














































I-85/I-385 Interchange Improvements
2015 No-Build AM

1: Woodruff Road & Roper Mountain Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	381	210	216	258	37	261	818	162	164	860	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3255		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.50	1.00		0.16	1.00	1.00	0.29	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	898	3255		297	3438	1538	526	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	132	423	233	240	287	41	290	909	180	182	956	102
RTOR Reduction (vph)	0	53	0	0	0	34	0	0	80	0	0	38
Lane Group Flow (vph)	132	603	0	240	287	7	290	909	100	182	956	64
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	34.6	23.0		37.4	24.4	24.4	76.0	76.0	76.0	7.0	88.0	88.0
Effective Green, g (s)	34.6	23.0		37.4	24.4	24.4	76.0	76.0	76.0	7.0	88.0	88.0
Actuated g/C Ratio	0.25	0.16		0.27	0.17	0.17	0.54	0.54	0.54	0.05	0.63	0.63
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	290	535		211	599	268	286	1866	835	167	2161	967
v/s Ratio Prot	0.04	0.19		c0.11	0.08			0.26		c0.05	0.28	
v/s Ratio Perm	0.07			c0.20		0.00	c0.55		0.07			0.04
v/c Ratio	0.46	1.13		1.14	0.48	0.03	1.01	0.49	0.12	1.09	0.44	0.07
Uniform Delay, d1	43.0	58.5		46.1	52.1	47.9	32.0	19.9	15.7	66.5	13.4	10.1
Progression Factor	1.00	1.00		0.97	0.79	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	78.5		103.1	1.4	0.1	56.8	0.9	0.3	95.7	0.7	0.1
Delay (s)	44.8	137.0		147.8	42.3	46.8	88.8	20.8	15.9	162.2	14.0	10.2
Level of Service	D	F		F	D	D	F	C	B	F	B	B
Approach Delay (s)		121.6			87.2			34.5			35.5	
Approach LOS		F			F			C			D	
Intersection Summary												
HCM Average Control Delay			59.6			HCM Level of Service			E			
HCM Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			85.8%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2015 No-Build AM

2: Woodruff Road & Costco Driveway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	18	736	25	56	551	28	25	1	53	7	1	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	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	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3421		1719	3438	1538	1719	1543		1719	1810	1538
Flt Permitted	0.36	1.00		0.33	1.00	1.00	0.76	1.00		0.72	1.00	1.00
Satd. Flow (perm)	647	3421		604	3438	1538	1370	1543		1299	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	818	28	62	612	31	28	1	59	8	1	12
RTOR Reduction (vph)	0	3	0	0	0	14	0	52	0	0	0	10
Lane Group Flow (vph)	20	843	0	62	612	17	28	8	0	8	1	2
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	48.6	48.6		38.9	38.9	38.9	8.4	8.4		8.4	8.4	11.6
Effective Green, g (s)	48.6	48.6		38.9	38.9	38.9	8.4	8.4		8.4	8.4	11.6
Actuated g/C Ratio	0.69	0.69		0.56	0.56	0.56	0.12	0.12		0.12	0.12	0.17
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	498	2375		336	1911	855	164	185		156	217	398
v/s Ratio Prot	0.00	c0.25			0.18			0.01			0.00	0.00
v/s Ratio Perm	0.03			0.10		0.01	c0.02			0.01		0.00
v/c Ratio	0.04	0.35		0.18	0.32	0.02	0.17	0.04		0.05	0.00	0.00
Uniform Delay, d1	3.6	4.3		7.7	8.4	7.0	27.7	27.2		27.3	27.1	24.4
Progression Factor	0.33	0.32		0.29	0.30	0.44	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.0	0.2		1.1	0.4	0.0	1.2	0.2		0.3	0.0	0.0
Delay (s)	1.2	1.6		3.4	3.0	3.1	28.9	27.5		27.6	27.1	24.4
Level of Service	A	A		A	A	A	C	C		C	C	C
Approach Delay (s)		1.6			3.0			27.9			25.7	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM Average Control Delay			3.9			HCM Level of Service			A			
HCM Volume to Capacity ratio			0.33									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			13.0			
Intersection Capacity Utilization			65.4%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2015 No-Build AM

3: Green Heron Road & Woodruff Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	4	1	26	1	1	6	8	576	45	54	834	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.88			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1592			1765	1538	1719	3401		1719	3438	1538
Flt Permitted		0.97			0.87	1.00	0.30	1.00		0.39	1.00	1.00
Satd. Flow (perm)		1546			1578	1538	550	3401		704	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	1	29	1	1	7	9	640	50	60	927	4
RTOR Reduction (vph)	0	26	0	0	0	6	0	7	0	0	0	1
Lane Group Flow (vph)	0	8	0	0	2	1	9	683	0	60	927	3
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		7.6			7.6	7.6	51.1	51.1		51.1	51.1	51.1
Effective Green, g (s)		7.6			7.6	7.6	51.1	51.1		51.1	51.1	51.1
Actuated g/C Ratio		0.11			0.11	0.11	0.73	0.73		0.73	0.73	0.73
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		168			171	167	402	2483		514	2510	1123
v/s Ratio Prot								0.20			c0.27	
v/s Ratio Perm		c0.01			0.00	0.00	0.02			0.09		0.00
v/c Ratio		0.05			0.01	0.00	0.02	0.27		0.12	0.37	0.00
Uniform Delay, d1		28.0			27.8	27.8	2.6	3.2		2.8	3.5	2.6
Progression Factor		1.00			1.00	1.00	0.23	0.19		0.28	0.33	0.23
Incremental Delay, d2		0.2			0.0	0.0	0.1	0.3		0.4	0.4	0.0
Delay (s)		28.1			27.9	27.8	0.7	0.9		1.2	1.6	0.6
Level of Service		C			C	C	A	A		A	A	A
Approach Delay (s)		28.1			27.9			0.9			1.5	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM Average Control Delay		1.9			HCM Level of Service			A				
HCM Volume to Capacity ratio		0.33										
Actuated Cycle Length (s)		70.0			Sum of lost time (s)			11.3				
Intersection Capacity Utilization		68.8%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												


















I-85/I-385 Interchange Improvements 2015 No-Build AM

4: Woodruff Industrial Lane & Woodruff Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	36	5	58	21	5	2	12	512	79	156	854	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.86		1.00	0.96		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1561		1719	1742		1719	3369		1719	3418	
Flt Permitted	0.61	1.00		0.71	1.00		0.28	1.00		0.35	1.00	
Satd. Flow (perm)	1105	1561		1287	1742		498	3369		636	3418	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	6	64	23	6	2	13	569	88	173	949	39
RTOR Reduction (vph)	0	58	0	0	2	0	0	6	0	0	2	0
Lane Group Flow (vph)	40	12	0	23	6	0	13	651	0	173	986	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	19.3	12.2		14.7	9.9		91.9	89.3		105.0	96.4	
Effective Green, g (s)	19.3	12.2		14.7	9.9		91.9	89.3		105.0	96.4	
Actuated g/C Ratio	0.14	0.09		0.10	0.07		0.66	0.64		0.75	0.69	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	183	136		150	123		350	2149		552	2354	
v/s Ratio Prot	c0.01	0.01		0.01	0.00		0.00	0.19		c0.02	c0.29	
v/s Ratio Perm	c0.02			0.01			0.02			0.21		
v/c Ratio	0.22	0.09		0.15	0.05		0.04	0.30		0.31	0.42	
Uniform Delay, d1	53.3	58.8		56.8	60.7		8.4	11.4		5.5	9.5	
Progression Factor	1.00	1.00		1.00	1.00		0.47	0.40		0.21	0.39	
Incremental Delay, d2	1.0	0.4		0.8	0.3		0.1	0.4		0.5	0.5	
Delay (s)	54.2	59.2		57.6	60.9		4.0	5.0		1.7	4.2	
Level of Service	D	E		E	E		A	A		A	A	
Approach Delay (s)		57.4			58.5			4.9			3.8	
Approach LOS		E			E			A			A	
Intersection Summary												
HCM Average Control Delay			8.1			HCM Level of Service				A		
HCM Volume to Capacity ratio			0.38									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)				18.0		
Intersection Capacity Utilization			61.5%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												












