

Queues

I-526 Long Point Rd IMR

10: Hobcaw Bluff Dr./Wando Park Blvd. & Long Point Rd.

2030 No Build PM



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	25	998	184	658	440	14	3	154	662	43
v/c Ratio	0.08	0.73	0.57	0.34	0.32	0.11	0.02	0.46	0.93	0.14
Control Delay	10.5	27.7	22.3	5.0	0.6	49.7	48.0	8.0	64.6	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.5	27.7	22.3	5.0	0.6	49.7	48.0	8.0	64.6	18.1
Queue Length 50th (ft)	6	270	25	36	0	9	2	0	238	5
Queue Length 95th (ft)	24	#486	#109	78	0	30	11	37	#348	36
Internal Link Dist (ft)		408		302			505			503
Turn Bay Length (ft)	150		525			100		100	200	
Base Capacity (vph)	324	1365	326	1908	1388	131	138	340	709	348
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.73	0.56	0.34	0.32	0.11	0.02	0.45	0.93	0.12

Intersection Summary












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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

10: Hobcaw Bluff Dr./Wando Park Blvd. & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build PM

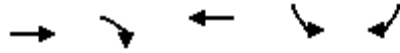
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	908	10	169	605	405	13	3	142	609	8	31
Future Volume (vph)	23	908	10	169	605	405	13	3	142	609	8	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.8	7.8		6.8	7.8	6.9	6.4	7.0	6.8	6.9	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1271	2798		1805	3008	1559	1805	1900	1599	3467	1541	
Flt Permitted	0.38	1.00		0.18	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	511	2798		345	3008	1559	1805	1900	1599	3467	1541	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	987	11	184	658	440	14	3	154	662	9	34
RTOR Reduction (vph)	0	1	0	0	0	93	0	0	139	0	27	0
Lane Group Flow (vph)	25	997	0	184	658	347	14	3	15	662	16	0
Confl. Peds. (#/hr)	1					1						
Heavy Vehicles (%)	42%	29%	13%	0%	20%	2%	0%	0%	1%	1%	0%	11%
Turn Type	D.Pm	NA		D.P+P	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases		2		1	6	7	3	8	1	7	4	
Permitted Phases	6			2		6			8			
Actuated Green, G (s)	64.2	48.1		57.4	64.2	86.7	3.2	1.6	10.9	22.5	21.4	
Effective Green, g (s)	64.2	48.1		57.4	64.2	86.7	3.2	1.6	10.9	22.5	21.4	
Actuated g/C Ratio	0.58	0.44		0.52	0.58	0.79	0.03	0.01	0.10	0.20	0.19	
Clearance Time (s)	7.8	7.8		6.8	7.8	6.9	6.4	7.0	6.8	6.9	7.0	
Vehicle Extension (s)	6.0	6.0		2.5	6.0	3.0	3.0	3.0	2.5	3.0	3.0	
Lane Grp Cap (vph)	298	1223		303	1755	1228	52	27	158	709	299	
v/s Ratio Prot		c0.36		c0.05	0.22	0.06	0.01	0.00	0.01	c0.19	c0.01	
v/s Ratio Perm	0.05			0.27		0.16			0.00			
v/c Ratio	0.08	0.82		0.61	0.37	0.28	0.27	0.11	0.10	0.93	0.05	
Uniform Delay, d1	10.0	27.1		16.2	12.2	3.2	52.3	53.5	45.1	43.0	36.0	
Progression Factor	1.00	1.00		1.57	0.44	0.24	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	6.1		2.6	0.6	0.1	2.8	1.8	0.2	19.3	0.1	
Delay (s)	10.6	33.1		28.0	6.0	0.9	55.0	55.3	45.3	62.3	36.1	
Level of Service	B	C		C	A	A	E	E	D	E	D	
Approach Delay (s)		32.6			7.4			46.2			60.7	
Approach LOS		C			A			D			E	
Intersection Summary												
HCM 2000 Control Delay			29.4				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			110.0				Sum of lost time (s)			28.5		
Intersection Capacity Utilization			76.8%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

I-526 Long Point Rd IMR

11: I-526 EB On-Ramp/I-526 EB off ramp & Long Point Rd.

