

# SR 140 Corridor Study Supplemental Technical Report

From Cherokee/Fulton County line  
to I-575

Prepared for Cherokee County

DRAFT 07.9.19

The background of the cover is a photograph of a road, SR 140, with cars driving. The image is overlaid with a large, semi-transparent blue graphic that contains the text "SR 140".

SR  
140

This supplemental technical report provides additional study information and results documentation. This is a companion report to the summary report. Information is organized by the following sections:

1. Traffic Data
2. Crash Data
3. Future Traffic Projections
4. Traffic Analysis Results
5. Preliminary Cost Estimates
6. Project Schematic Layouts

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# 1. Traffic Data

The study intersections (with reference number) are listed below. Intersection turning movement counts were performed at all study intersections during a 2-hour AM period and 2-hour PM period. Thirteen hours of data were collected at two locations. Additionally, seven 24-hr volume counts were performed along the corridor. The traffic data reports are included here.

Table A- Study Intersections	
1	SR 140 at I-575 SB Off Ramp
2	SR 140 at I-575 SB On Ramp
3	SR 140 at I-575 NB Ramps
4	SR 124 at Lower Scott Mill Rd
5	SR 140 at Mountain Vista Blvd
6	SR 140 at Northside Cherokee Blvd
7	SR 140 at Scott Rd
8	SR 140 at Avery Rd
9	SR 140 at Univeter Rd
10	SR 140 at Harmony Lake Dr
11	SR 140 at Bart Manous Rd
12	SR 140 at Darnell Rd
13	SR 140 at Stringer Rd
14	SR 140 at E Cherokee Dr
15	SR 140 at Batesville Rd/Hickory Rd
16	SR 140 at Sugar Pike Rd
17	SR 140 at Mountain Rd/Earney Rd
18	SR 140 at Arnold Mill Rd

**VOLUME**

Hickory Flat Hwy/SR-140 N/O Northside Cherokee Blvd

Day: Wednesday  
Date: 2/27/2019

City: Canton  
Project #: GA19\_9116\_001

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	7,807	8,527	16,334			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			4	12	16	12:00			107	137	244	
00:15			6	8	14	12:15			112	118	230	
00:30			8	3	11	12:30			91	130	221	
00:45			7	25	11	12:45			100	410	114	499
01:00			3	3	6	13:00			102	117	219	
01:15			0	8	8	13:15			118	114	232	
01:30			4	8	12	13:30			118	102	220	
01:45			5	12	0	13:45			115	453	115	448
02:00			0	2	2	14:00			102	120	222	
02:15			1	4	5	14:15			109	123	232	
02:30			2	3	5	14:30			110	132	242	
02:45			8	11	4	14:45			124	445	136	511
03:00			0	1	1	15:00			108	164	272	
03:15			6	4	10	15:15			131	148	279	
03:30			4	9	13	15:30			109	170	279	
03:45			4	14	3	15:45			149	497	168	650
04:00			1	4	5	16:00			135	161	296	
04:15			9	10	19	16:15			147	189	336	
04:30			9	11	20	16:30			195	201	396	
04:45			14	33	6	16:45			189	666	189	740
05:00			30	17	47	17:00			195	220	415	
05:15			42	30	72	17:15			162	216	378	
05:30			49	31	80	17:30			164	231	395	
05:45			76	197	42	17:45			155	676	228	895
06:00			86	42	128	18:00			137	176	313	
06:15			129	58	187	18:15			117	177	294	
06:30			152	79	231	18:30			124	165	289	
06:45			193	560	89	18:45			125	503	148	666
07:00			172	125	297	19:00			127	128	255	
07:15			188	140	328	19:15			108	107	215	
07:30			166	175	341	19:30			79	129	208	
07:45			145	671	164	19:45			72	386	120	484
08:00			110	130	240	20:00			65	85	150	
08:15			135	131	266	20:15			70	79	149	
08:30			112	125	237	20:30			68	70	138	
08:45			111	468	132	20:45			50	253	81	315
09:00			139	99	238	21:00			51	65	116	
09:15			127	96	223	21:15			42	72	114	
09:30			108	119	227	21:30			42	58	100	
09:45			93	467	108	21:45			35	170	45	240
10:00			103	95	198	22:00			25	33	58	
10:15			95	101	196	22:15			25	34	59	
10:30			97	96	193	22:30			21	32	53	
10:45			86	381	103	22:45			16	87	19	118
11:00			90	94	184	23:00			15	16	31	
11:15			87	111	198	23:15			8	19	27	
11:30			102	119	221	23:30			10	19	29	
11:45			106	385	122	23:45			4	37	20	74
<b>TOTALS</b>			3224	2887	6111	<b>TOTALS</b>			4583	5640	10223	
<b>SPLIT %</b>			52.8%	47.2%	37.4%	<b>SPLIT %</b>			44.8%	55.2%	62.6%	

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	7,807	8,527	16,334		
AM Peak Hour			06:45	07:15	07:00	PM Peak Hour			16:30	17:00	17:00
AM Pk Volume			719	609	1275	PM Pk Volume			741	895	1571
Pk Hr Factor			0.931	0.870	0.935	Pk Hr Factor			0.950	0.969	0.946
7 - 9 Volume	0	0	1139	1122	2261	4 - 6 Volume	0	0	1342	1635	2977
7 - 9 Peak Hour			07:00	07:15	07:00	4 - 6 Peak Hour			16:30	17:00	17:00
7 - 9 Pk Volume	0	0	671	609	1275	4 - 6 Pk Volume	0	0	741	895	1571
Pk Hr Factor	0.000	0.000	0.892	0.870	0.935	Pk Hr Factor	0.000	0.000	0.950	0.969	0.946

### VOLUME

Hickory Flat Hwy/SR-140 N/O Scott Rd

Day: Wednesday  
Date: 2/27/2019

City: Canton  
Project #: GA19\_9116\_002

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	10,242	10,686	20,928		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			11	12	23	12:00			142	161	303
00:15			7	6	13	12:15			143	168	311
00:30			10	7	17	12:30			134	164	298
00:45			9	37	46	12:45			135	554	689
01:00			7	2	9	13:00			171	140	311
01:15			1	7	8	13:15			165	158	323
01:30			3	5	8	13:30			173	143	316
01:45			4	15	19	13:45			173	682	855
02:00			3	2	5	14:00			153	156	309
02:15			2	4	6	14:15			153	155	308
02:30			4	6	10	14:30			157	171	328
02:45			12	21	33	14:45			157	620	777
03:00			8	3	11	15:00			171	193	364
03:15			6	9	15	15:15			189	179	368
03:30			9	8	17	15:30			149	191	340
03:45			8	31	39	15:45			221	730	951
04:00			6	7	13	16:00			208	184	392
04:15			7	16	23	16:15			201	218	419
04:30			18	10	28	16:30			243	218	461
04:45			15	46	61	16:45			255	907	1162
05:00			26	19	45	17:00			226	238	464
05:15			44	35	79	17:15			218	279	497
05:30			69	47	116	17:30			254	247	501
05:45			91	230	321	17:45			260	958	1218
06:00			91	61	152	18:00			189	230	419
06:15			126	82	208	18:15			165	214	379
06:30			119	121	240	18:30			147	212	359
06:45			178	514	692	18:45			174	675	849
07:00			197	149	346	19:00			158	160	318
07:15			207	192	399	19:15			152	134	286
07:30			176	265	441	19:30			117	115	232
07:45			163	743	906	19:45			130	557	687
08:00			134	168	302	20:00			108	112	220
08:15			168	181	349	20:15			114	83	197
08:30			131	188	319	20:30			118	80	198
08:45			137	570	707	20:45			84	424	508
09:00			135	159	294	21:00			68	60	128
09:15			142	137	279	21:15			69	62	131
09:30			133	166	299	21:30			50	65	115
09:45			109	519	628	21:45			44	231	275
10:00			116	146	262	22:00			38	28	66
10:15			114	135	249	22:15			33	29	62
10:30			126	134	260	22:30			32	29	61
10:45			114	470	584	22:45			24	127	151
11:00			134	151	285	23:00			19	21	40
11:15			111	146	257	23:15			13	17	30
11:30			126	158	284	23:30			15	14	29
11:45			153	524	677	23:45			10	57	67
<b>TOTALS</b>			3720	4050	7770	<b>TOTALS</b>			6522	6636	13158
<b>SPLIT %</b>			47.9%	52.1%	37.1%	<b>SPLIT %</b>			49.6%	50.4%	62.9%

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	10,242	10,686	20,928

AM Peak Hour			06:45	07:15	07:00	PM Peak Hour			17:00	17:00	17:00
AM Pk Volume			758	872	1596	PM Pk Volume			958	994	1952
Pk Hr Factor			0.915	0.823	0.905	Pk Hr Factor			0.921	0.891	0.974
7 - 9 Volume	0	0	1313	1566	2879	4 - 6 Volume	0	0	1865	1842	3707
7 - 9 Peak Hour			07:00	07:15	07:00	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	743	872	1596	4 - 6 Pk Volume	0	0	958	994	1952
Pk Hr Factor	0.000	0.000	0.897	0.823	0.905	Pk Hr Factor	0.000	0.000	0.921	0.891	0.974

**VOLUME**

Hickory Flat Hwy/SR-140 Bet. Old Pioneer Trail & Orchard Dr

Day: Wednesday  
Date: 2/27/2019

City: Canton  
Project #: GA19\_9116\_003

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	11,285	11,302	22,587			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			11	12	23	12:00			162	164	326	
00:15			6	8	14	12:15			168	179	347	
00:30			5	10	15	12:30			141	160	301	
00:45			6	28	7	37	12:45		156	627	165	668
01:00			7	4	11	13:00			169	154	323	
01:15			1	8	9	13:15			201	176	377	
01:30			2	9	11	13:30			147	165	312	
01:45			4	14	3	24	13:45		165	682	171	666
02:00			5	3	8	14:00			169	158	327	
02:15			6	5	11	14:15			195	180	375	
02:30			5	8	13	14:30			164	158	322	
02:45			10	26	1	17	14:45		184	712	172	668
03:00			12	2	14	15:00			180	223	403	
03:15			9	9	18	15:15			207	177	384	
03:30			6	10	16	15:30			177	220	397	
03:45			8	35	9	30	15:45		197	761	215	835
04:00			8	8	16	16:00			212	235	447	
04:15			11	14	25	16:15			212	234	446	
04:30			17	9	26	16:30			207	249	456	
04:45			23	59	9	40	16:45		243	874	244	962
05:00			34	24	58	17:00			247	264	511	
05:15			53	31	84	17:15			233	287	520	
05:30			88	40	128	17:30			249	259	508	
05:45			107	282	55	150	17:45		258	987	225	1035
06:00			120	54	174	18:00			211	257	468	
06:15			165	85	250	18:15			194	225	419	
06:30			133	123	256	18:30			156	237	393	
06:45			193	611	143	405	18:45		189	750	190	909
07:00			239	165	404	19:00			159	182	341	
07:15			216	210	426	19:15			143	137	280	
07:30			241	238	479	19:30			123	149	272	
07:45			230	926	216	829	19:45		130	555	122	590
08:00			217	202	419	20:00			97	126	223	
08:15			223	186	409	20:15			87	102	189	
08:30			181	189	370	20:30			95	98	193	
08:45			196	817	184	761	20:45		88	367	82	408
09:00			171	179	350	21:00			66	77	143	
09:15			163	139	302	21:15			59	65	124	
09:30			152	180	332	21:30			57	52	109	
09:45			140	626	136	634	21:45		50	232	48	242
10:00			143	150	293	22:00			37	39	76	
10:15			127	144	271	22:15			28	38	66	
10:30			135	132	267	22:30			37	29	66	
10:45			132	537	146	572	22:45		25	127	18	124
11:00			139	159	298	23:00			13	27	40	
11:15			162	150	312	23:15			11	14	25	
11:30			145	162	307	23:30			15	15	30	
11:45			153	599	150	621	23:45		12	51	19	75
<b>TOTALS</b>			4560	4120	<b>8680</b>	<b>TOTALS</b>			6725	7182	<b>13907</b>	
<b>SPLIT %</b>			52.5%	47.5%	<b>38.4%</b>	<b>SPLIT %</b>			48.4%	51.6%	<b>61.6%</b>	

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	11,285	11,302	22,587		
AM Peak Hour			07:00	07:15	07:15	PM Peak Hour			17:00	16:45	16:45
AM Pk Volume			926	866	1770	PM Pk Volume			987	1054	2026
Pk Hr Factor			0.961	0.910	0.924	Pk Hr Factor			0.956	0.918	0.974
7 - 9 Volume	0	0	1743	1590	3333	4 - 6 Volume	0	0	1861	1997	3858
7 - 9 Peak Hour			07:00	07:15	07:15	4 - 6 Peak Hour			17:00	16:45	16:45
7 - 9 Pk Volume	0	0	926	866	1770	4 - 6 Pk Volume	0	0	987	1054	2026
Pk Hr Factor	0.961	0.910	0.961	0.910	0.924	Pk Hr Factor	0.956	0.918	0.956	0.918	0.974

### VOLUME

Hickory Flat Hwy/SR-140 E/O White Columns Blvd

Day: Wednesday  
Date: 2/27/2019

City: Canton  
Project #: GA19\_9116\_004

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	9,700	9,741	19,441		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			10	16	26	12:00			141	140	281
00:15			4	10	14	12:15			168	164	332
00:30			6	10	16	12:30			141	136	277
00:45			0	20	5	12:45			129	579	708
01:00			4	7	11	13:00			140	147	287
01:15			1	2	3	13:15			135	162	297
01:30			0	7	7	13:30			159	151	310
01:45			5	10	2	13:45			157	591	748
02:00			3	1	4	14:00			129	146	275
02:15			6	5	11	14:15			138	161	299
02:30			3	5	8	14:30			123	160	283
02:45			8	20	1	14:45			154	544	698
03:00			9	2	11	15:00			140	194	334
03:15			11	11	22	15:15			161	191	352
03:30			5	6	11	15:30			138	213	351
03:45			8	33	7	15:45			159	598	757
04:00			12	11	23	16:00			159	214	373
04:15			11	6	17	16:15			166	220	386
04:30			22	5	27	16:30			163	240	403
04:45			30	75	8	16:45			176	664	840
05:00			37	10	47	17:00			172	221	393
05:15			59	14	73	17:15			162	246	408
05:30			94	19	113	17:30			193	230	423
05:45			118	308	29	17:45			186	713	899
06:00			138	28	166	18:00			192	238	430
06:15			180	59	239	18:15			200	224	424
06:30			169	71	240	18:30			132	188	320
06:45			188	675	75	18:45			136	660	796
07:00			228	78	306	19:00			133	169	302
07:15			202	124	326	19:15			111	141	252
07:30			222	156	378	19:30			105	156	261
07:45			198	850	137	19:45			92	441	533
08:00			201	120	321	20:00			62	141	203
08:15			197	123	320	20:15			82	102	184
08:30			170	153	323	20:30			59	96	155
08:45			182	750	158	20:45			61	264	325
09:00			185	110	295	21:00			37	66	103
09:15			164	124	288	21:15			40	63	103
09:30			128	130	258	21:30			24	49	73
09:45			128	605	126	21:45			21	122	143
10:00			140	115	255	22:00			26	58	84
10:15			141	113	254	22:15			21	28	49
10:30			111	102	213	22:30			22	34	56
10:45			141	533	118	22:45			12	81	93
11:00			108	151	259	23:00			7	23	30
11:15			154	130	284	23:15			8	22	30
11:30			129	125	254	23:30			5	15	20
11:45			143	534	113	23:45			10	30	40
<b>TOTALS</b>			4413	2938	7351	<b>TOTALS</b>			5287	6803	12090
<b>SPLIT %</b>			60.0%	40.0%	37.8%	<b>SPLIT %</b>			43.7%	56.3%	62.2%

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	9,700	9,741	19,441		
AM Peak Hour			07:00	08:00	07:15	PM Peak Hour			17:30	17:15	17:30
AM Pk Volume			850	554	1360	PM Pk Volume			771	939	1688
Pk Hr Factor			0.932	0.877	0.899	Pk Hr Factor			0.964	0.954	0.981
7 - 9 Volume	0	0	1600	1049	2649	4 - 6 Volume	0	0	1377	1808	3185
7 - 9 Peak Hour			07:00	08:00	07:15	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	850	554	1360	4 - 6 Pk Volume	0	0	713	922	1635
Pk Hr Factor	0.932	0.877	0.932	0.877	0.899	Pk Hr Factor	0.924	0.937	0.924	0.937	0.966

**CLASSIFICATION**

Hickory Flat Hwy/SR-140 S/O Foster Rd

Day: Wednesday

City: Canton

Date: 2/27/2019

Project #: GA19\_9116\_005

**Summary**

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	38	8	0	0	1	0	0	0	0	0	0	0	47
01:00	0	19	2	0	1	0	0	0	2	0	0	0	0	24
02:00	0	29	4	0	0	0	0	1	0	0	0	0	0	34
03:00	0	31	8	0	0	0	0	2	4	0	0	0	0	45
04:00	0	63	21	2	3	0	0	0	4	0	0	0	0	93
05:00	0	294	90	1	13	0	0	7	2	0	0	0	0	407
06:00	0	696	197	9	41	8	0	1	4	0	0	0	0	956
07:00	0	909	230	13	43	7	0	8	5	0	0	0	0	1215
08:00	1	837	242	18	40	2	0	4	10	0	0	0	0	1154
09:00	0	724	236	2	66	9	0	8	14	0	0	0	0	1059
10:00	0	636	188	4	55	18	0	4	8	0	0	0	0	913
11:00	0	673	236	5	50	15	0	13	14	0	0	0	0	1006
12:00 PM	0	712	225	5	44	14	0	10	5	0	0	0	0	1015
13:00	1	753	224	4	33	18	0	8	10	0	0	0	0	1051
14:00	0	783	219	7	57	12	0	8	2	0	0	0	0	1088
15:00	1	887	258	18	38	12	0	3	4	0	0	0	0	1221
16:00	1	990	255	11	52	3	0	5	6	0	0	0	0	1323
17:00	1	1114	244	3	39	1	0	3	3	0	0	0	0	1408
18:00	1	1050	276	2	42	1	0	7	6	0	0	0	0	1385
19:00	0	741	196	0	27	2	0	0	1	0	0	0	0	967
20:00	0	524	115	0	13	0	0	2	2	0	0	0	0	656
21:00	0	354	65	0	7	0	0	0	0	0	0	0	0	426
22:00	0	186	29	0	4	0	0	0	0	0	0	0	0	219
23:00	0	102	8	0	1	0	0	0	1	0	0	0	0	112
<b>Totals</b>	<b>6</b>	<b>13145</b>	<b>3576</b>	<b>104</b>	<b>669</b>	<b>123</b>		<b>94</b>	<b>107</b>					<b>17824</b>
% of Totals	0%	74%	20%	1%	4%	1%		1%	1%					100%

<b>AM Volumes</b>	1	4949	1462	54	312	60	0	48	67	0	0	0	0	6953
<b>% AM</b>	0%	28%	8%	0%	2%	0%		0%	0%					39%
<b>AM Peak Hour</b>	08:00	07:00	08:00	08:00	09:00	10:00		11:00	09:00					07:00
<b>Volume</b>	1	909	242	18	66	18		13	14					1215
<b>PM Volumes</b>	5	8196	2114	50	357	63	0	46	40	0	0	0	0	10871
<b>% PM</b>	0%	46%	12%	0%	2%	0%		0%	0%					61%
<b>PM Peak Hour</b>	13:00	17:00	18:00	15:00	14:00	13:00		12:00	13:00					17:00
<b>Volume</b>	1	1114	276	18	57	18		10	10					1408
<b>Directional Peak Periods</b>	<b>AM 7-9</b>		<b>NOON 12-2</b>		<b>PM 4-6</b>		<b>Off Peak Volumes</b>							
<b>All Classes</b>	Volume		%	Volume		%	Volume		%	Volume		%		
	2369	↔	13%	2066	↔	12%	2731	↔	15%	10658	↔	60%		

**Classification Definitions**

1 Motorcycles	4 Buses	7 >=4-Axle Single Units	10 >=6-Axle Single Trailers	13 >=7-Axle Multi-Trailers
2 Passenger Cars	5 2-Axle, 6-Tire Single Units	8 <=4-Axle Single Trailers	11 <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	6 3-Axle Single Units	9 5-Axle Single Trailers	12 6-Axle Multi-Trailers	



**VOLUME**

Hickory Flat Hwy/SR-140 S/O Foster Rd

Day: Wednesday  
 Date: 2/27/2019

City: Canton  
 Project #: GA19\_9116\_005

DAILY TOTALS						NB	SB	EB	WB	Total	
						8,840	8,984	0	0	17,824	
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	21	4	0	0	25	12:00	122	128	0	0	250
00:15	5	4	0	0	9	12:15	127	123	0	0	250
00:30	8	1	0	0	9	12:30	127	148	0	0	275
00:45	2	36	2	11	4	12:45	136	512	104	503	240
01:00	7	4	0	0	11	13:00	136	120	0	0	256
01:15	4	1	0	0	5	13:15	132	129	0	0	261
01:30	3	0	0	0	3	13:30	141	134	0	0	275
01:45	1	15	4	9	5	13:45	127	536	132	515	259
02:00	4	4	0	0	8	14:00	134	129	0	0	263
02:15	4	4	0	0	8	14:15	157	125	0	0	282
02:30	5	3	0	0	8	14:30	147	116	0	0	263
02:45	2	15	8	19	10	14:45	159	597	121	491	280
03:00	2	7	0	0	9	15:00	148	119	0	0	267
03:15	5	7	0	0	12	15:15	195	136	0	0	331
03:30	3	12	0	0	15	15:30	192	150	0	0	342
03:45	3	13	6	32	9	15:45	165	700	116	521	281
04:00	4	7	0	0	11	16:00	198	106	0	0	304
04:15	7	15	0	0	22	16:15	201	139	0	0	340
04:30	3	23	0	0	26	16:30	217	143	0	0	360
04:45	4	18	30	75	34	16:45	190	806	129	517	319
05:00	10	36	0	0	46	17:00	212	131	0	0	343
05:15	15	60	0	0	75	17:15	221	143	0	0	364
05:30	20	107	0	0	127	17:30	219	144	0	0	363
05:45	20	65	139	342	159	17:45	187	839	151	569	338
06:00	30	161	0	0	191	18:00	220	154	0	0	374
06:15	43	195	0	0	238	18:15	192	148	0	0	340
06:30	63	187	0	0	250	18:30	198	169	0	0	367
06:45	85	221	192	735	277	18:45	173	783	131	602	304
07:00	91	183	0	0	274	19:00	137	117	0	0	254
07:15	129	155	0	0	284	19:15	162	118	0	0	280
07:30	157	191	0	0	348	19:30	142	87	0	0	229
07:45	132	509	177	706	309	19:45	110	551	94	416	204
08:00	121	146	0	0	267	20:00	123	66	0	0	189
08:15	113	189	0	0	302	20:15	107	77	0	0	184
08:30	125	181	0	0	306	20:30	90	65	0	0	155
08:45	95	454	184	700	279	20:45	78	398	50	258	128
09:00	98	190	0	0	288	21:00	59	58	0	0	117
09:15	100	163	0	0	263	21:15	59	37	0	0	96
09:30	102	164	0	0	266	21:30	80	48	0	0	128
09:45	116	416	126	643	242	21:45	60	258	25	168	85
10:00	102	116	0	0	218	22:00	40	29	0	0	69
10:15	95	135	0	0	230	22:15	32	25	0	0	57
10:30	121	128	0	0	249	22:30	31	23	0	0	54
10:45	101	419	115	494	216	22:45	23	126	16	93	39
11:00	112	120	0	0	232	23:00	22	8	0	0	30
11:15	123	137	0	0	260	23:15	24	10	0	0	34
11:30	119	128	0	0	247	23:30	14	6	0	0	20
11:45	124	478	143	528	267	23:45	15	75	13	37	28
<b>TOTALS</b>	2659	4294			6953	<b>TOTALS</b>	6181	4690			10871
<b>SPLIT %</b>	38.2%	61.8%			39.0%	<b>SPLIT %</b>	56.9%	43.1%			61.0%

