneuver	945	613	-	-	1063	-
Stage 1	640	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	332	613	-	-	1063	-
Mov Cap-2 Maneuver	332	-	-	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13.1	0	1			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	332	613	1063	-
HCM Lane VIC Ratio	-	-	0.084	0.179	0.037	-
HCM Control Delay (s)	-	-	16.8	12.7	8.5	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %ile Q (veh)	-	-	0.3	0.6	0.1	-

Intersection						
Int Delay, s/veh	21.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	349	33	35	312	130	57
Future Vol, veh/h	349	33	35	312	130	57
Conflicting Peas, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	125	160	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	80	80
Heavy Vehicles, %	16	10	10	11	7	9
Mvmt Flow	392	37	39	351	163	71
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	436	39	0	-	39	0
Stage 1	39	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Critical Hdwy	6.56	6.3	-	-	4.17	-
Critical Hdwy Stg 1	5.56	-	-	-	-	-
Critical Hdwy Stg 2	5.56	-	-	-	-	-
Follow-up Hdwy	3.644	3.39	-	-	2.263	-
Pot Cap-1 Maneuver	552	1010	-	0	1539	-
Stage 1	949	-	-	0	-	-
Stage 2	650	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	493	1010	-	-	1539	-
Mov Cap-2 Maneuver	493	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	32.8	0	5.3			
HCM LOS	D					
Minor Lane/Major Mvmt	NBTWBLn	TWBLn2	SBL	SBT		
Capacity (veh/h)	-	493	1010	1539	-	-
HCM Lane VIC Ratio	-	0.795	0.037	0.106	-	-
HCM Control Delay (s)	-	35.1	8.7	7.6	-	-
HCM Lane LOS	-	E	A	A	-	-
HCM 95th %ile D (veh)	-	7.4	0.1	0.4	-	-

HCM 6th Signalized Intersection Summary
 5: I-95 SB On-Ramp/I-95 SB Off-Ramp & US 278

Build AM w Impr w 95 NB signal

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↓	↑↑					↓	↓	↑
Traffic Volume (veh/h)	0	595	52	609	436	0	0	0	0	478	0	118
Future Volume (veh/h)	0	595	52	609	436	0	0	0	0	478	0	118
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1781	1707	1796	1757	0				1826	1826	1722
Adj Flow Rate, veh/h	0	717	0	692	495	0				520	0	0
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.92	0.92	0.92
Percent Heavy Veh, %	0	8	13	7	11	0				5	5	12
Cap, veh/h	0	1149		717	2371	0				585	0	
Arrive On Green	0.00	0.34	0.00	0.53	1.00	0.00				0.17	0.00	0.00
Sat Flow, veh/h	0	3474	1447	1711	3387	0				3478	0	1459
Grp Volume(v), veh/h	0	717	0	692	495	0				520	0	0
Grp Sat Flow(s), veh/h/ln	0	1692	1447	1711	1650	0				1739	0	1459
Q Serve(g_s), s	0.0	21.3	0.0	33.6	0.0	0.0				17.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	21.3	0.0	33.6	0.0	0.0				17.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1149		717	2371	0				585	0	
V/C Ratio(X)	0.00	0.62		0.96	0.21	0.00				0.89	0.00	
Aval Cap(c_a), veh/h	0	1149		839	2371	0				538	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.87	0.87	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	33.2	0.0	17.8	0.0	0.0				48.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.6	0.0	19.8	0.0	0.0				14.1	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
%ile Back Of Q(50%), veh/ln	0.0	8.8	0.0	8.8	0.0	0.0				8.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	35.8	0.0	31.6	0.0	0.0				62.9	0.0	0.0
LnGrp LOS	A	D		C	A	A				E	A	
Approach Vol, veh/h		717	A		1187						520	A
Approach Delay, s/veh		35.8			18.4						62.9	
Approach LOS		D			B						E	
Timer - Assigned Pfs		1	2		4						5	
Pfs Duration (G+Y+Rc), s		45.5	47.3		27.2						92.8	
Change Period (Y+Rc), s		7.4	6.6		7.0						6.6	
Max Green Setting (Gmax), s		46.6	30.4		22.0						84.4	
Max Q Clear Time (g_c+I), s		35.6	23.3		19.5						2.0	
Green End Time (p_c), s		2.9	2.9		0.6						4.1	
Intersection Summary												
HCM 6th Ctn Delay				33.1								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for (EBR, SBT) is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 8: I-95 NB Off-Ramp/I-95 NB On-Ramp & US 278