I-85/I-385 Interchange Improvements
2015 No-Build AM

5: I-85 SB Ramps & Woodruff Road

																		
Movement	WBL2	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER							
Lane Configurations																		
Volume (vph)	346	0	232	0	509	82	464	813	0	0	0							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900							
Total Lost time (s)	5.0		5.0		6.3	6.3	6.5	6.1										
Lane Util. Factor	0.97		0.88		0.95	1.00	1.00	0.95										
Frt	1.00		0.85		1.00	0.85	1.00	1.00										
Flt Protected	0.95		1.00		1.00	1.00	0.95	1.00										
Satd. Flow (prot)	3335		2707		3438	1538	1719	3438										
Flt Permitted	0.95		1.00		1.00	1.00	0.36	1.00										
Satd. Flow (perm)	3335		2707		3438	1538	655	3438										
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90							
Adj. Flow (vph)	384	0	258	0	566	91	516	903	0	0	0							
RTOR Reduction (vph)	0	0	216	0	0	44	0	0	0	0	0							
Lane Group Flow (vph)	384	0	42	0	566	47	516	903	0	0	0							
Turn Type	custom		custom		Perm		pm+pt											
Protected Phases					2		1		6									
Permitted Phases	4		4		2		6											
Actuated Green, G (s)	23.0		23.0		71.6		71.6		105.9		105.9							
Effective Green, g (s)	23.0		23.0		71.6		71.6		105.9		105.9							
Actuated g/C Ratio	0.16		0.16		0.51		0.51		0.76		0.76							
Clearance Time (s)	5.0		5.0		6.3		6.3		6.5		6.1							
Vehicle Extension (s)	4.3		4.3		4.3		4.3		4.3		4.3							
Lane Grp Cap (vph)	548		445		1758		787		705		2601							
v/s Ratio Prot					0.16		c0.14		0.26									
v/s Ratio Perm	c0.12		0.02				0.03		c0.41									
v/c Ratio	0.70		0.10		0.32		0.06		0.73		0.35							
Uniform Delay, d1	55.2		49.7		20.0		17.2		7.9		5.6							
Progression Factor	1.00		1.00		0.37		0.22		1.37		0.33							
Incremental Delay, d2	4.5		0.1		0.5		0.1		3.9		0.3							
Delay (s)	59.7		49.8		7.8		4.0		14.7		2.2							
Level of Service	E		D		A		A		B		A							
Approach Delay (s)			55.8		7.3				6.7		0.0							
Approach LOS			E		A				A		A							
Intersection Summary																		
HCM Average Control Delay			18.5		HCM Level of Service		B											
HCM Volume to Capacity ratio			0.71															
Actuated Cycle Length (s)			140.0		Sum of lost time (s)		11.5											
Intersection Capacity Utilization			74.2%		ICU Level of Service		D											
Analysis Period (min)			15															
c Critical Lane Group																		

I-85/I-385 Interchange Improvements
2015 No-Build AM

6: I-85 NB Ramps & Woodruff Road

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	331	583	698	157	0	946
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	0.88	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	2707	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	2707	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	368	648	776	174	0	1051
RTOR Reduction (vph)	0	398	0	79	0	0
Lane Group Flow (vph)	368	250	776	95	0	1051
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	32.4	32.4	76.5	76.5		95.5
Effective Green, g (s)	32.4	32.4	76.5	76.5		88.5
Actuated g/C Ratio	0.23	0.23	0.55	0.55		0.63
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	772	626	1879	840		2173
v/s Ratio Prot	c0.11	0.09	0.23			c0.31
v/s Ratio Perm				0.06		
v/c Ratio	0.48	0.40	0.41	0.11		0.48
Uniform Delay, d1	46.5	45.6	18.6	15.4		13.6
Progression Factor	1.00	1.00	0.81	2.48		1.00
Incremental Delay, d2	0.7	0.7	0.6	0.3		0.2
Delay (s)	47.2	46.2	15.6	38.4		13.9
Level of Service	D	D	B	D		B
Approach Delay (s)	46.6		19.8			13.9
Approach LOS	D		B			B
Intersection Summary						
HCM Average Control Delay			26.8		HCM Level of Service	C
HCM Volume to Capacity ratio			0.48			
Actuated Cycle Length (s)			140.0		Sum of lost time (s)	18.6
Intersection Capacity Utilization			49.8%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

I-85/I-385 Interchange Improvements
2015 No-Build AM

























7: Carolina Point Pkwy & Woodruff Road



Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations	↰↰	↰	↰↰	↰	↰	↰↰
Volume (vph)	113	86	1116	165	123	1441
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3335	1538	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.21	1.00
Satd. Flow (perm)	3335	1538	3438	1538	382	3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	126	96	1240	183	137	1601
RTOR Reduction (vph)	0	88	0	32	0	0
Lane Group Flow (vph)	126	8	1240	151	137	1601
Turn Type		Prot		Perm	Perm	
Protected Phases	4	4	2 3 6			2 3 6
Permitted Phases	4			2 3 6	2 3 6	
Actuated Green, G (s)	12.0	12.0	115.4	115.4	115.4	115.4
Effective Green, g (s)	12.0	12.0	115.4	115.4	115.4	115.4
Actuated g/C Ratio	0.09	0.09	0.82	0.82	0.82	0.82
Clearance Time (s)	7.0	7.0				
Vehicle Extension (s)	4.3	4.3				
Lane Grp Cap (vph)	286	132	2834	1268	315	2834
v/s Ratio Prot	c0.04	0.01	0.36			c0.47
v/s Ratio Perm				0.10	0.36	
v/c Ratio	0.44	0.06	0.44	0.12	0.43	0.56
Uniform Delay, d1	60.8	58.8	3.4	2.4	3.4	4.0
Progression Factor	1.00	1.00	0.31	0.00	0.12	0.11
Incremental Delay, d2	1.7	0.3	0.1	0.1	1.1	0.2
Delay (s)	62.5	59.1	1.2	0.1	1.5	0.7
Level of Service	E	E	A	A	A	A
Approach Delay (s)	61.1		1.1			0.7
Approach LOS	E		A			A
Intersection Summary						
HCM Average Control Delay			4.8		HCM Level of Service	A
HCM Volume to Capacity ratio			0.56			
Actuated Cycle Length (s)			140.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			60.0%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						
