DAILY TOTALS						NB	SB	EB	WB	Total
						8,840	8,984	0	0	17,824

AM Peak Hour	07:15	06:15			07:30	PM Peak Hour	17:15	17:45		17:15
AM Pk Volume	539	757			1226	PM Pk Volume	847	622		1439
Pk Hr Factor	0.858	0.971			0.881	Pk Hr Factor	0.958	0.920		0.962
7 - 9 Volume	963	1406	0	0	2369	4 - 6 Volume	1645	1086	0	2731
7 - 9 Peak Hour	07:15	07:00			07:30	4 - 6 Peak Hour	16:45	17:00		17:00
7 - 9 Pk Volume	539	706	0	0	1226	4 - 6 Pk Volume	842	569	0	1408
Pk Hr Factor	0.858	0.924	0.000	0.000	0.881	Pk Hr Factor	0.952	0.942	0.000	0.967

### VOLUME

Hickory Flat Hwy/SR-140 S/O Mountain Rd/Earney Rd

Day: Wednesday  
Date: 2/27/2019

City: Canton  
Project #: GA19\_9116\_006

DAILY TOTALS						NB	SB			EB	WB	Total
						8,326	8,276			0	0	16,602
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00	20	4			24	12:00	130	125			255	
00:15	9	6			15	12:15	95	122			217	
00:30	9	2			11	12:30	106	130			236	
00:45	4	42	1	13	5	12:45	104	435	92	469	196	
01:00	8	6			14	13:00	105	111			216	
01:15	5	2			7	13:15	141	123			264	
01:30	4	1			5	13:30	122	110			232	
01:45	1	18	5	14	6	13:45	116	484	123	467	239	
02:00	4	7			11	14:00	126	110			236	
02:15	5	3			8	14:15	137	119			256	
02:30	8	5			13	14:30	145	114			259	
02:45	1	18	8	23	9	14:45	151	559	101	444	252	
03:00	5	7			11	15:00	164	96			260	
03:15	6	7			13	15:15	186	107			293	
03:30	7	13			20	15:30	182	110			292	
03:45	3	21	6	32	9	15:45	189	721	104	417	293	
04:00	7	9			16	16:00	216	108			324	
04:15	6	19			25	16:15	195	120			315	
04:30	4	26			30	16:30	199	104			303	
04:45	5	22	35	89	40	16:45	195	805	129	461	324	
05:00	4	40			44	17:00	205	129			334	
05:15	8	88			96	17:15	210	140			350	
05:30	24	124			148	17:30	210	117			327	
05:45	18	54	166	418	184	17:45	168	793	124	510	292	
06:00	27	186			213	18:00	211	130			341	
06:15	42	226			268	18:15	182	133			315	
06:30	64	205			269	18:30	173	131			304	
06:45	86	219	176	793	262	18:45	179	745	92	486	271	
07:00	80	164			244	19:00	147	75			222	
07:15	102	149			251	19:15	152	72			224	
07:30	116	186			302	19:30	138	65			203	
07:45	114	412	186	685	300	19:45	125	562	53	265	178	
08:00	85	147			232	20:00	104	63			167	
08:15	94	160			254	20:15	92	44			136	
08:30	88	197			285	20:30	80	43			123	
08:45	92	359	165	669	257	20:45	86	362	39	189	125	
09:00	91	165			256	21:00	61	33			94	
09:15	89	153			242	21:15	68	34			102	
09:30	94	150			244	21:30	88	35			123	
09:45	106	380	130	598	236	21:45	66	283	19	121	85	
10:00	79	126			205	22:00	39	19			58	
10:15	87	134			221	22:15	40	20			60	
10:30	96	134			230	22:30	33	15			48	
10:45	116	378	112	506	228	22:45	23	135	12	66	35	
11:00	99	126			225	23:00	23	10			33	
11:15	119	163			282	23:15	21	9			30	
11:30	106	113			219	23:30	19	4			23	
11:45	109	433	109	511	218	23:45	23	86	7	30	30	
<b>TOTALS</b>	2356	4351			<b>6707</b>	<b>TOTALS</b>	5970	3925			<b>9895</b>	
<b>SPLIT %</b>	35.1%	64.9%			<b>40.4%</b>	<b>SPLIT %</b>	60.3%	39.7%			<b>59.6%</b>	

DAILY TOTALS						NB	SB			EB	WB	Total
						8,326	8,276			0	0	16,602
AM Peak Hour	11:15	06:00			07:00	PM Peak Hour	16:45	17:45			16:45	
AM Pk Volume	464	793			1097	PM Pk Volume	820	518			1335	
Pk Hr Factor	0.892	0.877			0.908	Pk Hr Factor	0.976	0.974			0.954	
7 - 9 Volume	771	1354	0	0	2125	4 - 6 Volume	1598	971	0	0	2569	
7 - 9 Peak Hour	07:15	07:45			07:00	4 - 6 Peak Hour	16:45	16:45			16:45	
7 - 9 Pk Volume	417	690	0	0	1097	4 - 6 Pk Volume	820	515	0	0	1335	
Pk Hr Factor	0.899	0.876	0.000	0.000	0.908	Pk Hr Factor	0.976	0.920	0.000	0.000	0.954	

### VOLUME

Arnold Mill Rd/SR-140 S/O Arnold Mill Rd

Day: Wednesday  
Date: 2/27/2019

City: Canton  
Project #: GA19\_9116\_007

DAILY TOTALS						NB	SB	EB	WB	Total	
						11,644	11,264	0	0	22,908	
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	18	8			26	12:00	147	137			284
00:15	15	3			18	12:15	141	149			290
00:30	16	1			17	12:30	128	164			292
00:45	6	55	1	13	7	12:45	159	575	137	587	296
					68						1162
01:00	11	5			16	13:00	149	147			296
01:15	8	5			13	13:15	152	133			285
01:30	6	1			7	13:30	153	145			298
01:45	4	29	4	15	8	13:45	174	628	139	564	313
					44						1192
02:00	3	8			11	14:00	169	159			328
02:15	8	2			10	14:15	186	139			325
02:30	7	6			13	14:30	211	149			360
02:45	4	22	10	26	14	14:45	170	736	134	581	304
					48						1317
03:00	4	7			11	15:00	218	135			353
03:15	7	9			16	15:15	279	105			384
03:30	6	17			23	15:30	268	130			398
03:45	6	23	19	52	25	15:45	266	1031	129	499	395
					75						1530
04:00	6	12			18	16:00	292	130			422
04:15	4	23			27	16:15	326	124			450
04:30	4	41			45	16:30	333	115			448
04:45	6	20	56	132	62	16:45	329	1280	141	510	470
					152						1790
05:00	5	75			80	17:00	382	135			517
05:15	12	109			121	17:15	347	152			499
05:30	23	166			189	17:30	377	141			518
05:45	18	58	252	602	270	17:45	332	1438	141	569	473
					660						2007
06:00	34	287			321	18:00	350	144			494
06:15	43	348			391	18:15	311	141			452
06:30	61	341			402	18:30	294	172			466
06:45	89	227	333	1309	422	18:45	264	1219	111	568	375
					1536						1787
07:00	82	318			400	19:00	206	96			302
07:15	86	299			385	19:15	219	84			303
07:30	117	271			388	19:30	199	90			289
07:45	109	394	272	1160	381	19:45	159	783	38	308	197
					1554						1091
08:00	106	259			365	20:00	157	70			227
08:15	90	239			329	20:15	132	46			178
08:30	98	291			389	20:30	139	40			179
08:45	100	394	209	998	309	20:45	126	554	45	201	171
					1392						755
09:00	81	298			379	21:00	98	37			135
09:15	115	231			346	21:15	114	38			152
09:30	100	234			334	21:30	123	29			152
09:45	129	425	194	957	323	21:45	90	425	21	125	111
					1382						550
10:00	102	173			275	22:00	62	21			83
10:15	100	185			285	22:15	63	21			84
10:30	101	198			299	22:30	50	20			70
10:45	127	430	160	716	287	22:45	44	219	13	75	57
					1146						294
11:00	119	175			294	23:00	41	11			52
11:15	149	188			337	23:15	32	9			41
11:30	123	152			275	23:30	33	6			39
11:45	155	546	151	666	306	23:45	27	133	5	31	32
					1212						164
<b>TOTALS</b>	<b>2623</b>	<b>6646</b>			<b>9269</b>	<b>TOTALS</b>	<b>9021</b>	<b>4618</b>			<b>13639</b>
<b>SPLIT %</b>	<b>28.3%</b>	<b>71.7%</b>			<b>40.5%</b>	<b>SPLIT %</b>	<b>66.1%</b>	<b>33.9%</b>			<b>59.5%</b>

DAILY TOTALS						NB	SB	EB	WB	Total
						11,644	11,264	0	0	22,908
AM Peak Hour	11:15	06:15			06:15	PM Peak Hour	17:00	17:45		17:00
AM Pk Volume	574	1340			1615	PM Pk Volume	1438	598		2007
Pk Hr Factor	0.926	0.963			0.957	Pk Hr Factor	0.941	0.869		0.969
7 - 9 Volume	788	2158	0	0	2946	4 - 6 Volume	2718	1079	0	3797
7 - 9 Peak Hour	07:30	07:00			07:00	4 - 6 Peak Hour	17:00	16:45		17:00
7 - 9 Pk Volume	422	1160	0	0	1554	4 - 6 Pk Volume	1438	569	0	2007
Pk Hr Factor	0.902	0.912	0.000	0.000	0.971	Pk Hr Factor	0.941	0.936	0.000	0.969

Project ID: 19-09115-001  
 Location: Hickory Flat Hwy/SR-140 & I-575 SB Off-Ramp  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					I-575 SB Off-Ramp Eastbound					I-575 SB Off-Ramp Westbound					Int. Total					
	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru		Rgt	Utum	Peds	App. Total	
7:00 AM	0	45	0	0	0	45	0	88	0	0	0	88	0	0	0	0	0	0	0	11	0	11	0	0	22	155
7:15 AM	0	56	0	0	0	56	0	90	0	0	0	90	0	0	0	0	0	0	0	21	0	15	0	0	36	182
7:30 AM	0	86	0	0	0	86	0	55	0	0	0	55	0	0	0	0	0	0	0	26	0	26	0	0	52	193
7:45 AM	0	112	0	0	0	112	0	83	0	0	0	83	0	0	0	0	0	0	0	25	0	26	0	0	51	246
Total	0	299	0	0	0	299	0	316	0	0	0	316	0	0	0	0	0	0	0	83	0	78	0	0	161	776
8:00 AM	0	98	0	0	0	98	0	54	0	0	0	54	0	0	0	0	0	0	0	13	0	23	0	0	36	188
8:15 AM	0	113	0	0	0	113	0	72	0	0	0	72	0	0	0	0	0	0	0	26	0	16	0	0	42	227
8:30 AM	0	114	0	0	0	114	0	54	0	0	0	54	0	0	0	0	0	0	0	19	0	17	0	0	36	204
8:45 AM	0	120	0	0	0	120	0	60	0	0	0	60	0	0	0	0	0	0	0	33	0	31	0	0	64	244
Total	0	445	0	0	0	445	0	240	0	0	0	240	0	0	0	0	0	0	0	91	0	87	0	0	178	863
***BREAK***																										
4:00 PM	0	102	0	0	0	102	0	80	0	0	0	80	0	0	0	0	0	0	0	38	0	13	0	0	51	233
4:15 PM	0	98	0	0	0	98	0	92	0	0	0	92	0	0	0	0	0	0	0	29	0	18	0	0	47	237
4:30 PM	0	97	0	0	0	97	0	85	0	0	0	85	0	0	0	0	0	0	0	34	0	17	0	0	51	233
4:45 PM	0	97	0	0	0	97	0	116	0	0	0	116	0	0	0	0	0	0	0	39	0	20	0	0	59	272
Total	0	394	0	0	0	394	0	373	0	0	0	373	0	0	0	0	0	0	0	140	0	68	0	0	208	975
5:00 PM	0	105	0	0	0	105	0	157	0	0	0	157	0	0	0	0	0	0	0	33	0	22	0	0	55	317
5:15 PM	0	100	0	0	0	100	0	141	0	0	0	141	0	0	0	0	0	0	0	41	0	25	0	0	66	307
5:30 PM	0	119	0	0	0	119	0	82	0	0	0	82	0	0	0	0	0	0	0	34	0	22	0	0	56	257
5:45 PM	0	102	0	0	0	102	0	117	0	0	0	117	0	0	0	0	0	0	0	34	0	22	0	0	56	275
Total	0	426	0	0	0	426	0	497	0	0	0	497	0	0	0	0	0	0	0	142	0	91	0	0	233	1156
Grand Total	0	1564	0	0	0	1564	0	1426	0	0	0	1426	0	0	0	0	0	0	0	456	0	324	0	0	780	3770
Apprch %	0.0	100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		58.5	0.0	41.5	0.0	0.0		
Total %	0.0	41.5	0.0	0.0	0.0	41.5	0.0	37.8	0.0	0.0	0.0	37.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0	8.6	0.0	0.0	20.7	
Cars, PU, Vans	0	1564	0	0	0	1564	0	1426	0	0	0	1426	0	0	0	0	0	0	0	456	0	324	0	0	780	3770
% Cars, PU, Vans	0.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09115-001  
 Location: Hickory Flat Hwy/SR-140 & I-575 SB Off-Ramp  
 City: Canton

**PEAK HOURS**

Day: Wednesday  
 Date: 02/27/2019

**AM**

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					I-575 SB Off-Ramp Eastbound					I-575 SB Off-Ramp Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
7:45 AM	0	112	0	0	112	0	83	0	0	83	0	0	0	0	0	25	0	26	0	51	246
8:00 AM	0	98	0	0	98	0	54	0	0	54	0	0	0	0	0	13	0	23	0	36	188
8:15 AM	0	113	0	0	113	0	72	0	0	72	0	0	0	0	0	26	0	16	0	42	227
8:30 AM	0	114	0	0	114	0	54	0	0	54	0	0	0	0	0	19	0	17	0	36	204
Total Volume	0	437	0	0	437	0	263	0	0	263	0	0	0	0	0	83	0	82	0	165	865
% App. Total	0.0	100.0	0.0	0.0	100	0.0	100.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	50.3	0.0	49.7	0.0	100	
PHF	0.958					0.792										0.809					0.879
Cars, PU, Vans	0	437	0	0	437	0	263	0	0	263	0	0	0	0	0	83	0	82	0	165	865
% Cars, PU, Vans	0.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0

**PM**

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					I-575 SB Off-Ramp Eastbound					I-575 SB Off-Ramp Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	0	105	0	0	105	0	157	0	0	157	0	0	0	0	0	33	0	22	0	55	317
5:15 PM	0	100	0	0	100	0	141	0	0	141	0	0	0	0	0	41	0	25	0	66	307
5:30 PM	0	119	0	0	119	0	82	0	0	82	0	0	0	0	0	34	0	22	0	56	257
5:45 PM	0	102	0	0	102	0	117	0	0	117	0	0	0	0	0	34	0	22	0	56	275
Total Volume	0	426	0	0	426	0	497	0	0	497	0	0	0	0	0	142	0	91	0	233	1156
% App. Total	0.0	100.0	0.0	0.0	100	0.0	100.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0	60.9	0.0	39.1	0.0	100	
PHF	0.895					0.791										0.883					0.912
Cars, PU, Vans	0	426	0	0	426	0	497	0	0	497	0	0	0	0	0	142	0	91	0	233	1156
% Cars, PU, Vans	0.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0















Project ID: 19-09115-005  
 Location: Mountain Vista Blvd & Hickory Flat Hwy/SR-140  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Mountain Vista Blvd Northbound					Mountain Vista Blvd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total				
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru		Rgt	Uturn	Peds	App. Total
7:00 AM	23	0	16	0	0	39	0	0	0	0	0	0	0	135	2	0	0	137	1	140	0	0	0	141	317
7:15 AM	15	0	8	0	0	23	0	0	0	0	0	0	0	147	2	0	0	149	1	138	0	0	0	139	311
7:30 AM	9	0	9	0	0	18	0	0	2	0	0	2	3	134	6	0	0	143	4	177	2	0	0	183	346
7:45 AM	10	0	6	0	0	16	0	0	0	0	0	0	4	116	7	0	0	127	5	171	3	0	0	179	322
Total	57	0	39	0	0	96	0	0	2	0	0	2	7	532	17	0	0	556	11	626	5	0	0	642	1296
8:00 AM	6	0	5	0	0	11	0	0	1	0	0	1	2	99	3	0	0	104	4	135	3	0	0	142	258
8:15 AM	11	0	6	0	0	17	0	0	1	0	0	1	1	118	7	0	0	126	6	144	1	0	0	151	295
8:30 AM	9	0	3	0	0	12	0	0	0	0	0	0	1	97	4	0	0	102	2	116	1	0	0	119	233
8:45 AM	10	0	4	0	0	14	0	0	1	0	0	1	1	100	5	0	0	106	8	137	2	0	0	147	268
Total	36	0	18	0	0	54	0	0	3	0	0	3	5	414	19	0	0	438	20	532	7	0	0	559	1054
9:00 AM	9	0	6	0	0	15	0	0	1	0	0	1	5	121	6	0	0	132	8	104	2	0	0	114	262
9:15 AM	11	0	8	0	0	19	0	0	0	0	0	0	1	108	8	0	0	117	5	100	0	0	0	105	241
9:30 AM	5	0	5	0	0	10	0	0	3	0	0	3	4	96	5	0	0	105	6	112	2	0	0	120	238
9:45 AM	10	0	3	0	0	13	0	0	1	0	0	1	1	82	6	0	0	89	4	97	1	0	0	102	205
Total	35	0	22	0	0	57	0	0	5	0	0	5	11	407	25	0	0	443	23	413	5	0	0	441	946
***BREAK***																									
10:00 AM	13	0	11	0	0	24	0	0	1	0	0	1	0	91	3	0	0	94	3	105	1	0	0	109	228
10:15 AM	11	0	3	0	0	14	0	0	2	0	0	2	2	89	2	0	0	93	5	94	1	0	0	100	209
10:30 AM	9	0	4	0	0	13	1	0	1	0	0	2	0	87	7	0	0	94	6	85	1	0	0	92	201
10:45 AM	6	0	1	0	0	7	0	0	1	0	0	1	0	82	5	0	0	87	4	109	0	0	0	113	208
Total	39	0	19	0	0	58	1	0	5	0	0	6	2	349	17	0	0	368	18	393	3	0	0	414	846
11:00 AM	7	0	4	0	0	11	0	0	4	0	0	4	0	89	9	0	0	98	5	82	0	0	0	87	200
11:15 AM	10	0	4	0	0	14	0	0	1	0	0	1	0	80	7	0	0	87	4	108	0	0	0	112	214
11:30 AM	9	0	4	0	0	13	1	0	1	0	0	2	0	89	6	0	0	95	8	100	1	0	0	109	219
11:45 AM	9	1	6	0	0	16	0	0	4	0	0	4	1	97	8	0	0	106	11	104	0	0	0	115	241
Total	35	1	18	0	0	54	1	0	10	0	0	11	1	355	30	0	0	386	28	394	1	0	0	423	874
12:00 PM	6	0	6	0	0	12	0	0	3	0	0	3	0	99	9	0	0	108	7	117	2	0	0	126	249
12:15 PM	4	0	6	0	0	10	0	0	1	0	0	1	4	103	11	0	0	118	8	117	1	0	0	126	255
12:30 PM	7	0	5	0	0	12	0	0	0	0	0	0	1	79	7	0	0	87	7	109	6	0	0	122	221
12:45 PM	10	0	6	0	0	16	0	0	1	0	0	1	5	90	8	0	0	103	9	108	6	0	0	123	243
Total	27	0	23	0	0	50	0	0	5	0	0	5	10	371	35	0	0	416	31	451	15	0	0	497	968
1:00 PM	9	0	3	0	0	12	0	0	0	0	0	0	0	98	8	0	0	106	10	80	2	0	0	92	210
1:15 PM	12	0	4	0	0	16	0	0	1	0	0	1	4	117	8	0	0	129	3	120	2	0	0	125	271
1:30 PM	11	0	6	0	0	17	0	0	5	0	0	5	0	111	9	0	0	120	4	89	0	0	0	93	235
1:45 PM	10	0	8	0	0	18	0	0	2	0	0	2	2	98	6	0	0	106	10	98	3	0	0	111	237
Total	42	0	21	0	0	63	0	0	8	0	0	8	6	424	31	0	0	461	27	387	7	0	0	421	953
***BREAK***																									
2:00 PM	10	0	4	0	0	14	0	0	2	0	0	2	1	100	9	0	0	110	6	103	0	0	0	109	235
2:15 PM	6	0	9	0	0	15	0	0	2	0	0	2	1	97	7	0	0	105	5	104	0	0	0	109	231
2:30 PM	10	0	4	0	0	14	0	0	2	0	0	2	2	108	13	0	0	123	8	105	1	0	0	114	253
2:45 PM	12	0	1	0	0	13	0	0	2	0	0	2	3	111	17	0	0	131	6	123	2	0	0	131	277
Total	38	0	18	0	0	56	0	0	8	0	0	8	7	416	46	0	0	469	25	435	3	0	0	463	996
3:00 PM	12	0	4	0	0	16	0	0	3	0	0	3	2	107	12	0	0	121	2	138	0	0	0	140	280
3:15 PM	3	0	5	0	0	8	0	0	2	0	0	2	3	141	10	0	0	154	7	134	1	0	0	142	306
3:30 PM	8	0	6	0	0	14	0	0	3	0	0	3	0	105	14	0	0	119	7	164	1	0	0	172	308
3:45 PM	11	0	3	0	0	14	0	0	2	0	0	2	2	143	18	0	0	163	5	143	1	0	0	149	328
Total	34	0	18	0	0	52	0	0	10	0	0	10	7	496	54	0	0	557	21	579	3	0	0	603	1222
4:00 PM	9	0	5	0	0	14	0	0	1	0	0	1	1	137	20	0	0	158	7	138	3	0	0	148	321
4:15 PM	8	0	7	0	0	15	0	0	2	0	0	2	1	149	10	0	0	160	11	173	0	0	0	184	361
4:30 PM	7	0	8	0	0	15	0	0	6	0	0	6	0	185	14	0	0	199	13	177	2	0	0	192	412
4:45 PM	7	0	7	0	0	14	0	1	5	0	0	6	3	183	25	0	0	211	12	154	1	0	0	167	398
Total	31	0	27	0	0	58	0	1	14	0	0	15	5	654	69	0	0	728	43	642	6	0	0	691	1492
5:00 PM	25	0	5	0	0	30	0	0	5	0	0	5	0	184	16	0	0	200	16	190	2	0	0	208	443
5:15 PM	15	0	7	0	0	22	0	0	5	0	0	5	0	167	25	0	0	192	16	192	0	0	0	208	427
5:30 PM	20	0	7	0	0	27	0	0	1	0	0	1	0	165	13	0	0	178	12	225	0	0	0	237	443
5:45 PM	13	0	7	0	0	20	0	0	2	0	0	2	0	179	11	0	0	190	13	209	0	0	0	222	434
Total	73	0	26	0	0	99	0	0	13	0	0	13	0	695	65	0	0	760	57	816	2	0	0	875	1747
6:00 PM	12	0	7	0	0	19	0	0	1	0	0	1	0	141	29	0	0	170	16	166	0	0	0	182	372
6:15 PM	9	0	3	0	0	12	0	0	1	0	0	1	0	134	20	0	0	154	11	151	0	0	0	162	329
6:30 PM	16	0	4	0	0	20	0	0	0	0	0	0	0	130	24	0	0	154	21	136	0	0	0	157	331
6:45 PM	9	0	3	0	0	12	0	0	0	0	0	0	1	122	18	0	0	141	19	121	0	0	0	140	293
Total	46	0	17	0	0	63	0	0	2	0	0	2	1	527	91	0	0	619	67	574	0	0	0	641	1325
Grand Total	493	1	266	0	0	760	2	1	85	0	0	88	62	5640	499	0	0	6201	371	6242	57	0	0	6670	13719
Apprch %	64.9	0.1	35.0	0.0	0.0	2.3	1.1	96.6	0.0	0.0	0.6	1.0	91.0	8.0	0.0	0.0	5.6	93.6	0.9	0.0	0.0	0.0	0.0	0.0	
Total %	3.6	0.0	1.9	0.0	0.0	5.5	0.0	0.0	0.6	0.0	0.0	0.6	0.5	41.1	3.6	0.0	0.0	45.2	2.7	45.5	0.4	0.0	0.0	48.6	
Cars, PU, Vans	493	1	266	0	0	760	2	1	85	0	0	88													

% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0
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Project ID: 19-09115-005  
 Location: Mountain Vista Blvd & Hickory Flat Hwy/SR-140  
 City: Canton

**PEAK HOURS**

Day: Wednesday  
 Date: 02/27/2019

**AM**

Start Time	Mountain Vista Blvd Northbound					Mountain Vista Blvd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	
Peak Hour Analysis from 07:00 AM to 10:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	23	0	16	0	39	0	0	0	0	0	0	135	2	0	137	1	140	0	0	141	317
7:15 AM	15	0	8	0	23	0	0	0	0	0	0	147	2	0	149	1	138	0	0	139	311
7:30 AM	9	0	9	0	18	0	0	2	0	2	3	134	6	0	143	4	177	2	0	183	346
7:45 AM	10	0	6	0	16	0	0	0	0	0	4	116	7	0	127	5	171	3	0	179	322
Total Volume	57	0	39	0	96	0	0	2	0	2	7	532	17	0	556	11	626	5	0	642	1296
% App. Total	59.4	0.0	40.6	0.0	100	0.0	0.0	100.0	0.0	100	1.3	95.7	3.1	0.0	100	1.7	97.5	0.8	0.0	100	
PHF	0.615					0.250					0.933					0.877					0.936
Cars, PU, Vans	57	0	39	0	96	0	0	2	0	2	7	532	17	0	556	11	626	5	0	642	1296
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

**NOON**

Start Time	Mountain Vista Blvd Northbound					Mountain Vista Blvd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	
Peak Hour Analysis from 10:00 AM to 02:00 PM																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	6	0	6	0	12	0	0	3	0	3	0	99	9	0	108	7	117	2	0	126	249
12:15 PM	4	0	6	0	10	0	0	1	0	1	4	103	11	0	118	8	117	1	0	126	255
12:30 PM	7	0	5	0	12	0	0	0	0	0	1	79	7	0	87	7	109	6	0	122	221
12:45 PM	10	0	6	0	16	0	0	1	0	1	5	90	8	0	103	9	108	6	0	123	243
Total Volume	27	0	23	0	50	0	0	5	0	5	10	371	35	0	416	31	451	15	0	497	968
% App. Total	54.0	0.0	46.0	0.0	100	0.0	0.0	100.0	0.0	100	2.4	89.2	8.4	0.0	100	6.2	90.7	3.0	0.0	100	
PHF	0.781					0.417					0.881					0.986					0.949
Cars, PU, Vans	27	0	23	0	50	0	0	5	0	5	10	371	35	0	416	31	451	15	0	497	968
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

**PM**

Start Time	Mountain Vista Blvd Northbound					Mountain Vista Blvd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	
Peak Hour Analysis from 02:00 PM to 07:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	25	0	5	0	30	0	0	5	0	5	0	184	16	0	200	16	190	2	0	208	443
5:15 PM	15	0	7	0	22	0	0	5	0	5	0	167	25	0	192	16	192	0	0	208	427
5:30 PM	20	0	7	0	27	0	0	1	0	1	0	165	13	0	178	12	225	0	0	237	443
5:45 PM	13	0	7	0	20	0	0	2	0	2	0	179	11	0	190	13	209	0	0	222	434
Total Volume	73	0	26	0	99	0	0	13	0	13	0	695	65	0	760	57	816	2	0	875	1747
% App. Total	73.7	0.0	26.3	0.0	100	0.0	0.0	100.0	0.0	100	0.0	91.4	8.6	0.0	100	6.5	93.3	0.2	0.0	100	
PHF	0.825					0.650					0.950					0.923					0.986
Cars, PU, Vans	73	0	26	0	99	0	0	13	0	13	0	695	65	0	760	57	816	2	0	875	1747
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09115-006

Location: Northside Cherokee Blvd/Russell King Ln & Hickory Flat Hwy/SR-140  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Northside Cherokee Blvd/Russell King Ln Northbound						Northside Cherokee Blvd/Russell King Ln Southbound						Hickory Flat Hwy/SR-140 Eastbound						Hickory Flat Hwy/SR-140 Westbound						Int. Total
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	
7:00 AM	1	1	0	0	0	2	48	1	14	0	0	63	37	136	0	0	0	173	0	104	46	0	0	150	388
7:15 AM	0	0	0	0	0	0	56	0	17	0	0	73	37	147	0	0	0	184	0	116	65	0	0	181	438
7:30 AM	0	1	1	0	0	2	48	0	28	0	0	76	41	118	1	0	0	160	0	143	104	0	0	247	485
7:45 AM	0	0	1	0	0	1	47	0	22	0	0	69	36	111	0	0	0	147	0	134	117	0	0	251	468
Total	1	2	2	0	0	5	199	1	81	0	0	281	151	512	1	0	0	664	0	497	332	0	0	829	1779
8:00 AM	0	0	0	0	0	0	46	0	15	0	0	61	27	84	0	0	0	111	0	121	62	0	0	183	355
8:15 AM	1	0	0	0	0	1	56	1	19	1	0	77	32	107	0	0	0	139	0	110	74	0	0	184	401
8:30 AM	0	1	2	0	0	3	45	1	12	0	0	58	34	77	0	0	0	111	1	112	70	0	0	183	355
8:45 AM	0	0	1	0	0	1	53	1	20	0	0	74	28	83	0	0	0	111	1	107	71	0	0	179	365
Total	1	1	3	0	0	5	200	3	66	1	0	270	121	351	0	0	0	472	2	450	277	0	0	729	1476
***BREAK***																									
4:00 PM	0	0	0	0	0	0	94	0	41	1	0	136	20	114	0	0	0	134	1	117	66	0	0	184	454
4:15 PM	1	0	0	0	0	1	79	0	49	0	0	128	24	118	1	0	0	143	1	140	79	0	0	220	492
4:30 PM	0	0	1	0	0	1	111	0	68	0	0	179	30	150	0	0	0	180	2	124	84	0	0	210	570
4:45 PM	0	0	1	0	0	1	91	0	46	0	0	137	35	159	1	0	0	195	1	141	102	0	0	244	577
Total	1	0	2	0	0	3	375	0	204	1	0	580	109	541	2	0	0	652	5	522	331	0	0	858	2093
5:00 PM	0	0	2	0	0	2	97	1	71	0	0	169	39	162	0	0	0	201	0	137	69	0	0	206	578
5:15 PM	2	0	2	0	0	4	86	3	62	0	0	151	34	119	1	0	0	154	0	169	81	0	0	250	559
5:30 PM	1	0	1	0	0	2	108	0	61	1	0	170	44	124	2	0	0	170	1	157	75	0	0	233	575
5:45 PM	0	2	0	0	0	2	85	0	56	0	0	141	30	133	0	0	0	163	1	174	84	0	0	259	565
Total	3	2	5	0	0	10	376	4	250	1	0	631	147	538	3	0	0	688	2	637	309	0	0	948	2277
Grand Total	6	5	12	0	0	23	1150	8	601	3	0	1762	528	1942	6	0	0	2476	9	2106	1249	0	0	3364	7625
Apprch %	26.1	21.7	52.2	0.0	0.0		65.3	0.5	34.1	0.2	0.0		21.3	78.4	0.2	0.0	0.0		0.3	62.6	37.1	0.0	0.0		
Total %	0.1	0.1	0.2	0.0	0.0	0.3	15.1	0.1	7.9	0.0	0.0	23.1	6.9	25.5	0.1	0.0	0.0	32.5	0.1	27.6	16.4	0.0	0.0	44.1	
Cars, PU, Vans	6	5	12	0	0	23	1150	8	601	0	0	1762	528	1942	6	0	0	2476	9	2106	1249	0	0	3364	7625
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09115-006

Location: Northside Cherokee Blvd/Russell King Ln & Hickory  
City: Canton

**PEAK HOURS**

Day: Wednesday  
Date: 02/27/2019

**AM**

Start Time	Northside Cherokee Blvd/Russell King Northbound					Northside Cherokee Blvd/Russell King Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	1	1	0	0	2	48	1	14	0	63	37	136	0	0	173	0	104	46	0	150	388
7:15 AM	0	0	0	0	0	56	0	17	0	73	37	147	0	0	184	0	116	65	0	181	438
7:30 AM	0	1	1	0	2	48	0	28	0	76	41	118	1	0	160	0	143	104	0	247	485
7:45 AM	0	0	1	0	1	47	0	22	0	69	36	111	0	0	147	0	134	117	0	251	468
Total Volume	1	2	2	0	5	199	1	81	0	281	151	512	1	0	664	0	497	332	0	829	1779
% App. Total	20.0	40.0	40.0	0.0	100	70.8	0.4	28.8	0.0	100	22.7	77.1	0.2	0.0	100	0.0	60.0	40.0	0.0	100	
PHF	0.625					0.924					0.902					0.826					0.917
Cars, PU, Vans	1	2	2	0	5	199	1	81	0	281	151	512	1	0	664	0	497	332	0	829	1779
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0

**PM**

Start Time	Northside Cherokee Blvd/Russell King Northbound					Northside Cherokee Blvd/Russell King Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	0	0	1	0	1	91	0	46	0	137	35	159	1	0	195	1	141	102	0	244	577
5:00 PM	0	0	2	0	2	97	1	71	0	169	39	162	0	0	201	0	137	69	0	206	578
5:15 PM	2	0	2	0	4	86	3	62	0	151	34	119	1	0	154	0	169	81	0	250	559
5:30 PM	1	0	1	0	2	108	0	61	1	170	44	124	2	0	170	1	157	75	0	233	575
Total Volume	3	0	6	0	9	382	4	240	1	627	152	564	4	0	720	2	604	327	0	933	2289
% App. Total	33.3	0.0	66.7	0.0	100	60.9	0.6	38.3	0.2	100	21.1	78.3	0.6	0.0	100	0.2	64.7	35.0	0.0	100	
PHF	0.563					0.922					0.896					0.933					0.990
Cars, PU, Vans	3	0	6	0	9	382	4	240	1	627	152	564	4	0	720	2	604	327	0	933	2289
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0



Project ID: 19-09115-007  
 Location: Scott Rd & Hickory Flat Hwy/SR-140  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Scott Rd Northbound					Scott Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total						
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru		Rgt	Uturn	Peds	App. Total		
7:00 AM	0	0	0	0	0	0	18	0	33	0	0	51	6	191	0	0	0	197	0	115	9	0	0	124	372		
7:15 AM	0	0	0	0	0	0	32	0	31	0	0	63	6	190	0	0	0	196	0	152	14	0	0	166	425		
7:30 AM	0	0	0	0	0	0	23	0	25	0	0	48	7	172	0	0	0	179	0	233	17	0	0	250	477		
7:45 AM	0	0	0	0	0	0	23	0	10	0	0	33	3	158	0	0	0	161	0	238	11	0	0	249	443		
Total	0	0	0	0	0	0	96	0	99	0	0	195	22	711	0	0	0	733	0	738	51	0	0	789	1717		
8:00 AM	0	0	0	0	0	0	20	0	12	0	0	32	4	128	0	0	0	132	0	154	13	0	0	167	331		
8:15 AM	0	0	0	0	0	0	14	0	3	0	0	17	3	163	0	0	0	166	0	173	7	0	0	180	363		
8:30 AM	0	0	0	0	0	0	14	0	6	0	0	20	6	124	0	0	0	130	0	182	11	0	0	193	343		
8:45 AM	0	0	0	0	0	0	22	0	8	0	0	30	6	127	0	0	0	133	0	166	19	0	0	185	348		
Total	0	0	0	0	0	0	70	0	29	0	0	99	19	542	0	0	0	561	0	675	50	0	0	725	1385		
***BREAK***																											
4:00 PM	0	0	0	0	0	0	24	0	4	0	0	28	11	188	0	0	0	199	0	176	19	0	0	195	422		
4:15 PM	0	0	0	0	0	0	20	0	12	0	0	32	19	178	0	0	0	197	0	206	18	0	0	224	453		
4:30 PM	0	0	0	0	0	0	21	0	8	0	0	29	14	220	0	0	0	234	0	209	20	0	0	229	492		
4:45 PM	0	0	0	0	0	0	23	0	9	0	0	32	13	228	0	0	0	241	0	216	14	0	0	230	503		
Total	0	0	0	0	0	0	88	0	33	0	0	121	57	814	0	0	0	871	0	807	71	0	0	878	1870		
5:00 PM	0	0	0	0	0	0	28	0	21	0	0	49	14	203	0	0	0	217	0	215	19	0	0	234	500		
5:15 PM	0	0	0	0	0	0	18	0	27	0	0	45	12	204	0	0	0	216	0	249	22	0	0	271	532		
5:30 PM	0	0	0	0	0	0	10	0	10	0	0	20	11	234	0	0	0	245	0	225	23	0	0	248	513		
5:45 PM	0	0	0	0	0	0	15	0	10	0	0	25	18	235	0	0	0	253	0	202	16	0	0	218	496		
Total	0	0	0	0	0	0	71	0	68	0	0	139	55	876	0	0	0	931	0	891	80	0	0	971	2041		
Grand Total	0	0	0	0	0	0	325	0	229	0	0	554	153	2943	0	0	0	3096	0	3111	252	0	0	3363	7013		
Apprch %	0.0	0.0	0.0	0.0	0.0	0.0	58.7	0.0	41.3	0.0	0.0	4.9	95.1	0.0	0.0	0.0	0.0	92.5	7.5	0.0	0.0	0.0	44.4	3.6	0.0	0.0	48.0
Total %	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	3.3	0.0	0.0	7.9	2.2	42.0	0.0	0.0	0.0	44.1	0.0	44.4	3.6	0.0	0.0	48.0			
Cars, PU, Vans	0	0	0	0	0	0	325	0	229	0	0	554	153	2943	0	0	0	3096	0	3111	252	0	0	3363	7013		
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0		

Project ID: 19-09115-007  
 Location: Scott Rd & Hickory Flat Hwy/SR-140  
 City: Canton

### PEAK HOURS

Day: Wednesday  
 Date: 02/27/2019

**AM**

Start Time	Scott Rd Northbound					Scott Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total	
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total		
Peak Hour Analysis from 07:00 AM to 09:00 AM																						
Peak Hour for Entire Intersection Begins at 07:00 AM																						
7:00 AM	0	0	0	0	0	18	0	33	0	51	6	191	0	0	197	0	115	9	0	124	372	
7:15 AM	0	0	0	0	0	32	0	31	0	63	6	190	0	0	196	0	152	14	0	166	425	
7:30 AM	0	0	0	0	0	23	0	25	0	48	7	172	0	0	179	0	233	17	0	250	477	
7:45 AM	0	0	0	0	0	23	0	10	0	33	3	158	0	0	161	0	238	11	0	249	443	
Total Volume	0	0	0	0	0	96	0	99	0	195	22	711	0	0	733	0	738	51	0	789	1717	
% App. Total	0.0	0.0	0.0	0.0	0.0	49.2	0.0	50.8	0.0	100	3.0	97.0	0.0	0.0	100	0.0	93.5	6.5	0.0	100		
PHF											0.774					0.930					0.789	0.900
Cars, PU, Vans	0	0	0	0	0	96	0	99	0	195	22	711	0	0	733	0	738	51	0	789	1717	
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	

**PM**

Start Time	Scott Rd Northbound					Scott Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total	
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total		
Peak Hour Analysis from 04:00 PM to 06:00 PM																						
Peak Hour for Entire Intersection Begins at 04:45 PM																						
4:45 PM	0	0	0	0	0	23	0	9	0	32	13	228	0	0	241	0	216	14	0	230	503	
5:00 PM	0	0	0	0	0	28	0	21	0	49	14	203	0	0	217	0	215	19	0	234	500	
5:15 PM	0	0	0	0	0	18	0	27	0	45	12	204	0	0	216	0	249	22	0	271	532	
5:30 PM	0	0	0	0	0	10	0	10	0	20	11	234	0	0	245	0	225	23	0	248	513	
Total Volume	0	0	0	0	0	79	0	67	0	146	50	869	0	0	919	0	905	78	0	983	2048	
% App. Total	0.0	0.0	0.0	0.0	0.0	54.1	0.0	45.9	0.0	100	5.4	94.6	0.0	0.0	100	0.0	92.1	7.9	0.0	100		
PHF											0.745					0.938					0.907	0.962
Cars, PU, Vans	0	0	0	0	0	79	0	67	0	146	50	869	0	0	919	0	905	78	0	983	2048	
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	

Project ID: 19-09115-008  
 Location: Avery Rd & Hickory Flat Hwy/SR-140  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Avery Rd Northbound					Avery Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total				
	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru		Rgt	Utum	Peds	App. Total
7:00 AM	0	0	0	0	0	0	7	0	14	0	0	21	23	191	0	0	0	214	0	108	6	0	0	114	349
7:15 AM	0	0	0	0	0	0	4	0	32	0	0	36	17	206	0	0	0	223	0	133	3	0	0	136	395
7:30 AM	0	0	0	0	0	0	0	0	28	0	0	28	17	177	0	0	0	194	0	228	17	0	0	245	467
7:45 AM	0	0	0	0	0	0	6	0	50	0	0	56	16	167	0	0	0	183	0	194	4	0	0	198	437
Total	0	0	0	0	0	0	17	0	124	0	0	141	73	741	0	0	0	814	0	663	30	0	0	693	1648
8:00 AM	0	0	0	0	0	0	2	0	17	0	0	19	9	138	0	0	0	147	0	160	9	0	0	169	335
8:15 AM	0	0	0	0	0	0	4	0	25	0	0	29	8	171	0	0	0	179	0	148	2	0	0	150	358
8:30 AM	0	0	0	0	0	0	4	0	27	0	0	31	9	127	0	0	0	136	0	163	2	0	0	165	332
8:45 AM	0	0	0	0	0	0	4	0	18	0	0	22	15	137	0	0	0	152	0	166	4	0	0	170	344
Total	0	0	0	0	0	0	14	0	87	0	0	101	41	573	0	0	0	614	0	637	17	0	0	654	1369
***BREAK***																									
4:00 PM	0	0	0	0	0	0	3	0	11	0	0	14	20	195	0	0	0	215	0	190	6	0	0	196	425
4:15 PM	0	0	0	0	0	0	3	0	32	0	0	35	22	174	0	0	0	196	0	196	10	0	0	206	437
4:30 PM	0	0	0	0	0	0	2	0	28	0	0	30	31	207	0	0	0	238	0	196	9	0	0	205	473
4:45 PM	0	0	0	0	0	0	4	0	31	0	0	35	34	220	0	0	0	254	0	200	11	0	0	211	500
Total	0	0	0	0	0	0	12	0	102	0	0	114	107	796	0	0	0	903	0	782	36	0	0	818	1835
5:00 PM	0	0	0	0	0	0	4	0	22	0	0	26	45	188	0	0	0	233	0	217	8	0	0	225	484
5:15 PM	0	0	0	0	0	0	3	0	38	0	0	41	25	190	0	0	0	215	0	232	13	0	0	245	501
5:30 PM	0	0	0	0	0	0	6	0	36	0	0	42	38	211	0	0	0	249	0	212	17	0	0	229	520
5:45 PM	0	0	0	0	0	0	8	0	31	0	0	39	37	215	0	0	0	252	0	179	9	0	0	188	479
Total	0	0	0	0	0	0	21	0	127	0	0	148	145	804	0	0	0	949	0	840	47	0	0	887	1984
Grand Total	0	0	0	0	0	0	64	0	440	0	0	504	366	2914	0	0	0	3280	0	2922	130	0	0	3052	6836
Apprch %	0.0	0.0	0.0	0.0	0.0	0.0	12.7	0.0	87.3	0.0	0.0	11.2	88.8	0.0	0.0	0.0	0.0	95.7	4.3	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	6.4	0.0	0.0	7.4	5.4	42.6	0.0	0.0	0.0	48.0	0.0	42.7	1.9	0.0	0.0	44.6	
Cars, PU, Vans	0	0	0	0	0	0	64	0	440	0	0	504	366	2914	0	0	0	3280	0	2922	130	0	0	3052	6836
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	

Project ID: 19-09115-008  
 Location: Avery Rd & Hickory Flat Hwy/SR-140  
 City: Canton

### PEAK HOURS

Day: Wednesday  
 Date: 02/27/2019

**AM**

Start Time	Avery Rd Northbound					Avery Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total		
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total			
Peak Hour Analysis from 07:00 AM to 09:00 AM																							
Peak Hour for Entire Intersection Begins at 07:00 AM																							
7:00 AM	0	0	0	0	0	7	0	14	0	21	23	191	0	0	214	0	108	6	0	114	349		
7:15 AM	0	0	0	0	0	4	0	32	0	36	17	206	0	0	223	0	133	3	0	136	395		
7:30 AM	0	0	0	0	0	0	0	28	0	28	17	177	0	0	194	0	228	17	0	245	467		
7:45 AM	0	0	0	0	0	6	0	50	0	56	16	167	0	0	183	0	194	4	0	198	437		
Total Volume	0	0	0	0	0	17	0	124	0	141	73	741	0	0	814	0	663	30	0	693	1648		
% App. Total	0.0	0.0	0.0	0.0	0.0	12.1	0.0	87.9	0.0	100	9.0	91.0	0.0	0.0	100	0.0	95.7	4.3	0.0	100			
PHF											0.629					0.913					0.707		0.882
Cars, PU, Vans	0	0	0	0	0	17	0	124	0	141	73	741	0	0	814	0	663	30	0	693	1648		
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0		

**PM**

Start Time	Avery Rd Northbound					Avery Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total		
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total			
Peak Hour Analysis from 04:00 PM to 06:00 PM																							
Peak Hour for Entire Intersection Begins at 04:45 PM																							
4:45 PM	0	0	0	0	0	4	0	31	0	35	34	220	0	0	254	0	200	11	0	211	500		
5:00 PM	0	0	0	0	0	4	0	22	0	26	45	188	0	0	233	0	217	8	0	225	484		
5:15 PM	0	0	0	0	0	3	0	38	0	41	25	190	0	0	215	0	232	13	0	245	501		
5:30 PM	0	0	0	0	0	6	0	36	0	42	38	211	0	0	249	0	212	17	0	229	520		
Total Volume	0	0	0	0	0	17	0	127	0	144	142	809	0	0	951	0	861	49	0	910	2005		
% App. Total	0.0	0.0	0.0	0.0	0.0	11.8	0.0	88.2	0.0	100	14.9	85.1	0.0	0.0	100	0.0	94.6	5.4	0.0	100			
PHF											0.857					0.936					0.929		0.964
Cars, PU, Vans	0	0	0	0	0	17	0	127	0	144	142	809	0	0	951	0	861	49	0	910	2005		
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0		

