

HCM Unsignalized Intersection Capacity Analysis  
 1: Blue Heron Point & US 278

2015 AM Peak  
 Baseline















Movement	EBT	EBR	WBU	WBL	WBT	NEL	NER
Lane Configurations	↑↑	↑		↓	↑↑	↓	
Volume (veh/h)	2945	3	1	3	1386	7	21
Sign Control	Free				Free Stop		
Grade	0%				0% 0%		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	3005	3	0	3	1414	7	21
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None				None		
Median storage (veh)							
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0		3008		3718		1503
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	0		3008		3718		1503
tC, single (s)	0.0		4.2		6.9		7.0
tC, 2 stage (s)							
tF (s)	0.0		2.3		3.5		3.3
p0 queue free %	0		97		0		80
cM capacity (veh/h)	0		104		3		109

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	1503	1503	3	3	707	707	29
Volume Left	0	0	0	3	0	0	7
Volume Right	0	0	3	0	0	0	21
cSH	1700	1700	1700	104	1700	1700	11
Volume to Capacity	0.88	0.88	0.00	0.03	0.42	0.42	2.55
Queue Length 95th (ft)	0	0	0	2	0	0	113
Control Delay (s)	0.0	0.0	0.0	40.6	0.0	0.0	1374.4
Lane LOS	E				F		
Approach Delay (s)	0.0			0.1		1374.4	
Approach LOS							F

Intersection Summary							
Average Delay	8.8						
Intersection Capacity Utilization	91.4%			ICU Level of Service			F
Analysis Period (min)	15						

HCM Unsignalized Intersection Capacity Analysis  
2: Crossover Dr./Gateway Dr. & US 278

2015 AM Peak  
Baseline

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑	↗	↗		↗			↗
Volume (veh/h)	0	2948	25	20	1393	0	11	0	49	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	3039	26	21	1436	0	11	0	51	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh		1			1							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1436			3039			3798	4516	1520	2997	4516	718
vC1, stage 1 conf vol							3039	3039		1477	1477	
vC2, stage 2 conf vol							759	1477		1520	3039	
vCu, unblocked vol	1436			3039			3798	4516	1520	2997	4516	718
tC, single (s)	4.2			4.3			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)							6.6	5.6		6.6	5.6	
tF (s)	2.3			2.3			3.5	4.0	3.3	3.6	4.1	3.4
p0 queue free %	100			78			0	100	52	100	100	100
cM capacity (veh/h)	449			94			11	22	106	28	6	362
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>EB 3</b>	<b>WB 1</b>	<b>WB 2</b>	<b>WB 3</b>	<b>WB 4</b>	<b>NB 1</b>	<b>NB 2</b>	<b>SB 1</b>		
Volume Total	1520	1520	26	21	718	718	0	11	51	0		
Volume Left	0	0	0	21	0	0	0	11	0	0		
Volume Right	0	0	26	0	0	0	0	0	51	0		
cSH	1700	1700	1700	94	1700	1700	1700	11	106	1700		
Volume to Capacity	0.89	0.89	0.02	0.22	0.42	0.42	0.00	1.04	0.48	0.00		
Queue Length 95th (ft)	0	0	0	19	0	0	0	52	53	0		
Control Delay (s)	0.0	0.0	0.0	53.7	0.0	0.0	0.0	737.6	67.0	0.0		
Lane LOS				F				F	F	A		
Approach Delay (s)	0.0			0.8				190.0		0.0		
Approach LOS								F		A		
<b>Intersection Summary</b>												
Average Delay			2.8									
Intersection Capacity Utilization			91.5%		ICU Level of Service				F			
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 3: US 278 & Jenkins Rd

2015 AM Peak  
Baseline



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↵	↕↕	↕↕		↵	
Volume (veh/h)	4	6	2994	1379	18	9	12
Sign Control			Free	Free		Stop	
Grade			0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	6	3119	1436	19	9	12
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			Raised	Raised			
Median storage (veh)			1	1			
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0	1455				3018	728
vC1, stage 1 conf vol						1446	
vC2, stage 2 conf vol						1572	
vCu, unblocked vol	0	1455				3018	728
tC, single (s)	0.0	4.2				7.6	7.7
tC, 2 stage (s)						6.6	
tF (s)	0.0	2.3				3.9	3.7
p0 queue free %	0	99				83	96
cM capacity (veh/h)	0	441				56	291

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	6	1559	1559	958	498	22
Volume Left	6	0	0	0	0	9
Volume Right	0	0	0	0	19	12
cSH	441	1700	1700	1700	1700	103
Volume to Capacity	0.01	0.92	0.92	0.56	0.29	0.21
Queue Length 95th (ft)	1	0	0	0	0	19
Control Delay (s)	13.3	0.0	0.0	0.0	0.0	48.9
Lane LOS	B					E
Approach Delay (s)	0.0			0.0		48.9
Approach LOS						E

Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			92.8%		ICU Level of Service	F
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis  
 1: Blue Heron Point & US 278

2015 PM Peak  
 Baseline



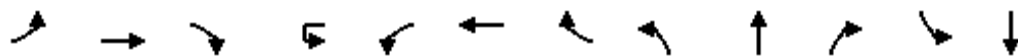
Movement	EBT	EBR	WBU	WBL	WBT	NEL	NER
Lane Configurations	↑↑	↑		↓	↑↑	↓	
Volume (veh/h)	1898	7	3	17	3017	8	12
Sign Control	Free				Free Stop		
Grade	0%				0%		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	1957	7	0	18	3110	8	12
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None				None		
Median storage (veh)							
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0		1964		3547		978
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	0		1964		3547		978
tC, single (s)	0.0		4.1		6.8		6.9
tC, 2 stage (s)							
tF (s)	0.0		2.2		3.5		3.3
p0 queue free %	0		94		0		95
cM capacity (veh/h)	0		292		4		250

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	978	978	7	18	1555	1555	21
Volume Left	0	0	0	18	0	0	8
Volume Right	0	0	7	0	0	0	12
cSH	1700	1700	1700	292	1700	1700	10
Volume to Capacity	0.58	0.58	0.00	0.06	0.91	0.91	2.07
Queue Length 95th (ft)	0	0	0	5	0	0	88
Control Delay (s)	0.0	0.0	0.0	18.1	0.0	0.0	1238.4
Lane LOS	C				F		
Approach Delay (s)	0.0			0.1		1238.4	
Approach LOS					F		

Intersection Summary							
Average Delay	5.1						
Intersection Capacity Utilization	93.4%			ICU Level of Service			F
Analysis Period (min)	15						

HCM Unsignalized Intersection Capacity Analysis  
2: Crossover Dr./Gateway Dr. & US 278

2015 PM Peak  
Baseline



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑	↗		↖	↑↑	↗	↖		↗		
Volume (veh/h)	0	1894	27	2	56	3021	0	24	0	45	0	0
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	1953	28	0	58	3114	0	25	0	46	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised				Raised						
Median storage veh		1				1						
Upstream signal (ft)												
pX, platoon unblocked				0.00								
vC, conflicting volume	3114			0	1953			3625	5182	976	4206	5182
vC1, stage 1 conf vol								1953	1953		3230	3230
vC2, stage 2 conf vol								1673	3230		976	1953
vCu, unblocked vol	3114			0	1953			3625	5182	976	4206	5182
tC, single (s)	4.1			0.0	4.1			7.6	6.6	7.0	7.5	6.5
tC, 2 stage (s)								6.6	5.6		6.5	5.5
tF (s)	2.2			0.0	2.2			3.6	4.1	3.4	3.5	4.0
p0 queue free %	100			0	80			23	100	81	100	100
cM capacity (veh/h)	102			0	295			32	14	243	7	13

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2	SB 1
Volume Total	976	976	28	58	1557	1557	0	25	46	0
Volume Left	0	0	0	58	0	0	0	25	0	0
Volume Right	0	0	28	0	0	0	0	0	46	0
cSH	1700	1700	1700	295	1700	1700	1700	32	243	1700
Volume to Capacity	0.57	0.57	0.02	0.20	0.92	0.92	0.00	0.77	0.19	0.00
Queue Length 95th (ft)	0	0	0	18	0	0	0	65	17	0
Control Delay (s)	0.0	0.0	0.0	20.1	0.0	0.0	0.0	267.4	23.3	0.0
Lane LOS				C				F	C	A
Approach Delay (s)	0.0			0.4				108.2		0.0
Approach LOS								F		A

Intersection Summary

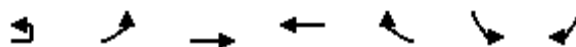
Average Delay	1.7
Intersection Capacity Utilization	93.5%
ICU Level of Service	F
Analysis Period (min)	15



Movement	SBR
Lane Configurations	↗
Volume (veh/h)	0
Sign Control	
Grade	
Peak Hour Factor	0.97
Hourly flow rate (vph)	0
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage (veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	1557
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	1557
tC, single (s)	6.9
tC, 2 stage (s)	
tF (s)	3.3
p0 queue free %	100
cM capacity (veh/h)	102
Direction, Lane #	

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Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (veh/h)	1	14	1913	3041	21	12	21
Sign Control			Free	Free		Stop	
Grade			0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	14	1972	3135	22	12	22
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			Raised	Raised			
Median storage (veh)			1	1			
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0	3157				4161	1578
vC1, stage 1 conf vol						3146	
vC2, stage 2 conf vol						1015	
vCu, unblocked vol	0	3157				4161	1578
tC, single (s)	0.0	4.4				7.2	7.3
tC, 2 stage (s)						6.2	
tF (s)	0.0	2.3				3.7	3.5
p0 queue free %	0	81				1	74
cM capacity (veh/h)	0	78				13	82

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	14	986	986	2090	1067	34
Volume Left	14	0	0	0	0	12
Volume Right	0	0	0	0	22	22
cSH	78	1700	1700	1700	1700	27
Volume to Capacity	0.19	0.58	0.58	1.23	0.63	1.25
Queue Length 95th (ft)	16	0	0	0	0	101
Control Delay (s)	61.5	0.0	0.0	0.0	0.0	472.7
Lane LOS	F					F
Approach Delay (s)	0.4			0.0		472.7
Approach LOS						F

Intersection Summary						
Average Delay			3.3			
Intersection Capacity Utilization			94.7%		ICU Level of Service	F
Analysis Period (min)			15			

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2015 Weekend Peak  
 Baseline



Movement	EBT	EBR	WBU	WBL	WBT	NEL	NER
Lane Configurations	↑↑	↑		↓	↑↑	↓	
Volume (veh/h)	2538	4	2	8	2004	2	10
Sign Control	Free				Free		Stop
Grade	0%				0%		0%
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	2590	4	0	8	2045	2	10
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None				None		
Median storage (veh)							
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0		2594		3629		1295
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	0		2594		3629		1295
tC, single (s)	0.0		4.1		6.8		6.9
tC, 2 stage (s)							
tF (s)	0.0		2.2		3.5		3.3
p0 queue free %	0		95		43		93
cM capacity (veh/h)	0		165		4		153













Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	1295	1295	4	8	1022	1022	12
Volume Left	0	0	0	8	0	0	2
Volume Right	0	0	4	0	0	0	10
cSH	1700	1700	1700	165	1700	1700	19
Volume to Capacity	0.76	0.76	0.00	0.05	0.60	0.60	0.63
Queue Length 95th (ft)	0	0	0	4	0	0	44
Control Delay (s)	0.0	0.0	0.0	28.0	0.0	0.0	353.7
Lane LOS	D				F		
Approach Delay (s)	0.0			0.1		353.7	
Approach LOS					F		

Intersection Summary							
Average Delay	1.0						
Intersection Capacity Utilization	80.2%		ICU Level of Service			D	
Analysis Period (min)	15						



HCM Unsignalized Intersection Capacity Analysis  
2: Crossover Dr./Gateway Dr. & US 278

2015 Weekend Peak  
Baseline

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑	↗	↘		↗			↗
Volume (veh/h)	0	2523	28	20	1999	0	20	0	27	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	0	2574	29	20	2040	0	20	0	28	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh		1			1							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2040			2574			3635	4655	1287	3368	4655	1020
vC1, stage 1 conf vol							2574	2574		2081	2081	
vC2, stage 2 conf vol							1061	2081		1287	2574	
vCu, unblocked vol	2040			2574			3635	4655	1287	3368	4655	1020
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			88			5	100	82	100	100	100
cM capacity (veh/h)	273			168			21	29	155	32	21	234
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>EB 3</b>	<b>WB 1</b>	<b>WB 2</b>	<b>WB 3</b>	<b>WB 4</b>	<b>NB 1</b>	<b>NB 2</b>	<b>SB 1</b>		
Volume Total	1287	1287	29	20	1020	1020	0	20	28	0		
Volume Left	0	0	0	20	0	0	0	20	0	0		
Volume Right	0	0	29	0	0	0	0	0	28	0		
cSH	1700	1700	1700	168	1700	1700	1700	21	155	1700		
Volume to Capacity	0.76	0.76	0.02	0.12	0.60	0.60	0.00	0.95	0.18	0.00		
Queue Length 95th (ft)	0	0	0	10	0	0	0	68	16	0		
Control Delay (s)	0.0	0.0	0.0	29.4	0.0	0.0	0.0	429.9	33.2	0.0		
Lane LOS				D				F	D	A		
Approach Delay (s)	0.0			0.3				202.0		0.0		
Approach LOS								F		A		
<b>Intersection Summary</b>												
Average Delay			2.2									
Intersection Capacity Utilization			79.7%		ICU Level of Service				D			
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 3: US 278 & Jenkins Rd

2015 Weekend Peak  
Baseline



Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations		↔	↕		↕		↔	
Volume (veh/h)	7	36	2500	6	2008	22	13	9
Sign Control			Free		Free		Stop	
Grade			0%		0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	37	2577	0	2070	23	13	9
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			Raised		Raised			
Median storage (veh)			1		1			
Upstream signal (ft)								
pX, platoon unblocked	0.00			0.00				
vC, conflicting volume	0	2093		0			3444	1046
vC1, stage 1 conf vol							2081	
vC2, stage 2 conf vol							1363	
vCu, unblocked vol	0	2093		0			3444	1046
tC, single (s)	0.0	4.1		0.0			6.8	6.9
tC, 2 stage (s)							5.8	
tF (s)	0.0	2.2		0.0			3.5	3.3
p0 queue free %	0	86		0			74	96
cM capacity (veh/h)	0	260		0			53	225

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	37	1289	1289	1380	713	23
Volume Left	37	0	0	0	0	13
Volume Right	0	0	0	0	23	9
cSH	260	1700	1700	1700	1700	77
Volume to Capacity	0.14	0.76	0.76	0.81	0.42	0.30
Queue Length 95th (ft)	12	0	0	0	0	27
Control Delay (s)	21.1	0.0	0.0	0.0	0.0	70.8
Lane LOS	C					F
Approach Delay (s)	0.3			0.0		70.8
Approach LOS						F

Intersection Summary		
Average Delay		0.5
Intersection Capacity Utilization	79.1%	ICU Level of Service
Analysis Period (min)	15	D

HCM Unsignalized Intersection Capacity Analysis  
 1: Blue Heron Pt Rd & US 278

2020 No-Build Condition  
 AM Peak















Movement	EBT	EBR	WBU	WBL	WBT	NEL	NER
Lane Configurations	↑↑	↑		↓	↑↑	↓	
Volume (veh/h)	2945	3	1	3	1386	7	21
Sign Control	Free				Free Stop		
Grade	0%				0%		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	3065	3	0	3	1443	7	22
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None				None		
Median storage (veh)							
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0		3068		3793		1533
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	0		3068		3793		1533
tC, single (s)	0.0		4.2		6.9		7.0
tC, 2 stage (s)							
tF (s)	0.0		2.3		3.5		3.3
p0 queue free %	0		97		0		79
cM capacity (veh/h)	0		98		3		103

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	1533	1533	3	3	721	721	29
Volume Left	0	0	0	3	0	0	7
Volume Right	0	0	3	0	0	0	22
cSH	1700	1700	1700	98	1700	1700	10
Volume to Capacity	0.90	0.90	0.00	0.03	0.42	0.42	2.93
Queue Length 95th (ft)	0	0	0	2	0	0	118
Control Delay (s)	0.0	0.0	0.0	42.8	0.0	0.0	1619.3
Lane LOS	E				F		
Approach Delay (s)	0.0			0.1		1619.3	
Approach LOS					F		

