



CLARK NEXSEN

NC 54 Multimodal Analysis - Town of Chapel Hill Section									
Delay Summary (Burning Tree Dr & W. Barbee Chapel Rd as Synchronized Streets)									
Movement	AM Peak-Hour Delay (seconds)			Mid-Day Peak-Hour Delay (seconds)*			PM Peak-Hour Delay (seconds)		
	Existing (2016)	Future No Build (2030)	Future Build (2030)	Existing (2016)	Future No Build (2030)	Future Build (2030)	Existing (2016)	Future No Build (2030)	Future Build (2030)
<b>NC-54 &amp; Hamilton Road (Signalized)</b>									
EBT -	21	24	26	12	12	12	20	19	19
WBT -	15	44	45	3	20	23	16	54	55
NBL -	82	118	123	87	71	71	77	80	80
<b>NC-54 &amp; Environ/Rogerson Dr (Signalized)</b>									
EBT -	1	1	1	0	2	3	2	2	5
WBT -	0	2	2	0	1	1	0	2	4
NBR -	27	64	69	12	54	54	7	64	64
<b>NC-54 &amp; Burning Tree Dr (Signalized)</b>									
EBT -	45	19	14	6	6	6	9	6	3
WBT -	9	7	5	1	6	3	9	3	3
NBT -	87	56	0	87	52	0	211	58	0
<b>NC-54 &amp; W Barbee Chapel Rd/Business Park Driveway (Signalized)</b>									
EBT -	9	15	12	4	5	6	11	6	7
WBT -	10	12	21	20	16	11	18	24	18
NBL -	92	75	0	205	123	0	253	219	0
<b>NC-54 &amp; Meadowmont Lane (Signalized)</b>									
EBT -	20	26	85	14	22	28	35	33	46
WBT -	12	30	33	7	8	13	12	12	35
NBL -	64	47	62	72	50	50	65	48	57
<b>NC-54 &amp; East Barbee Chapel Road (Signalized)</b>									
EBT -	21	119	28	6	25	6	11	20	24
WBT -	25	28	10	21	21	12	32	40	30
SBL -	171	141	0	66	49	0	114	55	0

Reported delays represent seconds per vehicle delay rounded to the nearest whole second, with the overall intersection delay representing a weighted average of total intersection delay.

\*Note: Mid-day peak hour analysis studied the 1:00-2:00 PM time period at each study intersection.

**NC 54 Multimodal Analysis - Town of Chapel Hill Section**  
**Delay Summary (Burning Tree Dr & W. Barbee Chapel Rd as Synchronized Streets)**