Project ID: 19-09115-009  
 Location: Univeter Rd & Hickory Flat Hwy/SR-140  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Univeter Rd Northbound						Univeter Rd Southbound						Hickory Flat Hwy/SR-140 Eastbound						Hickory Flat Hwy/SR-140 Westbound						Int. Total
	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	
7:00 AM	31	0	81	0	0	112	0	0	0	0	0	0	0	150	45	0	0	195	69	83	0	0	0	152	459
7:15 AM	44	0	79	0	0	123	0	0	0	0	0	0	0	134	78	0	0	212	116	93	0	0	0	209	544
7:30 AM	70	0	105	0	0	175	0	0	0	0	0	0	0	134	44	0	0	178	77	182	0	0	0	259	612
7:45 AM	41	0	64	0	0	105	0	0	0	0	0	0	0	161	36	0	0	197	49	161	0	0	0	210	512
Total	186	0	329	0	0	515	0	0	0	0	0	0	0	579	203	0	0	782	311	519	0	0	0	830	2127
8:00 AM	24	0	89	0	0	113	0	0	0	0	0	0	0	117	26	0	0	143	59	145	0	0	0	204	460
8:15 AM	18	0	70	0	0	88	0	0	0	0	0	0	0	146	33	0	0	179	51	139	0	0	0	190	457
8:30 AM	23	0	64	0	0	87	0	0	0	0	0	0	0	114	22	0	0	136	39	142	0	0	0	181	404
8:45 AM	24	0	64	0	0	88	0	0	0	0	0	0	0	132	23	0	0	155	37	143	0	0	0	180	423
Total	89	0	287	0	0	376	0	0	0	0	0	0	0	509	104	0	0	613	186	569	0	0	0	755	1744
***BREAK***																									
4:00 PM	26	0	55	0	0	81	0	0	0	0	0	0	0	158	40	0	0	198	64	167	0	0	0	231	510
4:15 PM	46	0	64	0	0	110	0	0	0	0	0	0	0	138	34	0	0	172	72	160	0	0	0	232	514
4:30 PM	36	0	46	0	0	82	0	0	0	0	0	0	0	165	45	0	0	210	58	183	0	0	0	241	533
4:45 PM	40	0	68	0	0	108	0	0	0	0	0	0	0	180	27	0	0	207	60	180	0	0	0	240	555
Total	148	0	233	0	0	381	0	0	0	0	0	0	0	641	146	0	0	787	254	690	0	0	0	944	2112
5:00 PM	50	0	76	0	0	126	0	0	0	0	0	0	0	162	38	0	0	200	71	200	0	0	0	271	597
5:15 PM	46	0	81	0	0	127	0	0	0	0	0	0	0	152	33	0	0	185	104	177	0	0	0	281	593
5:30 PM	41	0	64	0	0	105	0	0	0	0	0	0	0	187	34	0	0	221	69	185	0	0	0	254	580
5:45 PM	48	0	81	0	0	129	0	0	0	0	0	0	0	173	35	0	0	208	81	146	0	0	0	227	564
Total	185	0	302	0	0	487	0	0	0	0	0	0	0	674	140	0	0	814	325	708	0	0	0	1033	2334
Grand Total	608	0	1151	0	0	1759	0	0	0	0	0	0	0	2403	593	0	0	2996	1076	2486	0	0	0	3562	8317
Apprch %	34.6	0.0	65.4	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0	80.2	19.8	0.0	0.0	30.2	69.8	0.0	0.0	0.0		
Total %	7.3	0.0	13.8	0.0	0.0	21.1	0.0	0.0	0.0	0.0	0.0			0.0	28.9	7.1	0.0	0.0	12.9	29.9	0.0	0.0	0.0		42.8
Cars, PU, Vans	608	0	1151	0	0	1759	0	0	0	0	0	0	0	2403	593	0	0	2996	1076	2486	0	0	0	3562	8317
% Cars, PU, Vans	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0			0.0	100.0	100.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0		100.0

Project ID: 19-09115-009  
 Location: Univeter Rd & Hickory Flat Hwy/SR-140  
 City: Canton

**PEAK HOURS**

Day: Wednesday  
 Date: 02/27/2019

**AM**

Start Time	Univeter Rd Northbound					Univeter Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	44	0	79	0	123	0	0	0	0	0	0	134	78	0	212	116	93	0	0	209	544
7:30 AM	70	0	105	0	175	0	0	0	0	0	0	134	44	0	178	77	182	0	0	259	612
7:45 AM	41	0	64	0	105	0	0	0	0	0	0	161	36	0	197	49	161	0	0	210	512
8:00 AM	24	0	89	0	113	0	0	0	0	0	0	117	26	0	143	59	145	0	0	204	460
Total Volume	179	0	337	0	516	0	0	0	0	0	0	546	184	0	730	301	581	0	0	882	2128
% App. Total	34.7	0.0	65.3	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	74.8	25.2	0.0	100	34.1	65.9	0.0	0.0	100	
PHF	0.737										0.861					0.851					0.869
Cars, PU, Vans	179	0	337	0	516	0	0	0	0	0	0	546	184	0	730	301	581	0	0	882	2128
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

**PM**

Start Time	Univeter Rd Northbound					Univeter Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	50	0	76	0	126	0	0	0	0	0	0	162	38	0	200	71	200	0	0	271	597
5:15 PM	46	0	81	0	127	0	0	0	0	0	0	152	33	0	185	104	177	0	0	281	593
5:30 PM	41	0	64	0	105	0	0	0	0	0	0	187	34	0	221	69	185	0	0	254	580
5:45 PM	48	0	81	0	129	0	0	0	0	0	0	173	35	0	208	81	146	0	0	227	564
Total Volume	185	0	302	0	487	0	0	0	0	0	0	674	140	0	814	325	708	0	0	1033	2334
% App. Total	38.0	0.0	62.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	82.8	17.2	0.0	100	31.5	68.5	0.0	0.0	100	
PHF	0.944										0.921					0.919					0.977
Cars, PU, Vans	185	0	302	0	487	0	0	0	0	0	0	674	140	0	814	325	708	0	0	1033	2334
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09115-010  
 Location: Harmony Lake Dr & Hickory Flat Hwy/SR-140  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Harmony Lake Dr Northbound					Harmony Lake Dr Southbound					Hickory Flat Hwy/SR-140 Eastbound				Hickory Flat Hwy/SR-140 Westbound					Int. Total					
	Left	Thru	Rgt	Uturm	Peds	App. Total	Left	Thru	Rgt	Uturm	Peds	App. Total	Left	Thru	Rgt	Uturm	Peds	App. Total							
7:00 AM	68	0	28	0	0	96	1	0	1	0	0	2	0	211	12	0	0	223	2	94	0	0	0	96	417
7:15 AM	103	0	32	0	0	135	1	0	1	0	0	2	0	191	30	1	0	222	7	131	2	0	0	140	499
7:30 AM	45	0	37	0	0	82	1	0	0	0	0	1	1	189	32	0	0	222	14	156	0	0	0	170	475
7:45 AM	53	0	47	0	0	100	0	0	0	0	0	0	2	208	12	0	0	222	9	161	0	0	0	170	492
Total	269	0	144	0	0	413	3	0	2	0	0	5	3	799	86	1	0	889	32	542	2	0	0	576	1883
8:00 AM	34	0	34	0	0	68	0	0	0	0	0	0	0	204	12	0	0	216	9	166	0	0	0	175	459
8:15 AM	32	1	28	0	0	61	0	1	0	0	0	1	0	197	13	0	0	210	9	151	1	0	0	161	433
8:30 AM	42	0	22	0	0	64	1	0	0	0	0	1	1	160	8	0	0	169	13	146	1	0	0	160	394
8:45 AM	22	0	23	0	0	45	0	1	0	0	0	1	1	190	8	0	0	199	16	152	3	0	0	171	416
Total	130	1	107	0	0	238	1	2	0	0	0	3	2	751	41	0	0	794	47	615	5	0	0	667	1702
***BREAK***																									
4:00 PM	32	1	12	0	0	45	0	1	1	0	0	2	0	175	39	0	0	214	20	203	3	0	0	226	487
4:15 PM	22	0	19	0	0	41	0	1	1	0	0	2	1	170	32	0	0	203	27	208	1	0	0	236	482
4:30 PM	27	0	15	0	0	42	0	0	0	0	0	0	0	167	25	0	0	192	33	216	0	0	0	249	483
4:45 PM	35	0	26	0	0	61	1	0	1	0	0	2	0	192	48	0	0	240	21	203	0	0	0	224	527
Total	116	1	72	0	0	189	1	2	3	0	0	6	1	704	144	0	0	849	101	830	4	0	0	935	1979
5:00 PM	47	2	19	0	0	68	3	1	0	0	0	4	0	189	51	0	0	240	23	215	1	0	0	239	551
5:15 PM	49	1	21	0	0	71	1	0	0	0	0	1	1	167	39	0	0	207	26	237	2	0	0	265	544
5:30 PM	43	0	22	0	0	65	3	0	1	0	0	4	0	201	41	0	0	242	24	213	2	0	0	239	550
5:45 PM	26	0	27	0	0	53	0	2	0	0	0	2	0	206	41	0	0	247	33	196	0	0	0	229	531
Total	165	3	89	0	0	257	7	3	1	0	0	11	1	763	172	0	0	936	106	861	5	0	0	972	2176
Grand Total	680	5	412	0	0	1097	12	7	6	0	0	25	7	3017	443	1	0	3468	286	2848	16	0	0	3150	7740
Apprch %	62.0	0.5	37.6	0.0	0.0		48.0	28.0	24.0	0.0	0.0		0.2	87.0	12.8	0.0	0.0		9.1	90.4	0.5	0.0	0.0		
Total %	8.8	0.1	5.3	0.0	0.0	14.2	0.2	0.1	0.1	0.0	0.0	0.3	0.1	39.0	5.7	0.0	0.0	44.8	3.7	36.8	0.2	0.0	0.0	40.7	
Cars, PU, Vans	680	5	412	0	0	1097	12	7	6	0	0	25	7	3017	443	1	0	3468	286	2848	16	0	0	3150	7740
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0

Project ID: 19-09115-010  
 Location: Harmony Lake Dr & Hickory Flat Hwy/SR-140  
 City: Canton

**PEAK HOURS**

Day: Wednesday  
 Date: 02/27/2019

**AM**

Start Time	Harmony Lake Dr Northbound					Harmony Lake Dr Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	103	0	32	0	135	1	0	1	0	2	0	191	30	1	222	7	131	2	0	140	499
7:30 AM	45	0	37	0	82	1	0	0	0	1	1	189	32	0	222	14	156	0	0	170	475
7:45 AM	53	0	47	0	100	0	0	0	0	0	2	208	12	0	222	9	161	0	0	170	492
8:00 AM	34	0	34	0	68	0	0	0	0	0	0	204	12	0	216	9	166	0	0	175	459
Total Volume	235	0	150	0	385	2	0	1	0	3	3	792	86	1	882	39	614	2	0	655	1925
% App. Total	61.0	0.0	39.0	0.0	100	66.7	0.0	33.3	0.0	100	0.3	89.8	9.8	0.1	100	6.0	93.7	0.3	0.0	100	
PHF	0.713					0.375					0.993					0.936					0.964
Cars, PU, Vans	235	0	150	0	385	2	0	1	0	3	3	792	86	1	882	39	614	2	0	655	1925
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

**PM**

Start Time	Harmony Lake Dr Northbound					Harmony Lake Dr Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	47	2	19	0	68	3	1	0	0	4	0	189	51	0	240	23	215	1	0	239	551
5:15 PM	49	1	21	0	71	1	0	0	0	1	1	167	39	0	207	26	237	2	0	265	544
5:30 PM	43	0	22	0	65	3	0	1	0	4	0	201	41	0	242	24	213	2	0	239	550
5:45 PM	26	0	27	0	53	0	2	0	0	2	0	206	41	0	247	33	196	0	0	229	531
Total Volume	165	3	89	0	257	7	3	1	0	11	1	763	172	0	936	106	861	5	0	972	2176
% App. Total	64.2	1.2	34.6	0.0	100	63.6	27.3	9.1	0.0	100	0.1	81.5	18.4	0.0	100	10.9	88.6	0.5	0.0	100	
PHF	0.905					0.688					0.947					0.917					0.987
Cars, PU, Vans	165	3	89	0	257	7	3	1	0	11	1	763	172	0	936	106	861	5	0	972	2176
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0



Project ID: 19-09115-011  
 Location: Holly Commons Pkwy/Bart Manous Rd & Hickory Flat Hwy/SR-140  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Holly Commons Pkwy/Bart Manous Rd Northbound					Holly Commons Pkwy/Bart Manous Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total				
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru		Rgt	Uturn	Peds	App. Total
7:00 AM	0	0	11	0	0	11	0	0	25	0	0	25	26	201	2	0	0	229	4	76	1	0	0	81	346
7:15 AM	1	1	7	0	0	9	1	0	32	0	0	33	28	190	5	0	0	223	4	118	1	0	0	123	388
7:30 AM	1	0	12	0	0	13	0	0	42	0	0	42	42	183	7	0	0	232	6	115	1	1	0	123	410
7:45 AM	1	0	12	0	0	13	0	1	26	0	0	27	31	216	3	0	0	250	5	146	1	0	0	152	442
Total	3	1	42	0	0	46	1	1	125	0	0	127	127	790	17	0	0	934	19	455	4	1	0	479	1586
8:00 AM	3	0	6	0	0	9	1	2	43	0	0	46	37	201	5	0	0	243	4	121	2	0	0	127	425
8:15 AM	0	0	4	0	0	4	0	1	30	0	0	31	34	183	5	0	0	222	2	131	1	0	0	134	391
8:30 AM	1	0	6	0	0	7	0	0	24	0	0	24	18	167	8	0	0	193	8	142	0	0	0	150	374
8:45 AM	0	0	3	0	0	3	0	2	25	0	0	27	31	163	10	0	0	204	12	141	0	0	0	153	387
Total	4	0	19	0	0	23	1	5	122	0	0	128	120	714	28	0	0	862	26	535	3	0	0	564	1577
***BREAK***																									
4:00 PM	2	6	9	0	0	17	1	1	29	0	0	31	20	168	6	0	0	194	9	194	1	0	0	204	446
4:15 PM	1	2	6	0	0	9	1	1	30	0	0	32	28	158	6	0	0	192	13	202	0	0	0	215	448
4:30 PM	2	0	10	0	0	12	0	0	22	0	0	22	20	144	9	0	0	173	7	227	0	0	0	234	441
4:45 PM	3	0	8	0	0	11	1	1	29	0	0	31	34	185	7	0	0	226	7	197	3	0	0	207	475
Total	8	8	33	0	0	49	3	3	110	0	0	116	102	655	28	0	0	785	36	820	4	0	0	860	1810
5:00 PM	2	0	12	0	0	14	0	1	33	0	0	34	29	169	8	0	0	206	10	202	0	0	0	212	466
5:15 PM	2	1	9	0	0	12	0	1	38	0	0	39	39	147	6	0	0	192	17	225	1	0	0	243	486
5:30 PM	1	0	9	0	0	10	0	1	31	0	0	32	31	181	10	0	0	222	9	221	0	0	0	230	494
5:45 PM	2	3	13	0	0	18	2	2	36	0	0	40	49	166	15	0	0	230	9	178	1	1	0	189	477
Total	7	4	43	0	0	54	2	5	138	0	0	145	148	663	39	0	0	850	45	826	2	1	0	874	1923
Grand Total	22	13	137	0	0	172	7	14	495	0	0	516	497	2822	112	0	0	3431	126	2636	13	2	0	2777	6896
Apprch %	12.8	7.6	79.7	0.0	0.0		1.4	2.7	95.9	0.0	0.0		14.5	82.3	3.3	0.0	0.0		4.5	94.9	0.5	0.1	0.0		
Total %	0.3	0.2	2.0	0.0	0.0	2.5	0.1	0.2	7.2	0.0	0.0	7.5	7.2	40.9	1.6	0.0	0.0	49.8	1.8	38.2	0.2	0.0	0.0	40.3	
Cars, PU, Vans	22	13	137	0	0	172	7	14	495	0	0	516	497	2822	112	0	0	3431	126	2636	13	2	0	2777	6896
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0



Project ID: 19-09115-012  
 Location: Darnell Rd & Hickory Flat Hwy/SR-140  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Darnell Rd Northbound					Darnell Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total				
	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru		Rgt	Utum	Peds	App. Total
7:00 AM	1	0	12	0	0	13	0	0	0	0	0	0	0	228	1	0	0	229	2	86	0	0	0	88	330
7:15 AM	3	0	19	0	0	22	0	0	0	0	0	0	0	194	4	0	0	198	4	115	0	0	0	119	339
7:30 AM	1	0	8	0	0	9	0	0	0	0	0	0	0	200	0	0	0	200	5	132	0	0	0	137	346
7:45 AM	3	0	9	0	0	12	0	0	0	0	0	0	0	237	0	0	0	237	2	147	0	0	0	149	398
Total	8	0	48	0	0	56	0	0	0	0	0	0	0	859	5	0	0	864	13	480	0	0	0	493	1413
8:00 AM	2	0	2	0	0	4	0	0	0	0	0	0	0	189	1	0	0	190	2	131	0	0	0	133	327
8:15 AM	5	0	4	0	0	9	0	0	0	0	0	0	0	188	1	0	0	189	1	127	0	0	0	128	326
8:30 AM	3	0	9	0	0	12	0	0	0	0	0	0	0	178	1	0	0	179	6	145	0	0	0	151	342
8:45 AM	6	0	4	0	0	10	0	0	0	0	0	0	0	154	3	0	0	157	4	152	0	0	0	156	323
Total	16	0	19	0	0	35	0	0	0	0	0	0	0	709	6	0	0	715	13	555	0	0	0	568	1318
***BREAK***																									
4:00 PM	5	0	2	0	0	7	0	0	0	0	0	0	0	162	5	1	0	168	7	189	0	0	0	196	371
4:15 PM	2	0	3	0	0	5	0	0	0	0	0	0	0	170	1	0	0	171	8	213	0	0	0	221	397
4:30 PM	2	0	7	0	0	9	0	0	0	0	0	0	0	148	2	0	0	150	9	243	0	0	0	252	411
4:45 PM	4	0	7	0	0	11	0	0	0	0	0	0	0	185	11	0	0	196	5	197	0	0	0	202	409
Total	13	0	19	0	0	32	0	0	0	0	0	0	0	665	19	1	0	685	29	842	0	0	0	871	1588
5:00 PM	4	0	3	0	0	7	0	0	0	0	0	0	0	178	2	0	0	180	10	225	0	0	0	235	422
5:15 PM	7	0	6	0	0	13	0	0	0	0	0	0	0	159	3	0	0	162	9	223	0	0	0	232	407
5:30 PM	4	0	3	0	0	7	0	0	0	0	0	0	0	188	4	0	0	192	7	216	0	0	0	223	422
5:45 PM	1	0	4	0	0	5	0	0	0	0	0	0	0	175	8	0	0	183	8	214	0	0	0	222	410
Total	16	0	16	0	0	32	0	0	0	0	0	0	0	700	17	0	0	717	34	878	0	0	0	912	1661
Grand Total	53	0	102	0	0	155	0	0	0	0	0	0	0	2933	47	1	0	2981	89	2755	0	0	0	2844	5980
Apprch %	34.2	0.0	65.8	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	98.4	1.6	0.0	0.0	3.1	96.9	0.0	0.0	0.0			
Total %	0.9	0.0	1.7	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.0	0.8	0.0	0.0	1.5	46.1	0.0	0.0	0.0	47.6		
Cars, PU, Vans	53	0	102	0	0	155	0	0	0	0	0	0	0	2933	47	1	0	2981	89	2755	0	0	0	2844	5980
% Cars, PU, Vans	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0

Project ID: 19-09115-012  
 Location: Darnell Rd & Hickory Flat Hwy/SR-140  
 City: Canton

### PEAK HOURS

Day: Wednesday  
 Date: 02/27/2019

**AM**

Start Time	Darnell Rd Northbound					Darnell Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	1	0	12	0	13	0	0	0	0	0	0	228	1	0	229	2	86	0	0	88	330
7:15 AM	3	0	19	0	22	0	0	0	0	0	0	194	4	0	198	4	115	0	0	119	339
7:30 AM	1	0	8	0	9	0	0	0	0	0	0	200	0	0	200	5	132	0	0	137	346
7:45 AM	3	0	9	0	12	0	0	0	0	0	0	237	0	0	237	2	147	0	0	149	398
Total Volume	8	0	48	0	56	0	0	0	0	0	0	859	5	0	864	13	480	0	0	493	1413
% App. Total	14.3	0.0	85.7	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	99.4	0.6	0.0	100	2.6	97.4	0.0	0.0	100	
PHF	0.636										0.911					0.827					0.888
Cars, PU, Vans	8	0	48	0	56	0	0	0	0	0	0	859	5	0	864	13	480	0	0	493	1413
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

**PM**

Start Time	Darnell Rd Northbound					Darnell Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	4	0	3	0	7	0	0	0	0	0	0	178	2	0	180	10	225	0	0	235	422
5:15 PM	7	0	6	0	13	0	0	0	0	0	0	159	3	0	162	9	223	0	0	232	407
5:30 PM	4	0	3	0	7	0	0	0	0	0	0	188	4	0	192	7	216	0	0	223	422
5:45 PM	1	0	4	0	5	0	0	0	0	0	0	175	8	0	183	8	214	0	0	222	410
Total Volume	16	0	16	0	32	0	0	0	0	0	0	700	17	0	717	34	878	0	0	912	1661
% App. Total	50.0	0.0	50.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	97.6	2.4	0.0	100	3.7	96.3	0.0	0.0	100	
PHF	0.615										0.934					0.970					0.984
Cars, PU, Vans	16	0	16	0	32	0	0	0	0	0	0	700	17	0	717	34	878	0	0	912	1661
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09115-013  
 Location: Stringer Rd & Hickory Flat Hwy/SR-140  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Stringer Rd Northbound						Stringer Rd Southbound						Hickory Flat Hwy/SR-140 Eastbound						Hickory Flat Hwy/SR-140 Westbound						Int. Total	
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total		
7:00 AM	13	0	14	0	0	27	0	0	0	0	0	0	0	222	19	0	0	241	4	76	0	0	0	80	348	
7:15 AM	14	0	17	1	0	32	0	0	0	0	0	0	0	188	26	0	0	214	6	107	0	0	0	113	359	
7:30 AM	14	0	15	0	0	29	0	0	0	0	0	0	0	166	38	0	0	204	18	123	0	0	0	141	374	
7:45 AM	19	0	10	1	0	30	0	0	0	0	0	0	0	195	55	0	0	250	11	136	0	0	0	147	427	
Total	60	0	56	2	0	118	0	0	0	0	0	0	0	771	138	0	0	909	39	442	0	0	0	481	1508	
8:00 AM	13	0	16	0	0	29	0	0	0	0	0	0	0	164	32	0	0	196	11	104	0	0	0	115	340	
8:15 AM	22	0	6	0	0	28	0	0	0	0	0	0	0	174	18	0	0	192	11	108	0	0	0	119	339	
8:30 AM	13	0	8	0	0	21	0	0	0	0	0	0	0	164	21	0	0	185	5	140	0	0	0	145	351	
8:45 AM	17	0	11	0	0	28	0	0	0	0	0	0	0	143	18	0	0	161	14	133	0	0	0	147	336	
Total	65	0	41	0	0	106	0	0	0	0	0	0	0	645	89	0	0	734	41	485	0	0	0	526	1366	
***BREAK***																										
4:00 PM	10	0	11	0	0	21	0	0	0	0	0	0	0	147	20	0	0	167	10	187	0	0	0	197	385	
4:15 PM	12	0	4	0	0	16	0	0	0	0	0	0	0	164	10	0	0	174	13	214	0	0	0	227	417	
4:30 PM	16	0	7	0	0	23	0	0	0	0	0	0	0	142	14	0	0	156	10	229	0	0	0	239	418	
4:45 PM	17	0	18	0	0	35	0	0	0	0	0	0	0	164	26	0	0	190	15	187	0	0	0	202	427	
Total	55	0	40	0	0	95	0	0	0	0	0	0	0	617	70	0	0	687	48	817	0	0	0	865	1647	
5:00 PM	24	0	17	0	0	41	0	0	0	0	0	0	0	144	34	0	0	178	14	207	0	0	0	221	440	
5:15 PM	16	0	15	0	0	31	0	0	0	0	0	0	0	147	14	0	0	161	12	223	0	0	0	235	427	
5:30 PM	27	0	11	0	0	38	0	0	0	0	0	0	0	182	17	0	0	199	16	198	0	0	0	214	451	
5:45 PM	14	0	17	0	0	31	0	0	0	0	0	0	0	166	12	0	0	178	18	208	0	0	0	226	435	
Total	81	0	60	0	0	141	0	0	0	0	0	0	0	639	77	0	0	716	60	836	0	0	0	896	1753	
Grand Total	261	0	197	2	0	460	0	0	0	0	0	0	0	2672	374	0	0	3046	188	2580	0	0	0	2768	6274	
Apprch %	56.7	0.0	42.8	0.4	0.0		0.0	0.0	0.0	0.0	0.0			87.7	12.3	0.0	0.0		6.8	93.2	0.0	0.0	0.0			
Total %	4.2	0.0	3.1	0.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0			42.6	6.0	0.0	0.0	48.5	3.0	41.1	0.0	0.0	0.0	44.1		
Cars, PU, Vans	261	0	197	2	0	460	0	0	0	0	0	0	0	2672	374	0	0	3046	188	2580	0	0	0	2768	6274	
% Cars, PU, Vans	100.0	0.0	100.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0			100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0	

