

Research Forest Dr & Grogans Mill Road

Int #
22

AM Peak Hour - 2045 Conventional Improvement							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	301	21.1	C	0.52	88	43.0
	NBT	234	36.8	D	0.66	242	
	NBR	222	26.0	C	0.36	236	
Eastbound	EBL	216	43.5	D	0.90	m139	Intersection LOS
	EBT	1687	45.0	D	0.84	m366	
	EBR	746	34.9	C	0.87	m414	
Southbound	SBL	74	55.4	E	0.50	95	D
	SBT	305	60.9	E	0.81	#174	
	SBR	247	33.0	C	0.52	214	
Westbound	WBL	471	66.1	E	0.94	#271	Max Movement V/C
	WBT	1764	46.2	D	0.85	353	
	WBR	320	23.0	C	0.43	177	
Operations:							Synchro

282895.7

Int #
22

PM Peak Hour - 2045 Conventional Improvement							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	785	52.6	D	0.99	#385	46.1
	NBT	262	31.5	C	0.58	m271	
	NBR	362	25.4	C	0.59	321	
Eastbound	EBL	191	71.2	E	0.94	m#183	Intersection LOS
	EBT	1620	40.9	D	0.82	365	
	EBR	444	16.4	B	0.47	m226	
Southbound	SBL	90	57.0	E	0.57	111	D
	SBT	249	52.5	D	0.68	128	
	SBR	336	45.3	D	0.77	#339	
Westbound	WBL	231	56.1	E	0.78	m#131	Max Movement V/C
	WBT	1756	59.1	E	0.98	m#444	
	WBR	179	19.4	B	0.26	m119	
Operations:							Synchro

299512.2

Lake Woodlands Dr & Grogans Mill Road

Int #
53

AM Peak Hour - 2045 Conventional Improvement							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	435	67.6	E	0.84	204	32.5
	NBT	1002	37.2	D	0.87	#228	
	NBR	258	9.6	A	0.44	29	
Eastbound	EBL	80	58.6	E	0.57	#108	Intersection LOS
	EBT	804	30.2	C	0.55	217	
	EBR	487	20.1	C	0.62	343	
Southbound	SBL	116	36.2	D	0.38	m55	C
	SBT	700	64.0	E	0.85	m#241	
	SBR	49	43.0	D	0.10	m41	
Westbound	WBL	172	59.3	E	0.54	m63	Max Movement V/C
	WBT	1291	12.5	B	0.77	274	
	WBR	514	13.5	B	0.69	m437	
Operations:							Synchro

Int #
53

PM Peak Hour - 2045 Conventional Improvement							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	764	56.2	E	0.96	#434	43.7
	NBT	874	24.2	C	0.59	235	
	NBR	411	21.9	C	0.61	m404	
Eastbound	EBL	29	47.8	D	0.25	m31	Intersection LOS
	EBT	1205	49.8	D	0.87	m395	
	EBR	743	34.8	C	0.85	m748	
Southbound	SBL	280	60.2	E	0.71	160	D
	SBT	882	75.2	E	0.99	#360	
	SBR	139	34.2	C	0.30	144	
Westbound	WBL	275	60.2	E	0.91	m117	Max Movement V/C
	WBT	1324	31.6	C	0.89	m427	
	WBR	154	15.7	B	0.21	m96	
Operations:							Synchro

Research Forest Dr & Grogans Mill Road - AM Peak Hour

AM Peak Hour - 2045 Quadrant - Research Forest Drive and Quadrant Roadway							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	301	48.6	D	0.72	173	18.1
	NBR	74					
Eastbound	EBT	1687	22.7	C	0.74	359	Intersection LOS
	EBR	962	8.1	A	0.52	189	
Southbound							B
Westbound	WBL	471	51.8	D	0.79	204	Max Movement V/C
	WBT	2011	5.4	A	0.58	171	
Operations: Synchro							0.79

AM Peak Hour - 2045 Quadrant - Research Forest Drive and Grogans Mill Road							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	301	23.8	C	0.28	101	13.9
	NBT	450	26.7	C	0.58	138	
Eastbound	NBR	222	32.5	C	0.64	192	Intersection LOS
	EBT	1761	2.2	A	0.56	33	
Southbound							B
	SBT	379	31.3	C	0.49	130	
Westbound	SBR	247	42.1	D	0.71	195	Max Movement V/C
	WBT	2235	13.3	B	0.71	437	
Operations: Synchro							0.71

AM Peak Hour - 2045 Quadrant - Total Movement Delays									
Control	Traffic Signal								
Approach	Movement	Volume	Mmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)	
Northbound	NBL	301	72.2	0.0	72.2	E	0.72	35.4	Intersection LOS
	NBT	234	31.7	0.0	31.7	C	0.58		
Eastbound	NBR	222	37.5	0.0	37.5	D	0.64	Intersection LOS	
	EBL	216	77.6	19.3	96.9	F	0.74		
Southbound	EBT	1687	24.9	0.0	24.9	F	0.71	D	
	EBR	746	23.1	0.0	23.1	C	0.81		
Westbound	SBL	74	84.7	29.1	113.8	F	0.72	Max Movement V/C	
	SBT	305	35.1	0.0	35.1	D	0.49		
Westbound	SBR	247	47.5	0.0	47.5	D	0.71	0.81	
	WBL	471	80.1	22.9	103.0	F	0.81		
Operations: Synchro							0.81	Intersection LOS	

215967.2

AM Peak Hour - 2045 Quadrant - Grogans Mill Road and Quadrant Roadway							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	301	23.8	C	0.28	101	14.9
	NBT	456	5.0	A	0.13	44	
Eastbound	EBL	216	42.8	D	0.74	m188	Intersection LOS
	EBR	1217	15.0	B	0.81	292	
Southbound							B
	SBT	305	3.8	A	0.29	15	
Westbound	SBR	74	2.6	A	0.09	10	Max Movement V/C
Operations: Synchro							0.81