Condition	AM Peak-Hour Delay		2030 Volumes	Mid-Day Peak-Hour Delay		2030 Volumes	PM Peak-Hour Delay (Sec)		2030 Volumes	95th/Max Queue (ft)
	(Sec)			(Sec)						
<b>NC-54 &amp; Hamilton Road (Signalized)</b>										
Future (2030) Traffic Build	Overall -	43		Overall -	25		Overall -	39		
	EBL -	116	278	EBL -	37	276	EBL -	60	268	391
	EBT -	26	1942	EBT -	12	1451	EBT -	19	2297	
	EBR -		116	EBR -		41	EBR -		61	
	WBL -	37	49	WBL -	20	74	WBL -	36	104	233
	WBT -	45	2410	WBT -	23	1503	WBT -	55	2224	
	WBR -	18	274	WBR -	42	252	WBR -	23	280	460
	NBL -	123	135	NBL -	71	130	NBL -	80	170	220
	NBT -	39	32	NBT -	37	13	NBT -	43	29	
	NBR -	44	102	NBR -	42	92	NBR -	50	117	229
	SBL -	42	113	SBL -	47	118	SBL -	55	187	362
	SBT -	43	88	SBT -	41	84	SBT -	46	123	
	SBR -	43	88	SBR -	47	95	SBR -	51	135	156
<b>NC-54 &amp; Environ/Rogerson Dr (Signalized)</b>										
Future (2030) Traffic Build	Overall -	9		Overall -	3		Overall -	6		
	EBL -		0	EBL -		0	EBL -		0	
	EBT -	1	2077	EBT -	3	1554	EBT -	5	2435	
	EBR -	0	62	EBR -	1	46	EBR -	3	36	104
	WBL -	273	126	WBL -	5	76	WBL -	39	97	365
	WBT -	2	2229	WBT -	1	1612	WBT -	4	2317	
	WBR -		0	WBR -		0	WBR -		1	
	NBL -		0	NBL -		0	NBL -		0	
	NBT -		0	NBT -		0	NBT -		0	
	NBR -	69	20	NBR -	54	78	NBR -	64	79	284
	SBL -		0	SBL -		0	SBL -		0	
	SBT -		0	SBT -		0	SBT -		0	
	SBR -	0	6	SBR -		0	SBR -	0	5	15
<b>NC-54 &amp; Burning Tree Dr (Signalized)</b>										
Future (2030) Traffic Build	Overall -	12		Overall -	7		Overall -	10		
	EBL -	38	21	EBL -	12	62	EBL -	20	51	158
	EBT -	14	2030	EBT -	6	1562	EBT -	3	2512	
	EBR -		70	EBR -		45	EBR -		45	
	WBL -	20	183	WBL -	13	127	WBL -	58	213	450
	WBT -	5	2491	WBT -	3	1612	WBT -	3	2407	
	WBR -		22	WBR -		19	WBR -		62	
	NBL -		0	NBL -		0	NBL -		0	
	NBT -		0	NBT -		0	NBT -		0	
	NBR -	55	206	NBR -	44	164	NBR -	81	251	708
	SBL -		0	SBL -		0	SBL -		0	
	SBT -		0	SBT -		0	SBT -		0	
	SBR -	68	94	SBR -	53	65	SBR -	62	93	185

NC-54 & W Barbee Chapel Rd/Business Park Driveway (Signalized)										
Future (2030) Traffic Build	Overall -	20		Overall -	13		Overall -	19		
	EBL -	56	257	EBL -	23	233	EBL -	54	248	525
	EBT -	12	2354	EBT -	6	1594	EBT -	7	2581	
	EBR -	12	95	EBR -	13	51	EBR -	5	31	301
	WBL -	37	99	WBL -	3	41	WBL -	9	6	224
	WBT -	21	2622	WBT -	11	1702	WBT -	18	2424	
	WBR -	8	44	WBR -	12	48	WBR -	8	24	161
	NBL -	0	0	NBL -	0	0	NBL -	0	0	
	NBT -	0	0	NBT -	0	0	NBT -	0	0	
	NBR -	65	22	NBR -	51	74	NBR -	59	145	475
	SBL -	0	0	SBL -	0	0	SBL -	0	0	
	SBT -	0	0	SBT -	0	0	SBT -	0	0	
SBR -	68	126	SBR -	52	205	SBR -	109	229	658	
NC-54 & Meadowmont Lane (Signalized)										
Future (2030) Traffic Build	Overall -	231		Overall -	27		Overall -	48		
	EBL -	64	164	EBL -	45	172	EBL -	77	253	526
	EBT -	85	1505	EBT -	28	1280	EBT -	46	2117	
	EBR -	28	182	EBR -	14	62	EBR -	9	75	462
	WBL -	1292	638	WBL -	120	87	WBL -	100	90	534
	WBT -	33	2441	WBT -	13	1374	WBT -	35	1964	
	WBR -	5	174	WBR -	4	127	WBR -	7	113	427
	NBL -	62	95	NBL -	50	31	NBL -	57	143	1577
	NBT -	62	6	NBT -	49	18	NBT -	171	28	
	NBR -	20	40	NBR -	35	71	NBR -	37	450	570
	SBL -	475	774	SBL -	48	378	SBL -	98	535	336
	SBT -	53	36	SBT -	40	26	SBT -	42	18	
SBR -	42	132	SBR -	28	187	SBR -	34	227	99	
NC-54 & East Barbee Chapel Road (Signalized)										
Future (2030) Traffic Build	Overall -	23		Overall -	11		Overall -	26		
	EBL -	6	15	EBL -	2	45	EBL -	28	132	374
	EBT -	28	2932	EBT -	6	1417	EBT -	24	2040	
	EBR -	8	320	EBR -	1	150	EBR -	12	273	350
	WBL -	63	6	WBL -	14	6	WBL -	36	22	16
	WBT -	10	1713	WBT -	12	1365	WBT -	30	2199	
	WBR -	4	230	WBR -	5	255	WBR -	16	960	338
	NBL -	0	0	NBL -	0	0	NBL -	0	0	
	NBT -	0	0	NBT -	0	0	NBT -	0	0	
	NBR -	68	222	NBR -	52	138	NBR -	50	269	1308
	SBL -	0	0	SBL -	0	0	SBL -	0	0	
	SBT -	0	0	SBT -	0	0	SBT -	0	0	
SBR -	68	165	SBR -	52	78	SBR -	47	65	210	