I-85/I-385 Interchange Improvements
2015 No-Build AM

8: Woodruff Road & Market Point Drive

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	100	1048	54	24	1468	60	33	1	34	27	1	63	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	111	1164	60	27	1631	67	37	1	38	30	1	70	
RTOR Reduction (vph)	0	0	17	0	0	21	0	0	33	0	0	66	
Lane Group Flow (vph)	111	1164	43	27	1631	46	37	1	5	30	1	4	
Turn Type	Prot	pm+ov		Prot	Perm		Prot	pm+ov		Prot	Perm		
Protected Phases	5	2	3	1	6	3		8	1	7	4		
Permitted Phases	2			6						8			4
Actuated Green, G (s)	9.8	93.6	101.4	6.9	90.7	90.7	7.8	11.5	18.4	4.2	7.9	7.9	
Effective Green, g (s)	9.8	93.6	101.4	6.9	90.7	90.7	7.8	11.5	18.4	4.2	7.9	7.9	
Actuated g/C Ratio	0.07	0.67	0.72	0.05	0.65	0.65	0.06	0.08	0.13	0.03	0.06	0.06	
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8	
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	233	2299	1114	85	2227	996	96	149	202	100	194	87	
v/s Ratio Prot	0.03	c0.34	0.00	0.02	c0.47	c0.02		0.00	c0.00	0.01	0.00		
v/s Ratio Perm	0.03			0.03				0.00			c0.00		
v/c Ratio	0.48	0.51	0.04	0.32	0.73	0.05	0.39	0.01	0.02	0.30	0.01	0.05	
Uniform Delay, d1	62.6	11.6	5.5	64.3	16.5	8.9	63.8	59.0	53.0	66.5	62.3	62.5	
Progression Factor	1.25	0.52	0.29	0.72	0.15	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.2	0.7	0.0	2.7	1.7	0.1	4.0	0.0	0.1	2.7	0.0	0.3	
Delay (s)	80.5	6.7	1.6	48.7	4.2	0.1	67.8	59.0	53.1	69.1	62.4	62.8	
Level of Service	F	A	A	D	A	A	E	E	D	E	E	E	
Approach Delay (s)	12.6		4.7				60.3			64.7			
Approach LOS	B		A				E			E			
Intersection Summary													
HCM Average Control Delay			11.2	HCM Level of Service					B				
HCM Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			140.0	Sum of lost time (s)					29.9				
Intersection Capacity Utilization			62.6%	ICU Level of Service					B				
Analysis Period (min)			15										
c Critical Lane Group													


















I-85/I-385 Interchange Improvements
2015 No-Build AM

9: Woodruff Road & Garlington Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	773	116	103	1018	465	253	243	66	140	112	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	3335	1752		3335	1810	1538
Flt Permitted	0.95	1.00	1.00	0.26	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	475	3438	1538	3335	1752		3335	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	244	859	129	114	1131	517	281	270	73	156	124	312
RTOR Reduction (vph)	0	0	66	0	0	217	0	7	0	0	0	0
Lane Group Flow (vph)	244	859	63	114	1131	300	281	336	0	156	124	312
Turn Type	Prot		Perm	pm+pt		Perm	Prot			Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6						Free
Actuated Green, G (s)	14.4	67.9	67.9	71.5	62.5	62.5	17.1	31.6		9.8	24.3	140.0
Effective Green, g (s)	14.4	67.9	67.9	71.5	62.5	62.5	17.1	31.6		9.8	24.3	140.0
Actuated g/C Ratio	0.10	0.49	0.49	0.51	0.45	0.45	0.12	0.23		0.07	0.17	1.00
Clearance Time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	343	1667	746	323	1535	687	407	395		233	314	1538
v/s Ratio Prot	c0.07	0.25		0.02	c0.33		c0.08	c0.19		0.05	0.07	
v/s Ratio Perm			0.04	0.16		0.20						0.20
v/c Ratio	0.71	0.52	0.08	0.35	0.74	0.44	0.69	0.85		0.67	0.39	0.20
Uniform Delay, d1	60.8	24.8	19.4	18.7	32.0	26.6	58.9	51.9		63.5	51.3	0.0
Progression Factor	1.22	0.77	0.93	0.49	0.48	0.06	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.7	1.0	0.2	0.9	2.8	1.7	5.6	16.8		8.2	1.3	0.3
Delay (s)	81.1	20.1	18.2	10.0	18.1	3.4	64.5	68.7		71.7	52.6	0.3
Level of Service	F	C	B	A	B	A	E	E		E	D	A
Approach Delay (s)		32.0			13.3			66.8			30.1	
Approach LOS		C			B			E			C	
Intersection Summary												
HCM Average Control Delay			29.0				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			140.0				Sum of lost time (s)			21.7		
Intersection Capacity Utilization			73.5%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2015 No-Build AM

10: Woodruff Road & I-385 SB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	830	149	64	1091	0	0	0	0	832	0	495
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		4.0
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.98		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3359		1719	3438					3335		1538
Flt Permitted		1.00		0.14	1.00					0.95		1.00
Satd. Flow (perm)		3359		261	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	922	166	71	1212	0	0	0	0	924	0	550
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1078	0	71	1212	0	0	0	0	924	0	550
Turn Type			pm+pt							Prot		Free
Protected Phases		2		1	6					4		
Permitted Phases				6								Free
Actuated Green, G (s)		68.0		81.2	81.2					46.5		140.0
Effective Green, g (s)		68.0		81.2	81.2					46.5		140.0
Actuated g/C Ratio		0.49		0.58	0.58					0.33		1.00
Clearance Time (s)		6.6		6.6	6.6					5.7		
Vehicle Extension (s)		4.3		4.3	4.3					4.3		
Lane Grp Cap (vph)		1632		220	1994					1108		1538
v/s Ratio Prot		c0.32		0.02	c0.35					c0.28		
v/s Ratio Perm				0.17								0.36
v/c Ratio		0.66		0.32	0.61					0.83		0.36
Uniform Delay, d1		27.3		17.6	19.1					43.2		0.0
Progression Factor		0.72		0.12	0.29					1.02		1.00
Incremental Delay, d2		1.8		0.4	0.4					5.9		0.7
Delay (s)		21.5		2.6	5.9					49.8		0.7
Level of Service		C		A	A					D		A
Approach Delay (s)		21.5			5.8			0.0			31.5	
Approach LOS		C			A			A			C	
Intersection Summary												
HCM Average Control Delay			20.1			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)				18.9		
Intersection Capacity Utilization			114.8%			ICU Level of Service				H		
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2015 No-Build AM

11: Woodruff Road & I-385 NB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Volume (vph)	605	1057	0	0	632	614	523	0	254	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.11	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	190	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	672	1174	0	0	702	682	581	0	282	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	452	0	0	54	0	0	0
Lane Group Flow (vph)	672	1174	0	0	702	230	581	0	228	0	0	0
Turn Type	pm+pt				Perm		Prot	custom				
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	83.9	83.9			31.9	31.9	45.0		45.0			
Effective Green, g (s)	83.9	83.9			31.9	31.9	45.0		45.0			
Actuated g/C Ratio	0.60	0.60			0.23	0.23	0.32		0.32			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	615	2060			783	350	553		494			
v/s Ratio Prot	c0.36	0.34			0.20		c0.34					
v/s Ratio Perm	c0.30					0.15			0.15			
v/c Ratio	1.09	0.57			0.90	0.66	1.05		0.46			
Uniform Delay, d1	40.0	17.1			52.4	49.1	47.5		37.8			
Progression Factor	0.99	0.71			0.75	1.77	1.00		1.00			
Incremental Delay, d2	58.9	0.8			11.0	6.4	52.2		1.1			
Delay (s)	98.4	12.9			50.3	93.3	99.7		38.9			
Level of Service	F	B			D	F	F		D			
Approach Delay (s)		44.1			71.5			79.9			0.0	
Approach LOS		D			E			E			A	
Intersection Summary												
HCM Average Control Delay			60.9			HCM Level of Service			E			
HCM Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			11.1			
Intersection Capacity Utilization			114.8%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												



