Project ID: 19-09115-013  
 Location: Stringer Rd & Hickory Flat Hwy/SR-140  
 City: Canton

**PEAK HOURS**

Day: Wednesday  
 Date: 02/27/2019

**AM**

Start Time	Stringer Rd Northbound					Stringer Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	13	0	14	0	27	0	0	0	0	0	0	222	19	0	241	4	76	0	0	80	348
7:15 AM	14	0	17	1	32	0	0	0	0	0	0	188	26	0	214	6	107	0	0	113	359
7:30 AM	14	0	15	0	29	0	0	0	0	0	0	166	38	0	204	18	123	0	0	141	374
7:45 AM	19	0	10	1	30	0	0	0	0	0	0	195	55	0	250	11	136	0	0	147	427
Total Volume	60	0	56	2	118	0	0	0	0	0	0	771	138	0	909	39	442	0	0	481	1508
% App. Total	50.8	0.0	47.5	1.7	100	0.0	0.0	0.0	0.0	0.0	0.0	84.8	15.2	0.0	100	8.1	91.9	0.0	0.0	100	
PHF	0.922										0.909					0.818					0.883
Cars, PU, Vans	60	0	56	2	118	0	0	0	0	0	0	771	138	0	909	39	442	0	0	481	1508
% Cars, PU, Vans	100.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

**PM**

Start Time	Stringer Rd Northbound					Stringer Rd Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	24	0	17	0	41	0	0	0	0	0	0	144	34	0	178	14	207	0	0	221	440
5:15 PM	16	0	15	0	31	0	0	0	0	0	0	147	14	0	161	12	223	0	0	235	427
5:30 PM	27	0	11	0	38	0	0	0	0	0	0	182	17	0	199	16	198	0	0	214	451
5:45 PM	14	0	17	0	31	0	0	0	0	0	0	166	12	0	178	18	208	0	0	226	435
Total Volume	81	0	60	0	141	0	0	0	0	0	0	639	77	0	716	60	836	0	0	896	1753
% App. Total	57.4	0.0	42.6	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	89.2	10.8	0.0	100	6.7	93.3	0.0	0.0	100	
PHF	0.860										0.899					0.953					0.972
Cars, PU, Vans	81	0	60	0	141	0	0	0	0	0	0	639	77	0	716	60	836	0	0	896	1753
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09115-014  
 Location: E Cherokee Dr & Hickory Flat Hwy/SR-140  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	E Cherokee Dr Northbound						E Cherokee Dr Southbound						Hickory Flat Hwy/SR-140 Eastbound						Hickory Flat Hwy/SR-140 Westbound						Int. Total
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	
	7:00 AM	18	43	10	0	0	71	24	95	2	0	0	121	19	143	32	0	0	194	7	52	8	0	0	
7:15 AM	33	49	9	0	0	91	29	81	8	0	0	118	8	144	40	0	0	192	17	75	6	0	0	98	499
7:30 AM	41	58	14	0	0	113	30	95	5	0	0	130	15	125	47	0	0	187	14	82	17	0	0	113	543
7:45 AM	18	34	9	0	0	61	21	56	2	0	0	79	17	111	48	0	0	176	28	95	18	0	0	141	457
Total	110	184	42	0	0	336	104	327	17	0	0	448	59	523	167	0	0	749	66	304	49	0	0	419	1952
8:00 AM	24	41	5	0	0	70	36	92	6	0	0	134	11	124	44	0	0	179	22	66	13	0	0	101	484
8:15 AM	29	38	10	0	0	77	31	89	4	0	0	124	19	134	22	0	0	175	17	78	12	0	0	107	483
8:30 AM	52	54	13	0	0	119	45	97	10	0	0	152	13	97	34	0	0	144	10	85	9	0	0	104	519
8:45 AM	51	67	12	0	0	130	45	70	13	0	0	128	19	125	28	0	0	172	12	81	20	0	0	113	543
Total	156	200	40	0	0	396	157	348	33	0	0	538	62	480	128	0	0	670	61	310	54	0	0	425	2029
***BREAK***																									
4:00 PM	50	90	8	0	0	148	48	93	15	0	0	156	31	86	30	0	0	147	28	119	32	0	0	179	630
4:15 PM	54	79	7	0	0	140	42	93	12	0	0	147	35	95	21	0	0	151	29	119	30	0	0	178	616
4:30 PM	59	84	8	0	0	151	30	72	17	0	0	119	28	101	33	0	0	162	13	148	28	0	0	189	621
4:45 PM	31	80	3	0	0	114	33	80	9	0	0	122	27	103	22	0	0	152	19	156	26	0	0	201	589
Total	194	333	26	0	0	553	153	338	53	0	0	544	121	385	106	0	0	612	89	542	116	0	0	747	2456
5:00 PM	40	71	4	0	0	115	44	92	11	0	0	147	41	102	18	0	0	161	31	143	15	0	0	189	612
5:15 PM	49	79	5	0	0	133	39	98	10	0	0	147	47	87	20	0	0	154	22	154	27	0	0	203	637
5:30 PM	38	77	4	0	0	119	32	71	6	0	0	109	32	114	31	0	0	177	20	178	19	0	0	217	622
5:45 PM	38	86	0	0	0	124	44	95	6	0	0	145	35	110	33	0	0	178	26	154	25	0	0	205	652
Total	165	313	13	0	0	491	159	356	33	0	0	548	155	413	102	0	0	670	99	629	86	0	0	814	2523
Grand Total	625	1030	121	0	0	1776	573	1369	136	0	0	2078	397	1801	503	0	0	2701	315	1785	305	0	0	2405	8960
Apprch %	35.2	58.0	6.8	0.0	0.0		27.6	65.9	6.5	0.0	0.0		14.7	66.7	18.6	0.0	0.0		13.1	74.2	12.7	0.0	0.0		
Total %	7.0	11.5	1.4	0.0	0.0	19.8	6.4	15.3	1.5	0.0	0.0	23.2	4.4	20.1	5.6	0.0	0.0	30.1	3.5	19.9	3.4	0.0	0.0	26.8	
Cars, PU, Vans	625	1030	121	0	0	1776	573	1369	136	0	0	2078	397	1801	503	0	0	2701	315	1785	305	0	0	2405	8960
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09115-014  
 Location: E Cherokee Dr & Hickory Flat Hwy/SR-140  
 City: Canton

### PEAK HOURS

Day: Wednesday  
 Date: 02/27/2019

**AM**

Start Time	E Cherokee Dr Northbound					E Cherokee Dr Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
8:00 AM	24	41	5	0	70	36	92	6	0	134	11	124	44	0	179	22	66	13	0	101	484
8:15 AM	29	38	10	0	77	31	89	4	0	124	19	134	22	0	175	17	78	12	0	107	483
8:30 AM	52	54	13	0	119	45	97	10	0	152	13	97	34	0	144	10	85	9	0	104	519
8:45 AM	51	67	12	0	130	45	70	13	0	128	19	125	28	0	172	12	81	20	0	113	543
Total Volume	156	200	40	0	396	157	348	33	0	538	62	480	128	0	670	61	310	54	0	425	2029
% App. Total	39.4	50.5	10.1	0.0	100	29.2	64.7	6.1	0.0	100	9.3	71.6	19.1	0.0	100	14.4	72.9	12.7	0.0	100	
PHF					0.762					0.885					0.936					0.940	0.934
Cars, PU, Vans	156	200	40	0	396	157	348	33	0	538	62	480	128	0	670	61	310	54	0	425	2029
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

**PM**

Start Time	E Cherokee Dr Northbound					E Cherokee Dr Southbound					Hickory Flat Hwy/SR-140 Eastbound					Hickory Flat Hwy/SR-140 Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	40	71	4	0	115	44	92	11	0	147	41	102	18	0	161	31	143	15	0	189	612
5:15 PM	49	79	5	0	133	39	98	10	0	147	47	87	20	0	154	22	154	27	0	203	637
5:30 PM	38	77	4	0	119	32	71	6	0	109	32	114	31	0	177	20	178	19	0	217	622
5:45 PM	38	86	0	0	124	44	95	6	0	145	35	110	33	0	178	26	154	25	0	205	652
Total Volume	165	313	13	0	491	159	356	33	0	548	155	413	102	0	670	99	629	86	0	814	2523
% App. Total	33.6	63.7	2.6	0.0	100	29.0	65.0	6.0	0.0	100	23.1	61.6	15.2	0.0	100	12.2	77.3	10.6	0.0	100	
PHF					0.923					0.932					0.941					0.938	0.967
Cars, PU, Vans	165	313	13	0	491	159	356	33	0	548	155	413	102	0	670	99	629	86	0	814	2523
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0



Project ID: 19-09115-015  
 Location: Hickory Flat Hwy/SR-140 & Hickory Rd  
 City: Canton

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Hickory Flat Hwy/SR-140 Northbound						Hickory Flat Hwy/SR-140 Southbound						Hickory Rd Eastbound						Hickory Rd Westbound						Int. Total	
	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total		
7:00 AM	44	56	1	0	0	101	79	107	7	0	0	193	2	133	67	0	0	202	2	40	15	0	0	57	553	
7:15 AM	52	74	12	0	0	138	74	104	10	0	0	188	8	149	47	0	0	204	3	64	30	0	0	97	627	
7:30 AM	52	91	3	0	0	146	63	118	11	0	0	192	6	133	76	0	0	215	7	44	22	0	0	73	626	
7:45 AM	58	83	3	0	0	144	53	94	22	0	0	169	9	94	64	0	0	167	8	52	37	0	0	97	577	
Total	206	304	19	0	0	529	269	423	50	0	0	742	25	509	254	0	0	788	20	200	104	0	0	324	2383	
8:00 AM	57	56	4	0	0	117	62	92	14	0	0	168	9	85	46	0	0	140	7	42	31	0	0	80	505	
8:15 AM	36	76	4	0	0	116	69	119	13	0	0	201	8	120	67	0	0	195	5	51	26	0	0	82	594	
8:30 AM	33	71	1	0	0	105	57	108	8	0	0	173	11	80	66	0	0	157	7	29	29	0	0	65	500	
8:45 AM	41	66	6	0	0	113	43	111	16	0	0	170	13	92	75	0	0	180	7	57	27	0	0	91	554	
Total	167	269	15	0	0	451	231	430	51	0	0	712	41	377	254	0	0	672	26	179	113	0	0	318	2153	
***BREAK***																										
4:00 PM	72	115	3	0	0	190	39	74	20	0	0	133	17	55	41	0	0	113	4	68	49	0	0	121	557	
4:15 PM	70	125	8	0	0	203	34	101	21	0	0	156	27	61	42	0	0	130	5	83	46	0	0	134	623	
4:30 PM	67	118	5	0	0	190	34	94	20	0	0	148	17	37	47	0	0	101	8	105	53	0	0	166	605	
4:45 PM	76	114	7	0	0	197	31	84	16	0	0	131	13	56	43	0	0	112	8	116	51	0	0	175	615	
Total	285	472	23	0	0	780	138	353	77	0	0	568	74	209	173	0	0	456	25	372	199	0	0	596	2400	
5:00 PM	79	122	4	0	0	205	41	96	14	0	0	151	17	47	34	0	0	98	5	96	49	0	0	150	604	
5:15 PM	67	119	4	0	0	190	33	88	34	0	0	155	27	74	58	0	0	159	4	102	46	0	0	152	656	
5:30 PM	82	133	0	0	0	215	27	89	28	0	0	144	27	81	43	0	0	151	9	95	38	0	0	142	652	
5:45 PM	50	111	3	0	0	164	39	116	31	0	0	186	34	55	45	0	0	134	3	97	29	0	0	129	613	
Total	278	485	11	0	0	774	140	389	107	0	0	636	105	257	180	0	0	542	21	390	162	0	0	573	2525	
Grand Total	936	1530	68	0	0	2534	778	1595	285	0	0	2658	245	1352	861	0	0	2458	92	1141	578	0	0	1811	9461	
Apprch %	36.9	60.4	2.7	0.0	0.0		29.3	60.0	10.7	0.0	0.0		10.0	55.0	35.0	0.0	0.0		5.1	63.0	31.9	0.0	0.0			
Total %	9.9	16.2	0.7	0.0	0.0	26.8	8.2	16.9	3.0	0.0	0.0	28.1	2.6	14.3	9.1	0.0	0.0	26.0	1.0	12.1	6.1	0.0	0.0	19.1		
Cars, PU, Vans	936	1530	68	0	0	2534	778	1595	285	0	0	2658	245	1352	861	0	0	2458	92	1141	578	0	0	1811	9461	
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	

Project ID: 19-09115-015

Location: Hickory Flat Hwy/SR-140 & Hickory Rd

City: Canton

### PEAK HOURS

Day: Wednesday

Date: 02/27/2019

**AM**

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	44	56	1	0	101	79	107	7	0	193	2	133	67	0	202	2	40	15	0	57	553
7:15 AM	52	74	12	0	138	74	104	10	0	188	8	149	47	0	204	3	64	30	0	97	627
7:30 AM	52	91	3	0	146	63	118	11	0	192	6	133	76	0	215	7	44	22	0	73	626
7:45 AM	58	83	3	0	144	53	94	22	0	169	9	94	64	0	167	8	52	37	0	97	577
Total Volume	206	304	19	0	529	269	423	50	0	742	25	509	254	0	788	20	200	104	0	324	2383
% App. Total	38.9	57.5	3.6	0.0	100	36.3	57.0	6.7	0.0	100	3.2	64.6	32.2	0.0	100	6.2	61.7	32.1	0.0	100	
PHF	0.906					0.961					0.916					0.835					0.950
Cars, PU, Vans	206	304	19	0	529	269	423	50	0	742	25	509	254	0	788	20	200	104	0	324	2383
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

**PM**

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	76	114	7	0	197	31	84	16	0	131	13	56	43	0	112	8	116	51	0	175	615
5:00 PM	79	122	4	0	205	41	96	14	0	151	17	47	34	0	98	5	96	49	0	150	604
5:15 PM	67	119	4	0	190	33	88	34	0	155	27	74	58	0	159	4	102	46	0	152	656
5:30 PM	82	133	0	0	215	27	89	28	0	144	27	81	43	0	151	9	95	38	0	142	652
Total Volume	304	488	15	0	807	132	357	92	0	581	84	258	178	0	520	26	409	184	0	619	2527
% App. Total	37.7	60.5	1.9	0.0	100	22.7	61.4	15.8	0.0	100	16.2	49.6	34.2	0.0	100	4.2	66.1	29.7	0.0	100	
PHF	0.938					0.937					0.818					0.884					0.963
Cars, PU, Vans	304	488	15	0	807	132	357	92	0	581	84	258	178	0	520	26	409	184	0	619	2527
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09115-016  
 Location: Hickory Flat Hwy/SR-140 & Sugar Pike Rd  
 City: Woodstock

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					Sugar Pike Rd Eastbound					Sugar Pike Rd Westbound					Int. Total					
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru		Rgt	Uturn	Peds	App. Total	
7:00 AM	0	71	26	0	0	97	29	162	0	0	0	191	0	0	0	0	0	0	0	19	0	1	0	0	20	308
7:15 AM	0	111	35	0	0	146	25	153	0	0	0	178	0	0	0	0	0	0	0	19	0	7	0	0	26	350
7:30 AM	0	140	28	0	0	168	25	160	0	0	0	185	0	0	0	0	0	0	0	35	0	10	0	0	45	398
7:45 AM	0	107	25	0	0	132	22	158	0	0	0	180	0	0	0	0	0	0	0	45	0	6	0	0	51	363
Total	0	429	114	0	0	543	101	633	0	0	0	734	0	0	0	0	0	0	0	118	0	24	0	0	142	1419
8:00 AM	0	102	23	0	0	125	19	137	0	0	0	156	0	0	0	0	0	0	0	57	0	9	0	0	66	347
8:15 AM	0	85	30	0	0	115	11	160	0	0	0	171	0	0	0	0	0	0	0	41	0	10	0	0	51	337
8:30 AM	0	82	32	0	0	114	20	172	0	0	0	192	0	0	0	0	0	0	0	42	0	7	0	0	49	355
8:45 AM	0	91	35	0	0	126	11	167	0	0	0	178	0	0	0	0	0	0	0	31	0	12	0	0	43	347
Total	0	360	120	0	0	480	61	636	0	0	0	697	0	0	0	0	0	0	0	171	0	38	0	0	209	1386
9:00 AM	0	74	33	0	0	107	12	146	0	0	0	158	0	0	0	0	0	0	0	38	0	11	0	0	49	314
9:15 AM	0	74	37	0	0	111	7	146	0	0	0	153	0	0	0	0	0	0	0	30	0	8	0	0	38	302
9:30 AM	0	83	24	0	0	107	9	137	0	0	0	146	0	0	0	0	0	0	0	37	0	7	0	0	44	297
9:45 AM	0	98	23	0	0	121	16	117	0	0	0	133	0	0	0	0	0	0	0	21	0	11	0	0	32	286
Total	0	329	117	0	0	446	44	546	0	0	0	590	0	0	0	0	0	0	0	126	0	37	0	0	163	1199
***BREAK***																										
10:00 AM	0	81	20	0	0	101	7	108	0	0	0	115	0	0	0	0	0	0	0	21	0	8	0	0	29	245
10:15 AM	0	71	14	0	0	85	5	118	0	0	0	123	0	0	0	0	0	0	0	19	0	5	0	0	24	232
10:30 AM	0	92	16	0	0	108	6	115	0	0	0	121	0	0	0	0	0	0	0	22	0	5	0	0	27	256
10:45 AM	0	92	19	0	0	111	5	98	0	0	0	103	0	0	0	0	0	0	0	19	0	10	0	0	29	243
Total	0	336	69	0	0	405	23	439	0	0	0	462	0	0	0	0	0	0	0	81	0	28	0	0	109	976
11:00 AM	0	84	19	0	0	103	4	102	0	0	0	106	0	0	0	0	0	0	0	29	0	4	0	0	33	242
11:15 AM	0	104	15	0	0	119	3	118	0	0	0	121	0	0	0	0	0	0	0	30	0	7	1	0	38	278
11:30 AM	0	88	17	0	0	105	2	97	0	0	0	99	0	0	0	0	0	0	0	18	0	10	0	0	28	232
11:45 AM	0	107	17	0	0	124	7	104	0	0	0	111	0	0	0	0	0	0	0	20	0	7	0	0	27	262
Total	0	383	68	0	0	451	16	421	0	0	0	437	0	0	0	0	0	0	0	97	0	28	1	0	126	1014
12:00 PM	0	106	30	0	0	136	7	110	0	0	0	117	0	0	0	0	0	0	0	17	0	7	0	0	24	277
12:15 PM	0	115	10	0	0	125	6	107	0	0	0	113	0	0	0	0	0	0	0	22	0	6	0	0	28	266
12:30 PM	0	106	13	0	0	119	6	115	0	0	0	121	0	0	0	0	0	0	0	22	0	6	0	0	28	268
12:45 PM	0	95	16	0	0	111	8	88	0	0	0	96	0	0	0	0	0	0	0	23	0	8	0	0	31	238
Total	0	422	69	0	0	491	27	420	0	0	0	447	0	0	0	0	0	0	0	84	0	27	0	0	111	1049
1:00 PM	0	107	18	0	0	125	7	100	0	0	0	107	0	0	0	0	0	0	0	13	0	7	0	0	20	252
1:15 PM	0	110	30	0	0	140	5	104	0	0	0	109	0	0	0	0	0	0	0	22	0	9	0	0	31	280
1:30 PM	0	117	23	0	0	140	15	105	0	0	0	120	0	0	0	0	0	0	0	13	0	5	0	0	18	278
1:45 PM	0	110	21	0	0	131	3	104	0	0	0	107	0	0	0	0	0	0	0	35	0	7	0	0	42	280
Total	0	444	92	0	0	536	30	413	0	0	0	443	0	0	0	0	0	0	0	83	0	28	0	0	111	1090
***BREAK***																										
2:00 PM	0	105	22	0	0	127	10	109	0	0	0	119	0	0	0	0	0	0	0	22	0	6	0	0	28	274
2:15 PM	0	134	22	0	0	156	5	107	0	0	0	112	0	0	0	0	0	0	0	20	0	13	0	0	33	301
2:30 PM	0	140	22	0	0	162	10	104	0	0	0	114	0	0	0	0	0	0	0	21	0	14	1	0	36	312
2:45 PM	0	137	27	0	0	164	6	94	0	0	0	100	0	0	0	0	0	0	0	25	0	8	0	0	33	297
Total	0	516	93	0	0	609	31	414	0	0	0	445	0	0	0	0	0	0	0	88	0	41	1	0	130	1184
3:00 PM	0	139	24	0	0	163	7	81	0	0	0	88	0	0	0	0	0	0	0	22	0	7	0	0	29	280
3:15 PM	0	181	33	0	0	214	7	108	0	0	0	115	0	0	0	0	0	0	0	22	0	6	0	0	28	357
3:30 PM	0	162	29	0	0	191	10	122	0	0	0	132	0	0	0	0	0	0	0	22	0	11	0	0	33	356
3:45 PM	0	150	31	0	0	181	9	91	0	0	0	100	0	0	0	0	0	0	0	18	0	5	0	0	23	304
Total	0	632	117	0	0	749	33	402	0	0	0	435	0	0	0	0	0	0	0	84	0	29	0	0	113	1297
4:00 PM	0	189	35	0	0	224	10	90	0	0	0	100	0	0	0	0	0	0	0	19	0	8	0	0	27	351
4:15 PM	0	167	28	0	0	195	10	111	0	0	0	121	0	0	0	0	0	0	0	32	0	15	0	0	47	363
4:30 PM	0	193	36	0	0	229	7	109	0	0	0	116	0	0	0	0	0	0	0	19	0	13	0	0	32	377
4:45 PM	0	161	35	0	0	196	8	123	0	0	0	131	0	0	0	0	0	0	0	25	0	22	0	0	47	374
Total	0	710	134	0	0	844	35	433	0	0	0	468	0	0	0	0	0	0	0	95	0	58	0	0	153	1465
5:00 PM	0	199	43	0	0	242	15	120	0	0	0	135	0	0	0	0	0	0	0	39	0	6	0	0	45	422
5:15 PM	0	200	37	0	0	237	5	116	0	0	0	121	0	0	0	0	0	0	0	29	0	23	0	0	52	410
5:30 PM	0	208	33	0	0	241	10	120	0	0	0	130	0	0	0	0	0	0	0	32	0	25	0	0	57	428
5:45 PM	0	171	40	0	0	211	16	122	0	0	0	138	0	0	0	0	0	0	0	27	0	30	0	0	57	406
Total	0	778	153	0	0	931	46	478	0	0	0	524	0	0	0	0	0	0	0	127	0	84	0	0	211	1666
6:00 PM	0	187	37	0	0	224	7	133	0	0	0	140	0	0	0	0	0	0	0	31	0	26	0	0	57	421
6:15 PM	0	168	32	0	0	200	6	133	0	0	0	139	0	0	0	0	0	0	0	30	0	24	0	0	54	393
6:30 PM	0	146	27	0	0	173	10	128	0	0	0	138	0	0	0	0	0	0	0	26	0	11	0	0	37	348
6:45 PM	0	167	28	0	0	195	8	102	0	0	0	110	0	0	0	0	0	0	0	19	0	7	0	0	26	331
Total	0	668	124	0	0	792	31	496	0	0	0	527	0	0	0	0	0	0	0	106	0	68	0	0	174	1493
Grand Total	0	6007	1270	0	0	7277	478	5731	0	0	0	6209	0	0	0	0	0	0	0	1260	0	490	2	0	1752	15238
Apprch %	0.0	82.5	17.5	0.0	0.0		7.7</																			

% Cars, PU, Vans	0.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0
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Project ID: 19-09115-016  
 Location: Hickory Flat Hwy/SR-140 & Sugar Pike Rd  
 City: Woodstock