Build AM w Impr w 95 NB signal



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑			↑↑	↗		↑	↗			
Traffic Volume (veh/h)	33	1064	0	0	926	277	94	1	1147	0	0	0
Future Volume (veh/h)	33	1064	0	0	926	277	94	1	1147	0	0	0
Initial Q (Q ₀), veh	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			
Parking Bus, Adj	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			
Adj Sat Flow, veh/h/ln	1722	1826	0	0	1811	1826	1633	1811	1811			
Adj Flow Rate, veh/h	39	1252	0	0	1129	0	102	1	0			
Peak Hour Factor	0.85	0.85	0.85	0.82	0.82	0.82	0.92	0.92	0.92			
Percent Heavy Veh, %	12	5	0	0	6	5	18	6	6			
Cap, veh/h	303	2371	0	0	2351		370	4				
Arrive On Green	1.00	1.00	0.00	0.00	0.68	0.00	0.22	0.22	0.00			
Sat Flow, veh/h	459	3561	0	0	3532	1547	1709	17	1535			
Grp Volume(v), veh/h	39	1252	0	0	1129	0	103	0	0			
Grp Sat Flow(s), veh/h/ln	459	1735	0	0	1721	1547	1726	0	1535			
Q Serve(g_s), s	2.6	0.0	0.0	0.0	18.6	0.0	6.0	0.0	0.0			
Cycle Q Clear(g_c), s	21.2	0.0	0.0	0.0	18.6	0.0	6.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	303	2371	0	0	2351		370	0				
V/C Ratio(X)	0.13	0.53	0.00	0.00	0.48		0.28	0.00				
Avail Cap(c_a), veh/h	303	2371	0	0	2351		370	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.46	0.46	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	2.4	0.0	0.0	0.0	9.0	0.0	39.2	0.0	0.0			
Incr Delay (d2), s/veh	0.4	0.4	0.0	0.0	0.7	0.0	1.8	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			
%ile Back Of (50%), veh/ln	0.1	0.1	0.0	0.0	6.1	0.0	2.7	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	2.8	0.4	0.0	0.0	9.7	0.0	41.0	0.0	0.0			
LnGrp LOS	A	A	A	A	A		D	A				
Approach Vol, veh/h	1291				1129		A		103		A	
Approach Delay, s/veh	0.5				9.7				41.0			
Approach LOS	A				A				D			
Timer - Assigned Phs	2				6				8			
Phs Duration (G+Y+Rc), s	88.0				88.0				32.0			
Change Period (Y+Rc), s	6.0				6.0				6.0			
Max Green Setting (Gmax), s	82.0				82.0				26.0			
Max Q Clear Time (g_c+I), s	23.2				20.6				8.0			
Green Ext Time (p_c), s	12.7				9.9				0.4			

Intersection Summary

HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay s/veh	69.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	224	41	500	422	59	329
Future Vol, veh/h	224	41	500	422	59	329
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	100	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	93	93	87	87
Heavy Vehicles, %	8	8	7	6	7	8
Mvmt Flow	356	65	538	454	68	378

Major/Minor	Minor1	Major1	Major2	Minor2	Minor3	Minor4
Conflicting Flow All	1052	538	0	0	992	0
Stage 1	538	-	-	-	-	-
Stage 2	514	-	-	-	-	-
Critical Hdwy	6.28	6.28	-	-	4.17	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.372	-	-	2.263	-
Pot Cap-1 Maneuver	~244	532	-	-	678	-
Stage 1	573	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	~213	532	-	-	678	-
Mov Cap-2 Maneuver	~213	-	-	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	513	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	306.8	0	1.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBL1	WBL2	SBL	SBT
Capacity (veh/h)	-	-	213	532	678	-
HCM Lane V/C Ratio	-	-	1.669	0.122	0.1	-
HCM Control Delay (s)	-	-	360.8	12.7	10.9	0
HCM Lane LOS	-	-	F	B	B	A
HCM 95th %tile Q(veh)	-	-	23.5	0.4	0.3	-