I-85/I-385 Interchange Improvements
2015 No-Build AM

12: Woodruff Road & Commercial Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	1102	93	21	1099	44	85	5	7	78	20	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3398		1719	3418		1719	1654		1719	1604	
Flt Permitted	0.11	1.00		0.19	1.00		0.39	1.00		0.75	1.00	
Satd. Flow (perm)	195	3398		350	3418		710	1654		1354	1604	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	1224	103	23	1221	49	94	6	8	87	22	69
RTOR Reduction (vph)	0	9	0	0	4	0	0	6	0	0	62	0
Lane Group Flow (vph)	129	1318	0	23	1266	0	94	8	0	87	29	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	42.1	42.1		31.9	31.9		17.0	17.0		6.8	6.8	
Effective Green, g (s)	42.1	42.1		31.9	31.9		17.0	17.0		6.8	6.8	
Actuated g/C Ratio	0.60	0.60		0.46	0.46		0.24	0.24		0.10	0.10	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	224	2044		160	1558		243	402		132	156	
v/s Ratio Prot	0.04	c0.39			c0.37		c0.03	0.00			0.02	
v/s Ratio Perm	0.31			0.07			0.07			c0.06		
v/c Ratio	0.58	0.64		0.14	0.81		0.39	0.02		0.66	0.18	
Uniform Delay, d1	10.8	9.1		11.1	16.5		21.4	20.2		30.5	29.0	
Progression Factor	1.20	1.08		0.61	0.75		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.9	1.3		1.6	4.2		1.6	0.0		13.1	0.9	
Delay (s)	17.0	11.1		8.4	16.5		23.1	20.2		43.6	30.0	
Level of Service	B	B		A	B		C	C		D	C	
Approach Delay (s)		11.7			16.3			22.7			36.6	
Approach LOS		B			B			C			D	
Intersection Summary												
HCM Average Control Delay			15.5			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			21.7			
Intersection Capacity Utilization			71.8%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												




















I-85/I-385 Interchange Improvements
2015 No-Build AM

13: Woodruff Road & Smith Hines Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	1017	164	124	1088	1	74	1	104	1	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.92			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1719	3367		1719	3438			1633			1667	
Flt Permitted	0.21	1.00		0.18	1.00			0.86			0.92	
Satd. Flow (perm)	380	3367		333	3438			1441			1548	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	1130	182	138	1209	1	82	1	116	1	1	2
RTOR Reduction (vph)	0	18	0	0	0	0	0	72	0	0	2	0
Lane Group Flow (vph)	7	1294	0	138	1210	0	0	127	0	0	2	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	49.9	49.9		50.2	50.2			8.8			8.8	
Effective Green, g (s)	49.9	49.9		50.2	50.2			8.8			8.8	
Actuated g/C Ratio	0.71	0.71		0.72	0.72			0.13			0.13	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	271	2400		239	2466			181			195	
v/s Ratio Prot	0.38			0.35								
v/s Ratio Perm	0.02			c0.41				c0.09			0.00	
v/c Ratio	0.03	0.54		0.58	0.49			0.70			0.01	
Uniform Delay, d1	2.9	4.7		4.8	4.3			29.3			26.8	
Progression Factor	0.15	0.10		1.94	1.43			1.00			1.00	
Incremental Delay, d2	0.1	0.7		0.9	0.1			13.0			0.0	
Delay (s)	0.6	1.1		10.2	6.3			42.3			26.8	
Level of Service	A	A		B	A			D			C	
Approach Delay (s)	1.1			6.7				42.3			26.8	
Approach LOS	A			A				D			C	
Intersection Summary												
HCM Average Control Delay	6.6			HCM Level of Service			A					
HCM Volume to Capacity ratio	0.60											
Actuated Cycle Length (s)	70.0			Sum of lost time (s)			11.0					
Intersection Capacity Utilization	90.0%			ICU Level of Service			E					
Analysis Period (min)	15											
c Critical Lane Group												























I-85/I-385 Interchange Improvements
2015 No-Build AM

14: Woodruff Road & Walmart Driveway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	1445	17	14	3250	83	49	2	25	84	1	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.86			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	
Satd. Flow (prot)	1719	3432		1719	3425		1719	1556			1711	
Flt Permitted	0.04	1.00		0.14	1.00		0.78	1.00			0.73	
Satd. Flow (perm)	67	3432		251	3425		1413	1556			1296	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	1606	19	16	3611	92	54	2	28	93	1	9
RTOR Reduction (vph)	0	0	0	0	1	0	0	25	0	0	3	0
Lane Group Flow (vph)	23	1625	0	16	3702	0	54	5	0	0	100	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	111.4	111.4		101.0	101.0		17.3	17.3			17.3	
Effective Green, g (s)	111.4	111.4		101.0	101.0		17.3	17.3			17.3	
Actuated g/C Ratio	0.80	0.80		0.72	0.72		0.12	0.12			0.12	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	102	2731		181	2471		175	192			160	
v/s Ratio Prot	0.01	c0.47			c1.08			0.00				
v/s Ratio Perm	0.17			0.06			0.04				c0.08	
v/c Ratio	0.23	0.59		0.09	1.50		0.31	0.03			0.63	
Uniform Delay, d1	41.6	5.5		5.8	19.5		55.9	54.0			58.3	
Progression Factor	0.75	0.50		0.60	0.54		1.00	1.00			1.00	
Incremental Delay, d2	1.6	0.9		0.4	225.2		1.6	0.1			9.0	
Delay (s)	32.8	3.7		3.9	235.7		57.5	54.1			67.3	
Level of Service	C	A		A	F		E	D			E	
Approach Delay (s)		4.1			234.7			56.3			67.3	
Approach LOS		A			F			E			E	
Intersection Summary												
HCM Average Control Delay			160.4			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.36									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			17.6			
Intersection Capacity Utilization			113.8%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												




















I-85/I-385 Interchange Improvements
2015 No-Build AM

15: Woodruff Road & Verdin Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	746	20	94	2081	54	337	247	27	47	200	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3425		1719	3425		1719	1810	1538	1719	1738	
Flt Permitted	0.05	1.00		0.28	1.00		0.17	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	86	3425		512	3425		299	1810	1538	1069	1738	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	829	22	104	2312	60	374	274	30	52	222	79
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	20	0	10	0
Lane Group Flow (vph)	44	850	0	104	2371	0	374	274	10	52	291	0
Turn Type	Perm			Perm			pm+pt			Perm	Perm	
Protected Phases	2			6			3		8		4	
Permitted Phases	2			6			8			8	4	
Actuated Green, G (s)	83.7	83.7		83.7	83.7		45.0	45.0	45.0	18.8	18.8	
Effective Green, g (s)	83.7	83.7		83.7	83.7		45.0	45.0	45.0	18.8	18.8	
Actuated g/C Ratio	0.60	0.60		0.60	0.60		0.32	0.32	0.32	0.13	0.13	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	51	2048		306	2048		307	582	494	144	233	
v/s Ratio Prot		0.25			c0.69		c0.18	0.15			0.17	
v/s Ratio Perm	0.51			0.20			c0.21		0.01	0.05		
v/c Ratio	0.86	0.41		0.34	1.16		1.22	0.47	0.02	0.36	1.25	
Uniform Delay, d1	23.4	15.1		14.2	28.1		41.5	38.0	32.4	55.1	60.6	
Progression Factor	0.83	0.90		0.80	0.77		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	79.7	0.5		1.9	74.7		124.1	1.0	0.0	2.4	143.3	
Delay (s)	99.1	14.0		13.3	96.5		165.6	38.9	32.5	57.6	203.9	
Level of Service	F	B		B	F		F	D	C	E	F	
Approach Delay (s)		18.2			93.0			108.5			182.3	
Approach LOS		B			F			F			F	
Intersection Summary												
HCM Average Control Delay	87.3			HCM Level of Service			F					
HCM Volume to Capacity ratio	1.16											
Actuated Cycle Length (s)	140.0			Sum of lost time (s)			11.5					
Intersection Capacity Utilization	125.4%			ICU Level of Service			H					
Analysis Period (min)	15											
c Critical Lane Group												



