**PEAK HOURS**

Day: Wednesday  
 Date: 02/27/2019

**AM**

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					Sugar Pike Rd Eastbound					Sugar Pike Rd Westbound					Int. Total
	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	
Peak Hour Analysis from 07:00 AM to 10:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	111	35	0	146	25	153	0	0	178	0	0	0	0	0	19	0	7	0	26	350
7:30 AM	0	140	28	0	168	25	160	0	0	185	0	0	0	0	0	35	0	10	0	45	398
7:45 AM	0	107	25	0	132	22	158	0	0	180	0	0	0	0	0	45	0	6	0	51	363
8:00 AM	0	102	23	0	125	19	137	0	0	156	0	0	0	0	0	57	0	9	0	66	347
Total Volume	0	460	111	0	571	91	608	0	0	699	0	0	0	0	0	156	0	32	0	188	1458
% App. Total	0.0	80.6	19.4	0.0	100	13.0	87.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	83.0	0.0	17.0	0.0	100	
PHF	0.850					0.945										0.712	0.916				
Cars, PU, Vans	0	460	111	0	571	91	608	0	0	699	0	0	0	0	0	156	0	32	0	188	1458
% Cars, PU, Vans	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0

**NOON**

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					Sugar Pike Rd Eastbound					Sugar Pike Rd Westbound					Int. Total
	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	
Peak Hour Analysis from 10:00 AM to 02:00 PM																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
1:00 PM	0	107	18	0	125	7	100	0	0	107	0	0	0	0	0	13	0	7	0	20	252
1:15 PM	0	110	30	0	140	5	104	0	0	109	0	0	0	0	0	22	0	9	0	31	280
1:30 PM	0	117	23	0	140	15	105	0	0	120	0	0	0	0	0	13	0	5	0	18	278
1:45 PM	0	110	21	0	131	3	104	0	0	107	0	0	0	0	0	35	0	7	0	42	280
Total Volume	0	444	92	0	536	30	413	0	0	443	0	0	0	0	0	83	0	28	0	111	1090
% App. Total	0.0	82.8	17.2	0.0	100	6.8	93.2	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	74.8	0.0	25.2	0.0	100	
PHF	0.957					0.923										0.661	0.973				
Cars, PU, Vans	0	444	92	0	536	30	413	0	0	443	0	0	0	0	0	83	0	28	0	111	1090
% Cars, PU, Vans	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0

**PM**

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					Sugar Pike Rd Eastbound					Sugar Pike Rd Westbound					Int. Total
	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	
Peak Hour Analysis from 02:00 PM to 07:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	0	199	43	0	242	15	120	0	0	135	0	0	0	0	0	39	0	6	0	45	422
5:15 PM	0	200	37	0	237	5	116	0	0	121	0	0	0	0	0	29	0	23	0	52	410
5:30 PM	0	208	33	0	241	10	120	0	0	130	0	0	0	0	0	32	0	25	0	57	428
5:45 PM	0	171	40	0	211	16	122	0	0	138	0	0	0	0	0	27	0	30	0	57	406
Total Volume	0	778	153	0	931	46	478	0	0	524	0	0	0	0	0	127	0	84	0	211	1666
% App. Total	0.0	83.6	16.4	0.0	100	8.8	91.2	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	60.2	0.0	39.8	0.0	100	
PHF	0.962					0.949										0.925	0.973				
Cars, PU, Vans	0	778	153	0	931	46	478	0	0	524	0	0	0	0	0	127	0	84	0	211	1666
% Cars, PU, Vans	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0

Project ID: 19-09115-017  
 Location: Hickory Flat Hwy/SR-140 & Mountain Rd/Earney Rd  
 City: Woodstock

Day: Wednesday  
 Date: 02/27/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					Mountain Rd/Earney Rd Eastbound					Mountain Rd/Earney Rd Westbound					Int. Total				
	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru	Rgt	Utum	Peds	App. Total	Left	Thru		Rgt	Utum	Peds	App. Total
	7:00 AM	12	68	1	0	0	81	5	144	29	0	0	178	35	4	6	0	0	45	4		12	12	0	0
7:15 AM	14	88	3	0	0	105	1	135	39	0	0	175	49	5	13	0	0	67	4	18	8	0	0	30	377
7:30 AM	9	102	2	0	0	113	5	156	32	0	0	193	48	15	12	0	0	75	5	15	8	0	0	28	409
7:45 AM	4	105	2	0	0	111	3	167	36	0	0	206	28	3	0	0	0	31	4	1	8	0	0	13	361
Total	39	363	8	0	0	410	14	602	136	0	0	752	160	27	31	0	0	218	17	46	36	0	0	99	1479
8:00 AM	1	80	4	0	0	85	7	140	52	0	0	199	24	2	3	0	0	29	3	6	11	0	0	20	333
8:15 AM	5	83	2	0	0	90	6	164	37	0	0	207	20	5	2	0	0	27	5	8	13	0	0	26	350
8:30 AM	1	86	2	0	0	89	8	173	32	1	0	214	22	4	1	0	0	27	9	4	8	0	0	21	351
8:45 AM	2	82	3	0	0	87	10	149	33	0	0	192	26	0	0	0	0	26	5	5	14	0	0	24	329
Total	9	331	11	0	0	351	31	626	154	1	0	812	92	11	6	0	0	109	22	23	46	0	0	91	1363
***BREAK***																									
4:00 PM	6	202	6	0	0	214	7	96	11	0	0	114	18	5	10	0	0	33	5	3	9	0	0	17	378
4:15 PM	4	178	7	0	0	189	12	103	29	0	0	144	17	5	5	0	0	27	6	2	11	0	0	19	379
4:30 PM	3	194	6	0	0	203	13	100	20	0	0	133	17	4	3	0	0	24	7	6	12	0	0	25	385
4:45 PM	10	161	8	0	0	179	12	111	23	0	0	146	33	4	5	0	0	42	2	6	3	0	0	11	378
Total	23	735	27	0	0	785	44	410	83	0	0	537	85	18	23	0	0	126	20	17	35	0	0	72	1520
5:00 PM	7	192	10	0	0	209	10	114	39	0	0	163	27	8	10	0	0	45	9	10	17	0	0	36	453
5:15 PM	10	188	8	0	0	206	11	115	30	0	0	156	26	4	7	0	0	37	7	9	23	0	0	39	438
5:30 PM	4	193	7	0	0	204	11	97	35	0	0	143	40	5	6	0	0	51	6	15	16	0	0	37	435
5:45 PM	3	160	5	0	0	168	9	105	34	0	0	148	23	6	3	0	0	32	4	15	16	0	0	35	383
Total	24	733	30	0	0	787	41	431	138	0	0	610	116	23	26	0	0	165	26	49	72	0	0	147	1709
Grand Total	95	2162	76	0	0	2333	130	2069	511	1	0	2711	453	79	86	0	0	618	85	135	189	0	0	409	6071
Apprch %	4.1	92.7	3.3	0.0	0.0		4.8	76.3	18.8	0.0	0.0		73.3	12.8	13.9	0.0	0.0		20.8	33.0	46.2	0.0	0.0		
Total %	1.6	35.6	1.3	0.0	0.0	38.4	2.1	34.1	8.4	0.0	0.0	44.7	7.5	1.3	1.4	0.0	0.0	10.2	1.4	2.2	3.1	0.0	0.0	6.7	
Cars, PU, Vans	95	2162	76	0	0	2333	130	2069	511	0	0	2711	453	79	86	0	0	618	85	135	189	0	0	409	6071
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09115-017  
 Location: Hickory Flat Hwy/SR-140 & Mountain Rd/Earney Rd  
 City: Woodstock

**PEAK HOURS**

Day: Wednesday  
 Date: 02/27/2019

**AM**

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					Mountain Rd/Earney Rd Eastbound					Mountain Rd/Earney Rd Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	14	88	3	0	105	1	135	39	0	175	49	5	13	0	67	4	18	8	0	30	377
7:30 AM	9	102	2	0	113	5	156	32	0	193	48	15	12	0	75	5	15	8	0	28	409
7:45 AM	4	105	2	0	111	3	167	36	0	206	28	3	0	0	31	4	1	8	0	13	361
8:00 AM	1	80	4	0	85	7	140	52	0	199	24	2	3	0	29	3	6	11	0	20	333
Total Volume	28	375	11	0	414	16	598	159	0	773	149	25	28	0	202	16	40	35	0	91	1480
% App. Total	6.8	90.6	2.7	0.0	100	2.1	77.4	20.6	0.0	100	73.8	12.4	13.9	0.0	100	17.6	44.0	38.5	0.0	100	
PHF	0.916					0.938					0.673					0.758					0.905
Cars, PU, Vans	28	375	11	0	414	16	598	159	0	773	149	25	28	0	202	16	40	35	0	91	1480
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

**PM**

Start Time	Hickory Flat Hwy/SR-140 Northbound					Hickory Flat Hwy/SR-140 Southbound					Mountain Rd/Earney Rd Eastbound					Mountain Rd/Earney Rd Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	7	192	10	0	209	10	114	39	0	163	27	8	10	0	45	9	10	17	0	36	453
5:15 PM	10	188	8	0	206	11	115	30	0	156	26	4	7	0	37	7	9	23	0	39	438
5:30 PM	4	193	7	0	204	11	97	35	0	143	40	5	6	0	51	6	15	16	0	37	435
5:45 PM	3	160	5	0	168	9	105	34	0	148	23	6	3	0	32	4	15	16	0	35	383
Total Volume	24	733	30	0	787	41	431	138	0	610	116	23	26	0	165	26	49	72	0	147	1709
% App. Total	3.0	93.1	3.8	0.0	100	6.7	70.7	22.6	0.0	100	70.3	13.9	15.8	0.0	100	17.7	33.3	49.0	0.0	100	
PHF	0.941					0.936					0.809					0.942					0.943
Cars, PU, Vans	24	733	30	0	787	41	431	138	0	610	116	23	26	0	165	26	49	72	0	147	1709
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0







## 2. Crash Data

Traffic safety is a key consideration of how the existing transportation network is functioning. A review of historical crash data along the corridor was performed for the study. Five years of crash data for the years 2013 to 2017 were obtained from the GEARS database. Crash data was provided for the study area along SR 140 in Cherokee County from the I-575 Ramps to Arnold Mill Rd. For the five-year period a total of 1,368 crashes occurred along SR 140 within the study area. Of these, a total of 318 were injury crashes and 2 were fatalities. Table 2.1 summarizes the crashes along the SR 140 corridor. Figure 2.1 illustrates the crash locations.

Table 2.1: Crash Review Summary for SR 140 Corridor

Crash Type	Total Crashes	Percentage of Total
Unclassified	10	1%
Angle	297	22%
Head On	37	3%
Rear End	710	52%
Sideswipe - Same Direction	59	4%
Sideswipe - Opposite Direction	24	2%
Not a Collision with a Motor Vehicle	231	17%

The predominant types of crashes included rear end, accounting for 52% of the total. Angle crashes accounted for 22%, head on crashes accounted for 3%, sideswipe same direction crashes accounted for 4%, sideswipe opposite direction crashes accounted for 2%, crashes that were not a collision with a motor vehicle accounted for 17%, and undesignated crashes accounted for 1%.

Analysis of the crashes by roadway segments and by intersection was performed to better understand the location of accidents along the corridor. Table 2.2 summarizes the total crashes by intersection. Table 3 summarizes the total crashes by roadway segment.

Figure 2.1: Crashes along SR 140- Years 2013-2017



Table 2.2: Crash Review for SR 140 Major Intersections

Intersecting Road	Number of Crashes	Injury Crashes	Fatality Crashes	Rank
I-575 SB Off-Ramp	22	3	0	12
I-575 SB On-Ramp	2	0	0	18
I-575 NB	38	4	0	5
Lower Scott Mill Rd	25	4	0	9
Mountain Vista Blvd	12	6	0	16
Northside Cherokee Blvd	25	6	0	9
Scott Rd	30	2	0	6
Avery Rd	26	8	1	7
Univeter Rd	74	14	0	3
Harmony Lake Dr	24	2	0	7
Holly Commons Pkwy	14	2	0	15
Darnell Rd	6	1	0	17
Stringer Rd	20	5	0	13
E Cherokee Dr	157	33	0	1
Hickory Rd/Batesville Rd	146	19	0	2
Sugar Pike Rd	17	7	0	14
Mountain Rd	24	3	0	11
Arnold Mill Rd	47	11	0	4

Two fatalities occurred within the five-year period. One crash occurred at the intersection between SR 140 and Avery Rd and involved three vehicles. The cause of the crash was one vehicle swerving in an attempt to avoid a rear end with the second vehicle and striking the third vehicle in a head on manner. The second fatality crash did not occur at an intersection. It was a head on collision along SR 140 north of Jep Wheeler Rd.

Crash rates for the SR 140 corridor were calculated and compared to statewide averages for urban minor arterials. Table 2.3 summarizes the crash rate calculations and indicates the average crash rate of 489 crashes per 100 million vehicle miles for the five-year period was lower than the statewide average of 623 for urban minor arterials in the year 2017. All segments had crash rates lower than the statewide average, except for segment 4, which includes the busy intersections of East Cherokee Drive and Hickory Road/Batesville Road. Operations at these intersections and the multiple access points are likely the cause of this much higher crash rate.

Table 2.2: Crash Review for SR 140 Roadway Segments

	Segment	Total Crashes	PDO Crashes	Injury Crashes	Fatal Crashes	Crash Rate
1	I-575 to Northside Cherokee Boulevard	216	167	49	0	494.0
2	Northside Cherokee Boulevard to Univeter Road	188	135	52	1	564.6
3	Univeter Road to White Columns Boulevard	230	172	58	0	333.6
4	White Columns Boulevard to Saddlehorn Court	486	387	99	0	1,551.6
5	Saddlehorn Court to Mountain Road/Earney Road	150	110	39	1	295.7
6	Mountain Road/Earney Road to Fulton County Line	98	77	21	0	200.9
	Overall	1368	1048	318	2	488.6

# 3. Future Traffic Projections

Anticipated growth in population and vehicles was reviewed to develop traffic volumes for both ten-year and twenty-year periods. To estimate traffic conditions in the future, historic data and the regional traffic demand model were both consulted. This section explains the process.

## Review of Future Growth in the Corridor

Anticipated growth in population and vehicles was reviewed to project traffic volumes for both ten-year and twenty-year periods. The Cherokee County Comprehensive Transportation Plan (CTP), completed in 2016, included a thorough analysis of demographics, looking at both historical growth and future forecasts. During the 30-year period between 1980 and 2010, the County population grew at a compound annual rate of 4.85%. The plan stated the County is forecast to nearly double in population between 2010 and 2040. The change in population each decade was presented in Table 2.14 in the CTP (below). This equates to approximately a 2.2% compound annual growth rate.

**Table 2.14 Cherokee County Projected Population Change (2010-2040)**

	2010	2020	2030	2040
Population	207,388	276,798	341,201	401,558
Change over Decade	69,410	64,403	60,357	
Percent Change over Decade	33.5%	23.3%	17.7%	

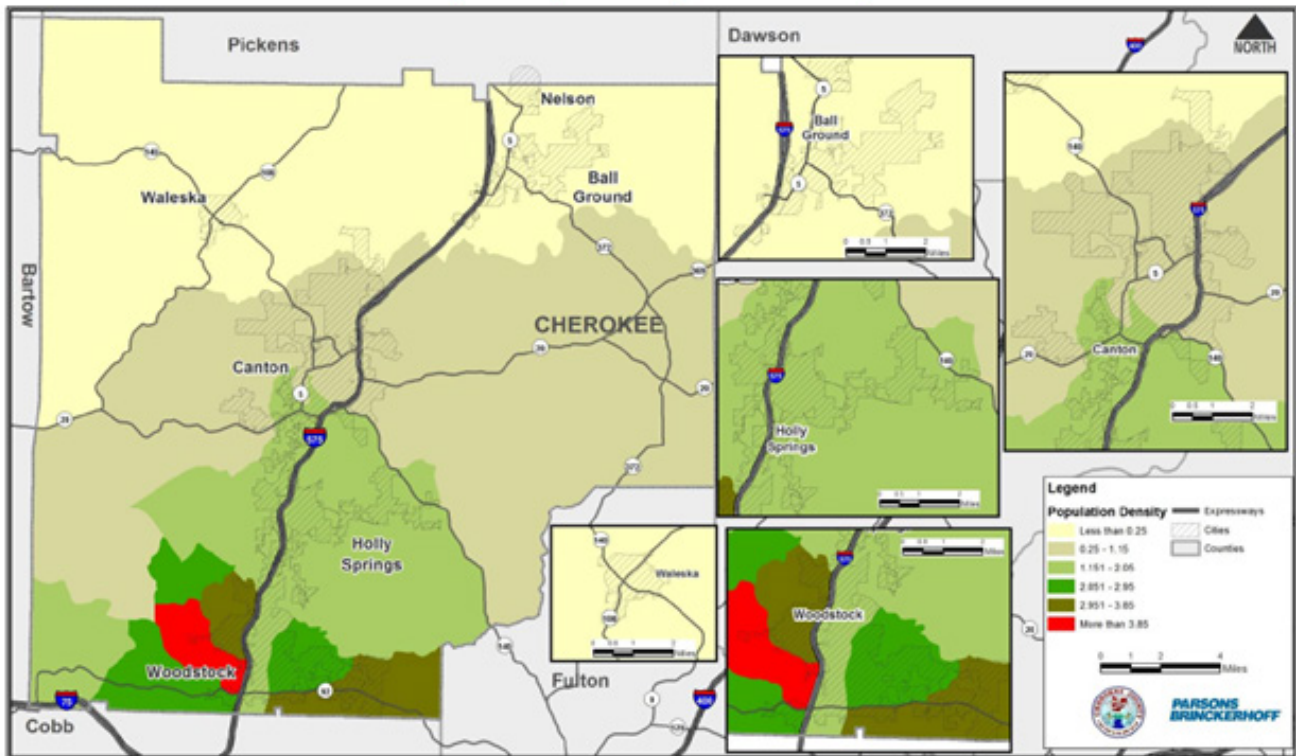
*Source: Atlanta Regional Commission, 2010-2040 Population & Employment Projections*

The CTP also provided two figures comparing the population density in 2012 (Figure 2.3) to the projected population density in 2040 (Figure 2.12). Comparing these two figures indicates where an increase in households is expected along the SR 140 corridor. Population density is forecast to increase to the west of SR 140, and the northern half of the corridor near the City of Canton. The forecast indicates the population density increase for the County is primarily oriented along the I-575 corridor. The CTP also projects increase employment in the County, which is similarly forecast to occur along the I-575 corridor and near the City of Canton.

# CTP Figure 2.3- Population Density (2012)

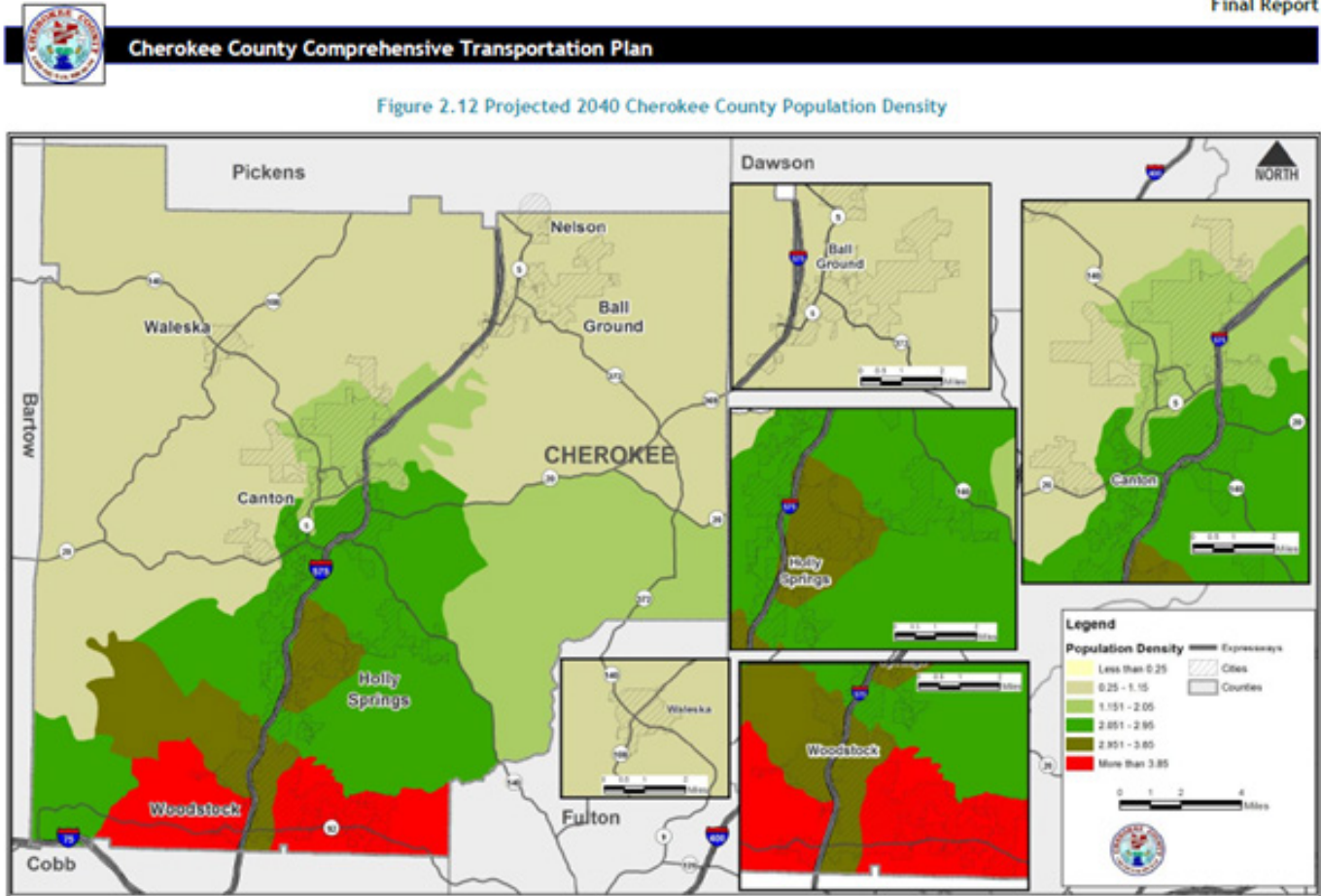


Figure 2.3 Population Density of Cherokee County



Source: 2012 US Census American Community Survey 5-Year Estimates

CTP Figure 2.12- Population Density (2040)



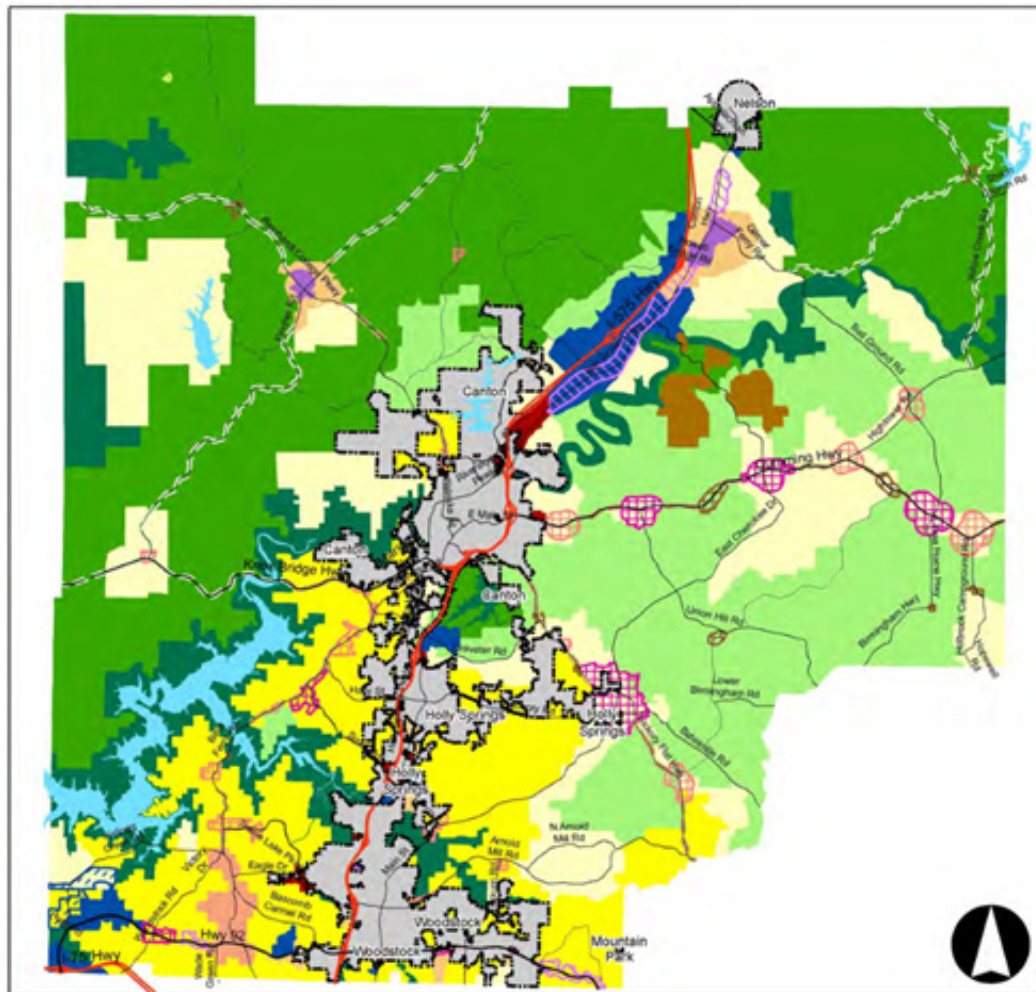
Source: Atlanta Regional Commission, 2010-2040 Population & Employment Projections

The recently adopted (both 2018) Cherokee County Comprehensive Plan and City of Holly Springs Comprehensive Plans reinforce the growth pattern anticipated in the Comprehensive Transportation Plan. The Cherokee County Comprehensive Plan indicates “Suburban Living” for most of the areas to the west and south of the SR 140 corridor relative to the lower density implied by the “Country Estates” indicated for the areas to the east and north of the SR 140 corridor. The Cherokee County Comprehensive Plan also anticipates a “Community Village” area around the Hickory Flats area, which is also broadly anticipated by the City of Holly Springs Comprehensive Plan which indicates commercially oriented and higher density land uses along this part of the SR 140 corridor. The City’s Comprehensive Plan also notes more intense residential oriented land uses in the areas west of Hickory Flats within the City of Holly Springs. Note, that many of the designations along the actual SR 140 frontage indicated by the City of Holly Springs Comprehensive Plan remain under the jurisdiction of Cherokee County, but both plans work together to broadly suggest more activity along the central part of the SR 140 corridor around Hickory Flats area, regardless of future jurisdiction.