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

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑	↑	↘	↘	↑
Traffic Vol, veh/h	8	31	309	25	104	205
Future Vol, veh/h	8	31	309	25	104	205
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	100	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	89	89	85	85
Heavy Vehicles, %	20	20	9	20	20	13
Mvmt Flow	9	34	347	28	122	241
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	846	361	0	0	375	0
Stage 1	361	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Critical Hdwy	6.6	6.4	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.48	-	-	2.38	-
Pot Cap-1 Maneuver	310	645	-	-	1091	-
Stage 1	667	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	275	645	-	-	1091	-
Mov Cap-2 Maneuver	275	-	-	-	-	-
Stage 1	667	-	-	-	-	-
Stage 2	518	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12.5	0	2.9			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	275	645	1091	-
HCM Lane VIC Ratio	-	-	0.032	0.053	0.112	-
HCM Control Delay (s)	-	-	18.5	10.9	8.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %ile Q(veh)	-	-	0.1	0.2	0.4	-

Intersection						
Ini Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↗		↘	↗
Traffic Vol, veh/h	8	31	314	26	104	301
Future Vol, veh/h	8	31	314	26	104	301
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	100	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	89	89	85	85
Heavy Vehicles, %	20	20	9	20	20	13
Mvmt Flow	9	34	353	29	122	354
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	966	368	0	0	382	0
Stage 1	368	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Critical Hdwy	6.6	6.4	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.48	-	-	2.38	-
Pot Cap-1 Maneuver	262	639	-	-	1085	-
Stage 1	662	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	233	639	-	-	1085	-
Mov Cap-2 Maneuver	233	-	-	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13.1	0	2.2			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBL	WBL	WBR	SBL	SBT
Capacity (veh/h)	-	-	233	639	1085	-
HCM Lane V/C Ratio	-	-	0.038	0.054	0.113	-
HCM Control Delay (s)	-	-	21.1	11	8.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %ile Q (veh)	-	-	0.1	0.2	0.4	-

Intersection						
Int Delay, s/veh	9.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	274	132	84	330	57	37
Future Vol, veh/h	274	132	84	330	57	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	125	160	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	81	81	80	80
Heavy Vehicles, %	7	5	4	13	15	15
Mvmt Flow	308	148	104	407	71	46
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	292	104	0	-	104	0
Stage 1	104	-	-	-	-	-
Stage 2	188	-	-	-	-	-
Critical Hdwy	6.47	6.25	-	-	4.25	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.345	-	-	2.335	-
Pot Cap-1 Maneuver	688	943	-	0	1410	-
Stage 1	908	-	-	0	-	-
Stage 2	832	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	654	943	-	-	1410	-
Mov Cap-2 Maneuver	654	-	-	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	790	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13.4	0	4.7			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1	WBLn2	SBL	SBT		
Capacity (veh/h)	-	654	943	1410	-	
HCM Lane V/C Ratio	-	0.471	0.157	0.051	-	
HCM Control Delay (s)	-	15.3	9.5	7.7	-	
HCM Lane LOS	-	C	A	A	-	
HCM 95th %ile Q(veh)	-	25	0.6	0.2	-	