I-85/I-385 Interchange Improvements
2015 No-Build AM

16: Woodruff Road & Butler Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	708	52	533	1893	1	162	28	390	22	29	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3402		1719	3438			1735	1538	1719	1750	
Flt Permitted		0.93		0.19	1.00			0.73	1.00	0.39	1.00	
Satd. Flow (perm)		3151		336	3438			1318	1538	700	1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	787	58	592	2103	1	180	31	433	24	32	9
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	35	0	7	0
Lane Group Flow (vph)	0	847	0	592	2104	0	0	211	398	24	34	0
Turn Type	Perm			pm+pt			Perm			pm+ov		Perm
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		56.4		102.3	102.3			26.4	66.0	26.4	26.4	
Effective Green, g (s)		56.4		102.3	102.3			26.4	66.0	26.4	26.4	
Actuated g/C Ratio		0.40		0.73	0.73			0.19	0.47	0.19	0.19	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1269		637	2512			249	725	132	330	
v/s Ratio Prot				c0.26	0.61				0.16		0.02	
v/s Ratio Perm		0.27		c0.42				c0.16	0.10	0.03		
v/c Ratio		0.67		0.93	0.84			0.85	0.55	0.18	0.10	
Uniform Delay, d1		34.1		29.9	13.1			54.9	26.4	47.7	47.0	
Progression Factor		0.55		1.19	0.59			1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.6		2.8	0.3			23.7	1.2	1.1	0.2	
Delay (s)		21.4		38.3	8.0			78.6	27.6	48.8	47.2	
Level of Service		C		D	A			E	C	D	D	
Approach Delay (s)		21.4			14.7			44.3			47.8	
Approach LOS		C			B			D			D	
Intersection Summary												
HCM Average Control Delay			21.0			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			11.3			
Intersection Capacity Utilization			109.1%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												
























I-85/I-385 Interchange Improvements
2015 No-Build AM

17: Woodruff Road & Bell Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	1105	90	28	2672	17	139	1	34	14	1	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3399		1719	3435			1694			1600	
Flt Permitted	0.04	1.00		0.18	1.00			0.67			0.95	
Satd. Flow (perm)	67	3399		327	3435			1176			1528	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	1228	100	31	2969	19	154	1	38	16	1	66
RTOR Reduction (vph)	0	4	0	0	0	0	0	6	0	0	4	0
Lane Group Flow (vph)	28	1324	0	31	2988	0	0	187	0	0	79	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	108.8	108.8		108.8	108.8			19.6			19.6	
Effective Green, g (s)	108.8	108.8		108.8	108.8			19.6			19.6	
Actuated g/C Ratio	0.78	0.78		0.78	0.78			0.14			0.14	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	52	2642		254	2669			165			214	
v/s Ratio Prot	0.39			c0.87								
v/s Ratio Perm	0.42			0.09				c0.16			0.05	
v/c Ratio	0.54	0.50		0.12	1.12			1.13			0.37	
Uniform Delay, d1	6.0	5.7		3.8	15.6			60.2			54.6	
Progression Factor	1.93	1.36		0.70	0.48			1.00			1.00	
Incremental Delay, d2	29.6	0.6		0.4	56.3			110.4			1.7	
Delay (s)	41.1	8.3		3.1	63.7			170.6			56.3	
Level of Service	D	A		A	E			F			E	
Approach Delay (s)	9.0			63.1				170.6			56.3	
Approach LOS	A			E				F			E	
Intersection Summary												
HCM Average Control Delay	51.7			HCM Level of Service			D					
HCM Volume to Capacity ratio	1.12											
Actuated Cycle Length (s)	140.0			Sum of lost time (s)			11.6					
Intersection Capacity Utilization	100.6%			ICU Level of Service			G					
Analysis Period (min)	15											
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2015 No-Build AM

18: Woodruff Road & SC 14
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	151	598	92	50	1477	199	369	384	132	132	229	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
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	0.98		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)	1719	3438	1538	1719	3377		1719	1810	1538	1719	1810	1538
Flt Permitted	0.06	1.00	1.00	0.36	1.00		0.19	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)	102	3438	1538	652	3377		345	1810	1538	452	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	168	664	102	56	1641	221	410	427	147	147	254	354
RTOR Reduction (vph)	0	0	33	0	7	0	0	0	75	0	0	18
Lane Group Flow (vph)	168	664	69	56	1855	0	410	427	72	147	254	336
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	82.0	71.3	94.3	74.8	67.7		44.0	32.0	39.1	23.0	16.0	26.7
Effective Green, g (s)	82.0	71.3	94.3	74.8	67.7		44.0	32.0	39.1	23.0	16.0	26.7
Actuated g/C Ratio	0.59	0.51	0.67	0.53	0.48		0.31	0.23	0.28	0.16	0.11	0.19
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	183	1751	1036	402	1633		334	414	430	138	207	293
v/s Ratio Prot	0.07	0.19	0.01	0.01	c0.55		c0.20	0.24	0.01	0.05	0.14	c0.09
v/s Ratio Perm	c0.47		0.03	0.07			c0.18		0.04	0.12		0.13
v/c Ratio	0.92	0.38	0.07	0.14	1.14		1.23	1.03	0.17	1.07	1.23	1.15
Uniform Delay, d1	44.1	20.9	7.8	15.9	36.1		42.2	54.0	38.1	57.1	62.0	56.6
Progression Factor	1.12	0.57	0.88	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	40.3	0.5	0.0	0.3	69.2		126.0	52.5	0.3	95.1	137.2	98.5
Delay (s)	89.9	12.5	6.9	16.1	105.4		168.2	106.5	38.4	152.2	199.2	155.2
Level of Service	F	B	A	B	F		F	F	D	F	F	F
Approach Delay (s)		25.8			102.8			122.1			169.4	
Approach LOS		C			F			F			F	

Intersection Summary

HCM Average Control Delay	102.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.9
Intersection Capacity Utilization	106.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

I-85/I-385 Interchange Improvements
2015 No-Build AM

19: E Parkins Mill Road & US 276

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	100	49	136	23	103	97	1419	75	84	1240	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3269		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.74	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1340	3269		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	111	54	151	26	114	108	1577	83	93	1378	99
RTOR Reduction (vph)	0	49	0	0	0	100	0	0	48	0	0	62
Lane Group Flow (vph)	117	116	0	151	26	14	108	1577	35	93	1378	37
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	9.8	5.8		6.0	7.8	7.8	7.6	27.2	27.2	5.0	24.6	24.6
Effective Green, g (s)	9.8	5.8		6.0	7.8	7.8	7.6	27.2	27.2	5.0	24.6	24.6
Actuated g/C Ratio	0.15	0.09		0.09	0.12	0.12	0.12	0.42	0.42	0.08	0.38	0.38
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	225	292		308	217	185	201	2067	644	257	1870	582
v/s Ratio Prot	0.03	0.04		c0.05	0.01		c0.06	c0.32		0.03	0.28	
v/s Ratio Perm	c0.05					0.01			0.02			0.02
v/c Ratio	0.52	0.40		0.49	0.12	0.07	0.54	0.76	0.05	0.36	0.74	0.06
Uniform Delay, d1	25.2	27.9		28.0	25.5	25.4	27.0	16.1	11.2	28.5	17.4	12.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.87	0.89	0.82	1.00	1.00	1.00
Incremental Delay, d2	3.2	1.8		1.9	0.5	0.3	3.2	2.2	0.1	1.4	2.6	0.2
Delay (s)	28.3	29.7		30.0	26.0	25.7	26.8	16.6	9.3	29.9	20.0	13.1
Level of Service	C	C		C	C	C	C	B	A	C	C	B
Approach Delay (s)		29.2			28.0			16.9			20.2	
Approach LOS		C			C			B			C	