Intersection Summary							
Average Delay	10.4						
Intersection Capacity Utilization	93.0%			ICU Level of Service			F
Analysis Period (min)	15						

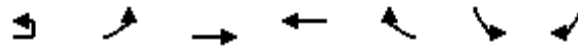
HCM Unsignalized Intersection Capacity Analysis  
2: Crossover Dr./Gateway Dr. & US 278

2020 No-Build Condition  
AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑	↗	↗		↗			↗
Volume (veh/h)	0	2948	25	20	1393	0	11	0	49	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	3100	26	21	1465	0	12	0	52	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh		1			1							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1465			3100			3874	4607	1550	3057	4607	732
vC1, stage 1 conf vol							3100	3100		1507	1507	
vC2, stage 2 conf vol							774	1507		1550	3100	
vCu, unblocked vol	1465			3100			3874	4607	1550	3057	4607	732
tC, single (s)	4.2			4.3			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)							6.6	5.6		6.6	5.6	
tF (s)	2.3			2.3			3.5	4.0	3.3	3.6	4.1	3.4
p0 queue free %	100			76			0	100	49	100	100	100
cM capacity (veh/h)	437			89			10	20	101	24	4	355
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>EB 3</b>	<b>WB 1</b>	<b>WB 2</b>	<b>WB 3</b>	<b>WB 4</b>	<b>NB 1</b>	<b>NB 2</b>	<b>SB 1</b>		
Volume Total	1550	1550	26	21	732	732	0	12	52	0		
Volume Left	0	0	0	21	0	0	0	12	0	0		
Volume Right	0	0	26	0	0	0	0	0	52	0		
cSH	1700	1700	1700	89	1700	1700	1700	10	101	1700		
Volume to Capacity	0.91	0.91	0.02	0.24	0.43	0.43	0.00	1.16	0.51	0.00		
Queue Length 95th (ft)	0	0	0	21	0	0	0	55	57	0		
Control Delay (s)	0.0	0.0	0.0	57.8	0.0	0.0	0.0	841.9	73.4	0.0		
Lane LOS				F				F	F	A		
Approach Delay (s)	0.0			0.8				214.3		0.0		
Approach LOS								F		A		
<b>Intersection Summary</b>												
Average Delay			3.2									
Intersection Capacity Utilization			93.1%		ICU Level of Service				F			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
3: US 278 & Jenkins Rd

2020 No-Build Condition  
AM Peak



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↵	↕↕	↕↕		↵	
Volume (veh/h)	4	6	2994	1379	18	9	12
Sign Control			Free	Free		Stop	
Grade			0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	6	3181	1465	19	10	13
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			Raised	Raised			
Median storage (veh)			1	1			
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0	1484				3078	742
vC1, stage 1 conf vol						1475	
vC2, stage 2 conf vol						1603	
vCu, unblocked vol	0	1484				3078	742
tC, single (s)	0.0	4.2				7.6	7.7
tC, 2 stage (s)						6.6	
tF (s)	0.0	2.3				3.9	3.7
p0 queue free %	0	99				82	96
cM capacity (veh/h)	0	430				53	284

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	6	1591	1591	977	508	22
Volume Left	6	0	0	0	0	10
Volume Right	0	0	0	0	19	13
cSH	430	1700	1700	1700	1700	99
Volume to Capacity	0.01	0.94	0.94	0.57	0.30	0.23
Queue Length 95th (ft)	1	0	0	0	0	20
Control Delay (s)	13.5	0.0	0.0	0.0	0.0	51.6
Lane LOS	B					F
Approach Delay (s)	0.0			0.0		51.6
Approach LOS						F

Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			94.4%	ICU Level of Service		F
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis  
 1: Blue Heron Pt Rd & US 278

2020 No Build  
 PM Peak















Movement	EBT	EBR	WBU	WBL	WBT	NEL	NER
Lane Configurations	↑↑	↑		↓	↑↑	↓	
Volume (veh/h)	1898	7	3	17	3017	8	12
Sign Control	Free			Free			Stop
Grade	0%			0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	1996	7	0	18	3173	8	13
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Median storage (veh)							
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume			0	2003			3618 998
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			0	2003			3618 998
tC, single (s)			0.0	4.1			6.8 6.9
tC, 2 stage (s)							
tF (s)			0.0	2.2			3.5 3.3
p0 queue free %			0	94			0 95
cM capacity (veh/h)			0	282			4 242

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	998	998	7	18	1586	1586	21
Volume Left	0	0	0	18	0	0	8
Volume Right	0	0	7	0	0	0	13
cSH	1700	1700	1700	282	1700	1700	9
Volume to Capacity	0.59	0.59	0.00	0.06	0.93	0.93	2.38
Queue Length 95th (ft)	0	0	0	5	0	0	92
Control Delay (s)	0.0	0.0	0.0	18.6	0.0	0.0	1454.4
Lane LOS				C	F		
Approach Delay (s)	0.0		0.1		1454.4		
Approach LOS				F			

Intersection Summary							
Average Delay			5.9				
Intersection Capacity Utilization			95.1%		ICU Level of Service		F
Analysis Period (min)	15						

HCM Unsignalized Intersection Capacity Analysis  
2: Crossover Dr./Gateway Dr. & US 278

2020 No Build  
PM Peak

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑	↗		↖	↑↑	↗	↖		↗		
Volume (veh/h)	0	1894	27	2	56	3021	0	24	0	45	0	0
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	1992	28	0	59	3177	0	25	0	47	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised				Raised						
Median storage veh		1				1						
Upstream signal (ft)												
pX, platoon unblocked				0.00								
vC, conflicting volume	3177			0	1992			3698	5286	996	4290	5286
vC1, stage 1 conf vol								1992	1992		3294	3294
vC2, stage 2 conf vol								1706	3294		996	1992
vCu, unblocked vol	3177			0	1992			3698	5286	996	4290	5286
tC, single (s)	4.1			0.0	4.1			7.6	6.6	7.0	7.5	6.5
tC, 2 stage (s)								6.6	5.6		6.5	5.5
tF (s)	2.2			0.0	2.2			3.6	4.1	3.4	3.5	4.0
p0 queue free %	100			0	79			17	100	80	100	100
cM capacity (veh/h)	96			0	285			30	12	236	6	11
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2	SB 1		
Volume Total	996	996	28	59	1588	1588	0	25	47	0		
Volume Left	0	0	0	59	0	0	0	25	0	0		
Volume Right	0	0	28	0	0	0	0	0	47	0		
cSH	1700	1700	1700	285	1700	1700	1700	30	236	1700		
Volume to Capacity	0.59	0.59	0.02	0.21	0.93	0.93	0.00	0.83	0.20	0.00		
Queue Length 95th (ft)	0	0	0	19	0	0	0	69	18	0		
Control Delay (s)	0.0	0.0	0.0	20.9	0.0	0.0	0.0	300.5	24.0	0.0		
Lane LOS				C				F	C	A		
Approach Delay (s)	0.0			0.4				120.2		0.0		
Approach LOS								F		A		
Intersection Summary												
Average Delay			1.9									
Intersection Capacity Utilization			95.2%		ICU Level of Service				F			
Analysis Period (min)			15									

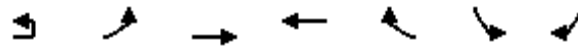


Movement	SBR
Lane Configurations	↗
Volume (veh/h)	0
Sign Control	
Grade	
Peak Hour Factor	0.97
Hourly flow rate (vph)	0
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage (veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	1588
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	1588
tC, single (s)	6.9
tC, 2 stage (s)	
tF (s)	3.3
p0 queue free %	100
cM capacity (veh/h)	97
Direction, Lane #	



HCM Unsignalized Intersection Capacity Analysis  
 3: US 278 & Jenkins Rd

2020 No Build  
 PM Peak



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (veh/h)	1	14	1913	3041	21	12	21
Sign Control			Free	Free		Stop	
Grade			0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	15	2012	3198	22	13	22
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			Raised	Raised			
Median storage veh			1	1			
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0	3220				4244	1610
vC1, stage 1 conf vol						3209	
vC2, stage 2 conf vol						1035	
vCu, unblocked vol	0	3220				4244	1610
tC, single (s)	0.0	4.4				7.2	7.3
tC, 2 stage (s)						6.2	
tF (s)	0.0	2.3				3.7	3.5
p0 queue free %	0	80				0	72
cM capacity (veh/h)	0	73				11	78

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	15	1006	1006	2132	1088	35
Volume Left	15	0	0	0	0	13
Volume Right	0	0	0	0	22	22
cSH	73	1700	1700	1700	1700	25
Volume to Capacity	0.20	0.59	0.59	1.25	0.64	1.38
Queue Length 95th (ft)	17	0	0	0	0	106
Control Delay (s)	66.3	0.0	0.0	0.0	0.0	546.6
Lane LOS	F					F
Approach Delay (s)	0.5			0.0		546.6
Approach LOS						F

Intersection Summary						
Average Delay			3.8			
Intersection Capacity Utilization			96.4%	ICU Level of Service		F
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis  
 1: Blue Heron Point & US 278

2020 No Build Condition  
 Weekend Peak















Movement	EBT	EBR	WBU	WBL	WBT	NEL	NER
Lane Configurations	↑↑	↑		↓	↑↑	↓	
Volume (veh/h)	2538	4	2	8	2004	2	10
Sign Control	Free				Free	Stop	
Grade	0%				0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	2642	4	0	8	2086	2	10
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None				None		
Median storage (veh)							
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0		2646	3701		1321	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	0		2646	3701		1321	
tC, single (s)	0.0		4.1	6.8		6.9	
tC, 2 stage (s)							
tF (s)	0.0		2.2	3.5		3.3	
p0 queue free %	0		95	35		93	
cM capacity (veh/h)	0		157	3		147	

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	1321	1321	4	8	1043	1043	12
Volume Left	0	0	0	8	0	0	2
Volume Right	0	0	4	0	0	0	10
cSH	1700	1700	1700	157	1700	1700	17
Volume to Capacity	0.78	0.78	0.00	0.05	0.61	0.61	0.73
Queue Length 95th (ft)	0	0	0	4	0	0	47
Control Delay (s)	0.0	0.0	0.0	29.2	0.0	0.0	420.8
Lane LOS	D				F		
Approach Delay (s)	0.0			0.1	420.8		
Approach LOS					F		

Intersection Summary							
Average Delay	1.2						
Intersection Capacity Utilization	81.6%		ICU Level of Service			D	
Analysis Period (min)	15						

HCM Unsignalized Intersection Capacity Analysis  
2: Crossover Dr./Gateway Dr. & US 278

2020 No Build Condition  
Weekend Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑	↗	↘		↗			↗
Volume (veh/h)	0	2523	28	20	1999	0	20	0	27	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	0	2626	29	21	2081	0	21	0	28	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh		1			1							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2081			2626			3708	4748	1313	3435	4748	1040
vC1, stage 1 conf vol							2626	2626		2122	2122	
vC2, stage 2 conf vol							1082	2122		1313	2626	
vCu, unblocked vol	2081			2626			3708	4748	1313	3435	4748	1040
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			87			0	100	81	100	100	100
cM capacity (veh/h)	263			160			20	28	149	30	19	227
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>EB 3</b>	<b>WB 1</b>	<b>WB 2</b>	<b>WB 3</b>	<b>WB 4</b>	<b>NB 1</b>	<b>NB 2</b>	<b>SB 1</b>		
Volume Total	1313	1313	29	21	1040	1040	0	21	28	0		
Volume Left	0	0	0	21	0	0	0	21	0	0		
Volume Right	0	0	29	0	0	0	0	0	28	0		
cSH	1700	1700	1700	160	1700	1700	1700	20	149	1700		
Volume to Capacity	0.77	0.77	0.02	0.13	0.61	0.61	0.00	1.05	0.19	0.00		
Queue Length 95th (ft)	0	0	0	11	0	0	0	71	17	0		
Control Delay (s)	0.0	0.0	0.0	30.9	0.0	0.0	0.0	488.1	34.7	0.0		
Lane LOS				D				F	D	A		
Approach Delay (s)	0.0			0.3				227.6		0.0		
Approach LOS								F		A		
<b>Intersection Summary</b>												
Average Delay			2.5									
Intersection Capacity Utilization			81.1%		ICU Level of Service				D			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 3: US 278 & Jenkins Rd

2020 No Build Condition  
 Weekend Peak



Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations		↔	↕		↕		↔	
Volume (veh/h)	7	36	2500	6	2008	22	13	9
Sign Control			Free		Free		Stop	
Grade			0%		0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	38	2629	0	2112	23	14	9
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			Raised		Raised			
Median storage veh			1		1			
Upstream signal (ft)								
pX, platoon unblocked	0.00			0.00				
vC, conflicting volume	0	2135		0			3513	1067
vC1, stage 1 conf vol							2123	
vC2, stage 2 conf vol							1390	
vCu, unblocked vol	0	2135		0			3513	1067
tC, single (s)	0.0	4.1		0.0			6.8	6.9
tC, 2 stage (s)							5.8	
tF (s)	0.0	2.2		0.0			3.5	3.3
p0 queue free %	0	85		0			73	96
cM capacity (veh/h)	0	250		0			50	218

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	38	1314	1314	1408	727	23
Volume Left	38	0	0	0	0	14
Volume Right	0	0	0	0	23	9
cSH	250	1700	1700	1700	1700	73
Volume to Capacity	0.15	0.77	0.77	0.83	0.43	0.32
Queue Length 95th (ft)	13	0	0	0	0	29
Control Delay (s)	21.9	0.0	0.0	0.0	0.0	76.0
Lane LOS	C					F
Approach Delay (s)	0.3			0.0		76.0
Approach LOS						F

Intersection Summary		
Average Delay		0.5
Intersection Capacity Utilization	80.5%	ICU Level of Service D
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 1: Blue Heron Pt Rd & US 278

2035 No Build Condition  
 AM Peak















Movement	EBT	EBR	WBU	WBL	WBT	NEL	NER
Lane Configurations	↑↑↑	↑		↓	↑↑↑	↑	
Volume (veh/h)	2945	3	1	3	1386	7	21
Sign Control	Free				Free Stop		
Grade	0%				0%		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	3215	3	0	3	1513	8	23
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None				None		
Median storage (veh)							
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0		3219		3726		1072
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	0		3219		3726		1072
tC, single (s)	0.0		4.2		6.9		7.0
tC, 2 stage (s)							
tF (s)	0.0		2.3		3.5		3.3
p0 queue free %	0		96		0		89
cM capacity (veh/h)	0		85		3		213

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NE 1
Volume Total	1072	1072	1072	3	3	504	504	504	31
Volume Left	0	0	0	0	3	0	0	0	8
Volume Right	0	0	0	3	0	0	0	0	23
cSH	1700	1700	1700	1700	85	1700	1700	1700	11
Volume to Capacity	0.63	0.63	0.63	0.00	0.04	0.30	0.30	0.30	2.68
Queue Length 95th (ft)	0	0	0	0	3	0	0	0	120
Control Delay (s)	0.0	0.0	0.0	0.0	48.9	0.0	0.0	0.0	1423.1
Lane LOS					E				F
Approach Delay (s)	0.0				0.1				1423.1
Approach LOS									F

Intersection Summary									
Average Delay	9.2								
Intersection Capacity Utilization	70.9%			ICU Level of Service				C	
Analysis Period (min)	15								

HCM Unsignalized Intersection Capacity Analysis  
2: Crossover Dr./Gateway Dr. & US 278