HCM 6th Signalized Intersection Summary

Build PM w Impr w 95 NB signalized

5: I-95 SB On-Ramp/I-95 SB Off-Ramp & US 278

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↓	↑↑					↓	↑	↑
Traffic Volume (veh/h)	0	318	136	1076	431	0	0	0	0	310	4	76
Future Volume (veh/h)	0	318	136	1076	431	0	0	0	0	310	4	76
Initial Q (Q ₀) veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1737	1693	1826	1796	0				1841	1841	1781
Adj Flow Rate, veh/h	0	361	0	1223	490	0				377	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.83	0.83	0.83
Percent Heavy Veh, %	0	11	14	5	7	0				4	4	8
Cap, veh/h	0	405		1148	2717	0				397	0	0
Arrive On Green	0.00	0.12	0.00	1.00	1.00	0.00				0.11	0.00	0.00
Sat Flow, veh/h	0	3387	1434	1739	3503	0				3506	0	1510
Grp Volume(v), veh/h	0	361	0	1223	490	0				377	0	0
Grp Sat Flow(s), veh/h/ln	0	1650	1434	1739	1706	0				1753	0	1510
Q Serve(g_s), s	0.0	16.2	0.0	93.6	0.0	0.0				16.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.2	0.0	93.6	0.0	0.0				16.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	405		1148	2717	0				397	0	0
W/C Ratio(X)	0.00	0.89		1.07	0.18	0.00				0.95	0.00	
Avail Cap(c_a), veh/h	0	405		1148	2717	0				397	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(f)	0.00	1.00	0.00	0.80	0.80	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	64.8	0.0	3.7	0.0	0.0				65.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	24.4	0.0	43.3	0.0	0.0				33.9	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
%ile BackOfQ(50%), veh/ln	0.0	8.1	0.0	16.4	0.0	0.0				8.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	89.2	0.0	47.0	0.0	0.0				100.0	0.0	0.0
LnGrp LOS	A	F		F	A	A				F	A	
Approach Vol, veh/h		361	A		1713						377	A
Approach Delay, s/veh		89.2			33.5						100.0	
Approach LOS		F			C						F	
Timer - Assigned Phs	1	2		4	6							
Phs Duration (G+Y+Rc), s	101.0	25.0		24.0	126.0							
Change Period (Y+Rc), s	7.4	6.6		7.0	6.6							
Max Green Setting (Gmax), s	93.6	18.4		17.0	119.4							
Max Q Clear Time (g_c+1), s	95.6	18.2		18.0	2.0							
Green Ext Time (p_c), s	0.0	0.1		0.0	4.1							
Intersection Summary												
HCM 6th Ctrl Delay	52.0											
HCM 6th LOS	D											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 8: I-95 NB Off-Ramp/I-95 NB On-Ramp & US 278

Build PM w Impr w 95 NB signalized

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑			↑↑	↵		↑	↵			
Traffic Volume (veh/h)	93	539	0	0	1455	437	32	2	743	0	0	0
Future Volume (veh/h)	93	539	0	0	1455	437	32	2	743	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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					
Adj Sat Flow, veh/h/ln	1707	1811	0	0	1856	1856	1633	1870	1870			
Adj Flow Rate, veh/h	116	674	0	0	1582	0	36	2	0			
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.89	0.89	0.89			
Percent Heavy Veh, %	13	6	0	0	3	3	18	2	2			
Cap, veh/h	236	2753	0	0	2820		203	11				
Arrive On Green	1.00	1.00	0.00	0.00	0.80	0.00	0.12	0.12	0.00			
Sat Flow, veh/h	295	3532	0	0	3618	1572	1692	94	1585			
Grp Volume(v), veh/h	116	674	0	0	1582	0	38	0	0			
Grp Sat Flow(s), veh/h/ln	295	1721	0	0	1763	1572	1786	0	1585			
Q Serve(g_s), s	23.6	0.0	0.0	0.0	24.4	0.0	2.9	0.0	0.0			
Cycle Q Clear(g_c), s	48.0	0.0	0.0	0.0	24.4	0.0	2.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	236	2753	0	0	2820		214	0				
V/C Ratio(X)	0.49	0.24	0.00	0.00	0.56		0.18	0.00				
Avail Cap(c_a), veh/h	236	2753	0	0	2820		214	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.21	0.21	0.80	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.9	0.0	0.0	0.0	5.4	0.0	59.3	0.0	0.0			
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.0	0.8	0.0	1.8	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			
%ile BackOfQ(50%), veh/ln	0.0	0.0	0.0	0.0	7.2	0.0	1.4	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.4	0.0	0.0	0.0	6.3	0.0	61.1	0.0	0.0			
LnGrp LOS	A	A	A	A	A		E	A				
Approach Vol, veh/h		790			1582	A		38	A			
Approach Delay, s/veh		1.0			6.3			61.1				
Approach LOS		A			A			E				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		126.0				126.0		24.0				
Change Period (Y+Rc), s		6.0				6.0		6.0				
Max Green Setting (Gmax), s		120.0				120.0		18.0				
Max Q Clear Time (g_c+I), s		50.0				26.4		4.9				
Green Ext Time (p_c), s		9.3				18.8		6.1				
Intersection Summary												
HCM 6th Ctrl Delay					5.4							
HCM 6th LOS					A							
Notes												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay												