NC 54 Multimodal Analysis - Town of Chapel Hill Section						
Delay Summary						
Condition	AM Peak-Hour Delay (Sec)	2030 Volumes	Mid-Day Peak-Hour Delay (Sec)	2030 Volumes	PM Peak-Hour Delay (Sec)	2030 Volumes
<b>NC-54 &amp; Hamilton Road (Signalized)</b>						
Future (2030) Traffic No Build	Overall -	41	Overall -	22	Overall -	39
	EBL -	107	EBL -	37	EBL -	60
	EBT -	24	EBT -	12	EBT -	19
	EBR -		EBR -		EBR -	
	WBL -	30	WBL -	13	WBL -	36
	WBT -	44	WBT -	20	WBT -	54
	WBR -	9	WBR -	23	WBR -	20
	NBL -	118	NBL -	71	NBL -	80
	NBT -	36	NBT -	37	NBT -	43
	NBR -	42	NBR -	42	NBR -	50
	SBL -	39	SBL -	47	SBL -	55
	SBT -	40	SBT -	41	SBT -	46
	SBR -	40	SBR -	47	SBR -	51
<b>NC-54 &amp; Environ/Rogerson Dr (Signalized)</b>						
Future (2030) Traffic No Build	Overall -	3	Overall -	3	Overall -	3
	EBL -		EBL -		EBL -	
	EBT -	1	EBT -	2	EBT -	2
	EBR -	0	EBR -	1	EBR -	0
	WBL -	70	WBL -	2	WBL -	22
	WBT -	2	WBT -	1	WBT -	2
	WBR -		WBR -		WBR -	
	NBL -		NBL -		NBL -	
	NBT -		NBT -		NBT -	
	NBR -	64	NBR -	54	NBR -	64
	SBL -		SBL -		SBL -	
	SBT -		SBT -		SBT -	
	SBR -	0	SBR -		SBR -	0
<b>NC-54 &amp; Burning Tree Dr (Signalized)</b>						
Future (2030) Traffic No Build	Overall -	14	Overall -	7	Overall -	8
	EBL -	28	EBL -	9	EBL -	28
	EBT -	19	EBT -	6	EBT -	6
	EBR -		EBR -		EBR -	
	WBL -	28	WBL -	11	WBL -	58
	WBT -	7	WBT -	6	WBT -	3
	WBR -		WBR -		WBR -	
	NBL -		NBL -		NBL -	
	NBT -	56	NBT -	52	NBT -	58
	NBR -	44	NBR -	42	NBR -	50
	SBL -		SBL -		SBL -	
	SBT -	62	SBT -	49	SBT -	65
	SBR -		SBR -		SBR -	