2035 No Build Condition  
AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘	↑↑↑		↗		↗			↗
Volume (veh/h)	0	2948	25	20	1393	0	11	0	49	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	3252	28	22	1537	0	12	0	54	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh		1			1							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1537			3252			3808	4833	1084	2665	4833	512
vC1, stage 1 conf vol							3252	3252		1581	1581	
vC2, stage 2 conf vol							556	1581		1084	3252	
vCu, unblocked vol	1537			3252			3808	4833	1084	2665	4833	512
tC, single (s)	4.2			4.3			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)							6.6	5.6		6.6	5.6	
tF (s)	2.3			2.3			3.5	4.0	3.3	3.6	4.1	3.4
p0 queue free %	100			71			0	100	74	100	100	100
cM capacity (veh/h)	410			76			8	17	209	49	0	496
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2	SB 1	
Volume Total	1084	1084	1084	28	22	615	615	307	12	54	0	
Volume Left	0	0	0	0	22	0	0	0	12	0	0	
Volume Right	0	0	0	28	0	0	0	0	0	54	0	
cSH	1700	1700	1700	1700	76	1700	1700	1700	8	209	1700	
Volume to Capacity	0.64	0.64	0.64	0.02	0.29	0.36	0.36	0.18	1.53	0.26	0.00	
Queue Length 95th (ft)	0	0	0	0	26	0	0	0	60	25	0	
Control Delay (s)	0.0	0.0	0.0	0.0	70.2	0.0	0.0	0.0	1146.2	28.1	0.0	
Lane LOS					F				F	D	A	
Approach Delay (s)	0.0				1.0				233.1		0.0	
Approach LOS									F		A	
Intersection Summary												
Average Delay				3.5								
Intersection Capacity Utilization			70.9%		ICU Level of Service				C			
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 3: US 278 & Jenkins Rd

2035 No Build Condition  
AM Peak



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		3	↑↑↑	↑↑↑		3	
Volume (veh/h)	4	6	2994	1379	18	9	12
Sign Control			Free	Free		Stop	
Grade			0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	7	3337	1537	20	10	13
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			Raised	Raised			
Median storage veh			1	1			
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0	1557				2673	522
vC1, stage 1 conf vol						1547	
vC2, stage 2 conf vol						1126	
vCu, unblocked vol	0	1557				2673	522
tC, single (s)	0.0	4.2				7.6	7.7
tC, 2 stage (s)						6.6	
tF (s)	0.0	2.3				3.9	3.7
p0 queue free %	0	98				86	97
cM capacity (veh/h)	0	402				69	411

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	SB 1
Volume Total	7	1112	1112	1112	615	615	327	23
Volume Left	7	0	0	0	0	0	0	10
Volume Right	0	0	0	0	0	0	20	13
cSH	402	1700	1700	1700	1700	1700	1700	132
Volume to Capacity	0.02	0.65	0.65	0.65	0.36	0.36	0.19	0.18
Queue Length 95th (ft)	1	0	0	0	0	0	0	15
Control Delay (s)	14.1	0.0	0.0	0.0	0.0	0.0	0.0	38.0
Lane LOS	B							E
Approach Delay (s)	0.0				0.0			38.0
Approach LOS								E

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization		71.9%	ICU Level of Service C
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 1: Blue Heron Pt Rd & US 278

2035 No Build Condition  
 PM Peak



Movement	EBT	EBR	WBU	WBL	WBT	NEL	NER
Lane Configurations	↑↑↑	↑		↓	↑↑↑	↓	
Volume (veh/h)	1898	7	3	17	3017	8	12
Sign Control	Free				Free Stop		
Grade	0%				0%		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	2094	8	0	19	3328	9	13
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None				None		
Median storage (veh)							
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0		2101	3241		698	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	0		2101	3241		698	
tC, single (s)	0.0		4.1	6.8		6.9	
tC, 2 stage (s)							
tF (s)	0.0		2.2	3.5		3.3	
p0 queue free %	0		93	0		97	
cM capacity (veh/h)	0		258	7		383	

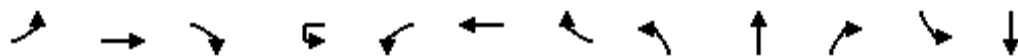
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NE 1
Volume Total	698	698	698	8	19	1109	1109	1109	22
Volume Left	0	0	0	0	19	0	0	0	9
Volume Right	0	0	0	8	0	0	0	0	13
cSH	1700	1700	1700	1700	258	1700	1700	1700	16
Volume to Capacity	0.41	0.41	0.41	0.00	0.07	0.65	0.65	0.65	1.36
Queue Length 95th (ft)	0	0	0	0	6	0	0	0	82
Control Delay (s)	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	686.9
Lane LOS					C				F
Approach Delay (s)	0.0				0.1				686.9
Approach LOS									F

Intersection Summary										
Average Delay	2.8									
Intersection Capacity Utilization	72.4%			ICU Level of Service				C		
Analysis Period (min)	15									



HCM Unsignalized Intersection Capacity Analysis  
2: Crossover Dr./Gateway Dr. & US 278

2035 No Build Condition  
PM Peak



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑↑	↑		↓	↑↑↑		↑		↑		
Volume (veh/h)	0	1894	27	2	56	3021	0	24	0	45	0	0
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	2089	30	0	62	3332	0	26	0	50	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised				Raised						
Median storage veh		1				1						
Upstream signal (ft)												
pX, platoon unblocked				0.00								
vC, conflicting volume	3332			0	2089			3324	5545	696	4152	5545
vC1, stage 1 conf vol								2089	2089		3456	3456
vC2, stage 2 conf vol								1234	3456		696	2089
vCu, unblocked vol	3332			0	2089			3324	5545	696	4152	5545
tC, single (s)	4.1			0.0	4.1			7.6	6.6	7.0	7.5	6.5
tC, 2 stage (s)								6.6	5.6		6.5	5.5
tF (s)	2.2			0.0	2.2			3.6	4.1	3.4	3.5	4.0
p0 queue free %	100			0	76			24	100	87	100	100
cM capacity (veh/h)	83			0	261			35	10	375	5	9

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2	SB 1
Volume Total	696	696	696	30	62	1333	1333	666	26	50	0
Volume Left	0	0	0	0	62	0	0	0	26	0	0
Volume Right	0	0	0	30	0	0	0	0	0	50	0
cSH	1700	1700	1700	1700	261	1700	1700	1700	35	375	1700
Volume to Capacity	0.41	0.41	0.41	0.02	0.24	0.78	0.78	0.39	0.76	0.13	0.00
Queue Length 95th (ft)	0	0	0	0	22	0	0	0	67	11	0
Control Delay (s)	0.0	0.0	0.0	0.0	23.0	0.0	0.0	0.0	247.5	16.1	0.0
Lane LOS					C				F	C	A
Approach Delay (s)	0.0				0.4				96.6		0.0
Approach LOS									F		A

Intersection Summary

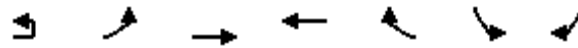
Average Delay		1.6	
Intersection Capacity Utilization		72.5%	ICU Level of Service
Analysis Period (min)		15	



Movement	SBR
Lane Configurations	↗
Volume (veh/h)	0
Sign Control	
Grade	
Peak Hour Factor	0.97
Hourly flow rate (vph)	0
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage (veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	1111
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	1111
tC, single (s)	6.9
tC, 2 stage (s)	
tF (s)	3.3
p0 queue free %	100
cM capacity (veh/h)	204
Direction, Lane #	

HCM Unsignalized Intersection Capacity Analysis  
 3: US 278 & Jenkins Rd

2035 No Build Condition  
 PM Peak



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		3	3	3		3	
Volume (veh/h)	1	14	1913	3041	21	12	21
Sign Control			Free	Free		Stop	
Grade			0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	15	2110	3355	23	13	23
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			Raised	Raised			
Median storage veh			1	1			
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0	3378				4100	1130
vC1, stage 1 conf vol						3366	
vC2, stage 2 conf vol						734	
vCu, unblocked vol	0	3378				4100	1130
tC, single (s)	0.0	4.4				7.2	7.3
tC, 2 stage (s)						6.2	
tF (s)	0.0	2.3				3.7	3.5
p0 queue free %	0	75				0	86
cM capacity (veh/h)	0	62				9	171

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	SB 1
Volume Total	15	703	703	703	1342	1342	694	36
Volume Left	15	0	0	0	0	0	0	13
Volume Right	0	0	0	0	0	0	23	23
cSH	62	1700	1700	1700	1700	1700	1700	23
Volume to Capacity	0.25	0.41	0.41	0.41	0.79	0.79	0.41	1.55
Queue Length 95th (ft)	22	0	0	0	0	0	0	115
Control Delay (s)	80.7	0.0	0.0	0.0	0.0	0.0	0.0	632.3
Lane LOS	F							F
Approach Delay (s)	0.6				0.0			632.3
Approach LOS								F

Intersection Summary			
Average Delay		4.4	
Intersection Capacity Utilization		73.4%	ICU Level of Service D
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 1: Blue Heron Point & US 278

2035 No Build Condition  
 Weekend Peak















Movement	EBT	EBR	WBU	WBL	WBT	NEL	NER
Lane Configurations	↑↑↑	↑		↓	↑↑↑	↑	
Volume (veh/h)	2538	4	2	8	2004	2	10
Sign Control	Free				Free Stop		
Grade	0%				0%		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	2771	4	0	9	2188	2	11
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None				None		
Median storage (veh)							
Upstream signal (ft)							
pX, platoon unblocked	0.00						
vC, conflicting volume	0		2775		3518		924
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	0		2775		3518		924
tC, single (s)	0.0		4.1		6.8		6.9
tC, 2 stage (s)							
tF (s)	0.0		2.2		3.5		3.3
p0 queue free %	0		94		49		96
cM capacity (veh/h)	0		139		4		271

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NE 1
Volume Total	924	924	924	4	9	729	729	729	13
Volume Left	0	0	0	0	9	0	0	0	2
Volume Right	0	0	0	4	0	0	0	0	11
cSH	1700	1700	1700	1700	139	1700	1700	1700	24
Volume to Capacity	0.54	0.54	0.54	0.00	0.06	0.43	0.43	0.43	0.55
Queue Length 95th (ft)	0	0	0	0	5	0	0	0	41
Control Delay (s)	0.0	0.0	0.0	0.0	32.6	0.0	0.0	0.0	275.1
Lane LOS					D				F
Approach Delay (s)	0.0				0.1				275.1
Approach LOS									F

Intersection Summary									
Average Delay	0.8								
Intersection Capacity Utilization	62.5%			ICU Level of Service				B	
Analysis Period (min)	15								

HCM Unsignalized Intersection Capacity Analysis  
2: Crossover Dr./Gateway Dr. & US 278

2035 No Build Condition  
Weekend Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘	↑↑↑		↗		↗			↗
Volume (veh/h)	0	2523	28	20	1999	0	20	0	27	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	0	2755	31	22	2183	0	22	0	29	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh		1			1							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2183			2755			3526	4981	918	3144	4981	728
vC1, stage 1 conf vol							2755	2755		2226	2226	
vC2, stage 2 conf vol							771	2226		918	2755	
vCu, unblocked vol	2183			2755			3526	4981	918	3144	4981	728
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			85			0	100	89	100	100	100
cM capacity (veh/h)	240			142			17	24	274	30	14	366
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2	SB 1	
Volume Total	918	918	918	31	22	873	873	437	22	29	0	
Volume Left	0	0	0	0	22	0	0	0	22	0	0	
Volume Right	0	0	0	31	0	0	0	0	0	29	0	
cSH	1700	1700	1700	1700	142	1700	1700	1700	17	274	1700	
Volume to Capacity	0.54	0.54	0.54	0.02	0.15	0.51	0.51	0.26	1.27	0.11	0.00	
Queue Length 95th (ft)	0	0	0	0	13	0	0	0	79	9	0	
Control Delay (s)	0.0	0.0	0.0	0.0	34.9	0.0	0.0	0.0	626.9	19.7	0.0	
Lane LOS					D				F	C	A	
Approach Delay (s)	0.0				0.3				278.1		0.0	
Approach LOS									F		A	
Intersection Summary												
Average Delay				3.0								
Intersection Capacity Utilization			62.2%		ICU Level of Service				B			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 3: US 278 & Jenkins Rd

2035 No Build Condition  
 Weekend Peak



Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations		↔	↑↑↑		↑↑↑		↔	
Volume (veh/h)	7	36	2500	6	2008	22	13	9
Sign Control			Free		Free		Stop	
Grade			0%		0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	40	2758	0	2215	24	14	10
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			Raised		Raised			
Median storage veh			1		1			
Upstream signal (ft)								
pX, platoon unblocked	0.00			0.00				
vC, conflicting volume	0	2239		0			3226	750
vC1, stage 1 conf vol							2227	
vC2, stage 2 conf vol							999	
vCu, unblocked vol	0	2239		0			3226	750
tC, single (s)	0.0	4.1		0.0			6.8	6.9
tC, 2 stage (s)							5.8	
tF (s)	0.0	2.2		0.0			3.5	3.3
p0 queue free %	0	83		0			72	97
cM capacity (veh/h)	0	228		0			51	354

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	SB 1
Volume Total	40	919	919	919	886	886	467	24
Volume Left	40	0	0	0	0	0	0	14
Volume Right	0	0	0	0	0	0	24	10
cSH	228	1700	1700	1700	1700	1700	1700	78
Volume to Capacity	0.17	0.54	0.54	0.54	0.52	0.52	0.27	0.31
Queue Length 95th (ft)	15	0	0	0	0	0	0	29
Control Delay (s)	24.1	0.0	0.0	0.0	0.0	0.0	0.0	70.4
Lane LOS	C							F
Approach Delay (s)	0.3				0.0			70.4
Approach LOS								F

Intersection Summary								
Average Delay			0.5					
Intersection Capacity Utilization			61.7%		ICU Level of Service			B
Analysis Period (min)			15					

**1: Blue Heron Pt Rd & US 278 Performance by movement**

Movement	EBT	EBR	WBT	NER	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.6	2.2	3.2	0.5	3.4

**2: Crossover Dr./Gateway Dr. & US 278 Performance by movement**

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	8.7	3.9	1.1	1.1	0.8	1.6	6.2

**3: US 278 & Jenkins Rd Performance by movement**

Movement	EBT	WBT	WBR	SBR	All
Denied Del/Veh (s)	0.0	0.3	1.4	0.0	0.1
Total Del/Veh (s)	1.5	1.3	1.6	1.0	1.4

**4: WH Dr. & Blue Heron Pt Rd Performance by movement**

Movement	NBL	SET	SER	NWT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.9	0.1	0.1	0.7	1.1

**5: Blue Heron Pt Rd & MC Dr. Performance by movement**

Movement	EBL	EBR	SET	SER	NWT	All
Denied Del/Veh (s)		0.1	0.0		0.0	0.0
Total Del/Veh (s)		1.7	0.0		0.3	0.4

**6: Access Rd & Blue Heron Pt Rd Performance by movement**

Movement	WBL	WBR	SEL	SET	NWT	NWR	All
Denied Del/Veh (s)	0.1	0.1		0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.5	2.0		0.0	1.1	0.6	1.1

**7: Gateway Dr. & Access Rd Performance by movement**

Movement	EBT	EBR	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.9	3.2	5.4	2.5	3.8

**8: Jenkins Rd & Access Rd Performance by movement**

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	3.7	0.0	0.8	0.0	0.6

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Total Network Performance

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Denied Del/Veh (s)	1.1
Total Del/Veh (s)	18.7



**1: Blue Heron Pt Rd & US 278 Performance by movement**

Movement	EBT	EBR	WBT	NET	NER	All
Denied Del/Veh (s)	0.0	0.0	0.0		0.0	0.0
Total Del/Veh (s)	0.5	1.9	5.0		0.4	3.3

**2: Crossover Dr./Gateway Dr. & US 278 Performance by movement**

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	1.4	1.7	6.7	1.6	0.9	1.6	4.5

**3: US 278 & Jenkins Rd Performance by movement**

Movement	EBT	WBT	WBR	SBR	All
Denied Del/Veh (s)	0.0	2.9	4.8	0.0	1.8
Total Del/Veh (s)	0.6	14.3	12.8	0.8	9.2

**4: WH Dr. & Blue Heron Pt Rd Performance by movement**

Movement	NBL	SET	SER	NWT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.7	1.1	0.3	0.9	1.6

**5: Blue Heron Pt Rd & MC Dr. Performance by movement**

Movement	EBL	EBR	SET	SER	NWL	NWT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.9	2.2	0.1	0.0	1.4	0.5	0.7