Intersection						
Int Delay s/veh	18.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↑	↗		↙
Traffic Vol. veh/h	333	10	273	240	4	368
Future Vol. veh/h	333	10	273	240	4	368
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	100	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade %	0	-	0	-	-	0
Peak Hour Factor	92	92	83	83	90	90
Heavy Vehicles %	3	3	5	4	8	10
Mvmt Flow	362	11	329	289	4	409
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	746	329	0	0	618	0
Stage 1	329	-	-	-	-	-
Stage 2	417	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.18	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.272	-
Pot Cap-1 Maneuver	380	710	-	-	934	-
Stage 1	727	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Platoon blocked %	-	-	-	-	-	-
Mov Cap-1 Maneuver	378	710	-	-	934	-
Mov Cap-2 Maneuver	378	-	-	-	-	-
Stage 1	727	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	68	0	0.1			
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBR	WBL1	WBL2	SBL	SBT
Capacity (veh/h)	-	-	378	710	934	-
HCM Lane V/C Ratio	-	-	0.958	0.015	0.005	-
HCM Control Delay (s)	-	-	69.7	10.1	8.9	0
HCM Lane LOS	-	-	F	B	A	A
HCM 95th %ile Q(veh)	-	-	10.7	0	0	-

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↓	↘	↗
Traffic Vol, veh/h	25	99	225	9	37	261
Future Vol, veh/h	25	99	225	9	37	261
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	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	80	80	94	94
Heavy Vehicles, %	20	20	3	20	20	9
Mvmt Flow	28	110	281	11	39	278
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	643	287	0	0	292	0
Stage 1	287	-	-	-	-	-
Stage 2	356	-	-	-	-	-
Critical Hdwy	6.6	6.4	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.48	-	-	2.38	-
Pot Cap-1 Maneuver	411	711	-	-	1174	-
Stage 1	722	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	397	711	-	-	1174	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.7	0	1			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	397	711	1174	-
HCM Lane V/C Ratio	-	-	0.07	0.155	0.034	-
HCM Control Delay (s)	-	-	14.7	11	8.2	-
HCM Lane LOS	-	-	B	B	A	-
HCM 95th %ile Q(veh)	-	-	0.2	0.5	0.1	-