Research Forest Dr & Grogans Mill Road - PM Peak Hour

PM Peak Hour - 2045 Quadrant - Research Forest Drive and Quadrant Roadway							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	785	31.4	C	0.86	#360	22.0
	NBR	90					
Eastbound	EBT	1620	30.9	C	0.85	390	Intersection LOS
	EBR	635	3.6	A	0.31	71	
Southbound							C
Westbound	WBL	231	55.5	E	0.71	m104	Max Movement V/C
	WBT	2092	13.2	B	0.77	284	
Operations: Synchro							0.86

PM Peak Hour - 2045 Quadrant - Research Forest Drive and Grogans Mill Road							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	463	19.5	B	0.43	93	15.9
	NBR	362	35.1	D	0.76	235	
Eastbound	EBT	1710	3.2	A	0.63	34	Intersection LOS
Southbound							B
	SBT	339	23.4	C	0.32	103	
Westbound	SBR	336	34.7	C	0.71	244	Max Movement V/C
	WBT	1987	18.3	B	0.74	438	
Operations: Synchro							0.76

PM Peak Hour - 2045 Quadrant - Total Movement Delays									
Control	Traffic Signal								
Approach	Movement	Volume	Mmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)	
Northbound	NBL	785	62.2	0.0	62.2	E	0.86	39.5	Intersection LOS
	NBT	262	24.6	0.0	24.6	C	0.43		
Eastbound	NBR	362	40.2	0.0	40.2	D	0.76	Intersection LOS	
	EBL	191	39.8	19.3	59.1	E	0.68		
Southbound	EBT	1620	34.1	0.0	34.1	C	0.85	D	
	EBR	444	14.1	0.0	14.1	B	0.45		
Westbound	SBL	90	58.3	29.1	87.4	F	0.86	Max Movement V/C	
	SBT	249	31.5	0.0	31.5	C	0.32		
Westbound	SBR	336	47.9	0.0	47.9	D	0.77	0.86	
	WBL	231	84.3	22.9	107.2	F	0.74		
Operations: Synchro							0.86	Intersection LOS	

245138.5

PM Peak Hour - 2045 Quadrant - Grogans Mill Road and Quadrant Roadway							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	785	30.8	C	0.73	256	17.4
	NBT	624	5.1	A	0.18	63	
Eastbound	EBL	191	16.7	B	0.68	m174	Intersection LOS
	EBR	675	10.5	B	0.45	134	
Southbound							B
	SBT	249	8.1	A	0.24	103	
Westbound	SBR	90	0.3	A	0.11	0	Max Movement V/C
Operations: Synchro							0.73

Int #

Int #

Int #

1

2

Total

Research Forest Dr & Grogans Mill Road - AM Peak Hour

AM Peak Hour - 2045 PDLT - Grogans Mill Road North Crossover							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	301	19.0	B	0.38	126	5.5
	NBT	234	32.1	C	0.29	102	
	NBR	222	2.4	A	0.19	38	
Eastbound	EBL	216	36.4	D	0.46	71	Intersection LOS
	EBT	1687	28.1	C	0.92	#491	
	EBR	746	0.2	A	0.28	0	
Southbound	SBL	74	18.0	B	0.18	79	A
	SBT	305	44.4	D	0.71	284	
	SBR	247	4.2	A	0.23	61	
Westbound	WBL	216	34.3	C	0.71	126	Max Movement V/C
	WBT	1687	19.1	B	0.83	437	
	WBR	320	0.3	A	0.21	0	
							0.36
Operations:							Synchro

AM Peak Hour - 2045 PDLT - Total Movement Delays								
Control	Traffic Signal							
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	301	33.7	0.0	33.7	C	0.38	25.0
	NBT	234	42.1	0.0	42.1	D	0.34	
	NBR	222	2.4	0.0	2.4	A	0.19	
Eastbound	EBL	216	46.4	0.0	46.4	D	0.46	Intersection LOS
	EBT	1687	28.1	0.0	28.1	C	0.92	
	EBR	746	16.4	0.0	16.4	B	0.54	
Southbound	SBL	74	32.0	0.0	32.0	C	0.18	C
	SBT	305	51.8	0.0	51.8	D	0.71	
	SBR	247	4.2	0.0	4.2	A	0.23	
Westbound	WBL	471	41.7	0.0	41.7	D	0.71	Max Movement V/C
	WBT	1764	19.1	0.0	19.1	B	0.83	
	WBR	320	6.5	0.0	6.5	A	0.36	
							0.92	
Operations:							Synchro	

164806.9

AM Peak Hour - 2045 PDLT - Research Forest Drive and Grogans Mill Road							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	301	19.0	B	0.38	126	20.0
	NBT	234	32.1	C	0.29	102	
	NBR	222	2.4	A	0.19	38	
Eastbound	EBL	216	36.4	D	0.46	71	Intersection LOS
	EBT	1687	28.1	C	0.92	#491	
	EBR	746	0.2	A	0.28	0	
Southbound	SBL	74	18.0	B	0.18	79	B
	SBT	305	44.4	D	0.71	284	
	SBR	247	4.2	A	0.23	61	
Westbound	WBL	216	34.3	C	0.71	126	Max Movement V/C
	WBT	1687	19.1	B	0.83	437	
	WBR	320	0.3	A	0.21	0	
							0.92
Operations:							Synchro

AM Peak Hour - 2045 PDLT - Grogans Mill Road South Crossover							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	301	14.7	B	0.19	81	9.8
	NBT	234	0.1	A	0.14	0	
	NBR	22		A			
Eastbound	EBL						Intersection LOS
	EBT						
	EBR	746	16.2	B	0.54	217	
Southbound	SBL						A
	SBT	776	7.4	A	0.58	141	
	SBR						
Westbound	WBL						Max Movement V/C
	WBT						
	WBR						
							0.58
Operations:							Synchro