**6: Access Rd & Blue Heron Pt Rd Performance by movement**

Movement	WBL	WBR	SEL	SET	NWT	NWR	All
Denied Del/Veh (s)			0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)			1.5	0.3	0.9	0.5	0.9

**7: Gateway Dr. & Access Rd Performance by movement**

Movement	EBT	EBR	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.9	2.6	4.6	4.0	4.0

**8: Jenkins Rd & Access Rd Performance by movement**

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1	0.1
Total Del/Veh (s)	7.2	0.1	0.2	0.0	1.7

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Total Network Performance

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Denied Del/Veh (s)	1.9
Total Del/Veh (s)	20.4

1: Blue Heron Pt Rd & US 278 Performance by movement

Movement	EBT	EBR	WBT	NET	NER	All
Denied Del/Veh (s)	0.0	0.0	0.0		0.0	0.0
Total Del/Veh (s)	1.0	1.9	4.3		0.6	2.5

2: Crossover Dr./Gateway Dr. & US 278 Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1		0.0	0.0
Total Del/Veh (s)	2.7	2.6	1.9	0.8	0.7		1.6	2.3

3: US 278 & Jenkins Rd Performance by movement

Movement	EBT	WBT	WBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.5	1.3		0.0	0.2
Total Del/Veh (s)	1.1	2.0	1.1		0.6	1.5

4: WH Dr. & Blue Heron Pt Rd Performance by movement

Movement	NBL	SET	SER	NWT	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.1
Total Del/Veh (s)	3.9	0.2	0.2	0.7	1.0

5: Blue Heron Pt Rd & MC Dr. Performance by movement

Movement	EBR	SET	SER	NWT	All
Denied Del/Veh (s)	0.1	0.0		0.0	0.0
Total Del/Veh (s)	1.5	0.0		0.3	0.4

6: Access Rd & Blue Heron Pt Rd Performance by movement

Movement	WBR	SEL	SET	NWT	NWR	All
Denied Del/Veh (s)	0.1		0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.6		0.1	1.6	1.0	0.7

7: Gateway Dr. & Access Rd Performance by movement

Movement	EBT	EBR	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.4	3.2	5.1	3.6	4.5

8: Jenkins Rd & Access Rd Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.0
Total Del/Veh (s)	6.6	0.1	0.2	0.0	3.1

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Total Network Performance

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Denied Del/Veh (s)	0.6
Total Del/Veh (s)	10.4

**1: Blue Heron Pt Rd & US 278 Performance by movement**

Movement	EBT	EBR	WBT	NER	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.6	1.3	0.9	0.4	0.7

**2: Crossover Dr./Gateway Dr. & US 278 Performance by movement**

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	1.7	2.3	0.8	1.0	0.7	1.4	1.4

**3: US 278 & Jenkins Rd Performance by movement**

Movement	EBT	WBT	WBR	SBR	All
Denied Del/Veh (s)	0.0	0.1	2.2	0.0	0.1
Total Del/Veh (s)	0.8	1.0	0.7	0.8	0.9

**4: WH Dr. & Blue Heron Pt Rd Performance by movement**

Movement	NBL	SET	SER	NWT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.6	0.3	0.5	1.3	1.3

**5: Blue Heron Pt Rd & MC Dr. Performance by movement**

Movement	EBR	SET	SER	NWL	NWT	All
Denied Del/Veh (s)	0.1	0.0			0.0	0.0
Total Del/Veh (s)	1.9	0.2			0.6	0.5

**6: Access Rd & Blue Heron Pt Rd Performance by movement**

Movement	WBL	WBR	SEL	SET	NWT	All
Denied Del/Veh (s)		0.1		0.0	0.0	0.0
Total Del/Veh (s)		2.1		0.1	1.8	1.5

**7: Gateway Dr. & Access Rd Performance by movement**

Movement	EBT	EBR	WBT	NBL	All
Denied Del/Veh (s)	0.3	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.3	2.6	5.8	2.5	3.6

**8: Jenkins Rd & Access Rd Performance by movement**

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	6.0	0.0	0.4	0.0	0.7

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Total Network Performance

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Denied Del/Veh (s)	0.3
Total Del/Veh (s)	6.4

**1: Blue Heron Pt Rd & US 278 Performance by movement**

Movement	EBT	EBR	WBT	NET	NER	All
Denied Del/Veh (s)	0.0	0.0	0.0		0.0	0.0
Total Del/Veh (s)	0.4	2.0	1.9		0.4	1.3

**2: Crossover Dr./Gateway Dr. & US 278 Performance by movement**

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	1.0	1.9	2.0	1.1	0.8	1.5	1.6

**3: US 278 & Jenkins Rd Performance by movement**

Movement	EBT	WBT	WBR	SBR	All
Denied Del/Veh (s)	0.0	0.4	0.8	0.0	0.2
Total Del/Veh (s)	0.4	2.0	1.1	0.8	1.4

**4: WH Dr. & Blue Heron Pt Rd Performance by movement**

Movement	NBL	SET	SER	NWT	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.7	0.8	0.4	0.9	1.5

**5: Blue Heron Pt Rd & MC Dr. Performance by movement**

Movement	EBL	EBR	SET	SER	NWL	NWT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0		0.0	0.0
Total Del/Veh (s)	3.0	2.0	0.1	0.0		0.5	0.5

**6: Access Rd & Blue Heron Pt Rd Performance by movement**

Movement	WBL	WBR	SEL	SET	NWT	NWR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.4	1.9	0.8	0.1	0.9	0.1	0.7

**7: Gateway Dr. & Access Rd Performance by movement**

Movement	EBT	EBR	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.4	2.5	7.2	3.2	3.7

**8: Jenkins Rd & Access Rd Performance by movement**

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	6.6	0.0	0.2	0.2	1.7

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Total Network Performance

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Denied Del/Veh (s)	0.3
Total Del/Veh (s)	6.7



1: Blue Heron Pt Rd & US 278 Performance by movement

Movement	EBT	EBR	WBT	NET	NER	All
Denied Del/Veh (s)	0.0	0.0	0.0		0.0	0.0
Total Del/Veh (s)	0.5	1.9	3.0		0.5	1.6

2: Crossover Dr./Gateway Dr. & US 278 Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	1.4	2.0	1.0	0.9	0.7	0.3	1.3	1.2

3: US 278 & Jenkins Rd Performance by movement

Movement	EBT	WBT	WBR	SBR	All
Denied Del/Veh (s)	0.0	0.2	1.1	0.0	0.1
Total Del/Veh (s)	0.6	1.3	1.3	0.8	0.9

4: WH Dr. & Blue Heron Pt Rd Performance by movement

Movement	NBL	SET	SER	NWT	All
Denied Del/Veh (s)	0.1	0.0	0.1	0.0	0.1
Total Del/Veh (s)	4.5	0.8	0.2	1.0	1.0

5: Blue Heron Pt Rd & MC Dr. Performance by movement

Movement	EBR	SET	SER	NWT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.5	0.1	0.0	0.5	0.5

6: Access Rd & Blue Heron Pt Rd Performance by movement

Movement	WBR	SEL	SET	NWT	NWR	All
Denied Del/Veh (s)	0.1		0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.6		0.1	1.3	0.8	0.8

7: Gateway Dr. & Access Rd Performance by movement

Movement	EBT	EBR	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.3	2.5	6.1	3.3	4.4

8: Jenkins Rd & Access Rd Performance by movement

Movement	EBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.3	0.1	0.1
Total Del/Veh (s)	6.3	0.2	1.0	0.0	2.8

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Total Network Performance

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Denied Del/Veh (s)	0.2
Total Del/Veh (s)	6.3

HCM Signalized Intersection Capacity Analysis  
 1: Blue Heron Point Rd & US 278 EB

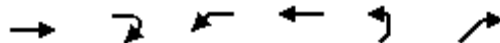
2020 Weekday AM  
 Alternate 2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		↑↑↑							↑		↑			
Volume (vph)	0	2945	3	0	0	0	0	0	28	30	3	0		
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			
Lane Util. Factor		0.91							1.00		1.00			
Frt		1.00							0.86		1.00			
Flt Protected		1.00							1.00		0.96			
Satd. Flow (prot)		4891							1580		1720			
Flt Permitted		1.00							1.00		0.96			
Satd. Flow (perm)		4891							1580		1720			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96		
Growth Factor (vph)	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%		
Adj. Flow (vph)	0	3129	3	0	0	0	0	0	30	32	3	0		
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	4	0	17	0		
Lane Group Flow (vph)	0	3132	0	0	0	0	0	0	26	0	18	0		
Heavy Vehicles (%)	6%	6%	33%	2%	6%	6%	6%	6%	4%	6%	2%	6%		
Turn Type		NA							Perm	Perm	NA			
Protected Phases		2									4			
Permitted Phases									2	4				
Actuated Green, G (s)		116.7							116.7		7.4			
Effective Green, g (s)		116.7							116.7		7.4			
Actuated g/C Ratio		0.86							0.86		0.05			
Clearance Time (s)		6.0							6.0		6.0			
Vehicle Extension (s)		3.0							3.0		3.0			
Lane Grp Cap (vph)		4193							1354		93			
v/s Ratio Prot		0.64												
v/s Ratio Perm									0.02		0.01			
v/c Ratio		0.75							0.02		0.19			
Uniform Delay, d1		3.8							1.4		61.5			
Progression Factor		1.00							1.00		1.00			
Incremental Delay, d2		0.8							0.0		1.0			
Delay (s)		4.6							1.4		62.5			
Level of Service		A							A		E			
Approach Delay (s)		4.6			0.0			1.4			62.5			
Approach LOS		A			A			A			E			
<b>Intersection Summary</b>														
HCM 2000 Control Delay			5.2									HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio			0.71											
Actuated Cycle Length (s)			136.1								12.0		Sum of lost time (s)	
Intersection Capacity Utilization			79.8%										ICU Level of Service	D
Analysis Period (min)			15											
c Critical Lane Group														

HCM Signalized Intersection Capacity Analysis  
2: WB U-Turn & US 278 WB

2020 Weekday AM  
Alternate 2



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations				↑↑↑	↑	
Volume (vph)	0	0	0	1397	28	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	
Lane Util. Factor				0.91	1.00	
Flt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				4893	1703	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				4893	1703	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor (vph)	102%	102%	102%	102%	102%	102%
Adj. Flow (vph)	0	0	0	1484	30	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	1484	30	0
Turn Type				NA	pm+pt	
Protected Phases				6	3	
Permitted Phases					6	
Actuated Green, G (s)				27.6	47.7	
Effective Green, g (s)				27.6	47.7	
Actuated g/C Ratio				0.46	0.80	
Clearance Time (s)				6.0	6.0	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)				2262	1703	
v/s Ratio Prot				c0.30	c0.01	
v/s Ratio Perm					0.01	
v/c Ratio				0.66	0.02	
Uniform Delay, d1				12.4	1.2	
Progression Factor				1.00	1.00	
Incremental Delay, d2				0.7	0.0	
Delay (s)				13.1	1.2	
Level of Service				B	A	
Approach Delay (s)	0.0			13.1	1.2	
Approach LOS	A			B	A	

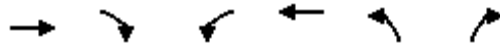
Intersection Summary

HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	120.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
3: Crosstree Dr. & US 278 EB

2020 Weekday AM  
Alternate 2



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑					↗
Volume (veh/h)	2958	45	0	0	0	60
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	3143	48	0	0	0	64
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	1010					
pX, platoon unblocked			0.17		0.17	0.17
vC, conflicting volume			3191		3167	1072
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.3
p0 queue free %			100		100	65
cM capacity (veh/h)			270		172	183

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	1257	1257	676	64
Volume Left	0	0	0	0
Volume Right	0	0	48	64
cSH	1700	1700	1700	183
Volume to Capacity	0.74	0.74	0.40	0.35
Queue Length 95th (ft)	0	0	0	37
Control Delay (s)	0.0	0.0	0.0	34.9
Lane LOS				D
Approach Delay (s)	0.0			34.9
Approach LOS				D

Intersection Summary			
Average Delay		0.7	
Intersection Capacity Utilization		69.8%	ICU Level of Service C
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 4: US 278 WB & Jenkins Rd

2020 Weekday AM  
 Alternate 2



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑↑			↗
Volume (veh/h)	0	0	1401	24	0	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	1489	26	0	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			594			
pX, platoon unblocked	0.77				0.77	0.77
vC, conflicting volume	1514				1501	509
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	633				617	0
tC, single (s)	4.2				6.9	7.7
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.7
p0 queue free %	100				100	97
cM capacity (veh/h)	710				319	751

Direction, Lane #	WB 1	WB 2	WB 3	SB 1
Volume Total	595	595	323	22
Volume Left	0	0	0	0
Volume Right	0	0	26	22
cSH	1700	1700	1700	751
Volume to Capacity	0.35	0.35	0.19	0.03
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	9.9
Lane LOS				A
Approach Delay (s)	0.0			9.9
Approach LOS				A

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		38.2%	ICU Level of Service A
Analysis Period (min)		15	

# HCM Signalized Intersection Capacity Analysis

## 1: Blue Heron Point Rd & US 278 EB

Alternate 2  
2020 Weekday PM

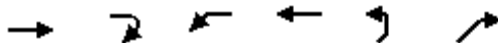


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑							↗		↖		
Volume (vph)	0	1898	7	0	0	0	0	0	20	73	17	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0							6.0		6.0		
Lane Util. Factor		0.91							1.00		1.00		
Frt		1.00							0.86		1.00		
Flt Protected		1.00							1.00		0.96		
Satd. Flow (prot)		4887							1580		1735		
Flt Permitted		1.00							1.00		0.96		
Satd. Flow (perm)		4887							1580		1735		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Growth Factor (vph)	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	
Adj. Flow (vph)	0	2017	7	0	0	0	0	0	21	78	18	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	7	0	28	0	
Lane Group Flow (vph)	0	2024	0	0	0	0	0	0	14	0	68	0	
Heavy Vehicles (%)	6%	6%	33%	2%	6%	6%	6%	6%	4%	6%	2%	6%	
Turn Type		NA							Perm	Perm	NA		
Protected Phases		2									4		
Permitted Phases									2	4			
Actuated Green, G (s)		40.9							40.9		8.2		
Effective Green, g (s)		40.9							40.9		8.2		
Actuated g/C Ratio		0.67							0.67		0.13		
Clearance Time (s)		6.0							6.0		6.0		
Vehicle Extension (s)		3.0							3.0		3.0		
Lane Grp Cap (vph)		3271							1057		232		
v/s Ratio Prot		0.41											
v/s Ratio Perm									0.01		0.04		
v/c Ratio		0.62							0.01		0.29		
Uniform Delay, d1		5.7							3.4		23.8		
Progression Factor		1.00							1.00		1.00		
Incremental Delay, d2		0.4							0.0		0.7		
Delay (s)		6.1							3.4		24.6		
Level of Service		A							A		C		
Approach Delay (s)		6.1			0.0			3.4			24.6		
Approach LOS		A			A			A			C		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			6.9		HCM 2000 Level of Service					A			
HCM 2000 Volume to Capacity ratio			0.56										
Actuated Cycle Length (s)			61.1		Sum of lost time (s)					12.0			
Intersection Capacity Utilization			60.9%		ICU Level of Service					B			
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Signalized Intersection Capacity Analysis

## 2: WB U-Turn & US 278 WB

Alternate 2  
2020 Weekday PM



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations				↑↑↑	↑	
Volume (vph)	0	0	0	3062	47	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	
Lane Util. Factor				0.91	1.00	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				4893	1703	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				4893	1703	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor (vph)	102%	102%	102%	102%	102%	102%
Adj. Flow (vph)	0	0	0	3253	50	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	3253	50	0
Turn Type				NA	pm+pt	
Protected Phases				6	3	
Permitted Phases					6	
Actuated Green, G (s)				134.7	150.9	
Effective Green, g (s)				134.7	150.9	
Actuated g/C Ratio				0.83	0.93	
Clearance Time (s)				6.0	6.0	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)				4045	1703	
v/s Ratio Prot				c0.66	c0.00	
v/s Ratio Perm					0.03	
v/c Ratio				0.80	0.03	
Uniform Delay, d1				7.3	0.5	
Progression Factor				1.00	1.00	
Incremental Delay, d2				1.2	0.0	
Delay (s)				8.5	0.5	
Level of Service				A	A	
Approach Delay (s)	0.0			8.5	0.5	
Approach LOS	A			A	A	