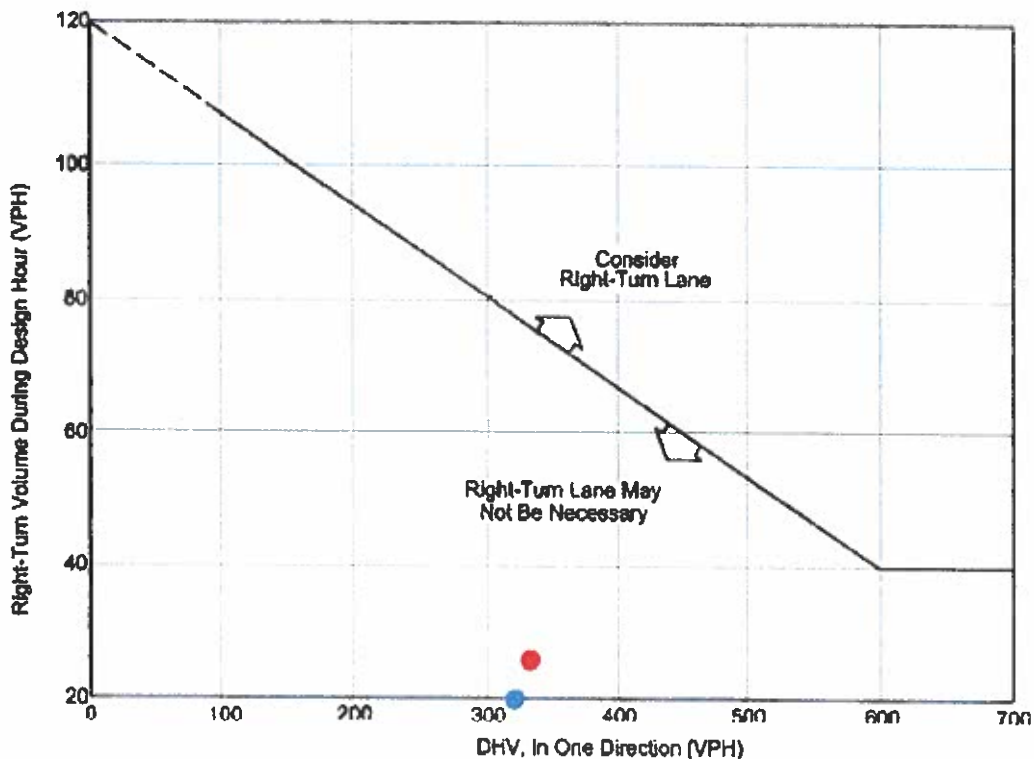
Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↓	↘	↗
Traffic Vol, veh/h	25	99	315	9	37	273
Future Vol, veh/h	25	99	315	9	37	273
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	80	80	94	94
Heavy Vehicles, %	20	20	3	20	20	9
Mvmt Flow	28	110	394	11	39	290
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	768	400	0	0	405	0
Stage 1	400	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Critical Hdwy	6.6	6.4	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.48	-	-	2.38	-
Pot Cap-1 Maneuver	346	613	-	-	1063	-
Stage 1	640	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	332	613	-	-	1063	-
Mov Cap-2 Maneuver	332	-	-	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13.1	0	1			
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	332	613	1063	-
HCM Lane V/C Ratio	-	-	0.084	0.179	0.037	-
HCM Control Delay (s)	-	-	16.8	12.2	8.5	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %ile Q (veh)	-	-	0.3	0.6	0.1	-

95 Logistics Center
US 17 at Site Driveway #1

9.5-2

INTERSECTIONS

March 2017



Note For highways with a design speed below 50 miles per hour with a DHV < 300 and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns

Example

			✗	✗
			● AM Peak Hour	● PM Peak Hour
<u>Given:</u>	Design Speed	= 35 miles per hour	Speed = 55 mph	Speed = 55 mph
	DHV	= 250 vehicles per hour	DHV = 340	DHV = 324
	Right Turns	= 100 vehicles per hour	R-Turns = 26	R-Turns = 9

Problem: Determine if a right-turn lane is necessary.

Solution: To read the vertical axis, use $100 - 20 = 80$ vehicles per hour. The figure indicates that a right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