Intersection Summary

HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

I-85/I-385 Interchange Improvements
2015 No-Build AM

























20: Duvall Drive & US 276



Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	346	96	1198	227	104	1245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4822		1719	4940
Flt Permitted	0.95	1.00	1.00		0.12	1.00
Satd. Flow (perm)	1719	1538	4822		221	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	384	107	1331	252	116	1383
RTOR Reduction (vph)	0	38	42	0	0	0
Lane Group Flow (vph)	384	69	1541	0	116	1383
Turn Type	Perm			Perm		
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	15.0	15.0	37.7		37.7	37.7
Effective Green, g (s)	15.0	15.0	37.7		37.7	37.7
Actuated g/C Ratio	0.23	0.23	0.58		0.58	0.58
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	397	355	2797		128	2865
v/s Ratio Prot	c0.22		0.32			0.28
v/s Ratio Perm		0.04			c0.52	
v/c Ratio	0.97	0.19	0.55		0.91	0.48
Uniform Delay, d1	24.8	20.1	8.4		12.1	8.0
Progression Factor	1.00	1.00	0.18		1.00	1.00
Incremental Delay, d2	36.7	0.5	0.6		57.5	0.6
Delay (s)	61.5	20.7	2.1		69.6	8.5
Level of Service	E	C	A		E	A
Approach Delay (s)	52.6		2.1			13.3
Approach LOS	D		A			B
Intersection Summary						
HCM Average Control Delay			13.7		HCM Level of Service	B
HCM Volume to Capacity ratio			0.92			
Actuated Cycle Length (s)			65.0		Sum of lost time (s)	12.3
Intersection Capacity Utilization			76.2%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						





















I-85/I-385 Interchange Improvements
2015 No-Build AM

23: US 276 & Millennium Blvd

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	102	1205	210	24	1680	57	71	75	61	4	14	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3206		1719	1810	2707
Flt Permitted	0.06	1.00	1.00	0.14	1.00	1.00	0.95	1.00		0.66	1.00	1.00
Satd. Flow (perm)	115	3438	1538	260	3438	1538	3335	3206		1188	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	113	1339	233	27	1867	63	79	83	68	4	16	42
RTOR Reduction (vph)	0	0	95	0	0	28	0	58	0	0	0	35
Lane Group Flow (vph)	113	1339	138	27	1867	35	79	93	0	4	16	7
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	71.2	63.2	63.2	62.9	59.3	59.3	8.0	16.2		9.4	8.8	16.8
Effective Green, g (s)	71.2	63.2	63.2	62.9	59.3	59.3	8.0	16.2		9.4	8.8	16.8
Actuated g/C Ratio	0.67	0.59	0.59	0.59	0.56	0.56	0.08	0.15		0.09	0.08	0.16
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	197	2038	912	203	1913	856	250	487		108	149	427
v/s Ratio Prot	c0.04	0.39		0.00	c0.54		c0.02	c0.03		0.00	0.01	0.00
v/s Ratio Perm	0.34		0.09	0.07		0.02				0.00		0.00
v/c Ratio	0.57	0.66	0.15	0.13	0.98	0.04	0.32	0.19		0.04	0.11	0.02
Uniform Delay, d1	22.3	14.5	9.7	10.7	23.0	10.7	46.7	39.5		44.4	45.3	37.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.2	1.0	0.2	0.5	15.3	0.0	1.2	0.6		0.2	1.0	0.0
Delay (s)	27.6	15.5	9.9	11.1	38.3	10.8	47.9	40.1		44.6	46.3	37.9
Level of Service	C	B	A	B	D	B	D	D		D	D	D
Approach Delay (s)		15.5			37.0			42.8			40.5	
Approach LOS		B			D			D			D	
Intersection Summary												
HCM Average Control Delay			28.2			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			106.6			Sum of lost time (s)				20.5		
Intersection Capacity Utilization			75.5%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2015 No-Build AM

24: Pelham Road & The Parkway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	234	936	955	0	1657	774	0	0	0	276	502	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	260	1040	1061	0	1841	860	0	0	0	307	558	200
RTOR Reduction (vph)	0	0	29	0	0	2	0	0	0	0	0	107
Lane Group Flow (vph)	260	1040	1032	0	1841	858	0	0	0	307	558	93
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	8.2	68.2	68.2		54.2	84.9				30.7	30.7	30.7
Effective Green, g (s)	8.2	68.2	68.2		54.2	84.9				30.7	30.7	30.7
Actuated g/C Ratio	0.07	0.62	0.62		0.49	0.77				0.28	0.28	0.28
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	249	2132	954		1694	1187				480	505	429
v/s Ratio Prot	0.08	0.30			0.54	0.20					c0.31	
v/s Ratio Perm			c0.67			0.36				0.18		0.06
v/c Ratio	1.04	0.49	1.08		1.09	0.72				0.64	1.10	0.22
Uniform Delay, d1	50.9	11.4	20.9		27.9	6.5				34.8	39.6	30.4
Progression Factor	1.00	1.00	1.00		0.82	0.89				1.00	1.00	1.00
Incremental Delay, d2	69.1	0.8	53.9		42.2	0.6				3.4	71.9	0.4
Delay (s)	120.0	12.2	74.8		65.2	6.4				38.1	111.5	30.8
Level of Service	F	B	E		E	A				D	F	C
Approach Delay (s)		52.2			46.5			0.0			75.2	
Approach LOS		D			D			A			E	
Intersection Summary												
HCM Average Control Delay			53.7		HCM Level of Service					D		
HCM Volume to Capacity ratio			1.09									
Actuated Cycle Length (s)			110.0		Sum of lost time (s)					11.1		
Intersection Capacity Utilization			145.4%		ICU Level of Service					H		
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2015 No-Build AM







25: Pelham Road & I-85 SB off ramp



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	↑↑
Volume (vph)	0	1212	1222	0	649	1209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1347	1358	0	721	1343
RTOR Reduction (vph)	0	0	0	0	0	11
Lane Group Flow (vph)	0	1347	1358	0	721	1332
Turn Type					Perm	
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		45.4	45.4		53.7	53.7
Effective Green, g (s)		45.4	45.4		53.7	53.7
Actuated g/C Ratio		0.41	0.41		0.49	0.49
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		1419	1419		839	1322
v/s Ratio Prot		0.39	c0.39		0.42	
v/s Ratio Perm						c0.49
v/c Ratio		0.95	0.96		0.86	1.01
Uniform Delay, d1		31.2	31.4		24.8	28.1
Progression Factor		0.93	0.84		1.00	1.00
Incremental Delay, d2		13.0	13.7		9.2	26.7
Delay (s)		42.0	40.1		34.1	54.8
Level of Service		D	D		C	D
Approach Delay (s)		42.0	40.1		47.6	
Approach LOS		D	D		D	
Intersection Summary						
HCM Average Control Delay			43.9		HCM Level of Service	D
HCM Volume to Capacity ratio			0.98			
Actuated Cycle Length (s)			110.0		Sum of lost time (s)	10.9
Intersection Capacity Utilization			122.0%		ICU Level of Service	H
Analysis Period (min)			15			
c Critical Lane Group						




















I-85/I-385 Interchange Improvements
2015 No-Build AM

26: Pelham Road & I-85 NB off ramp

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↘	↗
Volume (vph)	1110	0	0	647	910	948
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	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)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1233	0	0	719	1011	1053
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	1233	0	0	719	1011	1050
Turn Type					Perm	
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	36.2			36.2	63.0	63.0
Effective Green, g (s)	36.2			36.2	63.0	63.0
Actuated g/C Ratio	0.33			0.33	0.57	0.57
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	1131			1131	1910	881
v/s Ratio Prot	c0.36			0.21	0.30	
v/s Ratio Perm						c0.68
v/c Ratio	1.09			0.64	0.53	1.19
Uniform Delay, d1	36.9			31.3	14.4	23.5
Progression Factor	0.74			0.84	1.00	1.00
Incremental Delay, d2	46.9			2.2	0.4	97.8
Delay (s)	74.3			28.6	14.8	121.3
Level of Service	E			C	B	F
Approach Delay (s)	74.3			28.6	69.1	
Approach LOS	E			C	E	
Intersection Summary						
HCM Average Control Delay			63.5		HCM Level of Service	E
HCM Volume to Capacity ratio			1.16			
Actuated Cycle Length (s)			110.0		Sum of lost time (s)	10.8
Intersection Capacity Utilization			135.4%		ICU Level of Service	H
Analysis Period (min)			15			
c Critical Lane Group						




