# Cherokee County Comprehensive Plan Future Development Map

## Future Development Map



## Draft Future Development Map

### Legend

- Lakes
- Cities Outside of Plan
- Potential Workplace Center Expansion
- Character Areas**
- County Crossroads
- Hamlet
- Neighborhood Village
- Community Village
- Scenic Corridor
- Transitional Corridor
- Development Corridor
- Natural Preserve
- Rural Places
- Country Estates
- Suburban Growth
- Suburban Living
- Neighborhood Living
- Bells Ferry LCI
- Urban Core
- Regional Center
- Workplace Center
- Utilities / Services

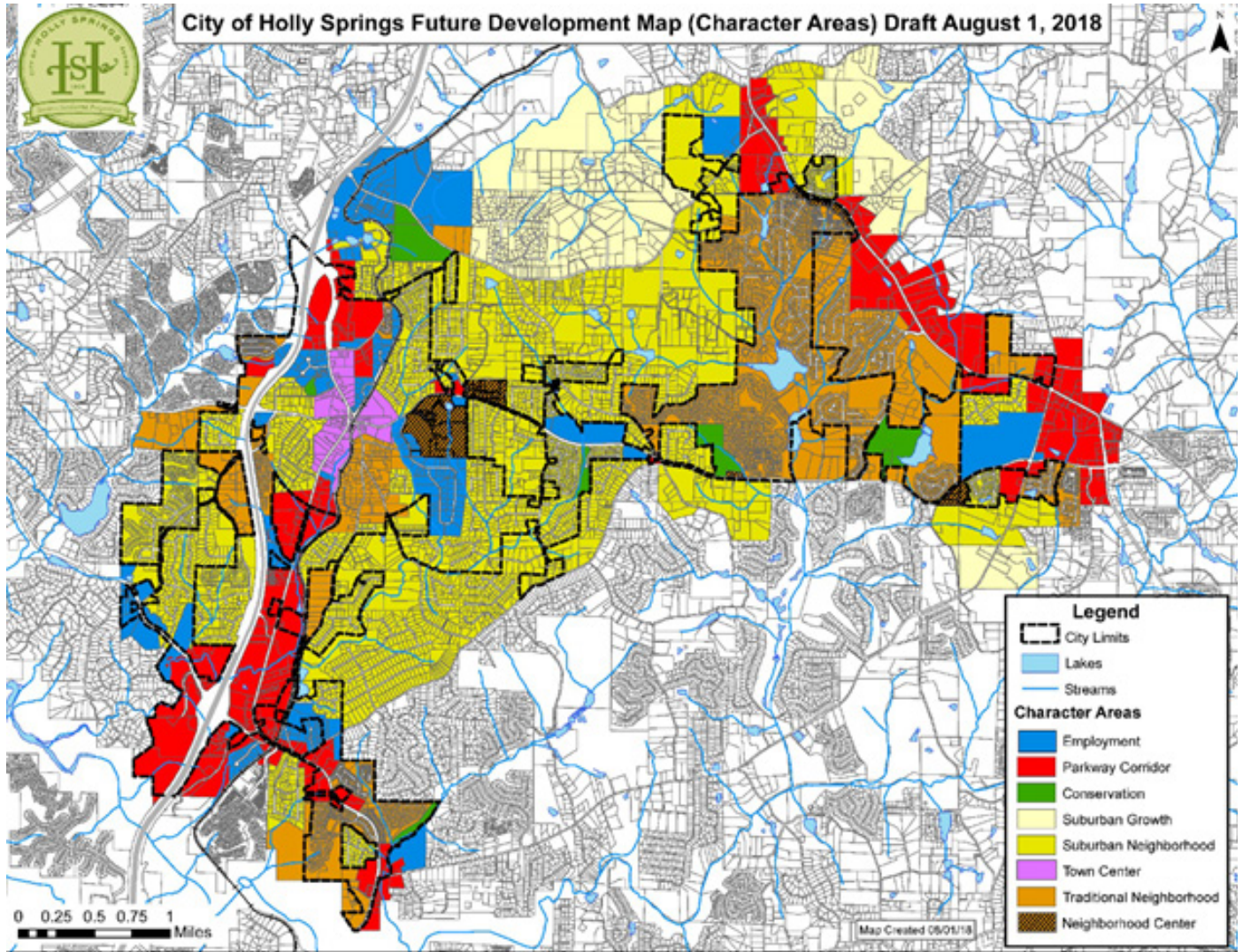


Date July 30, 2018

Prepared by  
Cherokee County Planning & Land Use  
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and most resources available. Cherokee County is not  
responsible for errors and omissions contained in  
this map. No warranties or representations are  
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## City of Holly Springs Comprehensive Plan Future Development Map



## Future Traffic Volumes

To estimate traffic conditions in the future, historic data and the regional traffic demand model were both consulted. Historical data for the five GDOT count locations on SR 140 in the study area were reviewed. These rates are shown in Table 3.1. These historic compound growth rates are fairly aggressive. The average growth rate across these five locations is just over 3% per year.

Table 3.1 – Historic Traffic Growth on Study Corridor			
Summary of trend annual compound growth rates from GDOT historical count stations (Years 1990 – 2016)			
GDOT Count Station #	Station Location	Year 2017 Volume	Trend
570106	Between Lawson Drive and Oakcrest Circle/Cherokee Overlook Drive	13,501	3.67%
570108	South of Bart Manous Road	17,633	3.33%
570110	Southeast of E. Cherokee Drive	18,632	4.26%
570112	South of Park Creek Drive	17,313	2.95%
570114	Between Partridge Road and Grimes Road	14,768	1.54%
Average of all locations:		17,087	3.15%

In addition to these locations, six locations near the SR 140 corridor were also reviewed. The trends at these locations are more mixed, with some rates above six percent per year, while others are below one percent or even negatives. The count stations near SR 140 on East Cherokee Drive, a major cross-street, show similarly aggressive growth in their historic counts.

Table 3.2 – Historic Traffic Growth Near Study Corridor			
Summary of trend annual compound growth rates from GDOT historical count stations (Years 1990 – 2017)			
GDOT Count Station #	Station Location	Year 2017 Volume	Trend
578150	Scott Road between Spring Branch Drive and Stoneybrook Drive (east of SR 140)	2,310	-5.90%
578171	Avery Road between Sweetbriar Court and Sweetbriar Lane (east of SR 140)	1,250	6.08%
570169	East Cherokee Drive between Lower Union Hill Road and Township Way/Quarles Drive (north of SR 140)	9,340	6.43%
570167	East Cherokee Drive between SR 140 and Hickory Road (south of SR 140)	10,900	3.49%
570162	Arnold Mill Road west of Oak Laurel/River Laurel Way (west of SR 140)	7,560	1.15%
1210332	SR 140 between Lackey Road and Holly Road (south of study area)	21,732	0.94%

The Atlanta Regional Commission (ARC) maintains an activity-based regional Travel Demand Model (TDM). The TDM indicates year 2015 volumes on SR 140 and surrounding roadways. The model estimates a typical volume along SR 140 in Cherokee County between 10,000 and 19,000 vehicles/day, and ABM estimates are on average 13.5% higher than GDOT counts indicate.

The Activity-Based TDM's year 2015 and year 2040 results were also consulted to approximate future growth. Based on total VMT along the study corridor, an average year 2015 ADT of 15,988 vehicles per day and an average year 2040 ADT of 20,423 vehicles per day were found, which equates to an average 0.98% compound growth rate. In the year 2040 ABM, SR 140 is included as a two-lane road. It is possible that the modest growth shown is partially due to capacity limits on the corridor. In order to better understand potential future demand on SR 140, an additional model run was performed with SR 140 widened to a four-lane road. In this model, SR 140 has an average year 2040 ADT of 29,645, which represents an average 2.50% annual compound growth rate.

In addition to the regional Activity-Based TDM, the previous Four-Step TDM used in the Cherokee County CTP was consulted. Through an identical process to that used for the Activity-Based TDM, an average year 2015 ADT of 16,155 and an average year 2040 ADT of 23,105 was reported by the CTP TDM. This equates to an average compound growth rate of 1.44% per year.

Both of these long-range, regional models anticipate a slower rate of growth along SR 140 than has occurred in the past. As development continues along SR 140 and in the area around it, less greenfield development will be possible, which will gradually slow the rate of growth in the mid-term and long-term future.

For the SR 140 corridor study, a compound annual growth rate of 3.0% was utilized from the existing year (2019) to the open year (2029). A compound annual growth rate of 1.5% was utilized from the open year (2029) to the design year (2039). The growth rates account for the forecasted population and employment growth. The growth rate also includes some latent demand that widening the SR 140 corridor would attract. This results in a growth factor of 1.344 for the opening year and 1.504 for the design year relative to the existing year. The resulting aggregate growth rate from the existing year to design year is 2.06%. This is in between the growth rates the travel demand models predicts for a two-lane roadway and a four-lane roadway.

The projected daily demand volumes along the SR 140 corridor for the open year (2029) and design year (2039) are summarized in Table 3.3.

<b>Table 3.3: Projected Daily Traffic Volumes</b>			
<b>SR 140 Location</b>	<b>Existing Year Daily Volumes</b>	<b>Open Year (2029) Daily Volume</b>	<b>Design Year (2039) Daily Volume</b>
1 – West of Northside Cherokee Blvd	16,334	21,950	24,575
2 – West of Scott Rd	20,928	28,125	31,475
3 – West of Harmony Lake Dr	22,587	30,350	33,975
4 – West of East Cherokee Dr	19,441	26,125	29,250
5 – South of Hickory Rd / Batesville Rd	17,824	23,950	26,825
6 – South of Mountain Rd / Earney Rd	16,602	22,300	24,975
7 - At Cherokee / Fulton County line	22,908	30,775	34,475

---

## Planned Developments

At the time of the study, the County was aware of multiple planned developments along Stringer Road. Information was provided by the County for the following developments, which were in varying stages of the development process. These developments total approximately 425 homes. Expected vehicle trips from these developments was forecast for use in the analysis at the SR 140 at Stringer Rd intersection.

- Developments:
  - o Stringer Road West (95 homes)
  - o Spring Meadows (135 homes)
  - o Idylwilde (195 homes)

# 4. Traffic Analysis Results

This section provides an explanation of the methodology, analysis of alternatives, and intersection capacity results.

## Methodology

The standard approach to defining intersection traffic congestion is the use of Level of Service (LOS), a quantifiable measure of congestion that is correlated to the delay experienced by the average vehicle. LOS is measured on a letter grade scale from A to F, with LOS A indicating free-flow conditions and LOS F indicating severe congestion as shown in the graphic below. Typically, LOS D or better is considered satisfactory, with LOS E or F considered failing.

The Highway Capacity Manual (HCM) defines LOS at signalized intersections in terms of average control delay per vehicle, which is composed of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Unsignalized intersection LOS is defined in similar terms, but with lower delay thresholds. These delay thresholds are presented in the table below.



Level of Service Criteria

Level of Service	Signalized Average Delay (sec/veh)	Unsignalized Average Delay (sec/veh)
A	≤10.0	≤10.0
B	>10.0 and ≤20.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

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## Analysis of Alternatives

Future year capacity analysis was performed for both ten-year and twenty-year periods. Capacity analysis of intersection operations in both an open year (2029) and design year (2039) were performed, for both a “No-Build” condition and a “Build” Condition. Alternative improvement options were modeled and capacity results compared. After discussions with both Cherokee County staff and GDOT District 6 staff, the capacity results were refined and finalized. One additional step included adjusting the ‘lane utilization’ factor in the intersection projects which added a second mainline through lane for a short distance at the intersection. This reduction in capacity was applied to account for how drivers will choose to use the two through lanes. This results in a slightly lower project benefit than discussed during the meetings with staff.

## Capacity Results

The capacity results are provided for the study intersections in the following tables:

Table 4.1 summarizes the year 2019 existing conditions LOS and delay, as well as the traffic volumes, and SR 140 mainline v/c ratio. The traffic volumes indicate the total intersection volume and the side-street approaches – which quickly highlights the high-volume intersections versus low volume. The mainline v/c ratio (volume to capacity ratio) indicates how close to capacity the SR 140 approaches are operating with the given traffic signal timing.

Table 4.2 summarizes the year 2029 future conditions LOS and delay for the “No-Build” and “Build” conditions, as well as the mainline v/c ratio for the “No-Build” condition. The “Build” condition result is for the recommended project.

Table 4.3 summarizes the year 2039 future conditions LOS and delay for the “No-Build” and “Build” conditions, as well as the mainline v/c ratio for the “No-Build” condition. The “Build” condition result is for the recommended project.

The Synchro “Build” files were updated to include all of the recommended project geometry in a single file per analysis period.

## SR 140 Corridor Study

Table 4.1 - Existing Conditions (2019)													
Intx #	Intersection	Control Type	Dir	Capacity Results		Volume				SR 140 Mainline Through Movement Volume to Capacity			
				AM Peak Hour	PM Peak Hour	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				LOS (delay in seconds)	LOS (delay in seconds)	Total	Sidestreet	Total	Sidestreet	NB/WB	SB/EB	NB/WB	SB/EB
										v/c ratio	v/c ratio	v/c ratio	v/c ratio
1	SR 140 at I-575 SB Off Ramp	Stop-control	WB	C (15.5)	D (32.2)	865	165	1,156	233				
2	SR 140 at I-575 SB On Ramp	Unsignalized	SBL	A (2.2)	A (3.2)	1,157	0	1,520	0				
3	SR 140 at I-575 NB Ramps	Signalized		B (15.5)	B (17.7)	1,460	387	1,974	617				
4	SR 124 at Lower Scott Mill Rd	Stop-control	EB	C (20.8)	D (30.4)	1,314	53	1,796	66				
5	SR 140 at Mountain Vista Blvd	Stop-control	NB	E (40.0)	F (197.3)	1,296	98	1,747	112				
			SB	B (12.9)	C (15.0)								
6	SR 140 at Northside Cherokee Blvd	Signalized		C (21.2)	C (34.6)	1,779	286	2,276	640				
7	SR 140 at Scott Rd	Signalized		B (12.8)	B (12.8)	1,717	195	2,041	139	0.69	0.57	0.79	0.65
8	SR 140 at Avery Rd	Stop-control	WB	E (49.1)	F (247.5)	1,648	141	1,984	148				
9	SR 140 at Univeter Rd	Signalized		C (21.5)	C (21.5)	2,128	516	2,334	487	0.51	0.69	0.55	0.76
10	SR 140 at Harmony Lake Dr	Signalized		C (23.6)	B (18.8)	1,925	388	2,176	268	0.52	0.77	0.7	0.74
11	SR 140 at Bart Manous Rd	Stop-control	NB	F (51.1)	F (165.0)	1,658	175	1,923	199				
			SB	C (21.3)	F (59.2)								
12	SR 140 at Darnell Rd	Stop-control	EB	C (23.6)	D (32.5)	1,413	56	1,661	32				
13	SR 140 at Stringer Rd	Stop-control	EB	E (39.6)	F (76.5)	1,508	118	1,753	141				
14	SR 140 at E Cherokee Dr	Signalized		D (45.0)	D (48.6)	2,029	934	2,523	1039	0.4	0.81	0.86	0.68
15	SR 140 at Batesville Rd/Hickory Rd	Signalized		D (40.9)	D (37.7)	2,383	1112	2,525	1115	0.48	0.61	0.69	0.62
16	SR 140 at Sugar Pike Rd	Stop-control	WB	F (153.9)	F (71.4)	1,458	188	1,666	211				
17	SR 140 at Mountain Rd/Earney Rd	Signalized		B (18.7)	B (17.4)	1,480	293	1,709	312				
18	SR 140 at Arnold Mill Rd	Stop-control	EB	F (109.2)	E (48.2)	1,555	524	2,033	176				

\* HCM 2000 Results

Note: n/a indicates no delay results



## SR 140 Corridor Study

Table 4.2 - Future Conditions (2029)											
Intx #	Intersection	Control Type	Dir	No-Build Conditions						Build Conditions	
				Capacity Results - No-Build		SR 140 Mainline Through Movement Volume to Capacity (No-build)				Capacity Results - Recommended Alternative	
				AM Peak Hour	PM Peak Hour	AM Peak Hour		PM Peak Hour		AM Peak Hour	PM Peak Hour
				LOS (delay in seconds)	LOS (delay in seconds)	NB/WB v/c ratio	SB/EB v/c ratio	NB/WB v/c ratio	SB/EB v/c ratio	LOS (delay in seconds)	LOS (delay in seconds)
1	SR 140 at I-575 SB Off Ramp	Stop-control	WB	D (27.4)	F (201.6)					WB= A (9.5)	WB= B (14.0)
2	SR 140 at I-575 SB On Ramp	Unsignalized	SBL	B (10.8)	B (12.7)						
3	SR 140 at I-575 NB Ramps	Signalized		B (17.1)	C (28.9)	0.55	0.27	0.79	0.47	B (10.5)	B (11.8)
4	SR 124 at Lower Scott Mill Rd	Stop-control	EB	E (40.4)	F (120.2)					C (16.0)	C (20.3)
5	SR 140 at Mountain Vista Blvd	Stop-control	NB	F (271.0)	F (**)						
			SB	C (15.7)	C (20.1)						
6	SR 140 at Northside Cherokee Blvd	Signalized		C (28.4)	E (76.5)	0.74	0.61	1.15	0.69	B (19.4)	C (29.4)
7	SR 140 at Scott Rd	Signalized		C (32.5)	D (41.6)	0.97	0.79	1.08	0.87	B (19.8)	C (30.8)
8	SR 140 at Avery Rd	Stop-control	WB	F (76.8)	F (**)					E (41.1)	F (106.6)
9	SR 140 at Univeter Rd	Signalized		D (50.1)	D (51.8)	0.67	0.99	0.71	1.01	C (23.2)	C (20.4)
10	SR 140 at Harmony Lake Dr	Signalized		D (48.9)	C (25.6)	0.69	1.03	0.85	0.89	C (22.4)	B (18.9)
11	SR 140 at Bart Manous Rd	Stop-control	NB	F (**)	C (25.6)					D (26.5)	C (18.9)
			SB	F (**)	F (**)					D (20.4)	F (58.8)
12	SR 140 at Darnell Rd	Stop-control	EB	E (35.5)	C (23.1)					D (31.9)	D (32.1)
13	SR 140 at Stringer Rd	Stop-control	EB	F (**)	F (**)					B (10.5)	B (10.5)
14	SR 140 at E Cherokee Dr	Signalized		E (62.8)	F (98.5)	0.59	1	1.04	0.71	D (50.8)	E (57.1)
15	SR 140 at Batesville Rd/Hickory Rd	Signalized		F (84.2)	E (70.6)	0.97	1.1	1	1.06	D (42.3)	D (49.9)
16	SR 140 at Sugar Pike Rd	Stop-control	WB	F (**)	F (**)					B (16.6)	C (20.5)
17	SR 140 at Mountain Rd/Earney Rd	Signalized		C (26.3)	C (27.8)	0.51	0.83	0.91	0.53	C (26.3)	C (27.7)
18	SR 140 at Arnold Mill Rd	Stop-control	EB	F (**)	F (**)					EB = F (88.6) SB = A (6.7)	NB = B (13.5) SB = B (13.8)

\* HCM 2000 Results

Note: n/a indicates no delay results; (\*\*) indicates a delay greater than 300 seconds

## SR 140 Corridor Study

Table 4.3 - Future Conditions (2039)											
Intx #	Intersection	Control Type	Dir	No-Build Conditions						Build Conditions	
				Capacity Results - No-Build		SR 140 Mainline Through Movement Volume to Capacity (No-build)				Capacity Results - Recommended Alternative	
				AM Peak Hour	PM Peak Hour	AM Peak Hour		PM Peak Hour		AM Peak Hour	PM Peak Hour
				LOS (delay in seconds)	LOS (delay in seconds)	NB/WB	SB/EB	NB/WB	SB/EB	LOS (delay in seconds)	LOS (delay in seconds)
				v/c ratio	v/c ratio	v/c ratio	v/c ratio				
1	SR 140 at I-575 SB Off Ramp	Stop-control	WB	F (55.1)	F (**)					WB = B (12.1)	WB = C (22.6)
2	SR 140 at I-575 SB On Ramp	Unsignalized	SBL	B (11.8)	C (15.3)						
3	SR 140 at I-575 NB Ramps	Signalized		B (18.7)	E (55.2)	0.66	0.32	1.04	0.6	B (12.0)	B (13.9)
4	SR 124 at Lower Scott Mill Rd	Stop-control	EB	F (79.7)	F (**)					C (18.7)	D (25.4)
5	SR 140 at Mountain Vista Blvd	Stop-control	NB	F (**)	F (**)						
			SB	C (18.0)	C (24.9)						
6	SR 140 at Northside Cherokee Blvd	Signalized		D (46.4)	F (119.2)	1	0.71	1.36	0.79	C (22.4)	C (35.6)
7	SR 140 at Scott Rd	Signalized		E (64.7)	F (85.5)	1.1	0.9	1.26	1.01	D (36.5)	E (65.9)
8	SR 140 at Avery Rd	Stop-control	WB	F (**)	F (**)					F (135.9)	F (**)
9	SR 140 at Univeter Rd	Signalized		F (93.8)	F (89.4)	0.78	1.14	0.83	1.16	D (37.3)	C (29.3)
10	SR 140 at Harmony Lake Dr	Signalized		F (83.7)	D (47.3)	0.78	1.17	0.99	1.03	C (25.7)	C (21.7)
11	SR 140 at Bart Manous Rd	Stop-control	NB	F (**)	F (**)					F (50.2)	D (26.1)
			SB	F (**)	F (**)					D (30.3)	F (185.4)
12	SR 140 at Darnell Rd	Stop-control	EB	F (64.1)	D (30.9)					F (52.1)	F (105.8)
13	SR 140 at Stringer Rd	Stop-control	EB	F (**)	F (**)					B (15.7)	B (15.6)
14	SR 140 at E Cherokee Dr	Signalized		F (92.0)	F (143.7)	0.67	1.12	1.27	0.85	E (67.6)	E (79.9)
15	SR 140 at Batesville Rd/Hickory Rd	Signalized		F (128.8)	F (106.9)	1.12	1.28	1.1	1.16	D (54.5)	E (72.2)
16	SR 140 at Sugar Pike Rd	Stop-control	WB	F (**)	F (**)					C (22.2)	C (30.8)
17	SR 140 at Mountain Rd/Earney Rd	Signalized		D (41.6)	D (49.8)	0.62	1.01	1.06	0.61		
18	SR 140 at Arnold Mill Rd	Stop-control	EB	F (858.3)	F (Err)					EB = F (226.3) SB = A (7.8)	NB = C (21.3) SB = C (21.3)

\* HCM 2000 Results

Note: n/a indicates no delay results; (\*\*) indicates a delay greater than 300 seconds

# 5. Preliminary Cost Estimates

Planning level cost estimates were prepared for eight projects identified in the study. The cost estimates were based on the schematic layouts and developed based on review of existing field conditions. The cost components consisted of preliminary engineering, right-of-way, construction, and a contingency amount. The cost estimate is intended to provide Cherokee County with a project cost for programming purposes. The project cost will need to be refined as the project is implemented through the engineering design phase.