2030 No Build PM



Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Group Flow (vph)	1164	651	834	1440	447
v/c Ratio	0.86	0.62	0.52	0.94	0.35
Control Delay	30.3	7.2	15.2	42.2	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	7.2	15.2	42.2	0.8
Queue Length 50th (ft)	333	96	169	476	0
Queue Length 95th (ft)	m398	m159	190	#629	0
Internal Link Dist (ft)	362		144		
Turn Bay Length (ft)					400
Base Capacity (vph)	1355	1057	1605	1575	1262
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.86	0.62	0.52	0.91	0.35

Intersection Summary

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













Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis

11: I-526 EB On-Ramp/I-526 EB off ramp & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build PM

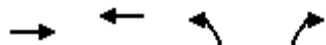
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑					↑↑		↑
Traffic Volume (vph)	0	1071	599	0	767	0	0	0	0	1325	0	411
Future Volume (vph)	0	1071	599	0	767	0	0	0	0	1325	0	411
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0					5.0		4.0
Lane Util. Factor		0.95	1.00		0.95					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		2959	1538		3505					3467		1262
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		2959	1538		3505					3467		1262
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1164	651	0	834	0	0	0	0	1440	0	447
RTOR Reduction (vph)	0	0	353	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1164	298	0	834	0	0	0	0	1440	0	447
Confl. Peds. (#/hr)										1		
Heavy Vehicles (%)	0%	22%	5%	0%	3%	0%	0%	0%	0%	1%	0%	28%
Turn Type		NA	Perm		NA					Prot		Free
Protected Phases		2			6					4		
Permitted Phases			2									Free
Actuated Green, G (s)		50.4	50.4		50.4					48.6		110.0
Effective Green, g (s)		50.4	50.4		50.4					48.6		110.0
Actuated g/C Ratio		0.46	0.46		0.46					0.44		1.00
Clearance Time (s)		6.0	6.0		6.0					5.0		
Vehicle Extension (s)		2.5	2.5		2.5					2.0		
Lane Grp Cap (vph)		1355	704		1605					1531		1262
v/s Ratio Prot		c0.39			0.24					c0.42		
v/s Ratio Perm			0.19									0.35
v/c Ratio		0.86	0.42		0.52					0.94		0.35
Uniform Delay, d1		26.6	20.0		21.2					29.3		0.0
Progression Factor		0.92	3.29		0.65					1.00		1.00
Incremental Delay, d2		4.8	1.2		1.1					11.6		0.8
Delay (s)		29.2	67.1		14.8					40.9		0.8
Level of Service		C	E		B					D		A
Approach Delay (s)		42.8			14.8			0.0			31.4	
Approach LOS		D			B			A			C	
Intersection Summary												
HCM 2000 Control Delay			32.9									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			110.0							11.0		
Intersection Capacity Utilization			118.6%									ICU Level of Service H
Analysis Period (min)			15									
c Critical Lane Group												

Queues

I-526 Long Point Rd IMR

12: I-526 WB off ramp & Long Point Rd.

2030 No Build PM



Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1973	1013	367	710
v/c Ratio	0.74	0.36	0.72	0.44
Control Delay	11.4	4.2	52.6	0.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.4	4.2	52.6	0.9
Queue Length 50th (ft)	384	76	128	0
Queue Length 95th (ft)	521	m127	174	0
Internal Link Dist (ft)	101	188	1417	
Turn Bay Length (ft)				
Base Capacity (vph)	2668	2780	596	1599
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.74	0.36	0.62	0.44

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis 12: I-526 WB off ramp & Long Point Rd.




















I-526 Long Point Rd IMR
2030 No Build PM

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↙	↗
Traffic Volume (vph)	1815	0	0	932	338	653
Future Volume (vph)	1815	0	0	932	338	653
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6			5.6	5.7	4.0
Lane Util. Factor	0.95			*1.00	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3574			3725	3400	1599
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3574			3725	3400	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1973	0	0	1013	367	710
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1973	0	0	1013	367	710
Heavy Vehicles (%)	1%	0%	0%	2%	3%	1%
Turn Type	NA			NA	Prot	Free
Protected Phases	2			6	8	
Permitted Phases						Free
Actuated Green, G (s)	82.1			82.1	16.6	110.0
Effective Green, g (s)	82.1			82.1	16.6	110.0
Actuated g/C Ratio	0.75			0.75	0.15	1.00
Clearance Time (s)	5.6			5.6	5.7	
Vehicle Extension (s)	4.0			4.0	3.0	
Lane Grp Cap (vph)	2667			2780	513	1599
v/s Ratio Prot	c0.55			0.27	c0.11	
v/s Ratio Perm						0.44
v/c Ratio	0.74			0.36	0.72	0.44
Uniform Delay, d1	7.9			4.9	44.5	0.0
Progression Factor	1.20			0.77	1.00	1.00
Incremental Delay, d2	1.1			0.3	4.7	0.9
Delay (s)	10.6			4.0	49.2	0.9
Level of Service	B			A	D	A
Approach Delay (s)	10.6			4.0	17.3	
Approach LOS	B			A	B	
Intersection Summary						
HCM 2000 Control Delay			10.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.74			
Actuated Cycle Length (s)			110.0		Sum of lost time (s)	11.3
Intersection Capacity Utilization			98.3%		ICU Level of Service	F
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