I-85/I-385 Interchange Improvements
2015 No-Build AM

27: Pelham Road & Boland Court

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	1425	600	141	869	8	305	2	148	26	2	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.96		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.97	
Satd. Flow (prot)	1719	3285		1719	3433			1724	1538		1682	
Flt Permitted	0.29	1.00		0.06	1.00			0.69	1.00		0.51	
Satd. Flow (perm)	532	3285		110	3433			1258	1538		880	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	37	1583	667	157	966	9	339	2	164	29	2	13
RTOR Reduction (vph)	0	42	0	0	1	0	0	0	82	0	10	0
Lane Group Flow (vph)	37	2208	0	157	974	0	0	341	82	0	34	0
Turn Type	Perm			pm+pt			Perm			Perm		Perm
Protected Phases		2		1	6			8				4
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	59.0	59.0		71.0	71.0			26.0	26.0		26.0	
Effective Green, g (s)	59.0	59.0		71.0	71.0			26.0	26.0		26.0	
Actuated g/C Ratio	0.54	0.54		0.65	0.65			0.24	0.24		0.24	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	285	1762		149	2216			297	364		208	
v/s Ratio Prot		c0.67		c0.05	0.28							
v/s Ratio Perm	0.07			0.63				c0.27	0.05		0.04	
v/c Ratio	0.13	1.25		1.05	0.44			1.15	0.22		0.16	
Uniform Delay, d1	12.7	25.5		33.1	9.7			42.0	33.9		33.4	
Progression Factor	0.62	0.54		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.1	114.3		88.7	0.6			98.5	0.5		0.6	
Delay (s)	7.9	128.1		121.8	10.3			140.5	34.4		34.0	
Level of Service	A	F		F	B			F	C		C	
Approach Delay (s)		126.1			25.8			106.0			34.0	
Approach LOS		F			C			F			C	
Intersection Summary												
HCM Average Control Delay			93.9			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.21									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)			19.7			
Intersection Capacity Utilization			106.5%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												


















I-85/I-385 Interchange Improvements
2015 No-Build AM

28: Forsythia Dr & E Butler Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	0	16	16	0	118	2	978	11	41	882	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.88		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1585		1719	3432		1719	3432	
Flt Permitted		0.76	1.00		0.96		0.26	1.00		0.22	1.00	
Satd. Flow (perm)		1377	1538		1527		474	3432		405	3432	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	0	18	18	0	131	2	1087	12	46	980	11
RTOR Reduction (vph)	0	0	15	0	46	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	21	3	0	103	0	2	1098	0	46	990	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		10.2	10.2		10.2		32.8	32.8		32.8	32.8	
Effective Green, g (s)		10.2	10.2		10.2		32.8	32.8		32.8	32.8	
Actuated g/C Ratio		0.19	0.19		0.19		0.60	0.60		0.60	0.60	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		4.3	4.3		4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)		255	285		283		283	2047		242	2047	
v/s Ratio Prot								c0.32				0.29
v/s Ratio Perm		0.02	0.00		c0.07		0.00			0.11		
v/c Ratio		0.08	0.01		0.37		0.01	0.54		0.19	0.48	
Uniform Delay, d1		18.5	18.3		19.6		4.5	6.6		5.1	6.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		0.65	0.72	
Incremental Delay, d2		0.2	0.0		1.3		0.0	1.0		1.6	0.8	
Delay (s)		18.7	18.3		20.8		4.5	7.6		4.9	5.3	
Level of Service		B	B		C		A	A		A	A	
Approach Delay (s)		18.5			20.8			7.6			5.3	
Approach LOS		B			C			A			A	
Intersection Summary												
HCM Average Control Delay		7.6										
HCM Volume to Capacity ratio		0.50										
Actuated Cycle Length (s)		55.0										
Intersection Capacity Utilization		58.9%										
Analysis Period (min)		15										
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2015 No-Build AM

30: E Butler Road & I-385 SB Ramps

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1052	65	179	714	0	557	0	245	0	0	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			6.0	6.0			
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00			
Flt		0.99		1.00	1.00			1.00	0.85			
Flt Protected		1.00		0.95	1.00			0.95	1.00			
Satd. Flow (prot)		3408		1719	3438			1719	1538			
Flt Permitted		1.00		0.09	1.00			0.95	1.00			
Satd. Flow (perm)		3408		155	3438			1719	1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1169	72	199	793	0	619	0	272	0	0	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	105	0	0	0
Lane Group Flow (vph)	0	1237	0	199	793	0	0	619	167	0	0	0
Turn Type				pm+pt			Perm		Perm			
Protected Phases				1	6			4				
Permitted Phases		2		6			4		4			
Actuated Green, G (s)		40.7		60.0	60.0			38.0	38.0			
Effective Green, g (s)		40.7		60.0	60.0			38.0	38.0			
Actuated g/C Ratio		0.37		0.55	0.55			0.35	0.35			
Clearance Time (s)		6.0		6.0	6.0			6.0	6.0			
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3			
Lane Grp Cap (vph)		1261		274	1875			594	531			
v/s Ratio Prot				c0.09	0.23							
v/s Ratio Perm		c0.36		0.31				0.36	0.11			
v/c Ratio		0.98		0.73	0.42			1.04	0.31			
Uniform Delay, d1		34.3		26.9	14.8			36.0	26.4			
Progression Factor		1.02		0.64	1.39			1.00	1.00			
Incremental Delay, d2		19.7		7.0	0.5			48.3	0.5			
Delay (s)		54.5		24.4	21.0			84.3	27.0			
Level of Service		D		C	C			F	C			
Approach Delay (s)		54.5			21.7			66.8			0.0	
Approach LOS		D			C			E			A	
Intersection Summary												
HCM Average Control Delay			47.6			HCM Level of Service			D			
HCM Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)			18.0			
Intersection Capacity Utilization			86.9%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												
























I-85/I-385 Interchange Improvements
2015 No-Build AM

31: E Butler Road & I-385 NB Ramps

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		 			 							
Volume (vph)	413	1196	0	0	875	512	0	0	0	18	0	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1719	3438			3438	1538				1719		1538
Flt Permitted	0.13	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	234	3438			3438	1538				1719		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	459	1329	0	0	972	569	0	0	0	20	0	338
RTOR Reduction (vph)	0	0	0	0	0	351	0	0	0	0	0	60
Lane Group Flow (vph)	459	1329	0	0	972	218	0	0	0	20	0	278
Turn Type	pm+pt				custom				custom			custom
Protected Phases	5	2										8
Permitted Phases	2				6	6				8		
Actuated Green, G (s)	74.9	74.9			42.1	42.1				23.1		23.1
Effective Green, g (s)	74.9	74.9			42.1	42.1				23.1		23.1
Actuated g/C Ratio	0.68	0.68			0.38	0.38				0.21		0.21
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Vehicle Extension (s)	4.3	4.3			4.3	4.3				4.3		4.3
Lane Grp Cap (vph)	521	2341			1316	589				361		323
v/s Ratio Prot	c0.21	0.39										c0.18
v/s Ratio Perm	c0.38				0.28	0.14				0.01		
v/c Ratio	0.88	0.57			0.74	0.37				0.06		0.86
Uniform Delay, d1	27.0	9.1			29.2	24.4				34.7		41.9
Progression Factor	0.63	0.34			1.00	1.00				1.00		1.00
Incremental Delay, d2	1.9	0.1			3.7	1.8				0.1		21.1
Delay (s)	19.0	3.2			33.0	26.2				34.8		63.0
Level of Service	B	A			C	C				C		E
Approach Delay (s)		7.2			30.5			0.0			61.4	
Approach LOS		A			C			A			E	
Intersection Summary												
HCM Average Control Delay			22.2				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			110.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			86.9%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												




