Research Forest Dr & Grogans Mill Road - PM Peak Hour

Int # 6

PM Peak Hour - 2045 PDLT - Grogans Mill Road North Crossover							
Control		Traffic Signal					
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	785	0.9	A	0.88	#365	4.3
	NBT	262	29.9	C	0.29	108	
	NBR	362	3.6	A	0.31	75	
Eastbound	EBL	191	36.0	D	0.41	63	Intersection LOS
	EBT	1620	24.9	C	0.90	#439	
	EBR	444	0.1	A	0.17	0	
Southbound	SBL	90	15.6	B	0.20	88	A
	SBT	249	35.3	D	0.52	222	
	SBR	336	4.5	A	0.30	84	
Westbound	WBL	231	32.1	C	0.41	63	Max Movement V/C
	WBT	1756	23.6	C	0.90	#439	
	WBR	179	0.2	A	0.12	0	
Operations:							Synchro

Int # Total

PM Peak Hour - 2045 PDLT - Total Movement Delays								
Control		Traffic Signal						
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	785	19.2	0.0	19.2	B	0.88	21.9
	NBT	262	38.4	0.0	38.4	D	0.34	
	NBR	362	3.6	0.0	3.6	A	0.31	
Eastbound	EBL	191	44.5	0.0	44.5	D	0.41	Intersection LOS
	EBT	1620	24.9	0.0	24.9	C	0.90	
	EBR	444	4.4	0.0	4.4	A	0.30	
Southbound	SBL	90	29.8	0.0	29.8	C	0.20	C
	SBT	249	42.0	0.0	42.0	D	0.52	
	SBR	336	4.5	0.0	4.5	A	0.30	
Westbound	WBL	231	38.8	0.0	38.8	D	0.41	Max Movement V/C
	WBT	1756	23.6	0.0	23.6	C	0.90	
	WBR	179	1.9	0.0	1.9	A	0.21	
Operations:							Synchro	

142607.9

Int # 4/22/5

PM Peak Hour - 2045 PDLT - Research Forest Drive and Grogans Mill Road							
Control		Traffic Signal					
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	785	0.9	A	0.88	#365	18.1
	NBT	262	29.9	C	0.29	108	
	NBR	362	3.6	A	0.31	75	
Eastbound	EBL	191	36.0	D	0.41	63	Intersection LOS
	EBT	1620	24.9	C	0.90	#439	
	EBR	444	0.1	A	0.17	0	
Southbound	SBL	90	15.6	B	0.20	88	B
	SBT	249	35.3	D	0.52	222	
	SBR	336	4.5	A	0.30	84	
Westbound	WBL	231	32.1	C	0.41	63	Max Movement V/C
	WBT	1756	23.6	C	0.90	#439	
	WBR	179	0.2	A	0.12	0	
Operations:							Synchro

Int # 1

PM Peak Hour - 2045 PDLT - Grogans Mill Road South Crossover							
Control		Traffic Signal					
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	785	18.3	B	0.49	226	8.4
	NBT	262	0.1	A	0.20	0	
	NBR	362		A			
Eastbound	EBL						Intersection LOS
	EBT						
	EBR	444	4.3	A	0.30	51	
Southbound	SBL						A
	SBT	480	6.7	A	0.36	113	
	SBR						
Westbound	WBL						Max Movement V/C
	WBT						
	WBR						
Operations:							Synchro

Research Forest Dr & Grogans Mill Road - AM Peak Hour

AM Peak Hour - 2045 MUT - Grogans Mill Road North U-Turn							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBU	772	36.4	D	0.73	309	17.2
	NBT	770	1.5	A	0.43	46	
Eastbound							Intersection LOS
Southbound							B
	SBT	626	13.0	B	0.34	168	
Westbound							Max Movement V/C
							0.73
Operations:							Synchro

AM Peak Hour - 2045 MUT - Total Movement Delays								
Control	Traffic Signal							
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	301	110.4	26.8	137.2	F	0.73	28.3
	NBT	234	44.1	0.0	44.1	D	0.55	
	NBR	222	52.6	0.0	52.6	D	0.70	
Eastbound	EBL	216	55.5	21.8	77.3	E	0.73	Intersection LOS
	EBT	1687	2.4	0.0	2.4	A	0.58	
Southbound	EBR	746	2.4	0.0	2.4	A	0.60	C
	SBL	74	132.6	21.8	154.4	F	0.89	
	SBT	305	52.4	0.0	52.4	D	0.89	
Westbound	SBR	247	31.4	0.0	31.4	C	0.73	Max Movement V/C
	WBL	471	81.4	26.8	108.2	F	0.89	
	WBT	1764	7.1	0.0	7.1	A	0.61	
							0.89	Operations: Synchro
WBR							320	

159356.2

AM Peak Hour - 2045 MUT - Research Forest Drive and Grogans Mill Road							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBT	751	30.0	C	0.55	196	14.2
	NBR	296	40.0	D	0.70	#275	
Eastbound							Intersection LOS
	EBT	1687	2.4	A	0.58	26	B
	EBR	962	2.4	A	0.60	23	
Southbound							Max Movement V/C
	SBT	850	39.1	D	0.89	#381	0.89
	SBR	548	31.4	C	0.73	261	
Westbound							Max Movement V/C
							0.89
WBT							1764
WBR							791
Operations:							Synchro

AM Peak Hour - 2045 MUT - Grogans Mill Road South U-Turn							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBT	757	12.6	B	0.35	320	8.4
Eastbound							Intersection LOS
Southbound	SBU	290	40.5	D	0.73	m205	A
	SBT	1522	0.3	A	0.44	0	
Westbound							Max Movement V/C
							0.73
Operations:							Synchro

Research Forest Dr & Grogans Mill Road - PM Peak Hour

PM Peak Hour - 2045 MUT - Grogans Mill Road North U-Turn							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBU	1016	15.1	B	0.77	93	12.1
	NBT	632	0.9	A	0.35	0	
							Intersection LOS
Southbound	SBT	675	18.1	B	0.45	203	B
							Max Movement V/C
							0.77
Operations:							Synchro