### Intersection Summary

HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	162.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	123.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



# HCM Unsignalized Intersection Capacity Analysis

## 3: Crosstree Dr & US 278 EB

Alternate 2  
2020 Weekday PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑					↗
Volume (veh/h)	1908	83	0	0	0	69
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	2027	88	0	0	0	73
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	1010					
pX, platoon unblocked			0.76		0.76	0.76
vC, conflicting volume			2115		2071	720
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1373		1315	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.3
p0 queue free %			100		100	91
cM capacity (veh/h)			363		110	822

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	811	811	494	73
Volume Left	0	0	0	0
Volume Right	0	0	88	73
cSH	1700	1700	1700	822
Volume to Capacity	0.48	0.48	0.29	0.09
Queue Length 95th (ft)	0	0	0	7
Control Delay (s)	0.0	0.0	0.0	9.8
Lane LOS				A
Approach Delay (s)	0.0			9.8
Approach LOS				A

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization		50.5%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 4: US 278 WB & Jenkins Rd

Alternate 2  
 2020 Weekday PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑↑			↗
Volume (veh/h)	0	0	3074	35	0	33
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	3266	37	0	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			594			
pX, platoon unblocked	0.19				0.19	0.19
vC, conflicting volume	3303				3285	1107
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				0	0
tC, single (s)	4.2				6.9	7.7
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.7
p0 queue free %	100				100	81
cM capacity (veh/h)	298				189	182

Direction, Lane #	WB 1	WB 2	WB 3	SB 1
Volume Total	1306	1306	690	35
Volume Left	0	0	0	0
Volume Right	0	0	37	35
cSH	1700	1700	1700	182
Volume to Capacity	0.77	0.77	0.41	0.19
Queue Length 95th (ft)	0	0	0	17
Control Delay (s)	0.0	0.0	0.0	29.5
Lane LOS				D
Approach Delay (s)	0.0			29.5
Approach LOS				D

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization		71.4%	ICU Level of Service C
Analysis Period (min)		15	

# HCM Signalized Intersection Capacity Analysis

## 1: Blue Heron Point Rd & US 278 EB

Alternate 2  
2020 Weekend Pe

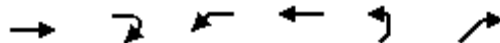


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑							↑		↑		
Volume (vph)	0	2538	4	0	0	0	0	0	12	35	8	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0							6.0		6.0		
Lane Util. Factor		0.91							1.00		1.00		
Frt		1.00							0.86		1.00		
Flt Protected		1.00							1.00		0.96		
Satd. Flow (prot)		4890							1580		1733		
Flt Permitted		1.00							1.00		0.96		
Satd. Flow (perm)		4890							1580		1733		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Growth Factor (vph)	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	
Adj. Flow (vph)	0	2697	4	0	0	0	0	0	13	37	8	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	3	0	17	0	
Lane Group Flow (vph)	0	2701	0	0	0	0	0	0	10	0	28	0	
Heavy Vehicles (%)	6%	6%	33%	2%	6%	6%	6%	6%	4%	6%	2%	6%	
Turn Type		NA							Perm	Perm	NA		
Protected Phases		2									4		
Permitted Phases									2	4			
Actuated Green, G (s)		74.6							74.6		7.5		
Effective Green, g (s)		74.6							74.6		7.5		
Actuated g/C Ratio		0.79							0.79		0.08		
Clearance Time (s)		6.0							6.0		6.0		
Vehicle Extension (s)		3.0							3.0		3.0		
Lane Grp Cap (vph)		3876							1252		138		
v/s Ratio Prot		0.55											
v/s Ratio Perm									0.01		0.02		
v/c Ratio		0.70							0.01		0.21		
Uniform Delay, d1		4.5							2.0		40.5		
Progression Factor		1.00							1.00		1.00		
Incremental Delay, d2		0.6							0.0		0.7		
Delay (s)		5.1							2.0		41.3		
Level of Service		A							A		D		
Approach Delay (s)		5.1			0.0			2.0			41.3		
Approach LOS		A			A			A			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			5.6									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.65										
Actuated Cycle Length (s)			94.1									Sum of lost time (s)	12.0
Intersection Capacity Utilization			71.8%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Signalized Intersection Capacity Analysis

## 4: WB U-Turn & US 278 WB

Alternate 2  
2020 Weekend Pe



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations				↑↑↑	↑	
Volume (vph)	0	0	0	2030	65	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	
Lane Util. Factor				0.91	1.00	
Flt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				4893	1703	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				4893	1703	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor (vph)	102%	102%	102%	102%	102%	102%
Adj. Flow (vph)	0	0	0	2157	69	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	2157	69	0
Turn Type				NA	pm+pt	
Protected Phases				6	3	
Permitted Phases					6	
Actuated Green, G (s)				50.4	68.6	
Effective Green, g (s)				50.4	68.6	
Actuated g/C Ratio				0.63	0.85	
Clearance Time (s)				6.0	6.0	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)				3059	1703	
v/s Ratio Prot				c0.44	c0.01	
v/s Ratio Perm					0.03	
v/c Ratio				0.71	0.04	
Uniform Delay, d1				10.1	0.9	
Progression Factor				1.00	1.00	
Incremental Delay, d2				0.8	0.0	
Delay (s)				10.9	0.9	
Level of Service				B	A	
Approach Delay (s)	0.0			10.9	0.9	
Approach LOS	A			B	A	

### Intersection Summary

HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	119.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
2: Crosstree Dr. & US 278 EB

Alternate 2  
2020 Weekend Pe



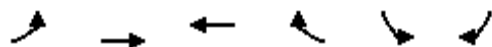
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑					↗
Volume (veh/h)	2537	48	0	0	0	47
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	2696	51	0	0	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	1010					
pX, platoon unblocked			0.70		0.70	0.70
vC, conflicting volume			2747		2721	924
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1997		1961	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.3
p0 queue free %			100		100	93
cM capacity (veh/h)			188		37	755

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	1078	1078	590	50
Volume Left	0	0	0	0
Volume Right	0	0	51	50
cSH	1700	1700	1700	755
Volume to Capacity	0.63	0.63	0.35	0.07
Queue Length 95th (ft)	0	0	0	5
Control Delay (s)	0.0	0.0	0.0	10.1
Lane LOS				B
Approach Delay (s)	0.0			10.1
Approach LOS				B

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	61.1%		ICU Level of Service B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis  
6: US 278 WB & Jenkins Rd

Alternate 2  
2020 Weekend Pe



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑↑			↗
Volume (veh/h)	0	0	2037	58	0	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	2164	62	0	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			594			
pX, platoon unblocked	0.70				0.70	0.70
vC, conflicting volume	2226				2195	752
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1239				1195	0
tC, single (s)	4.2				6.9	7.7
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.7
p0 queue free %	100				100	97
cM capacity (veh/h)	374				121	679

Direction, Lane #	WB 1	WB 2	WB 3	SB 1
Volume Total	866	866	494	23
Volume Left	0	0	0	0
Volume Right	0	0	62	23
cSH	1700	1700	1700	679
Volume to Capacity	0.51	0.51	0.29	0.03
Queue Length 95th (ft)	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	10.5
Lane LOS				B
Approach Delay (s)	0.0			10.5
Approach LOS				B

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		51.5%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 3: Crosstree Dr. & US 278 EB

Alternate 2 w/3ln  
 2035 Weekday AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑					↗
Volume (veh/h)	2958	45	0	0	0	60
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	3297	50	0	0	0	67
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	1010					
pX, platoon unblocked			0.15		0.15	0.15
vC, conflicting volume			3347		3322	1124
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.3
p0 queue free %			100		100	59
cM capacity (veh/h)			243		154	164

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	1319	1319	710	67
Volume Left	0	0	0	0
Volume Right	0	0	50	67
cSH	1700	1700	1700	164
Volume to Capacity	0.78	0.78	0.42	0.41
Queue Length 95th (ft)	0	0	0	45
Control Delay (s)	0.0	0.0	0.0	41.1
Lane LOS				E
Approach Delay (s)	0.0			41.1
Approach LOS				E

Intersection Summary			
Average Delay		0.8	
Intersection Capacity Utilization		72.9%	ICU Level of Service C
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 4: US 278 WB & Jenkins Rd

Alternate 2 w/3ln  
 2035 Weekday AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑↑			↑
Volume (veh/h)	0	0	1401	24	0	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	1562	27	0	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			594			
pX, platoon unblocked	0.76				0.76	0.76
vC, conflicting volume	1588				1575	534
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	677				659	0
tC, single (s)	4.2				6.9	7.7
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.7
p0 queue free %	100				100	97
cM capacity (veh/h)	673				295	741

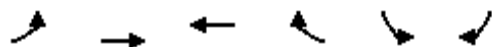
Direction, Lane #	WB 1	WB 2	WB 3	SB 1
Volume Total	625	625	339	23
Volume Left	0	0	0	0
Volume Right	0	0	27	23
cSH	1700	1700	1700	741
Volume to Capacity	0.37	0.37	0.20	0.03
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	10.0
Lane LOS				B
Approach Delay (s)	0.0			10.0
Approach LOS				B

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		39.5%	ICU Level of Service A
Analysis Period (min)		15	



HCM Unsignalized Intersection Capacity Analysis  
6: US 278 WB & Gateway Dr

Alternate 2 w/3ln  
2035 Weekday AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑↑			↗
Volume (veh/h)	0	0	1422	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	1585	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1585				1585	528
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1585				1585	528
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				100	100
cM capacity (veh/h)	392				95	484

Direction, Lane #	WB 1	WB 2	WB 3	SB 1
Volume Total	634	634	317	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1700	1700
Volume to Capacity	0.37	0.37	0.19	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS				A
Approach Delay (s)	0.0			0.0
Approach LOS				A

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		36.0%	ICU Level of Service A
Analysis Period (min)		15	

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Intersection Sign configuration not allowed in HCM analysis.

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Intersection Sign configuration not allowed in HCM analysis.

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HCM Signalized Intersection Capacity Analysis  
 1: Blue Heron Point Rd & US 278 EB

Alternate 2 w/3In  
 2035 Weekday AM

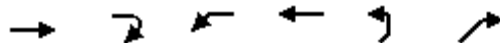


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑							↑		↑		
Volume (vph)	0	2945	3	0	0	0	0	0	28	30	3	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0							6.0		6.0		
Lane Util. Factor		0.91							1.00		1.00		
Frt		1.00							0.86		1.00		
Flt Protected		1.00							1.00		0.96		
Satd. Flow (prot)		4892							1580		1719		
Flt Permitted		1.00							1.00		0.96		
Satd. Flow (perm)		4892							1580		1719		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Growth Factor (vph)	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	
Adj. Flow (vph)	0	3282	3	0	0	0	0	0	31	33	3	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	4	0	17	0	
Lane Group Flow (vph)	0	3285	0	0	0	0	0	0	27	0	19	0	
Heavy Vehicles (%)	6%	6%	33%	2%	6%	6%	6%	6%	4%	6%	2%	6%	
Turn Type		NA							Perm	Perm	NA		
Protected Phases		2									4		
Permitted Phases									2	4			
Actuated Green, G (s)		131.2							131.2		7.5		
Effective Green, g (s)		131.2							131.2		7.5		
Actuated g/C Ratio		0.87							0.87		0.05		
Clearance Time (s)		6.0							6.0		6.0		
Vehicle Extension (s)		3.0							3.0		3.0		
Lane Grp Cap (vph)		4258							1375		85		
v/s Ratio Prot		0.67											
v/s Ratio Perm									0.02		0.01		
v/c Ratio		0.77							0.02		0.22		
Uniform Delay, d1		3.8							1.3		68.8		
Progression Factor		1.00							1.00		1.00		
Incremental Delay, d2		0.9							0.0		1.3		
Delay (s)		4.7							1.3		70.1		
Level of Service		A							A		E		
Approach Delay (s)		4.7			0.0			1.3			70.1		
Approach LOS		A			A			A			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			5.4									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.74										
Actuated Cycle Length (s)			150.7									Sum of lost time (s)	12.0
Intersection Capacity Utilization			82.6%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Signalized Intersection Capacity Analysis

## 2: WB U-Turn & US 278 WB

Alternate 2 w/3In  
2035 Weekday AM



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations				↑↑↑	↑	
Volume (vph)	0	0	0	1397	28	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	
Lane Util. Factor				0.91	1.00	
Flt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				4893	1703	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				4893	1703	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor (vph)	107%	107%	107%	107%	107%	107%
Adj. Flow (vph)	0	0	0	1557	31	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	1557	31	0
Turn Type				NA	pm+pt	
Protected Phases				6	3	
Permitted Phases					6	
Actuated Green, G (s)				29.5	49.6	
Effective Green, g (s)				29.5	49.6	
Actuated g/C Ratio				0.48	0.81	
Clearance Time (s)				6.0	6.0	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)				2343	1703	
v/s Ratio Prot				c0.32	c0.01	
v/s Ratio Perm					0.01	
v/c Ratio				0.66	0.02	
Uniform Delay, d1				12.3	1.2	
Progression Factor				1.00	1.00	
Incremental Delay, d2				0.7	0.0	
Delay (s)				13.0	1.2	
Level of Service				B	A	
Approach Delay (s)	0.0			13.0	1.2	
Approach LOS	A			B	A	

### Intersection Summary

HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	61.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
 3: Crosstree Dr. & US 278 EB

Alternate 2 w/3ln  
 2035 Weekday AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑					↗
Volume (veh/h)	2958	45	0	0	0	60
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	3297	50	0	0	0	67
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	1010					
pX, platoon unblocked			0.15		0.15	0.15
vC, conflicting volume			3347		3322	1124
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.3
p0 queue free %			100		100	59
cM capacity (veh/h)			243		154	164

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	1319	1319	710	67
Volume Left	0	0	0	0
Volume Right	0	0	50	67
cSH	1700	1700	1700	164
Volume to Capacity	0.78	0.78	0.42	0.41
Queue Length 95th (ft)	0	0	0	45
Control Delay (s)	0.0	0.0	0.0	41.1
Lane LOS				E
Approach Delay (s)	0.0			41.1
Approach LOS				E

Intersection Summary			
Average Delay		0.8	
Intersection Capacity Utilization		72.9%	ICU Level of Service C
Analysis Period (min)		15	

# HCM Unsignalized Intersection Capacity Analysis

## 4: US 278 WB & Jenkins Rd

Alternate 2 w/3ln  
2035 Weekday AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑↑			↑
Volume (veh/h)	0	0	1401	24	0	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	1562	27	0	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			594			
pX, platoon unblocked	0.76				0.76	0.76
vC, conflicting volume	1588				1575	534
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	677				659	0
tC, single (s)	4.2				6.9	7.7
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.7
p0 queue free %	100				100	97
cM capacity (veh/h)	673				295	741

Direction, Lane #	WB 1	WB 2	WB 3	SB 1
Volume Total	625	625	339	23
Volume Left	0	0	0	0
Volume Right	0	0	27	23
cSH	1700	1700	1700	741
Volume to Capacity	0.37	0.37	0.20	0.03
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	10.0
Lane LOS				B
Approach Delay (s)	0.0			10.0
Approach LOS				B

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		39.5%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis  
 1: Blue Heron Point Rd & US 278 EB