NC-54 & W Barbee Chapel Rd/Business Park Driveway (Signalized)									
Future (2030) Traffic No Build	Overall -	18		Overall -	12		Overall -	18	
	EBL -	114	224	EBL -	24	185	EBL -	40	187
	EBT -	15	2349	EBT -	5	1572	EBT -	6	2550
	EBR -	14	86	EBR -	18	43	EBR -	0	30
	WBL -	36	99	WBL -	6	41	WBL -	16	6
	WBT -	12	2605	WBT -	16	1670	WBT -	24	2338
	WBR -	4	41	WBR -	7	36	WBR -	11	16
	NBL -	75	17	NBL -	123	32	NBL -	219	86
	NBT -	59	3	NBT -	44	12	NBT -	44	8
	NBR -		2	NBR -		30	NBR -		51
	SBL -	60	5	SBL -	46	22	SBL -	45	31
	SBT -	61	9	SBT -	45	8	SBT -	45	1
	SBR -		112	SBR -		175	SBR -		197
NC-54 & Meadowmont Lane (Signalized)									
Future (2030) Traffic No Build	Overall -	31		Overall -	20		Overall -	27	
	EBL -	47	144	EBL -	52	128	EBL -	53	159
	EBT -	26	1505	EBT -	22	1280	EBT -	33	2117
	EBR -	11	182	EBR -	20	62	EBR -	6	75
	WBL -	51	560	WBL -	33	62	WBL -	32	55
	WBT -	30	2441	WBT -	8	1374	WBT -	12	1964
	WBR -	6	174	WBR -	2	127	WBR -	15	113
	NBL -	47	95	NBL -	50	31	NBL -	48	143
	NBT -	47	6	NBT -	49	18	NBT -	75	28
	NBR -	24	40	NBR -	35	71	NBR -	33	450
	SBL -	47	76	SBL -	49	152	SBL -	52	219
	SBT -	47	36	SBT -	47	26	SBT -	46	18
	SBR -	35	132	SBR -	35	187	SBR -	38	227
NC-54 & East Barbee Chapel Road (Signalized)									
Future (2030) Traffic No Build	Overall -	83		Overall -	24		Overall -	32	
	EBL -	19	15	EBL -	6	45	EBL -	48	132
	EBT -	119	2261	EBT -	25	1231	EBT -	20	1757
	EBR -	16	264	EBR -	24	127	EBR -	15	205
	WBL -	57	49	WBL -	30	27	WBL -	39	22
	WBT -	28	1551	WBT -	21	1304	WBT -	40	2074
	WBR -	5	186	WBR -	7	209	WBR -	21	842
	NBL -	93	162	NBL -	51	82	NBL -	62	125
	NBT -	85	44	NBT -	51	46	NBT -	87	118
	NBR -		16	NBR -		10	NBR -		26
	SBL -	141	677	SBL -	49	207	SBL -	55	283
	SBT -	130	99	SBT -	48	44	SBT -	53	68
	SBR -		87	SBR -		53	SBR -		30

NC 54 Multimodal Analysis - Town of Chapel Hill Section						
Delay Summary						
Condition	AM Peak-Hour Delay (Sec)	Existing Volumes	Mid-Day Peak-Hour Delay (Sec)	Existing Volumes	PM Peak-Hour Delay (Sec)	Existing Volumes
<b>NC-54 &amp; Hamilton Road (Signalized)</b>						
Existing (2016) Traffic	Overall -	20	Overall -	12	Overall -	22
	EBL - 8	23	EBL - 4	49	EBL - 23	50
	EBT - 21	1689	EBT - 12	1254	EBT - 20	1968
	EBR -	101	EBR - 0	36	EBR -	53
	WBL - 27	43	WBL - 2	64	WBL - 39	90
	WBT - 15	2096	WBT - 3	1299	WBT - 16	1904
	WBR -	19	WBR - 0	28	WBR -	61
	NBL - 82	117	NBL - 87	113	NBL - 77	148
	NBT - 41	28	NBT - 52	11	NBT - 47	25
	NBR - 52	89	NBR - 69	80	NBR - 62	102
	SBL - 43	53	SBL - 60	43	SBL - 56	86
	SBT - 45	31	SBT - 58	13	SBT - 52	30
SBR -	31	SBR - 0	23	SBR -	41	
<b>NC-54 &amp; Environ/Rogerson Dr (Signalized)</b>						
Existing (2016) Traffic	Overall -	1	Overall -	0	Overall -	1
	EBL - 2	0	EBL - 2	0	EBL - 7	0
	EBT - 1	1806	EBT - 0	1351	EBT - 2	2117
	EBR - 20	54	EBR - 2	40	EBR - 6	31
	WBL - 3	59	WBL - 1	41	WBL - 3	35
	WBT -	1938	WBT -	1402	WBT -	2015
	WBR -	0	WBR -	0	WBR -	1
	NBL -	0	NBL -	0	NBL -	0
	NBT -	0	NBT -	0	NBT -	0
	NBR - 27	17	NBR - 12	68	NBR - 2	69
	SBL -	0	SBL -	0	SBL -	0
	SBT -	0	SBT -	0	SBT -	0
SBR - 0	5	SBR -	0	SBR -	4	
<b>NC-54 &amp; Burning Tree Dr (Signalized)</b>						
Existing (2016) Traffic	Overall -	25	Overall -	4	Overall -	17
	EBL - 4	18	EBL - 5	54	EBL - 7	44
	EBT - 45	1734	EBT - 6	1338	EBT - 9	2156
	EBR -	42	EBR -	34	EBR -	18
	WBL - 33	147	WBL - 3	84	WBL - 211	157
	WBT - 9	2142	WBT - 1	1366	WBT - 9	2056
	WBR -	15	WBR -	10	WBR -	38
	NBL -	24	NBL -	36	NBL -	37
	NBT - 87	4	NBT - 87	6	NBT - 65	16
	NBR - 28	150	NBR - 25	101	NBR - 45	165
	SBL -	31	SBL -	20	SBL -	29
	SBT - 95	19	SBT - 39	5	SBT - 61	21
SBR -	31	SBR -	31	SBR -	31	