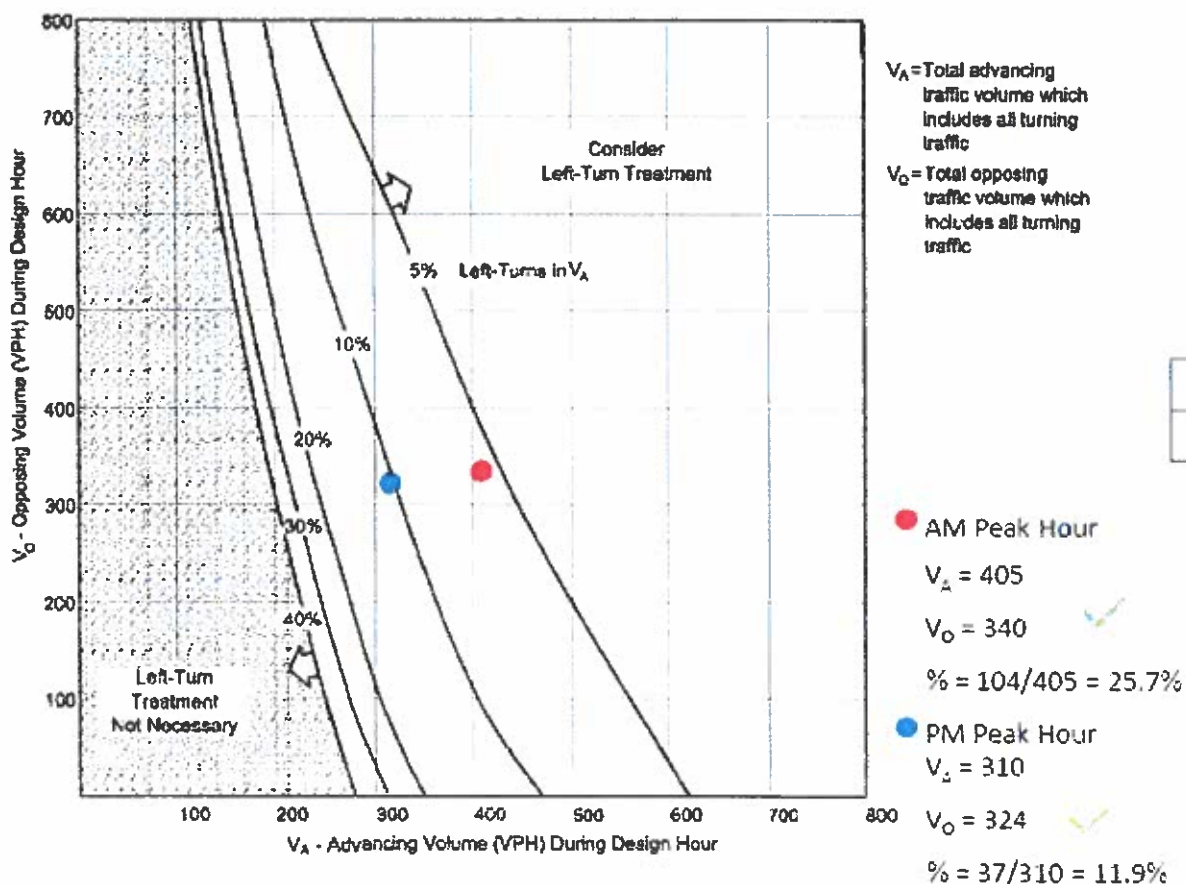
**GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS
ON TWO-LANE HIGHWAYS**
Figure 9.5-A

95 Logistics Center
US 17 at Site Driveway #1

9.5-6

INTERSECTIONS

March 2017



Instructions

1. The family of curves represents the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.
2. Read V_A and V_O into the chart and locate the intersection of the two volumes.
3. Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a left-turn lane is not warranted based on traffic volumes.

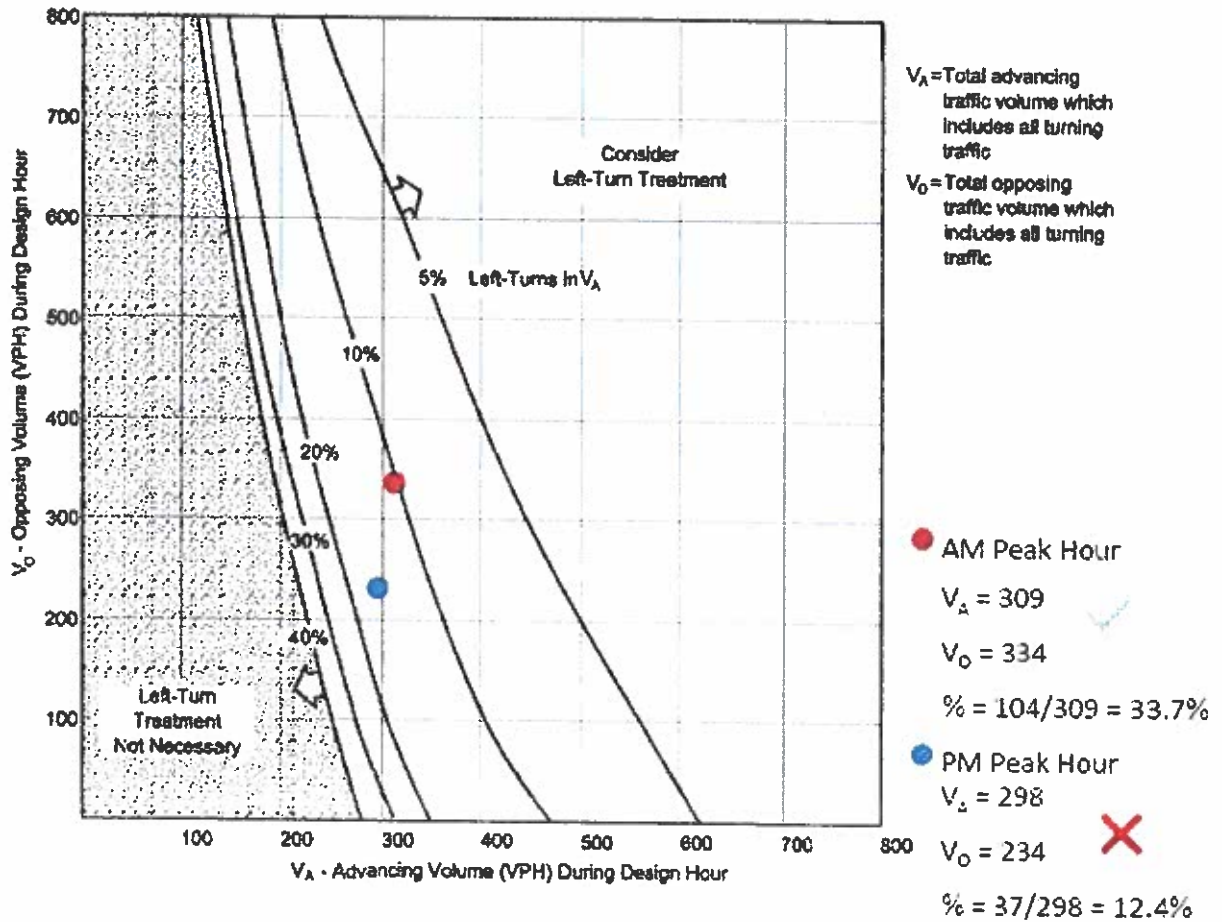
VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS (55 mph)
Figure 9.5-D