PM Peak Hour - 2045 MUT - Total Movement Delays								
Control	Traffic Signal							
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	785	90.7	26.8	117.5	F	0.93	37.7
	NBT	262	43.7	0.0	43.7	D	0.66	
	NBR	362	47.8	0.0	47.8	D	0.66	
Eastbound	EBL	191	63.9	21.8	85.7	F	0.74	D
	EBT	1620	8.3	0.0	8.3	A	0.83	
	EBR	444	6.7	0.0	6.7	A	0.59	
Southbound	SBL	90	95.6	21.8	117.4	F	0.74	D
	SBT	249	34.0	0.0	34.0	C	0.45	
	SBR	336	32.8	0.0	32.8	C	0.93	
Westbound	WBL	231	43.5	26.8	70.3	E	0.77	0.93
	WBT	1756	24.4	0.0	24.4	C	0.90	
	WBR	179	12.7	0.0	12.7	B	0.38	
Operations:							Synchro	

211837.2

PM Peak Hour - 2045 MUT - Research Forest Drive and Grogans Mill Road							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBT	1238	21.2	C	0.56	216	19.2
	NBR	452	26.2	C	0.66	228	
							Intersection LOS
Eastbound	EBT	1620	8.3	A	0.83	m82	B
	EBR	635	6.7	A	0.59	m50	
							Intersection LOS
Southbound	SBT	570	15.7	B	0.37	152	B
	SBR	1121	32.8	C	0.93	#452	
							Intersection LOS
							Max Movement V/C
							0.93
Operations:							Synchro

PM Peak Hour - 2045 MUT - Grogans Mill Road South U-Turn							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBT	1409	21.6	C	0.66	485	15.5
							Intersection LOS
Southbound	SBU	281	35.6	D	0.74	212	B
	SBT	924	0.2	A	0.27	0	
							Intersection LOS
							Max Movement V/C
							0.74
Operations:							Synchro

Research Forest Dr & Grogans Mill Road - AM Peak Hour

AM Peak Hour - 2045 Tight Diamond - Research Forest Drive North Ramp Terminal							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	301	2.9	A	0.27	0	25.5
	NBT	450	4.2	A	0.49	199	
Eastbound							Intersection LOS
Southbound							C
	SBT	379	32.4	C	0.38	161	
	SBR	247	38.3	D	0.55	238	
Westbound							Max Movement V/C
	WBL	471	43.8	D	0.65	220	0.65
	WBR	320	31.8	C	0.56	279	
Operations:							Synchro

AM Peak Hour - 2045 Tight Diamond - Total Movement Delays								
Control	Traffic Signal							
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	301	34.9	3.0	37.9	D	0.38	39.1
	NBT	234	36.2	0.0	36.2	D	0.49	
	NBR	222	36.9	0.0	36.9	D	0.50	
Eastbound	EBL	216	50.0	3.0	53.0	D	0.60	Intersection LOS
	EBT	1687	0.0	0.0	0.0	A		
Southbound	EBR	746	36.6	0.0	36.6	D	0.76	D
	SBL	74	33.7	3.0	36.7	D	0.38	
	SBT	305	34.2	0.0	34.2	C	0.81	
	SBR	247	38.3	0.0	38.3	D	0.55	
Westbound							Max Movement V/C	
	WBL	471	45.6	3.0	48.6	D	0.65	0.81
	WBT	1764	0.0	0.0	0.0	A		
	WBR	320	31.8	0.0	31.8	C	0.56	
Operations:							Synchro	

119309.6

AM Peak Hour - 2045 Tight Diamond - Research Forest Drive South Ramp Terminal							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBT	535	32.0	C	0.38	149	25.0
	NBR	222	36.9	D	0.50	214	
Eastbound							Intersection LOS
	EBL	216	47.1	D	0.60	227	
Southbound							C
	EBR	746	36.6	D	0.76	353	
	SBL	74	1.3	A	0.12	0	
	SBT	776	1.8	A	0.43	0	
Westbound							Max Movement V/C
							0.76
Operations:							Synchro

Research Forest Dr & Grogans Mill Road - PM Peak Hour

PM Peak Hour - 2045 Tight Diamond - Research Forest Drive North Ramp Terminal							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	785	7.0	A	0.62	0	18.9
	NBT	453	2.2	A	0.45	0	
Eastbound							
							Intersection LOS
Southbound							B
	SBT	339	26.2	C	0.28	132	
	SBR	336	35.3	D	0.63	308	
Westbound	WBL	231	48.4	D	0.51	124	Max Movement V/C
	WBR	179	30.7	C	0.36	164	
							0.63
Operations:							Synchro

PM Peak Hour - 2045 Tight Diamond - Total Movement Delays								
Control	Traffic Signal							
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	785	39.1	3.0	42.1	D	0.62	38.2
	NBT	262	34.3	0.0	34.3	C	0.62	
	NBR	362	38.7	0.0	38.7	D	0.69	
Eastbound	EBL	191	60.5	3.0	63.5	E	0.65	
	EBT	1620	0.0	0.0	0.0	A		
	EBR	444	26.8	0.0	26.8	C	0.43	
Southbound	SBL	90	28.1	3.0	31.1	C	0.28	D
	SBT	249	27.8	0.0	27.8	C	0.56	
	SBR	336	35.3	0.0	35.3	D	0.63	
Westbound	WBL	231	50.0	3.0	53.0	D	0.51	Max Movement V/C
	WBT	1756	0.0	0.0	0.0	A		
	WBR	179	30.7	0.0	30.7	C	0.36	
							0.69	
Operations:							Synchro	

115501.5

PM Peak Hour - 2045 Tight Diamond - Research Forest Drive South Ramp Terminal							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBT	1047	32.1	C	0.62	284	27.0
	NBR	362	38.7	D	0.69	342	
Eastbound	EBL	191	53.5	D	0.65	214	
	EBR	444	26.8	C	0.43	188	
							Intersection LOS
Southbound	SBL	90	1.9	A	0.16	0	C
	SBT	480	1.6	A	0.28	0	
Westbound							Max Movement V/C
							0.69
Operations:							Synchro

Int #
4

Research Forest Dr & Grogans Mill Road - AM Peak Hour

AM Peak Hour - 2045 Diverging Diamond - Research Forest Drive North Ramp Terminal							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	301	0.0	A			13.0
	NBT	450	17.6	B	0.69	179	
Eastbound							Intersection LOS
Southbound							B
	SBT	379	14.3	B	0.30	81	
	SBR	247	10.9	B	0.30	31	
Westbound	WBL	471	25.8	C	0.75	#287	Max Movement V/C
	WBR	320	0.0	A			0.75
Operations:							Synchro