I-85/I-385 Interchange Improvements
2015 No-Build AM

34: Frontage Road & Roper Mountain Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	61	94	69	14	11	526	766	647	61	1087	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1645		1633	1664	1538	1719	3438	1538	1719	3427	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.11	1.00	1.00	0.33	1.00	
Satd. Flow (perm)	1719	1645		1633	1664	1538	196	3438	1538	601	3427	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	68	104	77	16	12	584	851	719	68	1208	26
RTOR Reduction (vph)	0	61	0	0	0	11	0	0	200	0	2	0
Lane Group Flow (vph)	2	111	0	46	47	1	584	851	519	68	1232	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	7.0	7.0		4.0	4.0	4.0	61.0	61.0	61.0	31.0	31.0	
Effective Green, g (s)	7.0	7.0		4.0	4.0	4.0	61.0	61.0	61.0	31.0	31.0	
Actuated g/C Ratio	0.08	0.08		0.04	0.04	0.04	0.68	0.68	0.68	0.34	0.34	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	134	128		73	74	68	539	2330	1042	207	1180	
v/s Ratio Prot	0.00	c0.07		0.03	c0.03		c0.29	0.25			0.36	
v/s Ratio Perm						0.00	c0.45		0.34	0.11		
v/c Ratio	0.01	0.87		0.63	0.64	0.01	1.08	0.37	0.50	0.33	1.04	
Uniform Delay, d1	38.3	41.0		42.3	42.3	41.1	26.6	6.2	7.1	21.8	29.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.03	0.85	1.75	1.00	1.00	
Incremental Delay, d2	0.1	44.8		21.7	21.8	0.1	54.4	0.3	1.0	4.2	38.5	
Delay (s)	38.4	85.8		64.0	64.1	41.2	81.9	5.5	13.3	26.0	68.0	
Level of Service	D	F		E	E	D	F	A	B	C	E	
Approach Delay (s)		85.3			61.4			28.8			65.8	
Approach LOS		F			E			C			E	
Intersection Summary												
HCM Average Control Delay			45.3			HCM Level of Service			D			
HCM Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			18.0			
Intersection Capacity Utilization			92.2%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												













I-85/I-385 Interchange Improvements 2015 No-Build AM

35: I-385 NB Ramps & Roper Mountain Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	659	0	934	164	1005	0	0	963	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	732	0	1038	182	1117	0	0	1070	319
RTOR Reduction (vph)	0	0	0	0	0	56	0	0	0	0	0	206
Lane Group Flow (vph)	0	0	0	366	366	982	182	1117	0	0	1070	113
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				34.2	34.2	34.2	6.0	43.8			31.8	31.8
Effective Green, g (s)				34.2	34.2	34.2	6.0	43.8			31.8	31.8
Actuated g/C Ratio				0.38	0.38	0.38	0.07	0.49			0.35	0.35
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				621	621	1029	222	1673			1215	543
v/s Ratio Prot							0.05	c0.32			c0.31	
v/s Ratio Perm				0.22	0.22	c0.36						0.07
v/c Ratio				0.59	0.59	0.95	0.82	0.67			0.88	0.21
Uniform Delay, d1				22.3	22.3	27.1	41.5	17.6			27.3	20.3
Progression Factor				1.00	1.00	1.00	1.36	0.16			0.67	1.14
Incremental Delay, d2				2.2	2.2	18.4	17.6	1.6			1.0	0.1
Delay (s)				24.5	24.5	45.5	74.2	4.5			19.4	23.3
Level of Service				C	C	D	E	A			B	C
Approach Delay (s)		0.0			36.8			14.3			20.3	
Approach LOS		A			D			B			C	
Intersection Summary												
HCM Average Control Delay			25.1			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			18.0			
Intersection Capacity Utilization			88.0%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2015 No-Build AM

36: Roper Mountain Road & I-385 SB Ramps

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↑	↑	↑	↑↑		↑	↑	↑↑			
Volume (vph)	0	661	236	608	1014	0	508	0	284	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.32	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	587	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	734	262	676	1127	0	564	0	316	0	0	0
RTOR Reduction (vph)	0	0	170	0	0	0	0	0	178	0	0	0
Lane Group Flow (vph)	0	734	92	676	1127	0	282	282	138	0	0	0
Turn Type		Perm		pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		31.6	31.6	61.6	61.0		16.5	16.5	16.5			
Effective Green, g (s)		31.6	31.6	61.6	61.0		16.5	16.5	16.5			
Actuated g/C Ratio		0.35	0.35	0.68	0.68		0.18	0.18	0.18			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		1734	540	699	2330		299	299	496			
v/s Ratio Prot		0.15		c0.25	0.33							
v/s Ratio Perm			0.06	c0.41			c0.17	0.17	0.05			
v/c Ratio		0.42	0.17	0.97	0.48		0.94	0.94	0.28			
Uniform Delay, d1		22.3	20.2	16.1	7.0		36.3	36.3	31.6			
Progression Factor		0.74	0.26	0.52	0.45		1.00	1.00	1.00			
Incremental Delay, d2		0.7	0.7	19.5	0.5		37.8	37.8	0.6			
Delay (s)		17.1	5.8	27.8	3.6		74.1	74.1	32.2			
Level of Service		B	A	C	A		E	E	C			
Approach Delay (s)		14.2			12.7			59.1			0.0	
Approach LOS		B			B			E			A	
Intersection Summary												
HCM Average Control Delay			24.2			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			11.9			
Intersection Capacity Utilization			88.0%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2015 No-Build AM

37: Roper Mountain Road & Congaree Road

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	273	700	1	4	913	381	196	2	202	1	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.98	1.00
Satd. Flow (prot)	1719	4939			3437	1538	1719	1540			1780	1538
Flt Permitted	0.16	1.00			0.95	1.00	0.76	1.00			0.92	1.00
Satd. Flow (perm)	295	4939			3274	1538	1368	1540			1662	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	303	778	1	4	1014	423	218	2	224	1	2	1
RTOR Reduction (vph)	0	0	0	0	0	227	0	178	0	0	0	1
Lane Group Flow (vph)	303	779	0	0	1018	196	218	48	0	0	3	0
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	59.0	59.0			41.6	41.6	18.5	18.5			18.5	18.5
Effective Green, g (s)	59.0	59.0			41.6	41.6	18.5	18.5			18.5	18.5
Actuated g/C Ratio	0.66	0.66			0.46	0.46	0.21	0.21			0.21	0.21
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	377	3238			1513	711	281	317			342	316
v/s Ratio Prot	c0.10	0.16						0.03				
v/s Ratio Perm	c0.42				0.31	0.13	c0.16				0.00	0.00
v/c Ratio	0.80	0.24			0.67	0.27	0.78	0.15			0.01	0.00
Uniform Delay, d1	12.4	6.3			18.9	14.9	33.8	29.3			28.5	28.4
Progression Factor	1.00	1.00			0.75	0.74	1.00	1.00			1.00	1.00
Incremental Delay, d2	12.7	0.2			2.2	0.9	14.4	0.4			0.0	0.0
Delay (s)	25.1	6.5			16.3	11.8	48.2	29.8			28.5	28.4
Level of Service	C	A			B	B	D	C			C	C
Approach Delay (s)		11.7			15.0			38.8			28.5	
Approach LOS		B			B			D			C	

Intersection Summary

HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			