95 Logistics Center
US 17 at Site Driveway #2

9.5-6

INTERSECTIONS

March 2017



Instructions

1. The family of curves represents the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.
2. Read V_A and V_O into the chart and locate the intersection of the two volumes.
3. Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a left-turn lane is not warranted based on traffic volumes.

VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS (55 mph)
Figure 9.5-D

APPENDIX:

95 Logistics Center and the Jasper County Comprehensive Plan

- Develop competitive industrial sites and buildings, particularly those focusing on communications, technology, distribution, energy and telecommunications.
- Establish links for vocational training in high schools with post-secondary technical training through shared facilities and programs. This has been done in the past with Silverman Group tenants in other similar developments.
- Increase budget to support needed staffing increases. Fees and taxes paid by Silverman Group and the new Tenants will help accomplish this.
- Seek opportunities to use access management and design treatments to improve the mobility of strategic corridors. With further study and DOT review and approval this will be look to improve 278 and US 17 as well as begin aesthetic improvements at the two access points on US 17 as envisioned by the Whyte-Hardee Master Plan.
- Improve existing water, sewer and road infrastructure.
- The project will improve the Employment Status of Jasper County. The estimated employment increase upon full development will be 2170 new jobs which will increase the 2016 Employment Status Estimates by 18%.
- The proposed development of a new port on the Savannah River has been a vision for Jasper County for many years. This project will strengthen the infrastructure for the Terminal project.
- The sellers donated 5 acres of land for the new Community Center on John Smith Road.
- The Comprehensive Plan states to give priority to transportation programs that retain existing businesses and attract new businesses to the area. This project does just that.
- Improve access to freight facilities (ports, airfields, industrial parks) for people and freight.
- Impact Fees: A one-time fee based on the cost associated with providing capital improvements to new homes or businesses. This fee is a per unit exaction paid at the time property is developed or purchased. These fees are placed into a special fund for system-wide capital facilities and are determined by fiscal impact analysis on the future demand a proposed development will have on the local infrastructure system. The project will be contributing according to the mutually negotiated Development Agreement.

April 25, 2022

95 Logistics Center

PDD Changes

Page 1 Revision date

Page 13 H-2 TIA statement

Page 23 E. 3. b. Setbacks and Buffers

Page 25 7. ii E 3 b. Clarification

Page 25 7. iv. Sound attenuation wall