AM Peak Hour - 2045 Diverging Diamond - Total Movement Delays								
Control	Traffic Signal							
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	301	10.5	3.0	13.5	B	0.36	22.1
	NBT	234	28.1	0.0	28.1	C	0.69	
	NBR	222	0.0	0.0	0.0	A		
Eastbound	EBL	216	37.4	3.0	40.4	D	0.69	Intersection LOS
	EBT	1687	0.0	0.0	0.0	A		
	EBR	746	16.3	0.0	16.3	B	0.64	
Southbound	SBL	74	14.3	3.0	17.3	B	0.30	C
	SBT	305	34.9	0.0	34.9	C	0.75	
	SBR	247	10.9	0.0	10.9	B	0.30	
Westbound	WBL	471	46.4	3.0	49.4	D	0.75	Max Movement V/C
	WBT	1764	0.0	0.0	0.0	A		0.75
	WBR	320	0.0	0.0	0.0	A		
Operations:							Synchro	

66223.5

AM Peak Hour - 2045 Diverging Diamond - Research Forest Drive South Ramp Terminal							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBT	535	10.5	B	0.36	108	14.8
	NBR	222	0.0	A			
Eastbound	EBL	216	19.8	B	0.42	118	Intersection LOS
	EBR	746	16.3	B	0.64	176	
Southbound	SBL	74	0.0	A			B
	SBT	776	20.6	C	0.75	166	
Westbound							Max Movement V/C
Operations:							Synchro

Int #
3

Int #
Total

Int #
8

Research Forest Dr & Grogans Mill Road - PM Peak Hour

PM Peak Hour - 2045 Diverging Diamond - Research Forest Drive North Ramp Terminal							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	785	0.0	A			8.7
	NBT	453	10.2	B	0.56	m113	
							Intersection LOS
Eastbound							A
							Max Movement V/C
Southbound	SBT	339	18.3	B	0.35	85	0.60
	SBR	336	19.8	B	0.60	99	
Westbound	WBL	231	11.8	B	0.30	96	0.60
	WBR	179	0.0	A			
Operations: Synchro							

PM Peak Hour - 2045 Diverging Diamond - Total Movement Delays								
Control	Traffic Signal							
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	785	12.1	3.0	15.1	B	0.60	17.5
	NBT	262	22.3	0.0	22.3	C	0.60	
Eastbound	NBR	362	0.0	0.0	0.0	A		Intersection LOS
	EBL	191	36.5	3.0	39.5	D	0.56	
Southbound	EBT	1620	0.0	0.0	0.0	A		B
	EBR	444	9.2	0.0	9.2	A	0.32	
Westbound	SBL	90	18.3	3.0	21.3	C	0.35	Max Movement V/C
	SBT	249	37.0	0.0	37.0	D	0.65	
Westbound	SBR	336	19.8	0.0	19.8	B	0.60	0.65
	WBL	231	30.5	3.0	33.5	C	0.65	
Westbound	WBT	1756	0.0	0.0	0.0	A		Operations: Synchro
	WBR	179	0.0	0.0	0.0	A		

50955.7

PM Peak Hour - 2045 Diverging Diamond - Research Forest Drive South Ramp Terminal								
Control	Traffic Signal							
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)	
Northbound	NBT	1047	12.1	B	0.60	187	12.2	
	NBR	362	0.0	A				
Eastbound	EBL	191	26.3	C	0.52	122	Intersection LOS	
	EBR	444	9.2	A	0.32	79		
Southbound	SBL							B
	SBT	480	18.7	B	0.65	78		
							Max Movement V/C	
Westbound							0.65	
Operations: Synchro								

Int #
8

Lake Woodlands Dr & Grogans Mill Road - AM Peak Hour

AM Peak Hour - 2045 PDLT - Grogans Mill Road North Crossover							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	435	30.8	C	0.41	204	6.4
	NBT	1002	27.5	C	0.64	239	
	NBR	258	0.6	A	0.22	0	
Eastbound	EBL	80	70.5	E	0.34	42	Intersection LOS
	EBT	804	13.7	B	0.52	186	
	EBR	487	0.1	A	0.19	0	
Southbound	SBL	116	30.1	C	0.22	138	A
	SBT	700	24.6	C	0.45	160	
	SBR	49	0.1	A	0.04	0	
Westbound	WBL	172	46.4	D	0.45	60	Max Movement V/C
	WBT	1291	22.8	C	0.89	#351	
	WBR	514	0.2	A	0.20	0	
Operations:							Synchro

AM Peak Hour - 2045 PDLT - Total Movement Delays								
Control	Traffic Signal							
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	435	52.0	0.0	52.0	D	0.41	26.5
	NBT	1002	30.3	0.0	30.3	C	0.64	
	NBR	258	0.6	0.0	0.6	A	0.22	
Eastbound	EBL	80	73.3	0.0	73.3	E	0.47	Intersection LOS
	EBT	804	13.7	0.0	13.7	B	0.52	
	EBR	487	16.8	0.0	16.8	B	0.47	
Southbound	SBL	116	49.9	0.0	49.9	D	0.22	C
	SBT	700	33.3	0.0	33.3	C	0.45	
	SBR	49	0.1	0.0	0.1	A	0.04	
Westbound	WBL	172	55.1	0.0	55.1	E	0.45	Max Movement V/C
	WBT	1291	22.8	0.0	22.8	C	0.89	
	WBR	514	20.7	0.0	20.7	C	0.51	
Operations:							Synchro	

AM Peak Hour - 2045 PDLT - Lake Woodlands Drive and Grogans Mill Road							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	435	30.8	C	0.41	204	19.6
	NBT	1002	27.5	C	0.64	239	
	NBR	258	0.6	A	0.22	0	
Eastbound	EBL	80	70.5	E	0.34	42	Intersection LOS
	EBT	804	13.7	B	0.52	186	
	EBR	487	0.1	A	0.19	0	
Southbound	SBL	116	30.1	C	0.22	138	B
	SBT	700	24.6	C	0.45	160	
	SBR	49	0.1	A	0.04	0	
Westbound	WBL	172	46.4	D	0.45	60	Max Movement V/C
	WBT	1291	22.8	C	0.89	#351	
	WBR	514	0.2	A	0.20	0	
Operations:							Synchro