NC-54 & W Barbee Chapel Rd/Business Park Driveway (Signalized)									
Existing (2016) Traffic	Overall -	11		Overall -	13		Overall -	19	
	EBL -	58	195	EBL -	18	161	EBL -	49	163
	EBT -	9	2043	EBT -	4	1367	EBT -	11	2217
	EBR -	2	75	EBR -	1	37	EBR -	1	26
	WBL -	24	86	WBL -	6	36	WBL -	2	5
	WBT -	10	2265	WBT -	20	1452	WBT -	18	2033
	WBR -	0	36	WBR -	0	31	WBR -	0	14
	NBL -	92	15	NBL -	205	28	NBL -	253	75
	NBT -	36	3	NBT -	23	10	NBT -	18	7
	NBR -		2	NBR -		26	NBR -		44
	SBL -	59	4	SBL -	61	19	SBL -	55	27
	SBT -	20	8	SBT -	16	7	SBT -	11	1
SBR -		97	SBR -		152	SBR -		171	
NC-54 & Meadowmont Lane (Signalized)									
Existing (2016) Traffic	Overall -	20		Overall -	16		Overall -	27	
	EBL -	53	125	EBL -	72	111	EBL -	56	138
	EBT -	20	1309	EBT -	14	1113	EBT -	35	1841
	EBR -	3	158	EBR -	2	54	EBR -	2	65
	WBL -	42	487	WBL -	43	54	WBL -	29	48
	WBT -	12	2123	WBT -	7	1195	WBT -	12	1708
	WBR -	1	151	WBR -	0	110	WBR -	1	98
	NBL -	64	83	NBL -	69	27	NBL -	63	124
	NBT -	61	5	NBT -	39	16	NBT -	63	24
	NBR -	0	35	NBR -	0	62	NBR -	17	391
	SBL -	61	66	SBL -	67	132	SBL -	65	190
	SBT -	63	31	SBT -	62	23	SBT -	57	16
SBR -	9	115	SBR -	8	163	SBR -	29	197	
NC-54 & East Barbee Chapel Road (Signalized)									
Existing (2016) Traffic	Overall -	43		Overall -	18		Overall -	28	
	EBL -	7	13	EBL -	3	39	EBL -	58	115
	EBT -	21	1961	EBT -	6	1052	EBT -	11	1495
	EBR -	0	192	EBR -	0	92	EBR -	0	170
	WBL -	15	5	WBL -	14	5	WBL -	17	11
	WBT -	25	1349	WBT -	21	1116	WBT -	32	1770
	WBR -	1	162	WBR -	1	182	WBR -	11	732
	NBL -	58	141	NBL -	65	71	NBL -	59	109
	NBT -	53	38	NBT -	62	40	NBT -	62	103
	NBR -		14	NBR -		9	NBR -		23
	SBL -	171	589	SBL -	66	180	SBL -	114	246
	SBT -	157	86	SBT -	59	38	SBT -	106	59
SBR -		76	SBR -		46	SBR -		26	