13: Belle Hall Pkwy. & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build PM












												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	327	1892	249	0	1587	129	0	0	61	0	0	275
Future Volume (Veh/h)	327	1892	249	0	1587	129	0	0	61	0	0	275
Sign Control		Free			Free			Yield			Yield	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.94	0.94	0.94	0.92	0.92	0.92
Hourly flow rate (vph)	352	2034	268	0	1688	137	0	0	65	0	0	299
Pedestrians												1
Lane Width (ft)												12.0
Walking Speed (ft/s)												3.5
Percent Blockage												0
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		463			836							
pX, platoon unblocked	0.64			0.70			0.79	0.79	0.70	0.79	0.79	0.64
vC, conflicting volume	1689			2034			3582	4427	1017	3478	4496	914
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	967			1623			2042	3106	174	1912	3192	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	24			100			100	100	89	100	100	57
cM capacity (veh/h)	464			285			6	2	589	11	2	699
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	NB 1	SB 1				
Volume Total	352	1017	1017	268	1125	700	65	299				
Volume Left	352	0	0	0	0	0	0	0				
Volume Right	0	0	0	268	0	137	65	299				
cSH	464	1700	1700	1700	1700	1700	589	699				
Volume to Capacity	0.76	0.60	0.60	0.16	0.66	0.41	0.11	0.43				
Queue Length 95th (ft)	161	0	0	0	0	0	9	54				
Control Delay (s)	33.2	0.0	0.0	0.0	0.0	0.0	11.9	14.0				
Lane LOS	D						B	B				
Approach Delay (s)	4.4				0.0		11.9	14.0				
Approach LOS							B	B				
Intersection Summary												
Average Delay			3.4									
Intersection Capacity Utilization			72.8%		ICU Level of Service					C		
Analysis Period (min)			15									

Queues

I-526 Long Point Rd IMR

15: Belle Point & Long Point Rd.

2030 No Build PM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	158	1657	309	183	1407	385	66	150	103	75	108
v/c Ratio	0.80	0.95	0.35	0.94	0.83	1.02	0.12	0.22	0.27	0.14	0.16
Control Delay	50.8	32.2	4.2	76.2	29.8	92.6	30.2	18.1	33.0	30.4	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	32.2	4.2	76.2	29.8	92.6	30.2	18.1	33.0	30.4	15.8
Queue Length 50th (ft)	65	496	15	78	436	~290	35	54	56	40	34
Queue Length 95th (ft)	m#137	#741	m50	#217	537	#478	69	100	104	77	71
Internal Link Dist (ft)		756			790		405			1179	
Turn Bay Length (ft)	190		210	175		175		185	150		175
Base Capacity (vph)	198	1738	886	195	1692	376	537	677	383	531	666
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.95	0.35	0.94	0.83	1.02	0.12	0.22	0.27	0.14	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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
























Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis

15: Belle Point & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build PM



















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	1524	284	168	1263	31	354	61	138	95	69	99
Future Volume (vph)	145	1524	284	168	1263	31	354	61	138	95	69	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.8	5.8	5.7	5.8		6.2	6.2	5.7	6.2	6.2	5.7
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3574	1599	1805	3488		1787	1900	1615	1805	1881	1583
Flt Permitted	0.07	1.00	1.00	0.08	1.00		0.71	1.00	1.00	0.71	1.00	1.00
Satd. Flow (perm)	142	3574	1599	143	3488		1332	1900	1615	1357	1881	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	158	1657	309	183	1373	34	385	66	150	103	75	108
RTOR Reduction (vph)	0	0	109	0	2	0	0	0	18	0	0	18
Lane Group Flow (vph)	158	1657	200	183	1405	0	385	66	132	103	75	90
Heavy Vehicles (%)	0%	1%	1%	0%	3%	8%	1%	0%	0%	0%	1%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	61.4	53.5	53.5	61.0	53.3		31.1	31.1	38.8	31.1	31.1	39.0
Effective Green, g (s)	61.4	53.5	53.5	61.0	53.3		31.1	31.1	38.8	31.1	31.1	39.0
Actuated g/C Ratio	0.56	0.49	0.49	0.55	0.48		0.28	0.28	0.35	0.28	0.28	0.35
Clearance Time (s)	5.7	5.8	5.8	5.7	5.8		6.2	6.2	5.7	6.2	6.2	5.7
Vehicle Extension (s)	2.6	2.6	2.6	2.5	2.6		2.5	2.5	2.5	2.5	2.5	2.6
Lane Grp Cap (vph)	198	1738	777	195	1690		376	537	569	383	531	561
v/s Ratio Prot	0.06	c0.46		c0.07	0.40			0.03	0.02		0.04	0.01
v/s Ratio Perm	0.39		0.13	0.45			c0.29		0.07	0.08		0.05
v/c Ratio	0.80	0.95	0.26	0.94	0.83		1.02	0.12	0.23	0.27	0.14	0.16
Uniform Delay, d1	23.1	27.1	16.6	29.8	24.5		39.5	29.3	25.1	30.6	29.5	24.3
Progression Factor	1.30	0.75	0.61	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.7	11.0	0.6	46.6	4.9		52.7	0.1	0.2	0.3	0.1	0.1
Delay (s)	45.7	31.3	10.7	76.4	29.4		92.1	29.4	25.2	30.9	29.6	24.4
Level of Service	D	C	B	E	C		F	C	C	C	C	C
Approach Delay (s)		29.4			34.8			68.5			28.1	
Approach LOS		C			C			E			C	

Intersection Summary

HCM 2000 Control Delay	36.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.7
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis 21: Hidden Blvd./Shipping Ln. & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	605	5	102	368	48	5	0	81	109	0	8
Future Volume (Veh/h)	15	605	5	102	368	48	5	0	81	109	0	8
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	18	738	6	124	449	59	5	0	87	130	0	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	TWLTL			TWLTL								
Median storage veh)	2			2								
Upstream signal (ft)				1201								
pX, platoon unblocked												
vC, conflicting volume	508			744			1260	1533	372	1218	1506	254
vC1, stage 1 conf vol							777	777		726	726	
vC2, stage 2 conf vol							482	756		492	780	
vCu, unblocked vol	508			744			1260	1533	372	1218	1506	254
tC, single (s)	5.5			4.1			7.5	6.5	7.0	7.6	6.5	8.3
tC, 2 stage (s)							6.5	5.5		6.6	5.5	
tF (s)	2.9			2.2			3.5	4.0	3.3	3.5	4.0	4.0
p0 queue free %	97			86			98	100	86	45	100	98
cM capacity (veh/h)	700			866			287	270	622	238	234	573
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	18	492	252	124	299	209	92	140				
Volume Left	18	0	0	124	0	0	5	130				
Volume Right	0	0	6	0	0	59	87	10				
cSH	700	1700	1700	866	1700	1700	585	249				
Volume to Capacity	0.03	0.29	0.15	0.14	0.18	0.12	0.16	0.56				
Queue Length 95th (ft)	2	0	0	12	0	0	14	79				
Control Delay (s)	10.3	0.0	0.0	9.9	0.0	0.0	12.3	36.6				
Lane LOS	B			A			B	E				
Approach Delay (s)	0.2			1.9			12.3	36.6				
Approach LOS							B	E				
Intersection Summary												
Average Delay	4.7											
Intersection Capacity Utilization	45.7%			ICU Level of Service					A			
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis 22: Wando Ln. & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build PM

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↘		↙	↑↑	↘↙	
Traffic Volume (veh/h)	438	1	17	157	0	33
Future Volume (Veh/h)	438	1	17	157	0	33
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.68	0.68	0.52	0.52
Hourly flow rate (vph)	476	1	25	231	0	63
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL		TWLTL			
Median storage veh)	2		2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			477	642		238
vC1, stage 1 conf vol			476			
vC2, stage 2 conf vol			166			
vCu, unblocked vol			477	642		238
tC, single (s)			4.2	6.8		7.0
tC, 2 stage (s)			5.8			
tF (s)			2.3	3.5		3.3
p0 queue free %			98	100		92
cM capacity (veh/h)			1054	559		760
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	317	160	25	116	116	63
Volume Left	0	0	25	0	0	0
Volume Right	0	1	0	0	0	63
cSH	1700	1700	1054	1700	1700	760
Volume to Capacity	0.19	0.09	0.02	0.07	0.07	0.08
Queue Length 95th (ft)	0	0	2	0	0	7
Control Delay (s)	0.0	0.0	8.5	0.0	0.0	10.2
Lane LOS			A			B
Approach Delay (s)	0.0	0.8		10.2		
Approach LOS	B					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			24.1%		ICU Level of Service	
Analysis Period (min)			15		A	