AM Peak Hour - 2045 PDLT - Grogans Mill Road South Crossover							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	435	21.2	C	0.37	139	8.2
	NBT	1002	0.1	A	0.21	0	
	NBR	258	0.2	A	0.18	0	
Eastbound	EBL	80	70.5	E	0.34	42	Intersection LOS
	EBT	804	13.7	B	0.52	186	
	EBR	487	0.1	A	0.19	0	
Southbound	SBL	116	30.1	C	0.22	138	A
	SBT	700	24.6	C	0.45	160	
	SBR	49	0.1	A	0.04	0	
Westbound	WBL	172	46.4	D	0.45	60	Max Movement V/C
	WBT	1291	22.8	C	0.89	#351	
	WBR	514	0.2	A	0.20	0	
Operations:							Synchro

Lake Woodlands Dr & Grogans Mill Road - PM Peak Hour

Int # 1

PM Peak Hour - 2045 PDLT - Grogans Mill Road North Crossover							
Control		Traffic Signal					
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	764	37.2	D	0.75	318	4.1
	NBT	874	28.2	C	0.58	245	
	NBR	411	1.9	A	0.33	30	
Eastbound	EBL	29	59.4	E	0.20	m28	Intersection LOS
	EBT	1205	14.1	B	0.79	337	
	EBR	743	0.2	A	0.28	0	
Southbound	SBL	280	36.6	D	0.53	267	A
	SBT	882	27.8	C	0.58	204	
	SBR	139	0.7	A	0.12	0	
Westbound	WBL	275	51.3	D	0.50	64	Max Movement V/C
	WBT	1324	14.3	B	0.70	362	
	WBR	154	0.0	A	0.06	0	
Operations:							Synchro

Int # Total

PM Peak Hour - 2045 PDLT - Total Movement Delays								
Control		Traffic Signal						
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	764	45.8	0.0	45.8	D	0.75	22.1
	NBT	874	30.1	0.0	30.1	C	0.58	
	NBR	411	1.9	0.0	1.9	A	0.33	
Eastbound	EBL	29	61.3	0.0	61.3	E	0.42	Intersection LOS
	EBT	1205	14.1	0.0	14.1	B	0.79	
	EBR	743	0.2	0.0	0.2	A	0.54	
Southbound	SBL	280	56.5	0.0	56.5	E	0.53	C
	SBT	882	27.8	0.0	27.8	C	0.67	
	SBR	139	0.7	0.0	0.7	A	0.12	
Westbound	WBL	275	51.3	0.0	51.3	D	0.67	Max Movement V/C
	WBT	1324	14.3	0.0	14.3	B	0.70	
	WBR	154	13.9	0.0	13.9	B	0.13	
Operations:							Synchro	

Int # 2/53/3

PM Peak Hour - 2045 PDLT - Lake Woodlands Drive and Grogans Mill Road							
Control		Traffic Signal					
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	764	37.2	D	0.75	318	19.9
	NBT	874	28.2	C	0.58	245	
	NBR	411	1.9	A	0.33	30	
Eastbound	EBL	29	59.4	E	0.20	m28	Intersection LOS
	EBT	1205	14.1	B	0.79	337	
	EBR	743	0.2	A	0.28	0	
Southbound	SBL	280	36.6	D	0.53	267	B
	SBT	882	27.8	C	0.58	204	
	SBR	139	0.7	A	0.12	0	
Westbound	WBL	275	51.3	D	0.50	64	Max Movement V/C
	WBT	1324	14.3	B	0.70	362	
	WBR	154	0.0	A	0.06	0	
Operations:							Synchro

Int # 4

PM Peak Hour - 2045 PDLT - Grogans Mill Road South Crossover							
Control		Traffic Signal					
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	764	8.6	A	0.45	m94	9.0
	NBT	874	0.0	A	0.18	0	
	NBR	411	0.1	A	0.27	0	
Eastbound	EBL	29	59.4	E	0.20	m28	Intersection LOS
	EBT	1205	14.1	B	0.79	337	
	EBR	743	0.2	A	0.28	0	
Southbound	SBL	280	36.6	D	0.53	267	A
	SBT	882	27.8	C	0.58	204	
	SBR	139	0.7	A	0.12	0	
Westbound	WBL	275	51.3	D	0.50	64	Max Movement V/C
	WBT	1324	14.3	B	0.70	362	
	WBR	154	0.0	A	0.06	0	
Operations:							Synchro

Lake Woodlands Dr & Grogans Mill Road - AM Peak Hour

AM Peak Hour - 2045 MUT - Lake Woodlands Drive West U-Turn							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound							5.2
Eastbound							Intersection LOS
	EBT	1371	4.2	A	0.41	83	
Southbound							A
Westbound	WBU	288	35.4	D	0.61	126	Max Movement V/C
	WBT	1775	1.0	A	0.38	0	
							0.61
Operations:							Synchro

AM Peak Hour - 2045 MUT - Total Movement Delays									
Control	Traffic Signal								
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)	
Northbound	NBL	435	86.4	40.8	127.2	F	0.81	30.5	Intersection LOS
	NBT	1002	21.7	0.0	21.7	C	0.64		
	NBR	258	28.9	0.0	28.9	C	0.81		
Eastbound	EBL	80	76.2	40.8	117.0	F	0.77	C	Intersection LOS
	EBT	804	18.6	0.0	18.6	B	0.41		
	EBR	487	20.0	0.0	20.0	B	0.49		
Southbound	SBL	116	62.1	30.6	92.7	F	0.34	C	Intersection LOS
	SBT	700	11.9	0.0	11.9	B	0.45		
	SBR	49	12.4	0.0	12.4	B	0.34		
Westbound	WBL	172	62.3	30.6	92.9	F	0.66	0.81	Max Movement V/C
	WBT	1291	13.6	0.0	13.6	B	0.66		
	WBR	514	16.5	0.0	16.5	B	0.77		
Operations:									Synchro