Alternate 2 w/3In  
 2035 Weekday AM



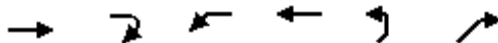
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑							↑		↑		
Volume (vph)	0	1898	7	0	0	0	0	0	20	73	17	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0							6.0		6.0		
Lane Util. Factor		0.91							1.00		1.00		
Frt		1.00							0.86		1.00		
Flt Protected		1.00							1.00		0.96		
Satd. Flow (prot)		4886							1580		1735		
Flt Permitted		1.00							1.00		0.96		
Satd. Flow (perm)		4886							1580		1735		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Growth Factor (vph)	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	
Adj. Flow (vph)	0	2115	8	0	0	0	0	0	22	81	19	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	7	0	23	0	
Lane Group Flow (vph)	0	2123	0	0	0	0	0	0	15	0	77	0	
Heavy Vehicles (%)	6%	6%	33%	2%	6%	6%	6%	6%	4%	6%	2%	6%	
Turn Type		NA							Perm	Perm	NA		
Protected Phases		2									4		
Permitted Phases									2	4			
Actuated Green, G (s)		45.7							45.7		8.9		
Effective Green, g (s)		45.7							45.7		8.9		
Actuated g/C Ratio		0.69							0.69		0.13		
Clearance Time (s)		6.0							6.0		6.0		
Vehicle Extension (s)		3.0							3.0		3.0		
Lane Grp Cap (vph)		3352							1084		231		
v/s Ratio Prot		0.43											
v/s Ratio Perm									0.01		0.04		
v/c Ratio		0.63							0.01		0.34		
Uniform Delay, d1		5.8							3.3		26.2		
Progression Factor		1.00							1.00		1.00		
Incremental Delay, d2		0.4							0.0		0.9		
Delay (s)		6.2							3.3		27.0		
Level of Service		A							A		C		
Approach Delay (s)		6.2			0.0			3.3			27.0		
Approach LOS		A			A			A			C		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			7.1									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.58										
Actuated Cycle Length (s)			66.6									Sum of lost time (s)	12.0
Intersection Capacity Utilization			63.0%									ICU Level of Service	B
Analysis Period (min)			15										
c Critical Lane Group													



# HCM Signalized Intersection Capacity Analysis

## 4: WB U-Turn & US 278 WB

Alternate 2 w/3In  
2035 Weekday AM



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations				↑↑↑	↑	
Volume (vph)	0	0	0	3062	47	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	
Lane Util. Factor				0.91	1.00	
Flt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				4893	1703	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				4893	1703	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor (vph)	107%	107%	107%	107%	107%	107%
Adj. Flow (vph)	0	0	0	3413	52	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	3413	52	0
Turn Type				NA	pm+pt	
Protected Phases				6	3	
Permitted Phases					6	
Actuated Green, G (s)				145.5	161.6	
Effective Green, g (s)				145.5	161.6	
Actuated g/C Ratio				0.84	0.93	
Clearance Time (s)				6.0	6.0	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)				4100	1703	
v/s Ratio Prot				c0.70	c0.00	
v/s Ratio Perm					0.03	
v/c Ratio				0.83	0.03	
Uniform Delay, d1				7.5	0.4	
Progression Factor				1.00	1.00	
Incremental Delay, d2				1.6	0.0	
Delay (s)				9.1	0.4	
Level of Service				A	A	
Approach Delay (s)	0.0			9.1	0.4	
Approach LOS	A			A	A	

### Intersection Summary

HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	173.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
2: Crosstree Dr & US 278 EB

Alternate 2 w/3ln  
2035 Weekday AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑					↗
Volume (veh/h)	1908	83	0	0	0	69
Sign Control	Free			Free Stop		
Grade	0%			0% 0%		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	2127	93	0	0	0	77
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	1010					
pX, platoon unblocked			0.75		0.75	0.75
vC, conflicting volume			2219		2173	755
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1459		1398	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.3
p0 queue free %			100		100	90
cM capacity (veh/h)			330		95	808

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	851	851	518	77
Volume Left	0	0	0	0
Volume Right	0	0	93	77
cSH	1700	1700	1700	808
Volume to Capacity	0.50	0.50	0.30	0.10
Queue Length 95th (ft)	0	0	0	8
Control Delay (s)	0.0	0.0	0.0	9.9
Lane LOS				A
Approach Delay (s)	0.0			9.9
Approach LOS				A

Intersection Summary			
Average Delay			0.3
Intersection Capacity Utilization	52.7%		ICU Level of Service A
Analysis Period (min)			15

HCM Unsignalized Intersection Capacity Analysis  
6: US 278 WB & Jenkins Rd

Alternate 2 w/3ln  
2035 Weekday AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑↑			↗
Volume (veh/h)	0	0	3074	35	0	33
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	3426	39	0	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			594			
pX, platoon unblocked	0.17				0.17	0.17
vC, conflicting volume	3465				3446	1162
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				0	0
tC, single (s)	4.2				6.9	7.7
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.7
p0 queue free %	100				100	78
cM capacity (veh/h)	277				176	169

Direction, Lane #	WB 1	WB 2	WB 3	SB 1
Volume Total	1370	1370	724	37
Volume Left	0	0	0	0
Volume Right	0	0	39	37
cSH	1700	1700	1700	169
Volume to Capacity	0.81	0.81	0.43	0.22
Queue Length 95th (ft)	0	0	0	20
Control Delay (s)	0.0	0.0	0.0	32.1
Lane LOS				D
Approach Delay (s)	0.0			32.1
Approach LOS				D

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization		74.4%	ICU Level of Service
Analysis Period (min)		15	D

HCM Signalized Intersection Capacity Analysis  
 1: Blue Heron Point Rd & US 278 EB

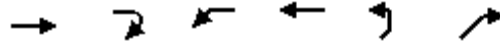
Alternate 2 w/3 In  
 2035 Weekend Pe



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑							↑		↑		
Volume (vph)	0	2538	4	0	0	0	0	0	12	35	8	0	
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		
Lane Util. Factor		0.91							1.00		1.00		
Frt		1.00							0.86		1.00		
Flt Protected		1.00							1.00		0.96		
Satd. Flow (prot)		4891							1580		1735		
Flt Permitted		1.00							1.00		0.96		
Satd. Flow (perm)		4891							1580		1735		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Growth Factor (vph)	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	
Adj. Flow (vph)	0	2829	4	0	0	0	0	0	13	39	9	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	2	0	17	0	
Lane Group Flow (vph)	0	2833	0	0	0	0	0	0	11	0	31	0	
Heavy Vehicles (%)	6%	6%	33%	2%	6%	6%	6%	6%	4%	6%	2%	6%	
Turn Type		NA							Perm	Perm	NA		
Protected Phases		2									4		
Permitted Phases									2	4			
Actuated Green, G (s)		86.3							86.3		7.9		
Effective Green, g (s)		86.3							86.3		7.9		
Actuated g/C Ratio		0.81							0.81		0.07		
Clearance Time (s)		6.0							6.0		6.0		
Vehicle Extension (s)		3.0							3.0		3.0		
Lane Grp Cap (vph)		3974							1283		129		
v/s Ratio Prot		c0.58											
v/s Ratio Perm									0.01		0.02		
v/c Ratio		0.71							0.01		0.24		
Uniform Delay, d1		4.4							1.9		46.3		
Progression Factor		1.00							1.00		1.00		
Incremental Delay, d2		0.6							0.0		1.0		
Delay (s)		5.1							1.9		47.3		
Level of Service		A							A		D		
Approach Delay (s)		5.1			0.0			1.9			47.3		
Approach LOS		A			A			A			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			5.7		HCM 2000 Level of Service					A			
HCM 2000 Volume to Capacity ratio			0.67										
Actuated Cycle Length (s)			106.2		Sum of lost time (s)					12.0			
Intersection Capacity Utilization			74.2%		ICU Level of Service					D			
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis  
 4: WB U-Turn & US 278 WB

Alternate 2 w/3 In  
 2035 Weekend Pe



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations				↑↑↑	↑	
Volume (vph)	0	0	0	2030	65	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	
Lane Util. Factor				0.91	1.00	
Flt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				4893	1703	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				4893	1703	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor (vph)	107%	107%	107%	107%	107%	107%
Adj. Flow (vph)	0	0	0	2263	72	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	2263	72	0
Turn Type				NA	pm+pt	
Protected Phases				6	3	
Permitted Phases					6	
Actuated Green, G (s)				56.6	75.8	
Effective Green, g (s)				56.6	75.8	
Actuated g/C Ratio				0.64	0.86	
Clearance Time (s)				6.0	6.0	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)				3154	1703	
v/s Ratio Prot				c0.46	c0.01	
v/s Ratio Perm					0.03	
v/c Ratio				0.72	0.04	
Uniform Delay, d1				10.3	0.9	
Progression Factor				1.00	1.00	
Incremental Delay, d2				0.8	0.0	
Delay (s)				11.1	0.9	
Level of Service				B	A	
Approach Delay (s)	0.0			11.1	0.9	
Approach LOS	A			B	A	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	87.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
 2: Crosstree Dr. & US 278 EB

Alternate 2 w/3 In  
 2035 Weekend Pe



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑					↗
Volume (veh/h)	2537	48	0	0	0	47
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	2828	54	0	0	0	52
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	1010					
pX, platoon unblocked			0.68		0.68	0.68
vC, conflicting volume			2881		2854	969
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2132		2093	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.3
p0 queue free %			100		100	93
cM capacity (veh/h)			162		29	737

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	1131	1131	619	52
Volume Left	0	0	0	0
Volume Right	0	0	54	52
cSH	1700	1700	1700	737
Volume to Capacity	0.67	0.67	0.36	0.07
Queue Length 95th (ft)	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	10.3
Lane LOS				B
Approach Delay (s)	0.0			10.3
Approach LOS				B

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization		63.6%	ICU Level of Service B
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
6: US 278 WB & Jenkins Rd

Alternate 2 w/3 In  
2035 Weekend Pe



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑↑			↗
Volume (veh/h)	0	0	2037	58	0	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	2270	65	0	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			594			
pX, platoon unblocked	0.68				0.68	0.68
vC, conflicting volume	2335				2303	789
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1339				1291	0
tC, single (s)	4.2				6.9	7.7
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.7
p0 queue free %	100				100	96
cM capacity (veh/h)	336				102	666

Direction, Lane #	WB 1	WB 2	WB 3	SB 1
Volume Total	908	908	519	25
Volume Left	0	0	0	0
Volume Right	0	0	65	25
cSH	1700	1700	1700	666
Volume to Capacity	0.53	0.53	0.31	0.04
Queue Length 95th (ft)	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	10.6
Lane LOS				B
Approach Delay (s)	0.0			10.6
Approach LOS				B

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		53.5%	ICU Level of Service A
Analysis Period (min)		15	

Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	5	5.0	21.1	0.2	38
Blue Heron Pt Rd	1	5.2	14.2	0.1	33
Crossover Dr.	2	9.2	23.0	0.2	31
	10	3.3	9.7	0.1	31
	4	3.3	12.7	0.1	37
Jenkins Rd	3	1.3	6.6	0.1	39
Total		27.2	87.3	0.8	35

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	1.3	25.7	0.4	50
	4	0.4	5.7	0.1	45
	10	0.7	10.2	0.1	47
Gateway Dr.	2	0.8	6.7	0.1	45
Blue Heron Pt Rd	1	2.7	16.9	0.2	42
	5	0.6	15.5	0.1	30
Total		6.5	80.7	1.0	43



Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	5	1.1	18.0	0.2	49
Blue Heron Pt Rd	1	0.6	7.2	0.1	48
Crossover Dr.	2	1.7	15.6	0.2	45
	10	0.8	6.9	0.1	41
	4	1.0	10.1	0.1	45
Jenkins Rd	3	0.6	6.7	0.1	45
Total		5.7	64.4	0.8	46

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	20.4	45.9	0.4	29
	4	6.0	12.2	0.1	25
	10	7.0	16.0	0.1	28
Gateway Dr.	2	2.9	8.5	0.1	33
Blue Heron Pt Rd	1	7.4	21.3	0.2	33
	5	1.0	11.9	0.1	29
Total		44.8	115.8	0.9	30

Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	1	3.2	26.7	0.3	47
Crossover Dr.	2	3.7	17.7	0.2	40
	10	1.9	7.9	0.1	36
Jenkins Rd	3	3.1	18.0	0.2	42
Total		11.8	70.4	0.8	42

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	21.6	45.4	0.4	28
	10	2.0	16.9	0.2	45
Gateway Dr.	2	0.6	6.1	0.1	46
	1	3.5	17.5	0.2	41
Total		27.7	85.8	0.8	35

Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	4	1.3	18.3	0.2	48
Blue Heron Pt Rd	1	0.7	7.0	0.1	48
Crossover Dr.	2	2.0	16.0	0.2	44
	10	1.1	7.2	0.1	39
	5	1.5	11.1	0.1	43
Jenkins Rd	3	0.7	6.3	0.1	44
Total		7.3	65.9	0.8	45

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	1.0	25.2	0.4	50
	5	0.3	6.1	0.1	46
	10	0.6	10.1	0.1	48
Gateway Dr.	2	0.4	6.0	0.1	47
Blue Heron Pt Rd	1	2.1	16.1	0.2	44
	4	0.3	10.8	0.1	31
Total		4.7	74.3	0.9	45

Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	4	0.7	17.7	0.2	50
Blue Heron Pt Rd	1	0.4	6.6	0.1	50
Crossover Dr.	2	1.1	15.2	0.2	47
	10	0.5	6.5	0.1	43
	5	0.7	10.3	0.1	47
Jenkins Rd	3	0.4	6.0	0.1	46
Total		3.9	62.3	0.8	47

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	2.2	26.4	0.4	48
	5	0.8	6.5	0.1	43
	10	1.5	11.0	0.1	44
Gateway Dr.	2	1.0	6.6	0.1	42
Blue Heron Pt Rd	1	4.2	18.1	0.2	39
	4	0.6	10.9	0.1	30
Total		10.3	79.4	0.9	42

Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	1	1.5	24.4	0.3	50
Crossover Dr.	2	1.5	15.5	0.2	46
	10	0.7	6.7	0.1	42
Jenkins Rd	3	1.5	16.4	0.2	46
Total		5.2	63.0	0.8	47

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	6.6	30.6	0.4	41
	10	1.6	16.5	0.2	46
Gateway Dr.	2	0.4	6.0	0.1	47
	1	2.6	16.7	0.2	43
Total		11.2	69.9	0.8	43

Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	9	5.8	24.0	0.2	39
Blue Heron Pt Rd	1	3.6	9.8	0.1	33
Crossover Dr.	2	8.8	22.4	0.2	32
	10	6.1	20.3	0.2	35
Jenkins Rd	3	1.5	8.3	0.1	40
Total		25.7	84.7	0.8	35

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	1.3	25.7	0.4	49
	10	0.5	7.1	0.1	46
Gateway Dr.	2	1.1	15.0	0.2	47
Blue Heron Pt Rd	1	3.1	17.6	0.2	40
	9	0.4	10.0	0.1	32
Total		6.4	75.3	0.9	44

Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	9	1.1	18.3	0.2	49
Blue Heron Pt Rd	1	0.5	6.7	0.1	47
Crossover Dr.	2	1.4	15.1	0.2	47
	10	1.6	15.8	0.2	45
Jenkins Rd	3	0.6	7.4	0.1	45
Total		5.3	63.3	0.8	47

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	14.3	40.4	0.4	33
	10	2.9	9.5	0.1	35
Gateway Dr.	2	6.7	20.5	0.2	35
Blue Heron Pt Rd	1	5.0	19.3	0.2	37
	9	1.9	7.7	0.1	41
Total		30.8	97.4	0.9	35

Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	9	1.8	19.3	0.2	47
Blue Heron Pt Rd	1	1.0	7.2	0.1	45
Crossover Dr.	2	2.7	16.5	0.2	43
	10	2.9	17.1	0.2	41
Jenkins Rd	3	1.1	7.8	0.1	42
Total		9.4	68.0	0.8	44

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	2.0	26.6	0.4	48
	10	0.8	7.4	0.1	45
Gateway Dr.	2	1.9	15.9	0.2	45
Blue Heron Pt Rd	1	4.3	18.7	0.2	38
	9	0.7	10.3	0.1	31
Total		9.7	78.8	0.9	42



Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	9	1.2	18.5	0.2	49
Blue Heron Pt Rd	1	0.6	6.8	0.1	47
Crossover Dr.	2	1.7	15.6	0.2	46
	10	2.1	16.3	0.2	43
Jenkins Rd	3	0.8	7.6	0.1	44
Total		6.4	64.7	0.8	46

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	1.0	25.1	0.4	50
	10	0.4	7.0	0.1	47
Gateway Dr.	2	0.8	14.7	0.2	48
Blue Heron Pt Rd	1	0.9	15.5	0.2	46
	9	0.3	6.0	0.1	53
Total		3.3	68.4	0.9	49

Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	9	0.8	18.0	0.2	50
Blue Heron Pt Rd	1	0.4	6.5	0.1	49
Crossover Dr.	2	1.0	14.8	0.2	48
	10	1.0	15.3	0.2	46
Jenkins Rd	3	0.4	7.2	0.1	46
Total		3.6	61.8	0.8	48

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	2.0	26.4	0.4	48
	10	0.8	7.4	0.1	44
Gateway Dr.	2	2.0	16.0	0.2	44
Blue Heron Pt Rd	1	1.9	16.2	0.2	44
	9	0.6	6.2	0.1	51
Total		7.3	72.3	0.9	46

Arterial Level of Service: EB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	9	1.0	18.3	0.2	49
Blue Heron Pt Rd	1	0.5	6.7	0.1	48
Crossover Dr.	2	1.4	15.4	0.2	46
	10	1.6	15.8	0.2	45
Jenkins Rd	3	0.6	7.4	0.1	45
Total		5.0	63.5	0.8	47

Arterial Level of Service: WB US 278

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jenkins Rd	3	1.3	25.4	0.4	50
	10	0.5	7.1	0.1	47
Gateway Dr.	2	1.0	15.0	0.2	47
Blue Heron Pt Rd	1	3.0	17.4	0.2	41
	9	0.4	9.8	0.1	33
Total		6.1	74.7	0.9	45

Arterial Level of Service: EB US 278 EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Blue Heron Point Rd	1	7.9	32.1	0.3	40
Crosstree Dr.	3	8.5	21.6	0.2	32
	7	16.9	36.0	0.3	27
WB U-Turn	22	2.8	10.3	0.1	37
Total		36.1	100.0	0.9	33

Arterial Level of Service: WB US 278 WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
WB U-Turn	2	10.8	26.7	0.2	31
Jenkins Rd	4	4.0	11.9	0.1	34
	20	2.8	18.5	0.2	43
Gateway Dr	6	0.9	6.6	0.1	44
	12	1.0	12.1	0.2	47
Total		19.5	75.8	0.8	38

Arterial Level of Service: EB US 278 EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Blue Heron Point Rd	1	7.3	31.5	0.3	40
Crosstree Dr	3	5.6	18.5	0.2	37
	7	3.4	22.3	0.3	44
WB U-Turn	22	0.8	8.2	0.1	46
Total		17.0	80.6	0.9	41

Arterial Level of Service: WB US 278 WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
WB U-Turn	2	15.5	31.5	0.2	27
Jenkins Rd	4	8.9	16.8	0.1	24
	20	25.0	40.0	0.2	20
Gateway Dr	6	12.2	17.7	0.1	16
	12	6.6	17.6	0.2	32
Total		68.1	123.6	0.8	23

Arterial Level of Service: EB US 278 EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Blue Heron Point Rd	1	6.4	30.4	0.3	42
Crosstree Dr.	2	6.4	19.5	0.2	35
	7	9.1	28.6	0.3	34
WB U-Turn	22	1.5	9.0	0.1	42
Total		23.4	87.6	0.9	38

Arterial Level of Service: WB US 278 WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
WB U-Turn	4	9.4	25.3	0.2	33
Jenkins Rd	6	4.7	12.6	0.1	32
	20	5.1	20.6	0.2	39
Gateway Dr	3	1.9	7.5	0.1	38
	12	1.7	12.8	0.2	44
Total		22.8	78.9	0.8	37

Arterial Level of Service: EB US 278 EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Blue Heron Point Rd	1	5.1	29.2	0.3	44
Crosstree Dr.	3	5.0	18.3	0.2	38
	7	3.3	22.8	0.3	43
WB U-Turn	22	0.8	8.3	0.1	46
Total		14.2	78.5	0.9	42

Arterial Level of Service: WB US 278 WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
WB U-Turn	2	10.4	26.3	0.2	32
Jenkins Rd	4	3.6	11.5	0.1	35
	20	1.6	17.2	0.2	46
Gateway Dr	6	0.5	6.2	0.1	47
	12	0.7	11.8	0.2	48
Total		16.8	73.0	0.8	40

Arterial Level of Service: EB US 278 EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Blue Heron Point Rd	1	5.1	29.1	0.3	44
Crosstree Dr	2	3.4	16.7	0.2	41
	7	1.7	21.4	0.3	46
WB U-Turn	22	0.6	8.1	0.1	47
Total		10.8	75.2	0.9	44

Arterial Level of Service: WB US 278 WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
WB U-Turn	4	8.7	24.9	0.2	34
Jenkins Rd	6	5.3	13.3	0.1	31
	20	4.8	20.4	0.2	39
Gateway Dr	3	1.7	7.4	0.1	39
	12	1.8	12.9	0.2	44
Total		22.3	78.8	0.8	37



Arterial Level of Service: EB US 278 EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Blue Heron Point Rd	1	4.7	29.0	0.3	44
Crosstree Dr.	2	3.8	17.0	0.2	40
	7	2.5	22.2	0.3	45
WB U-Turn	22	0.7	8.3	0.1	46
Total		11.7	76.6	0.9	43

Arterial Level of Service: WB US 278 WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
WB U-Turn	4	8.2	23.9	0.2	35
Jenkins Rd	6	3.6	11.6	0.1	35
	20	2.1	17.8	0.2	45
Gateway Dr	3	0.7	6.4	0.1	45
	12	0.9	12.0	0.2	47
Total		15.4	71.7	0.8	40

<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst	SU				Freeway/Dir of Travel	US 278 EB			
Agency/Company	ICA				Weaving Segment Location	Blue Heron Pt - Cross Tree Dr.			
Date Performed	7/22/2015				Analysis Year	2020			
Analysis Time Period	AM Peak								
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration	One-Sided				Segment type	C-D Roadway/			
Weaving number of lanes, N	3				Multilane				
Weaving segment length, L <sub>s</sub>	700ft				Highways				
Freeway free-flow speed, FFS	55 mph				Freeway minimum speed, S <sub>MIN</sub>	15			
					Freeway maximum capacity, C <sub>IFL</sub>	2250			
					Terrain type	Level			
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	2972	0.96	6	0	1.5	1.2	0.971	1.00	3189
V <sub>RF</sub>	31	0.96	4	0	1.5	1.2	0.980	1.00	33
V <sub>FR</sub>	26	0.96	20	0	1.5	1.2	0.909	1.00	30
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	3189							V =	
V <sub>W</sub>	63								
VR	0.019								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub>	2 lc				Minimum weaving lane changes, LC <sub>MIN</sub>	63 lc/h			
Interchange density, ID	3.0 int/mi				Weaving lane changes, LC <sub>W</sub>	276 lc/h			
Minimum RF lane changes, LC <sub>RF</sub>	1 lc/pc				Non-weaving lane changes, LC <sub>NW</sub>	459 lc/h			
Minimum FR lane changes, LC <sub>FR</sub>	1 lc/pc				Total lane changes, LC <sub>ALL</sub>	735 lc/h			
Minimum RR lane changes, LC <sub>RR</sub>	lc/pc				Non-weaving vehicle index, I <sub>NW</sub>	670			
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v	veh/h				Weaving intensity factor, W	0.235			
Weaving segment capacity, c <sub>w</sub>	veh/h				Weaving segment speed, S	49.3 mph			
Weaving segment v/c ratio					Average weaving speed, S <sub>w</sub>	47.4 mph			
Weaving segment density, D	22.0 pc/mi/ln				Average non-weaving speed, S <sub>NW</sub>	49.3 mph			
Level of Service, LOS	B				Maximum weaving length, L <sub>MAX</sub>	2775 ft			
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									

<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst					Freeway/Dir of Travel		US 278 EB		
Agency/Company ICA					Weaving Segment Location		Blue Heron Pt - Cross Tree Dr.		
Date Performed 7/22/2015					Analysis Year		2020		
Analysis Time Period PM Peak									
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration				One-Sided		Segment type		C-D Roadway/	
Weaving number of lanes, N				3				Multilane	
Weaving segment length, L <sub>s</sub>				700ft		Freeway minimum speed, S <sub>MIN</sub>		15	
Freeway free-flow speed, FFS				55 mph		Freeway maximum capacity, C <sub>IFL</sub>		2250	
						Terrain type		Level	
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	1894	0.96	2	0	1.5	1.2	0.990	1.00	1993
V <sub>RF</sub>	25	0.96	10	0	1.5	1.2	0.952	1.00	27
V <sub>FR</sub>	28	0.96	2	0	1.5	1.2	0.990	1.00	29
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	1993							V =	2029
V <sub>W</sub>	56								
VR	0.027								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub>				2 lc		Minimum weaving lane changes, LC <sub>MIN</sub>		56 lc/h	
Interchange density, ID				3.0 int/mi		Weaving lane changes, LC <sub>W</sub>		269 lc/h	
Minimum RF lane changes, LC <sub>RF</sub>				1 lc/pc		Non-weaving lane changes, LC <sub>NW</sub>		212 lc/h	
Minimum FR lane changes, LC <sub>FR</sub>				1 lc/pc		Total lane changes, LC <sub>ALL</sub>		481 lc/h	
Minimum RR lane changes, LC <sub>RR</sub>				lc/pc		Non-weaving vehicle index, I <sub>NW</sub>		419	
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v				2029 veh/h		Weaving intensity factor, W		0.168	
Weaving segment capacity, c <sub>w</sub>				6196 veh/h		Weaving segment speed, S		51.3 mph	
Weaving segment v/c ratio				0.327		Average weaving speed, S <sub>w</sub>		49.2 mph	
Weaving segment density, D				13.3 pc/mi/ln		Average non-weaving speed, S <sub>NW</sub>		51.3 mph	
Level of Service, LOS				B		Maximum weaving length, L <sub>MAX</sub>		2849 ft	
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									

<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst					Freeway/Dir of Travel				
Agency/Company ICA					US 278 EB				
Date Performed 7/22/2015					Weaving Segment Location Blue Heron Pt - Cross Tree Dr.				
Analysis Time Period Weekend Peak					Analysis Year 2020				
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration One-Sided					Segment type C-D Roadway/				
Weaving number of lanes, N 3					Multilane				
Weaving segment length, L <sub>S</sub> 700ft					Highways				
Freeway free-flow speed, FFS 55 mph					Freeway minimum speed, S <sub>MIN</sub> 15				
					Freeway maximum capacity, C <sub>IFL</sub> 2250				
					Terrain type Level				
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	2523	0.96	2	0	1.5	1.2	0.990	1.00	2654
V <sub>RF</sub>	24	0.96	2	0	1.5	1.2	0.990	1.00	25
V <sub>FR</sub>	29	0.96	2	0	1.5	1.2	0.990	1.00	31
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	2654							V =	
V <sub>W</sub>	56								
VR	0.021								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub> 2 lc					Minimum weaving lane changes, LC <sub>MIN</sub> 56 lc/h				
Interchange density, ID 3.0 int/mi					Weaving lane changes, LC <sub>W</sub> 269 lc/h				
Minimum RF lane changes, LC <sub>RF</sub> 1 lc/pc					Non-weaving lane changes, LC <sub>NW</sub> 348 lc/h				
Minimum FR lane changes, LC <sub>FR</sub> 1 lc/pc					Total lane changes, LC <sub>ALL</sub> 617 lc/h				
Minimum RR lane changes, LC <sub>RR</sub> 1c/pc					Non-weaving vehicle index, I <sub>NW</sub> 557				
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v veh/h					Weaving intensity factor, W 0.205				
Weaving segment capacity, c <sub>w</sub> veh/h					Weaving segment speed, S 50.2 mph				
Weaving segment v/c ratio					Average weaving speed, S <sub>w</sub> 48.2 mph				
Weaving segment density, D 18.0 pc/mi/ln					Average non-weaving speed, S <sub>NW</sub> 50.3 mph				
Level of Service, LOS B					Maximum weaving length, L <sub>MAX</sub> 2787 ft				
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									

<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst					Freeway/Dir of Travel				
Agency/Company ICA					US 278 EB				
Date Performed 7/22/2015					Weaving Segment Location Blue Heron Pt - Cross Tree Dr.				
Analysis Time Period AM Peak					Analysis Year 2035 w/3 Lane				
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration One-Sided					Segment type C-D Roadway/				
Weaving number of lanes, N 4					Multilane				
Weaving segment length, L <sub>s</sub> 700ft					Highways				
Freeway free-flow speed, FFS 55 mph					Freeway minimum speed, S <sub>MIN</sub> 15				
					Freeway maximum capacity, C <sub>IFL</sub> 2250				
					Terrain type Level				
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	3118	0.96	6	0	1.5	1.2	0.971	1.00	3345
V <sub>RF</sub>	32	0.96	4	0	1.5	1.2	0.980	1.00	34
V <sub>FR</sub>	27	0.96	20	0	1.5	1.2	0.909	1.00	31
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	3345							V =	
V <sub>W</sub>	65								
VR	0.019								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub> 2 lc					Minimum weaving lane changes, LC <sub>MIN</sub> 65 lc/h				
Interchange density, ID 3.0 int/mi					Weaving lane changes, LC <sub>W</sub> 443 lc/h				
Minimum RF lane changes, LC <sub>RF</sub> 1 lc/pc					Non-weaving lane changes, LC <sub>NW</sub> 298 lc/h				
Minimum FR lane changes, LC <sub>FR</sub> 1 lc/pc					Total lane changes, LC <sub>ALL</sub> 741 lc/h				
Minimum RR lane changes, LC <sub>RR</sub> 1c/pc					Non-weaving vehicle index, I <sub>NW</sub> 702				
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v veh/h					Weaving intensity factor, W 0.236				
Weaving segment capacity, c <sub>w</sub> veh/h					Weaving segment speed, S 50.4 mph				
Weaving segment v/c ratio					Average weaving speed, S <sub>w</sub> 47.4 mph				
Weaving segment density, D 16.9 pc/mi/ln					Average non-weaving speed, S <sub>NW</sub> 50.4 mph				
Level of Service, LOS B					Maximum weaving length, L <sub>MAX</sub> 2772 ft				
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									

<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst					Freeway/Dir of Travel		US 278 EB		
Agency/Company ICA					Weaving Segment Location		Blue Heron Pt - Cross Tree Dr.		
Date Performed 7/22/2015					Analysis Year		2035 w/3 lane		
Analysis Time Period PM Peak									
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration				One-Sided		Segment type		C-D Roadway/	
Weaving number of lanes, N				4				Multilane	
Weaving segment length, L <sub>S</sub>				700ft		Freeway minimum speed, S <sub>MIN</sub>		15	
Freeway free-flow speed, FFS				55 mph		Freeway maximum capacity, C <sub>IFL</sub>		2250	
						Terrain type		Level	
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	1987	0.96	2	0	1.5	1.2	0.990	1.00	2090
V <sub>RF</sub>	26	0.96	10	0	1.5	1.2	0.952	1.00	28
V <sub>FR</sub>	29	0.96	2	0	1.5	1.2	0.990	1.00	31
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	2090							V =	2128
V <sub>W</sub>	59								
VR	0.027								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub>				2 lc		Minimum weaving lane changes, LC <sub>MIN</sub>		59 lc/h	
Interchange density, ID				3.0 int/mi		Weaving lane changes, LC <sub>W</sub>		437 lc/h	
Minimum RF lane changes, LC <sub>RF</sub>				1 lc/pc		Non-weaving lane changes, LC <sub>NW</sub>		40 lc/h	
Minimum FR lane changes, LC <sub>FR</sub>				1 lc/pc		Total lane changes, LC <sub>ALL</sub>		477 lc/h	
Minimum RR lane changes, LC <sub>RR</sub>				lc/pc		Non-weaving vehicle index, I <sub>NW</sub>		439	
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v				2128 veh/h		Weaving intensity factor, W		0.167	
Weaving segment capacity, c <sub>w</sub>				8261 veh/h		Weaving segment speed, S		51.9 mph	
Weaving segment v/c ratio				0.258		Average weaving speed, S <sub>w</sub>		49.3 mph	
Weaving segment density, D				10.3 pc/mi/ln		Average non-weaving speed, S <sub>NW</sub>		52.0 mph	
Level of Service, LOS				A		Maximum weaving length, L <sub>MAX</sub>		2850 ft	
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									