HCM Unsignalized Intersection Capacity Analysis

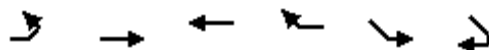
23: Lone Tree Dr & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build PM

	→	↘	↙	←	↖	↗		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑↑↘		↙	↑↑↑	↖↗			
Traffic Volume (veh/h)	1648	11	17	1161	18	22		
Future Volume (Veh/h)	1648	11	17	1161	18	22		
Sign Control	Free			Free	Stop			
Grade	0%			0%	0%			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly flow rate (vph)	1831	12	19	1290	20	24		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type	None			None				
Median storage veh								
Upstream signal (ft)	382			442				
pX, platoon unblocked					0.87			
vC, conflicting volume				1843		2305		616
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol				1843		1970		616
tC, single (s)				4.1		6.8		6.9
tC, 2 stage (s)								
tF (s)				2.2		3.5		3.3
p0 queue free %				94		55		94
cM capacity (veh/h)				326		45		433
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1
Volume Total	732	732	378	19	430	430	430	44
Volume Left	0	0	0	19	0	0	0	20
Volume Right	0	0	12	0	0	0	0	24
cSH	1700	1700	1700	326	1700	1700	1700	87
Volume to Capacity	0.43	0.43	0.22	0.06	0.25	0.25	0.25	0.50
Queue Length 95th (ft)	0	0	0	5	0	0	0	54
Control Delay (s)	0.0	0.0	0.0	16.7	0.0	0.0	0.0	82.2
Lane LOS				C		F		
Approach Delay (s)	0.0			0.2		82.2		
Approach LOS						F		
Intersection Summary								
Average Delay				1.2				
Intersection Capacity Utilization	42.1%			ICU Level of Service		A		
Analysis Period (min)	15							

HCM Unsignalized Intersection Capacity Analysis 41: Long Point Rd. & Long Point/I-526 EB onramp







I-526 Long Point Rd IMR
2030 No Build PM



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑	↑		
Traffic Volume (veh/h)	0	2396	767	503	0	0
Future Volume (Veh/h)	0	2396	767	503	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.84	0.84	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	2852	852	559	0	0
Pedestrians					1	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		224	1136			
pX, platoon unblocked					0.65	
vC, conflicting volume	1412				2279	427
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1412				1896	427
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	479				40	576
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	
Volume Total	1426	1426	426	426	559	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	559	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.84	0.84	0.25	0.25	0.33	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			118.6%		ICU Level of Service	H
Analysis Period (min)			15			

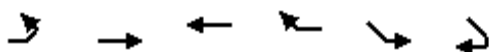
HCM Unsignalized Intersection Capacity Analysis
49: I-526 WB On-Ramp & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build PM

						
Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑↑	↑		↑↑		
Traffic Volume (veh/h)	1815	581	0	1270	0	0
Future Volume (Veh/h)	1815	581	0	1270	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.94	0.94	0.90	0.90
Hourly flow rate (vph)	1891	605	0	1351	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)	1179			181		
pX, platoon unblocked				0.90		
vC, conflicting volume			2496		2566	946
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2496		2520	946
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			186		21	263
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	
Volume Total	946	946	605	676	676	
Volume Left	0	0	0	0	0	
Volume Right	0	0	605	0	0	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.56	0.56	0.36	0.40	0.40	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS						
Approach Delay (s)	0.0			0.0		
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			98.3%	ICU Level of Service		F
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 54: Long Point Rd. & I-526 WB On-Ramp

I-526 Long Point Rd IMR
2030 No Build PM



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑	↑		
Traffic Volume (veh/h)	0	2468	932	930	0	0
Future Volume (Veh/h)	0	2468	932	930	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.94	0.94	0.90	0.90
Hourly flow rate (vph)	0	2571	991	989	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)		268	1031			
pX, platoon unblocked					0.66	
vC, conflicting volume	1980				2276	496
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1980				1909	496
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	288				40	520
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	
Volume Total	1286	1286	496	496	989	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	989	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.76	0.76	0.29	0.29	0.58	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			71.6%		ICU Level of Service	C
Analysis Period (min)			15			