AM Peak Hour - 2045 MUT - Lake Woodlands Drive and Grogans Mill Road							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound							15.8
	NBT	1002	21.7	C	0.64	191	
	NBR	693	28.9	C	0.81	264	
Eastbound							Intersection LOS
	EBT	1000	14.3	B	0.40	165	
	EBR	659	15.8	B	0.49	152	
Southbound							B
	SBT	700	11.9	B	0.45	67	
	SBR	165	12.4	B	0.34	m56	
Westbound							Max Movement V/C
	WBT	1898	10.6	B	0.61	155	
	WBR	594	14.5	B	0.77	282	0.81
Operations:							Synchro

AM Peak Hour - 2045 MUT - Lake Woodlands Drive East U-Turn							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound							7.2
Eastbound	EBU	515	43.2	D	0.73	m227	Intersection LOS
	EBT	1178	0.1	A	0.25	0	
Southbound							A
Westbound							Max Movement V/C
	WBT	1977	2.0	A	0.66	36	
							0.73
Operations:							Synchro

Lake Woodlands Dr & Grogans Mill Road - PM Peak Hour

PM Peak Hour - 2045 MUT - Lake Woodlands Drive West U-Turn							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound							10.5
Eastbound							Intersection LOS
	EBT	1977	12.4	B	0.64	339	
Southbound							B
Westbound	WBU	555	36.9	D	0.73	m185	Max Movement V/C
	WBT	2227	2.2	A	0.46	0	0.73
Operations:							Synchro

PM Peak Hour - 2045 MUT - Total Movement Delays								
Control	Traffic Signal							
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	764	61.7	40.8	102.5	F	0.97	47.2
	NBT	874	12.1	0.0	12.1	B	0.39	
Eastbound	NBR	411	26.9	0.0	26.9	C	0.97	Intersection LOS
	EBL	29	70.7	40.8	111.5	F	0.80	
Southbound	EBT	1205	31.7	0.0	31.7	C	0.76	D
	EBR	743	47.7	0.0	47.7	D	0.93	
Westbound	SBL	280	78.9	30.6	109.5	F	0.61	Max Movement V/C
	SBT	882	16.9	0.0	16.9	B	0.40	
Westbound	SBR	139	22.8	0.0	22.8	C	0.61	0.97
	WBL	275	103.3	30.6	133.9	F	0.93	
Westbound	WBT	1324	49.4	0.0	49.4	D	0.93	0.97
	WBR	154	40.3	0.0	40.3	D	0.64	
Operations:							Synchro	

PM Peak Hour - 2045 MUT - Lake Woodlands Drive and Grogans Mill Road							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound							24.7
	NBT	874	12.1	B	0.39	97	
Eastbound	NBR	1175	26.9	C	0.97	439	Intersection LOS
	EBT	1514	19.2	B	0.76	273	
Southbound	EBR	1018	35.3	D	0.93	#462	C
	SBT	882	16.9	B	0.40	157	
Westbound	SBR	1175	22.8	C	0.61	281	Max Movement V/C
	WBT	2363	30.4	C	0.93	#448	
Westbound	WBR	183	23.5	C	0.29	m185	0.97
	Operations:						

PM Peak Hour - 2045 MUT - Lake Woodlands Drive East U-Turn							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound							9.5
Eastbound	EBU	793	15.6	B	0.80	m254	Intersection LOS
	EBT	1896	0.1	A	0.39	0	
Southbound							A
Westbound							Max Movement V/C
	WBT	1753	16.8	B	0.64	m214	
Operations:							Synchro

Lake Woodlands Dr & Grogans Mill Road - AM Peak Hour

AM Peak Hour - 2045 Tight Diamond - Lake Woodlands Drive North Ramp Terminal							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	435	1.3	A	0.36	0	13.8
	NBT	1082	2.9	A	0.47	0	
Eastbound							Intersection LOS
Southbound							B
	SBT	816	17.0	B	0.42	77	
	SBR	49	17.0	B	0.10	m18	
Westbound	WBL	172	43.7	D	0.35	96	Max Movement V/C
	WBR	514	32.4	C	0.58	247	0.58
Operations:							Synchro

AM Peak Hour - 2045 Tight Diamond - Total Movement Delays								
Control	Traffic Signal							
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	435	33.1	3.0	36.1	D	0.69	31.6
	NBT	1002	34.7	0.0	34.7	C	0.69	
	NBR	258	34.0	0.0	34.0	C	0.59	
Eastbound	EBL	80	49.3	3.0	52.3	D	0.47	Intersection LOS
	EBT	804	-	0.0	0.0	A		
Southbound	EBR	487	33.8	0.0	33.8	C	0.58	C
	SBL	116	17.7	3.0	20.7	C	0.42	
	SBT	700	18.0	0.0	18.0	B	0.42	
Westbound	SBR	49	17.0	0.0	17.0	B	0.10	Max Movement V/C
	WBL	172	44.7	3.0	47.7	D	0.37	
	WBT	1291	-	0.0	0.0	A		
WBR	514	32.4	0.0	32.4	C	0.58	0.69	
Operations:							Synchro	

AM Peak Hour - 2045 Tight Diamond - Lake Woodlands Drive South Ramp Terminal							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBT	1437	31.8	C	0.69	244	23.6
	NBR	258	34.0	C	0.59	173	
Eastbound	EBL	80	46.4	D	0.34	106	Intersection LOS
	EBR	487	33.8	C	0.58	239	
Southbound	SBL	116	0.7	A	0.18	0	C
	SBT	872	1.0	A	0.37	0	
Westbound							Max Movement V/C
							0.69
Operations:							Synchro