<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst					Freeway/Dir of Travel				
Agency/Company ICA					US 278 EB				
Date Performed 7/22/2015					Weaving Segment Location Blue Heron Pt - Cross Tree Dr.				
Analysis Time Period Weekend Peak					Analysis Year 2035 w/3 Lane				
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration				One-Sided		Segment type		C-D Roadway/	
Weaving number of lanes, N				4				Multilane	
Weaving segment length, L <sub>S</sub>				700ft		Freeway minimum speed, S <sub>MIN</sub>		15	
Freeway free-flow speed, FFS				55 mph		Freeway maximum capacity, C <sub>IFL</sub>		2250	
						Terrain type		Level	
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	2647	0.96	2	0	1.5	1.2	0.990	1.00	2785
V <sub>RF</sub>	25	0.96	2	0	1.5	1.2	0.990	1.00	26
V <sub>FR</sub>	30	0.96	2	0	1.5	1.2	0.990	1.00	32
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	2785							V =	
V <sub>W</sub>	58								
VR	0.020								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub>				2 lc		Minimum weaving lane changes, LC <sub>MIN</sub>		58 lc/h	
Interchange density, ID				3.0 int/mi		Weaving lane changes, LC <sub>W</sub>		436 lc/h	
Minimum RF lane changes, LC <sub>RF</sub>				1 lc/pc		Non-weaving lane changes, LC <sub>NW</sub>		183 lc/h	
Minimum FR lane changes, LC <sub>FR</sub>				1 lc/pc		Total lane changes, LC <sub>ALL</sub>		619 lc/h	
Minimum RR lane changes, LC <sub>RR</sub>				lc/pc		Non-weaving vehicle index, I <sub>NW</sub>		585	
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v				veh/h		Weaving intensity factor, W		0.205	
Weaving segment capacity, c <sub>w</sub>				veh/h		Weaving segment speed, S		51.1 mph	
Weaving segment v/c ratio						Average weaving speed, S <sub>w</sub>		48.2 mph	
Weaving segment density, D				13.9 pc/mi/ln		Average non-weaving speed, S <sub>NW</sub>		51.2 mph	
Level of Service, LOS				B		Maximum weaving length, L <sub>MAX</sub>		2784 ft	
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									

<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst					Freeway/Dir of Travel		US 278 WB		
Agency/Company ICA					Weaving Segment Location		Jenkins Island - Gateway Dr.		
Date Performed 7/22/2015					Analysis Year		2020		
Analysis Time Period AM Peak									
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration				One-Sided		Segment type		C-D Roadway/	
Weaving number of lanes, N				3				Multilane	
Weaving segment length, L <sub>s</sub>				1050ft		Freeway minimum speed, S <sub>MIN</sub>		15	
Freeway free-flow speed, FFS				55 mph		Freeway maximum capacity, C <sub>IFL</sub>		2250	
						Terrain type		Level	
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	1382	0.96	6	0	1.5	1.2	0.971	1.00	1483
V <sub>RF</sub>	12	0.96	40	0	1.5	1.2	0.833	1.00	15
V <sub>FR</sub>	25	0.96	10	0	1.5	1.2	0.952	1.00	27
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	1483							V =	1481
V <sub>W</sub>	42								
VR	0.028								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub>				2 lc		Minimum weaving lane changes, LC <sub>MIN</sub>		42 lc/h	
Interchange density, ID				3.0 int/mi		Weaving lane changes, LC <sub>W</sub>		333 lc/h	
Minimum RF lane changes, LC <sub>RF</sub>				1 lc/pc		Non-weaving lane changes, LC <sub>NW</sub>		297 lc/h	
Minimum FR lane changes, LC <sub>FR</sub>				1 lc/pc		Total lane changes, LC <sub>ALL</sub>		630 lc/h	
Minimum RR lane changes, LC <sub>RR</sub>				lc/pc		Non-weaving vehicle index, I <sub>NW</sub>		467	
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v				1481 veh/h		Weaving intensity factor, W		0.151	
Weaving segment capacity, c <sub>w</sub>				6151 veh/h		Weaving segment speed, S		52.2 mph	
Weaving segment v/c ratio				0.241		Average weaving speed, S <sub>w</sub>		49.8 mph	
Weaving segment density, D				9.7 pc/mi/ln		Average non-weaving speed, S <sub>NW</sub>		52.3 mph	
Level of Service, LOS				A		Maximum weaving length, L <sub>MAX</sub>		2850 ft	
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									



<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst					Freeway/Dir of Travel				
Agency/Company ICA					US 278 WB				
Date Performed 7/22/2015					Weaving Segment Location Jenkins Island - Gateway Dr.				
Analysis Time Period PM Peak					Analysis Year 2020				
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration One-Sided					Segment type C-D Roadway/				
Weaving number of lanes, N 3					Multilane				
Weaving segment length, L <sub>S</sub> 1050ft					Highways				
Freeway free-flow speed, FFS 55 mph					Freeway minimum speed, S <sub>MIN</sub> 15				
					Freeway maximum capacity, C <sub>IFL</sub> 2250				
					Terrain type Level				
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	3025	0.96	4	0	1.5	1.2	0.980	1.00	3214
V <sub>RF</sub>	22	0.96	20	0	1.5	1.2	0.909	1.00	25
V <sub>FR</sub>	78	0.96	2	0	1.5	1.2	0.990	1.00	82
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	3214							V =	3256
V <sub>W</sub>	107								
VR	0.032								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub> 2 lc					Minimum weaving lane changes, LC <sub>MIN</sub> 107 lc/h				
Interchange density, ID 3.0 int/mi					Weaving lane changes, LC <sub>W</sub> 398 lc/h				
Minimum RF lane changes, LC <sub>RF</sub> 1 lc/pc					Non-weaving lane changes, LC <sub>NW</sub> 653 lc/h				
Minimum FR lane changes, LC <sub>FR</sub> 1 lc/pc					Total lane changes, LC <sub>ALL</sub> 1051 lc/h				
Minimum RR lane changes, LC <sub>RR</sub> 1c/pc					Non-weaving vehicle index, I <sub>NW</sub> 1012				
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v 3256 veh/h					Weaving intensity factor, W 0.226				
Weaving segment capacity, c <sub>w</sub> 6203 veh/h					Weaving segment speed, S 48.9 mph				
Weaving segment v/c ratio 0.525					Average weaving speed, S <sub>w</sub> 47.6 mph				
Weaving segment density, D 22.7 pc/mi/ln					Average non-weaving speed, S <sub>NW</sub> 48.9 mph				
Level of Service, LOS B					Maximum weaving length, L <sub>MAX</sub> 2894 ft				
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									

<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst					Freeway/Dir of Travel		US 278 WB		
Agency/Company ICA					Weaving Segment Location		Jenkins Island - Gateway Dr.		
Date Performed 7/22/2015					Analysis Year		2020		
Analysis Time Period Weekend Peak									
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration				One-Sided		Segment type		C-D Roadway/	
Weaving number of lanes, N				3				Multilane	
Weaving segment length, L <sub>S</sub>				1050ft		Freeway minimum speed, S <sub>MIN</sub>		15	
Freeway free-flow speed, FFS				55 mph		Freeway maximum capacity, C <sub>IFL</sub>		2250	
						Terrain type		Level	
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	2018	0.96	2	0	1.5	1.2	0.990	1.00	2123
V <sub>RF</sub>	10	0.96	2	0	1.5	1.2	0.990	1.00	11
V <sub>FR</sub>	31	0.96	2	0	1.5	1.2	0.990	1.00	33
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	2123							V =	
V <sub>W</sub>	44								
VR	0.020								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub>				2 lc		Minimum weaving lane changes, LC <sub>MIN</sub>		44 lc/h	
Interchange density, ID				3.0 int/mi		Weaving lane changes, LC <sub>W</sub>		335 lc/h	
Minimum RF lane changes, LC <sub>RF</sub>				1 lc/pc		Non-weaving lane changes, LC <sub>NW</sub>		429 lc/h	
Minimum FR lane changes, LC <sub>FR</sub>				1 lc/pc		Total lane changes, LC <sub>ALL</sub>		764 lc/h	
Minimum RR lane changes, LC <sub>RR</sub>				lc/pc		Non-weaving vehicle index, I <sub>NW</sub>		669	
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v				veh/h		Weaving intensity factor, W		0.176	
Weaving segment capacity, c <sub>w</sub>				veh/h		Weaving segment speed, S		51.2 mph	
Weaving segment v/c ratio						Average weaving speed, S <sub>w</sub>		49.0 mph	
Weaving segment density, D				14.1 pc/mi/ln		Average non-weaving speed, S <sub>NW</sub>		51.2 mph	
Level of Service, LOS				B		Maximum weaving length, L <sub>MAX</sub>		2783 ft	
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									

<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst					Freeway/Dir of Travel		US 278 WB		
Agency/Company ICA					Weaving Segment Location		Jenkins Island - Gateway Dr.		
Date Performed 7/22/2015					Analysis Year		2035 w/3 Lane		
Analysis Time Period AM Peak									
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration				One-Sided		Segment type		C-D Roadway/	
Weaving number of lanes, N				4				Multilane	
Weaving segment length, L <sub>S</sub>				1050ft		Freeway minimum speed, S <sub>MIN</sub>		15	
Freeway free-flow speed, FFS				55 mph		Freeway maximum capacity, C <sub>IFL</sub>		2250	
						Terrain type		Level	
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	1450	0.96	6	0	1.5	1.2	0.971	1.00	1556
V <sub>RF</sub>	13	0.96	40	0	1.5	1.2	0.833	1.00	16
V <sub>FR</sub>	26	0.96	10	0	1.5	1.2	0.952	1.00	28
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	1556							V =	1554
V <sub>W</sub>	44								
VR	0.027								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub>				2 lc		Minimum weaving lane changes, LC <sub>MIN</sub>		44 lc/h	
Interchange density, ID				3.0 int/mi		Weaving lane changes, LC <sub>W</sub>		562 lc/h	
Minimum RF lane changes, LC <sub>RF</sub>				1 lc/pc		Non-weaving lane changes, LC <sub>NW</sub>		119 lc/h	
Minimum FR lane changes, LC <sub>FR</sub>				1 lc/pc		Total lane changes, LC <sub>ALL</sub>		681 lc/h	
Minimum RR lane changes, LC <sub>RR</sub>				lc/pc		Non-weaving vehicle index, I <sub>NW</sub>		490	
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v				1554 veh/h		Weaving intensity factor, W		0.161	
Weaving segment capacity, c <sub>w</sub>				8202 veh/h		Weaving segment speed, S		52.7 mph	
Weaving segment v/c ratio				0.189		Average weaving speed, S <sub>w</sub>		49.5 mph	
Weaving segment density, D				7.6 pc/mi/ln		Average non-weaving speed, S <sub>NW</sub>		52.8 mph	
Level of Service, LOS				A		Maximum weaving length, L <sub>MAX</sub>		2850 ft	
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									

<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst Agency/Company ICA Date Performed 7/22/2015 Analysis Time Period PM Peak					Freeway/Dir of Travel US 278 WB Weaving Segment Location Jenkins Island - Gateway Dr. Analysis Year 2035 w/3 Lane				
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration One-Sided Weaving number of lanes, N 4 Weaving segment length, L <sub>s</sub> 1050ft Freeway free-flow speed, FFS 55 mph					Segment type C-D Roadway/ Multilane Highways Freeway minimum speed, S <sub>MIN</sub> 15 Freeway maximum capacity, C <sub>IFL</sub> 2250 Terrain type Level				
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	3173	0.96	4	0	1.5	1.2	0.980	1.00	3371
V <sub>RF</sub>	23	0.96	20	0	1.5	1.2	0.909	1.00	26
V <sub>FR</sub>	82	0.96	2	0	1.5	1.2	0.990	1.00	86
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	3371							V =	3415
V <sub>W</sub>	112								
VR	0.032								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub> 2 lc					Minimum weaving lane changes, LC <sub>MIN</sub> 112 lc/h				
Interchange density, ID 3.0 int/mi					Weaving lane changes, LC <sub>W</sub> 630 lc/h				
Minimum RF lane changes, LC <sub>RF</sub> 1 lc/pc					Non-weaving lane changes, LC <sub>NW</sub> 493 lc/h				
Minimum FR lane changes, LC <sub>FR</sub> 1 lc/pc					Total lane changes, LC <sub>ALL</sub> 1123 lc/h				
Minimum RR lane changes, LC <sub>RR</sub> 1c/pc					Non-weaving vehicle index, I <sub>NW</sub> 1062				
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v 3415 veh/h					Weaving intensity factor, W 0.238				
Weaving segment capacity, c <sub>w</sub> 8271 veh/h					Weaving segment speed, S 49.9 mph				
Weaving segment v/c ratio 0.413					Average weaving speed, S <sub>w</sub> 47.3 mph				
Weaving segment density, D 17.4 pc/mi/ln					Average non-weaving speed, S <sub>NW</sub> 50.0 mph				
Level of Service, LOS B					Maximum weaving length, L <sub>MAX</sub> 2894 ft				
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									

<b>FREEWAY WEAVING WORKSHEET</b>									
<b>General Information</b>					<b>Site Information</b>				
Analyst Agency/Company ICA Date Performed 7/22/2015 Analysis Time Period Weekend Peak					Freeway/Dir of Travel US 278 WB Weaving Segment Location Jenkins Island - Gateway Dr. Analysis Year 2015 w/3Lane				
Project Description Jenkins Island Access Management									
<b>Inputs</b>									
Weaving configuration One-Sided Weaving number of lanes, N 4 Weaving segment length, L <sub>s</sub> 1050ft Freeway free-flow speed, FFS 55 mph					Segment type C-D Roadway/ Multilane Highways Freeway minimum speed, S <sub>MIN</sub> 15 Freeway maximum capacity, C <sub>IFL</sub> 2250 Terrain type Level				
<b>Conversions to pc/h Under Base Conditions</b>									
	V (veh/h)	PHF	Truck (%)	RV (%)	E <sub>T</sub>	E <sub>R</sub>	f <sub>HV</sub>	f <sub>p</sub>	v (pc/h)
V <sub>FF</sub>	2116	0.96	2	0	1.5	1.2	0.990	1.00	2226
V <sub>RF</sub>	10	0.96	2	0	1.5	1.2	0.990	1.00	11
V <sub>FR</sub>	32	0.96	2	0	1.5	1.2	0.990	1.00	34
V <sub>RR</sub>	0	0.96	0	0	1.5	1.2	1.000	1.00	0
V <sub>NW</sub>	2226							V =	
V <sub>W</sub>	45								
VR	0.020								
<b>Configuration Characteristics</b>									
Minimum maneuver lanes, N <sub>WL</sub> 2 lc					Minimum weaving lane changes, LC <sub>MIN</sub> 45 lc/h				
Interchange density, ID 3.0 int/mi					Weaving lane changes, LC <sub>W</sub> 563 lc/h				
Minimum RF lane changes, LC <sub>RF</sub> 1 lc/pc					Non-weaving lane changes, LC <sub>NW</sub> 257 lc/h				
Minimum FR lane changes, LC <sub>FR</sub> 1 lc/pc					Total lane changes, LC <sub>ALL</sub> 820 lc/h				
Minimum RR lane changes, LC <sub>RR</sub> 1c/pc					Non-weaving vehicle index, I <sub>NW</sub> 701				
<b>Weaving Segment Speed, Density, Level of Service, and Capacity</b>									
Weaving segment flow rate, v veh/h					Weaving intensity factor, W 0.186				
Weaving segment capacity, c <sub>w</sub> veh/h					Weaving segment speed, S 51.9 mph				
Weaving segment v/c ratio					Average weaving speed, S <sub>w</sub> 48.7 mph				
Weaving segment density, D 10.9 pc/mi/ln					Average non-weaving speed, S <sub>NW</sub> 52.0 mph				
Level of Service, LOS A					Maximum weaving length, L <sub>MAX</sub> 2779 ft				
<b>Notes</b>									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									