Lake Woodlands Dr & Grogans Mill Road - PM Peak Hour

PM Peak Hour - 2045 Tight Diamond - Lake Woodlands Drive North Ramp Terminal								
Control	Traffic Signal							
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)	
Northbound	NBL	764	4.3	A	0.57	0	19.9	
	NBT	903	1.3	A	0.36	0		
Eastbound								
Intersection LOS								B
Southbound								
	SBT	1162	35.3	D	0.61	m218		
Westbound	SBR	139	34.8	C	0.30	m119		Max Movement V/C
	WBL	275	47.1	D	0.54	142		
	WBR	154	27.8	C	0.18	76		0.61
Operations: Synchro								

PM Peak Hour - 2045 Tight Diamond - Total Movement Delays								
Control	Traffic Signal							
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)
Northbound	NBL	764	29.6	3.0	32.6	C	0.73	34.9
	NBT	874	26.6	0.0	26.6	C	0.73	
	NBR	411	36.4	0.0	36.4	D	0.88	
Eastbound	EBL	29	41.6	3.0	44.6	D	0.36	
	EBT	1205	0.0	0.0	0.0	A		
Southbound	EBR	743	38.4	0.0	38.4	D	0.78	
	SBL	280	36.0	3.0	39.0	D	0.61	
Westbound	SBT	882	36.3	0.0	36.3	D	0.61	
	SBR	139	34.8	0.0	34.8	C	0.30	
Westbound	WBL	275	48.1	3.0	51.1	D	0.54	
	WBT	1324	0.0	0.0	0.0	A		
	WBR	154	27.8	0.0	27.8	C	0.18	0.88
Operations: Synchro								

PM Peak Hour - 2045 Tight Diamond - Lake Woodlands Drive South Ramp Terminal								
Control	Traffic Signal							
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)	
Northbound				A			21.0	
	NBT	1638	25.3	C	0.73	m208		
Eastbound	NBR	411	36.4	D	0.88	m271		
	EBL	29	40.3	D	0.11	47		
Intersection LOS								C
Southbound	EBR	743	38.4	D	0.78	362		
	SBL	280	0.7	A	0.44	0		
Westbound	SBT	1157	1.0	A	0.49	0		
				A				
Max Movement V/C								0.88
				A				
				A				
Operations: Synchro								

Lake Woodlands Dr & Grogans Mill Road - AM Peak Hour

Int #
53

AM Peak Hour - 2045 SPUI - Lake Woodlands Drive and Grogans Mill Road							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	435	44.7	D	0.73	192	32.7
	NBT	1002	23.2	C	0.65	378	
	NBR	258	0.2	A	0.18	0	
Eastbound	EBL	80	52.8	D	0.49	105	Intersection LOS
	EBT			A			
	EBR	487	48.9	D	0.83	#256	
Southbound	SBL	116	37.9	D	0.38	119	C
	SBT	700	19.6	B	0.46	241	
	SBR	49	0.0	A	0.03	0	
Westbound	WBL	172	49.3	D	0.55	96	Max Movement V/C
	WBT			A			
	WBR	514	53.3	D	0.88	#289	
Operations:							Synchro

Int #
Total

AM Peak Hour - 2045 SPUI - Total Movement Delays									
Control	Traffic Signal								
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)	
Northbound	NBL	435	44.7	0.0	44.7	D	0.73	32.7	Intersection LOS
	NBT	1002	23.2	0.0	23.2	C	0.65		
	NBR	258	0.2	0.0	0.2	A	0.18		
Eastbound	EBL	80	52.8	0.0	52.8	D	0.49	Intersection LOS	C
	EBT	804	-	0.0	0.0	A			
	EBR	487	48.9	0.0	48.9	D	0.83		
Southbound	SBL	116	37.9	0.0	37.9	D	0.38	Intersection LOS	C
	SBT	700	19.6	0.0	19.6	B	0.46		
	SBR	49	0.0	0.0	0.0	A	0.03		
Westbound	WBL	172	49.3	0.0	49.3	D	0.55	Max Movement V/C	0.88
	WBT	1291	-	0.0	0.0	A			
	WBR	514	53.3	0.0	53.3	D	0.88		
Operations:									Synchro

Lake Woodlands Dr & Grogans Mill Road - PM Peak Hour

Int #
53

PM Peak Hour - 2045 SPUI - Lake Woodlands Drive and Grogans Mill Road							
Control	Traffic Signal						
Approach	Movement	Volume	Delay (s)	LOS	V/C	95th Queue (ft)	Intersection Delay (s)
Northbound	NBL	764	42.3	D	0.84	306	33.5
	NBT	874	31.4	C	0.70	353	
	NBR	411	0.1	A	0.27	0	
Eastbound	EBL	29	41.7	D	0.15	46	Intersection LOS
	EBT			A			
	EBR	743	46.7	D	0.89	#381	
Southbound	SBL	280	36.2	D	0.59	240	C
	SBT	882	31.6	C	0.71	31.6	
	SBR	139	0.1	A	0.09	0	
Westbound	WBL	275	53.4	D	0.72	137	Max Movement V/C
	WBT			A			
	WBR	154	25.5	C	0.18	69	
Operations:							Synchro

Int #
Total

PM Peak Hour - 2045 SPUI - Total Movement Delays									
Control	Traffic Signal								
Approach	Movement	Volume	Mvmt Delay (s)	TT Delay (s)	Total Delay (s)	LOS	Max V/C	Intersection Delay (s)	
Northbound	NBL	764	42.3	0.0	42.3	D	0.84	33.5	Intersection LOS
	NBT	874	31.4	0.0	31.4	C	0.70		
	NBR	411	0.1	0.0	0.1	A	0.27		
Eastbound	EBL	29	41.7	0.0	41.7	D	0.15	Intersection LOS	C
	EBT	1205	-	0.0	0.0	A			
	EBR	743	46.7	0.0	46.7	D	0.89		
Southbound	SBL	280	36.2	0.0	36.2	D	0.59	Intersection LOS	C
	SBT	882	31.6	0.0	31.6	C	0.71		
	SBR	139	0.1	0.0	0.1	A	0.09		
Westbound	WBL	275	53.4	0.0	53.4	D	0.72	Max Movement V/C	0.89
	WBT	1324	-	0.0	0.0	A			
	WBR	154	25.5	0.0	25.5	C	0.18		
Operations:									Synchro