## Typical Cross Sections

For the proposed projects, the dimensions for the proposed roadway features were based on GDOT current standards. For the intersections which would be built to an 'urban' shoulder design (including curb and gutter, drainage systems, sidewalks), the features included 12-foot travel lanes, a 14-foot center turn lane, 30-inch curb and gutter, a 2-ft grass strip, 6-ft sidewalks, and 3.5-foot utility strip. This results in a typical right-of-way width of 90-feet. Additional right-of-way is needed to provide right-turn deceleration lanes at intersections and major driveways.

The 'urban' shoulder design was proposed at two intersections: E Cherokee Dr and Batesville/Hickory Rd.

For the intersections which would be built to a 'rural' shoulder design (including grassed shoulders and ditches), the features included 12-foot travel lanes, a 14-foot center turn lane, 4-foot paved shoulders, and an additional 6-foot stabilized shoulders. This results in a minimum right-of-way width of 82-feet. Additional permanent easement or right-of-way width is needed to accommodate clear zones, the drainage ditches, and/or slope tie-ins. The additional right-of-way varies and could be 16-feet on either side to accommodate drainage swales, or more. An additional 16-feet on both sides would require approximately 114-feet of right-of-way. Additional right-of-way is also needed to provide right-turn deceleration lanes at intersections and major driveways.

The 'rural' shoulder design was proposed at the other intersections, including: Northside Cherokee Dr and Univeter Road.

## Cost Assumptions

The included cost estimate tabulation sheets include the major construction cost components and include some assumptions. Engineering judgement and recent bid experience are factored in. Some items worth noting:

- The construction cost includes inflation (for different periods).
- For the larger projects, the cost estimates included the assumption one MS4 pond would be required; the land cost for the pond was included.
- The projects near the Hickory Flats Triangle area included installing roadway and pedestrian lighting.
- Right-of-way costs per SF were based on the current average commercial SF costs experienced on the E. Cherokee Dr at SR 140 intersection project (PI #0013368), Cherokee County tax assessor information, and similar previous projects.

Eight project cost estimate sheets are included here.

# Planning Level Preliminary Cost Estimate

## Planning Level Cost Estimate

Project: SR 140 Corridor Study

Project ID: #6 - Northside Cherokee Blvd

Date prepared: 5/21/2019

Description: Add 2 thru lanes; replace and extend NB right turn lane along SR 140 (project length 2,500 ft)

### Construction Costs

	Measurement		DESCRIPTION	Estimate			Total Cost
	UNIT	Quantity		Quantity	UNIT	Unit Price	
	LS	1	Traffic Control	1	LS	\$ 106,000.00	\$ 106,000.00
	Centerline LF	2500	Erosion Control (mulch, silt fence) - both sides of road	2500	LF	\$ 10.00	\$ 25,000.00
	Centerline LF	0	Erosion Control (mulch, silt fence) - one side of road	0	LF	\$ 5.00	\$ -
<b>Grading</b>							
	LS	1	Grading (including removal, fill, prep)	1	LS	\$ 235,000.00	\$ 235,000.00
	CY	0	Grading (if significant fill required)	0	CY		\$ -
	SF	0	Retaining Walls	0	SF		\$ -
	LF	0	Retaining Walls	0	LF	\$ 808.00	\$ -
	LF	800	Guardrail	800	LF	\$ 20.00	\$ 16,000.00
	EA	2	Guardrail anchorage	2	EA	\$ 2,000.00	\$ 4,000.00
<b>Pavement</b>							
	SY	0	New Pavement Patching - small areas (concrete or GAB & asphalt)	0	SY	\$ 85.20	\$ -
	SY	6042	New Pavement - Full section (GAB, asphalt and tack)	6042	SY	\$ 85.20	\$ 514,778.40
	SY	8333	Pavement Resurfacing (incl. edge milling and restriping)	8333	SY	\$ 10.90	\$ 90,829.70
	SY	0	Mill Asphalt	0	SY	\$ 5.00	\$ -
<b>Concrete</b>							
	EA	9	Residential Concrete Driveway (remove & rebuild) (assume 15'x25' area)	375	SY	\$ 80.00	\$ 30,000.00
	EA	0	Commercial Concrete Driveway (remove & rebuild) (assume 30'x25' area)	0	SY	\$ 80.00	\$ -
	LF	0	Concrete Curb & Gutter (8x24) or (8 x 30)	0	LF	\$ 22.00	\$ -
	SF	0	Concrete - Roundabout Truck Apron	0	SY	\$ 92.00	\$ -
	SF	0	Concrete Island/Median	0	SY	\$ 51.60	\$ -
	EA	0	Roundabout Splitter Island	0	EA	\$ 5,000.00	\$ -
	LF	0	5-foot Concrete Sidewalk, 4 in	0	LF	\$ 45.00	\$ -
	LF	0	6-foot Concrete Sidewalk, 4 in	0	LF	\$ 49.20	\$ -
	EA	0	ADA Crosswalk Ramps	0	EA	\$ 500.00	\$ -
<b>Drainage</b>							
	LF	270	Pipe - 18in	270	LF	\$ 45.00	\$ 12,150.00
	LF	0	Pipe - 24in	0	LF	\$ 60.00	\$ -
	EA	0	Catch Basin	0	EA	\$ 2,600.00	\$ -
	EA	18	Flared End	18	EA	\$ 750.00	\$ 13,500.00
	LS	0	Culvert crossing	0	LS	\$ -	\$ -
<b>Features</b>							
	LS	0	Signing and Marking	0	LS		\$ -
	LF	2500	Signing and Marking	2500	LF	\$ 22.70	\$ 56,750.00
	EA	4	Crosswalk Striping	4	EA	\$ 250.00	\$ 1,000.00
	LS	1	Traffic Signal (new, modification)	1	LS	\$ 175,000.00	\$ 175,000.00
	EA	0	Lighting (mix roadway and pedestrian poles)	0	EA	\$ 7,500.00	\$ -
	LS	1	Landscaping - minor improvement	1	LS	\$ 5,000.00	\$ 5,000.00
	LS	0	Landscaping - major improvement	0	LS	\$ -	\$ -
	LS	0	Remove and rebuild Entrance Sign/Monument	0	LS	\$ -	\$ -
<b>Other</b>							
	LS	0		0	LS	\$ -	\$ -
	LS	1	MS4 infrastructure (assume 1 pond)	1	LS	\$ 230,000.00	\$ 230,000.00
							\$ -

### Construction Costs

<b>Subtotal Construction Cost</b>	<b>\$ 1,515,008.10</b>
Inflation Rate 2.0 % @ 5 Years	\$ 157,683.26
<b>Sub Total</b>	<b>\$ 1,672,691.36</b>
Contingency 20%	\$ 334,538.27
<b>TOTAL CONSTRUCTION COST</b>	<b>\$2,007,229.63</b>
<b>Additional Costs</b>	
Engineering Design 12%	\$ 240,867.56
Right Of Way Cost - Commercial (\$16/SF)	\$ -
Right Of Way Cost - Residential (\$6/SF)	\$ 148,500.00
Easement Cost (\$6/SF)	\$ 150,000.00
Utilities 8%	\$ 160,578.37
Subtotal	\$ 699,945.93
<b>GRAND TOTAL</b>	<b>\$2,707,175.56</b>

### Right-of-Way Areas:

SF	0
SF	16500
SF	25000

### For SR 140 report table

PE	\$ 241,000.00
ROW	\$ 299,000.00
CST	\$1,833,000.00
Cont	\$ 335,000.00
<b>Total</b>	<b>\$2,708,000.00</b>

# Planning Level Preliminary Cost Estimate

## Planning Level Cost Estimate

Project: SR 140 Corridor Study

Project ID: #7 - Scott Rd

Date prepared: 5/20/2019

Description: Add side-street right-turn lane (250-ft storage); widen to north side

### Construction Costs

	Measurement		DESCRIPTION	Estimate			Total Cost
	UNIT	Quantity		Quantity	UNIT	Unit Price	
	LS	1	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
	Centerline LF	0	Erosion Control (mulch, silt fence) - both sides of road	0	LF	\$ 10.00	\$ -
	Centerline LF	315	Erosion Control (mulch, silt fence) - one side of road	315	LF	\$ 5.00	\$ 1,575.00
<b>Grading</b>							
	LS	1	Grading (including removal, fill, prep)	1	LS	\$ 22,000.00	\$ 22,000.00
	CY	0	Grading (if significant fill required)	0	CY		\$ -
	SF	0	Retaining Walls	0	SF		\$ -
	LF	0	Retaining Walls	0	LF	\$ 808.00	\$ -
	LF	0	Guardrail	0	LF	\$ 20.00	\$ -
	EA	0	Guardrail anchorage	0	EA	\$ 2,000.00	\$ -
<b>Pavement</b>							
	SY	0	New Pavement Patching - small areas (concrete or GAB & asphalt)	0	SY	\$ 85.20	\$ -
	SY	275	New Pavement - Full section (GAB, asphalt and tack)	275	SY	\$ 85.20	\$ 23,430.00
	SY	0	Pavement Resurfacing (incl. edge milling and restriping)	0	SY	\$ 10.90	\$ -
	SY	0	Mill Asphalt	0	SY	\$ 5.00	\$ -
<b>Concrete</b>							
	EA	1	Residential Concrete Driveway (remove & rebuild) (assume 15'x25' area)	42	SY	\$ 80.00	\$ 3,333.33
	EA	0	Commercial Concrete Driveway (remove & rebuild) (assume 30'x25' area)	0	SY	\$ 80.00	\$ -
	LF	240	Concrete Curb & Gutter (8x24) or (8 x 30)	240	LF	\$ 22.00	\$ 5,280.00
	SF	0	Concrete - Roundabout Truck Apron	0	SY	\$ 92.00	\$ -
	SF	0	Concrete Island/Median	0	SY	\$ 51.60	\$ -
	EA	0	Roundabout Splitter Island	0	EA	\$ 5,000.00	\$ -
	LF	20	5-foot Concrete Sidewalk, 4 in	20	LF	\$ 45.00	\$ 900.00
	LF	0	6-foot Concrete Sidewalk, 4 in	0	LF	\$ 49.20	\$ -
	EA	2	ADA Crosswalk Ramps	2	EA	\$ 500.00	\$ 1,000.00
<b>Drainage</b>							
	LF	150	Pipe - 18in	150	LF	\$ 45.00	\$ 6,750.00
	LF	0	Pipe - 24in	0	LF	\$ 60.00	\$ -
	EA	2	Catch Basin	2	EA	\$ 2,600.00	\$ 5,200.00
	EA	1	Flared End	1	EA	\$ 750.00	\$ 750.00
	LS	0	Culvert crossing	0	LS	\$ -	\$ -
<b>Features</b>							
	LS	0	Signing and Marking	0	LS		\$ -
	LF	315	Signing and Marking	315	LF	\$ 22.70	\$ 7,150.50
	EA	1	Crosswalk Striping	1	EA	\$ 250.00	\$ 250.00
	LS	1	Traffic Signal (new, modification)	1	LS	\$ 35,000.00	\$ 35,000.00
	EA	0	Lighting (mix roadway and pedestrian poles)	0	EA	\$ 7,500.00	\$ -
	LS	0	Landscaping - minor improvement	0	LS	\$ 25,000.00	\$ -
	LS	0	Landscaping - major improvement	0	LS	\$ -	\$ -
	LS	0	Remove and rebuild Entrance Sign/Monument	0	LS	\$ -	\$ -
<b>Other</b>							
	LS	1	Cost-to-cure for one property	1	LS	\$ 10,000.00	\$ 10,000.00
	LS			0	LS	\$ -	\$ -
							\$ -

### Construction Costs

<b>Subtotal Construction Cost</b>	<b>\$ 132,618.83</b>
Inflation Rate 2.0 % @ 5 Years	\$ 13,803.07
<b>Sub Total</b>	<b>\$ 146,421.91</b>
Contingency 20%	\$ 29,284.38
<b>TOTAL CONSTRUCTION COST</b>	<b>\$ 175,706.29</b>
<b>Additional Costs</b>	
Engineering Design 18%	\$ 31,627.13
Right Of Way Cost - Commercial (\$16/SF)	\$ -
Right Of Way Cost - Residential (\$6/SF)	\$ 21,600.00
Easement Cost (\$6/SF)	\$ 7,200.00
Utilities 8%	\$ 14,056.50
Subtotal	\$ 74,483.64
<b>GRAND TOTAL</b>	<b>\$ 250,189.92</b>

### Right-of-Way Areas:

SF	0
SF	2400
SF	1200

### For SR 140 report table

PE	\$ 32,000.00
ROW	\$ 29,000.00
CST	\$ 160,000.00
Cont	\$ 29,000.00
<b>Total</b>	<b>\$ 250,000.00</b>

# Planning Level Preliminary Cost Estimate

## Planning Level Cost Estimate

Project: SR 140 Corridor Study

Project ID: #8 - Avery Rd

Date prepared: 5/20/2019

Description: Add side-street right-turn lane (100-ft storage); widen to south side

Construction Costs

	Measurement		DESCRIPTION	Estimate			Total Cost
	UNIT	Quantity		Quantity	UNIT	Unit Price	
	LS	1	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
	Centerline LF	210	Erosion Control (mulch, silt fence) - both sides of road	210	LF	\$ 10.00	\$ 2,100.00
	Centerline LF	0	Erosion Control (mulch, silt fence) - one side of road	0	LF	\$ 5.00	\$ -
Grading							
	LS	1	Grading (including removal, fill, prep)	1	LS	\$ 20,000.00	\$ 20,000.00
	CY	0	Grading (if significant fill required)	0	CY		\$ -
	SF	0	Retaining Walls	0	SF		\$ -
	LF	0	Retaining Walls	0	LF	\$ 808.00	\$ -
	LF	0	Guardrail	0	LF	\$ 20.00	\$ -
	EA	0	Guardrail anchorage	0	EA	\$ 2,000.00	\$ -
Pavement							
	SY	0	New Pavement Patching - small areas (concrete or GAB & asphalt)	0	SY	\$ 85.20	\$ -
	SY	149	New Pavement - Full section (GAB, asphalt and tack)	149	SY	\$ 85.20	\$ 12,694.80
	SY	660	Pavement Resurfacing (incl. edge milling and restriping)	660	SY	\$ 10.90	\$ 7,194.00
	SY	50	Mill Asphalt	50	SY	\$ 5.00	\$ 250.00
Concrete							
	EA	2	Residential Concrete Driveway (remove & rebuild) (assume 15'x25' area)	83	SY	\$ 80.00	\$ 6,666.67
	EA	0	Commercial Concrete Driveway (remove & rebuild) (assume 30'x25' area)	0	SY	\$ 80.00	\$ -
	LF	120	Concrete Curb & Gutter (8x24) or (8 x 30)	120	LF	\$ 22.00	\$ 2,640.00
	SF	0	Concrete - Roundabout Truck Apron	0	SY	\$ 92.00	\$ -
	SF	0	Concrete Island/Median	0	SY	\$ 51.60	\$ -
	EA	0	Roundabout Splitter Island	0	EA	\$ 5,000.00	\$ -
	LF	0	5-foot Concrete Sidewalk, 4 in	0	LF	\$ 45.00	\$ -
	LF	0	6-foot Concrete Sidewalk, 4 in	0	LF	\$ 49.20	\$ -
	EA	0	ADA Crosswalk Ramps	0	EA	\$ 500.00	\$ -
Drainage							
	LF	100	Pipe - 18in	100	LF	\$ 45.00	\$ 4,500.00
	LF	0	Pipe - 24in	0	LF	\$ 60.00	\$ -
	EA	1	Catch Basin	1	EA	\$ 2,600.00	\$ 2,600.00
	EA	1	Flared End	1	EA	\$ 750.00	\$ 750.00
	LS	0	Culvert crossing	0	LS	\$ -	\$ -
Features							
	LS	0	Signing and Marking	0	LS		\$ -
	LF	190	Signing and Marking	190	LF	\$ 22.70	\$ 4,313.00
	EA	0	Crosswalk Striping	0	EA	\$ 250.00	\$ -
	LS	0	Traffic Signal (new, modification)	0	LS		\$ -
	EA	0	Lighting (mix roadway and pedestrian poles)	0	EA	\$ 7,500.00	\$ -
	LS	1	Landscaping - minor improvement	1	LS	\$ 5,000.00	\$ 5,000.00
	LS	0	Landscaping - major improvement	0	LS	\$ -	\$ -
	LS	0	Remove and rebuild Entrance Sign/Monument	0	LS	\$ -	\$ -
Other							
	LS	1	Cost-to-cure for one property	1	LS	\$ 10,000.00	\$ 10,000.00
	LS			0	LS	\$ -	\$ -
							\$ -

Construction Costs

<b>Subtotal Construction Cost</b>	<b>\$ 88,708.47</b>
Inflation Rate 2.0 % @ 5 Years	\$ 9,232.85
<b>Sub Total</b>	<b>\$ 97,941.32</b>
Contingency 30%	\$ 29,382.39
<b>TOTAL CONSTRUCTION COST</b>	<b>\$ 127,323.71</b>
Additional Costs	
Engineering Design 20%	\$ 25,464.74
Right Of Way Cost - Commercial (\$16/SF)	\$ 6,000.00
Right Of Way Cost - Residential (\$6/SF)	\$ 2,250.00
Easement Cost (\$6/SF)	\$ 9,000.00
Utilities 5%	\$ 6,366.19
Subtotal	\$ 49,080.93
<b>GRAND TOTAL</b>	<b>\$ 176,404.64</b>

Right-of-Way Areas:

SF	250
SF	250
SF	1500

For SR 140 report table

PE	\$ 25,000.00
ROW	\$ 17,000.00
CST	\$ 104,000.00
Cont	\$ 29,000.00
<b>Total</b>	<b>\$ 175,000.00</b>

# Planning Level Preliminary Cost Estimate

## Planning Level Cost Estimate

Project: SR 140 Corridor Study

Project ID: #9 - Univeter Rd

Date prepared: 5/20/2019

Description: Add travel lanes along SR 140 and dual NB left-turn lanes

Construction Costs

	Measurement		DESCRIPTION	Estimate			Total Cost
	UNIT	Quantity		Quantity	UNIT	Unit Price	
	LS	1	Traffic Control	1	LS	\$ 137,000.00	\$ 137,000.00
	Centerline LF	4000	Erosion Control (mulch, silt fence) - both sides of road	4000	LF	\$ 10.00	\$ 40,000.00
	Centerline LF	0	Erosion Control (mulch, silt fence) - one side of road	0	LF	\$ 5.00	\$ -
Grading							
	LS	1	Grading (including removal, fill, prep)	1	LS	\$ 303,000.00	\$ 303,000.00
	CY	0	Grading (if significant fill required)	0	CY		\$ -
	SF	0	Retaining Walls	0	SF		\$ -
	LF	0	Retaining Walls	0	LF	\$ 808.00	\$ -
	LF	250	Guardrail	250	LF	\$ 20.00	\$ 5,000.00
	EA	2	Guardrail anchorage	2	EA	\$ 2,000.00	\$ 4,000.00
Pavement							
	SY	0	New Pavement Patching - small areas (concrete or GAB & asphalt)	0	SY	\$ 85.20	\$ -
	SY	11184	New Pavement - Full section (GAB, asphalt and tack)	11184	SY	\$ 85.20	\$ 952,876.80
	SY	10350	Pavement Resurfacing (incl. edge milling and restriping)	10350	SY	\$ 10.90	\$ 112,815.00
	SY	0	Mill Asphalt	0	SY	\$ 5.00	\$ -
Concrete							
	EA	10	Residential Concrete Driveway (remove & rebuild) (assume 15'x25' area)	417	SY	\$ 80.00	\$ 33,333.33
	EA	3	Commercial Concrete Driveway (remove & rebuild) (assume 30'x25' area)	250	SY	\$ 80.00	\$ 20,000.00
	LF	350	Concrete Curb & Gutter (8x24) or (8 x 30)	350	LF	\$ 22.00	\$ 7,700.00
	SF	0	Concrete - Roundabout Truck Apron	0	SY	\$ 92.00	\$ -
	SF	0	Concrete Island/Median	0	SY	\$ 51.60	\$ -
	EA	0	Roundabout Splitter Island	0	EA	\$ 5,000.00	\$ -
	LF	0	5-foot Concrete Sidewalk, 4 in	0	LF	\$ 45.00	\$ -
	LF	0	6-foot Concrete Sidewalk, 4 in	0	LF	\$ 49.20	\$ -
	EA	6	ADA Crosswalk Ramps	6	EA	\$ 500.00	\$ 3,000.00
Drainage							
	LF	550	Pipe - 18in	550	LF	\$ 45.00	\$ 24,750.00
	LF	0	Pipe - 24in	0	LF	\$ 60.00	\$ -
	EA	1	Catch Basin	1	EA	\$ 2,600.00	\$ 2,600.00
	EA	21	Flared End	21	EA	\$ 750.00	\$ 15,750.00
	LS	0	Culvert crossing	0	LS	\$ -	\$ -
Features							
	LS	0	Signing and Marking	0	LS		\$ -
	LF	2830	Signing and Marking	2830	LF	\$ 22.70	\$ 64,241.00
	EA	3	Crosswalk Striping	3	EA	\$ 250.00	\$ 750.00
	LS	1	Traffic Signal (new, modification)	1	LS	\$ 175,000.00	\$ 175,000.00
	EA	0	Lighting (mix roadway and pedestrian poles)	0	EA	\$ 7,500.00	\$ -
	LS	1	Landscaping - minor improvement	1	LS	\$ 5,000.00	\$ 5,000.00
	LS	0	Landscaping - major improvement	0	LS	\$ -	\$ -
	LS	1	Remove and rebuild Entrance Sign/Monument	1	LS	\$ 20,000.00	\$ 20,000.00
Other							
	LS	1	Modification to existing parking/business access	1	LS	\$ 20,000.00	\$ 20,000.00
	LS	1	Drainage modification on north side of Univeter at private outfall	1	LS	\$ 10,000.00	\$ 10,000.00
	LS	1	MS4 infrastructure (assume 1 pond)	1	LS	\$ 230,000.00	\$ 230,000.00

Construction Costs

<b>Subtotal Construction Cost</b>		<b>\$ 2,186,816.13</b>
Inflation Rate 2.0 % @ 10 Years		\$ 478,900.53
<b>Sub Total</b>		<b>\$ 2,665,716.66</b>
Contingency 20%		\$ 533,143.33
<b>TOTAL CONSTRUCTION COST</b>		<b>\$3,198,860.00</b>
Additional Costs		
Engineering Design 10%		\$ 319,886.00
Right Of Way Cost - Commercial (\$16/SF)		\$ 297,600.00
Right Of Way Cost - Residential (\$6/SF)		\$ 210,600.00
Easement Cost (\$6/SF)		\$ 203,400.00
Utilities 8%		\$ 255,908.80
	Subtotal	\$ 1,287,394.80
<b>GRAND TOTAL</b>		<b>\$4,486,254.80</b>

Right-of-Way Areas:

SF	12400
SF	23400
SF	33900

For SR 140 report table

PE	\$ 320,000.00
ROW	\$ 712,000.00
CST	\$2,922,000.00
Cont	\$ 533,000.00
<b>Total</b>	<b>\$4,487,000.00</b>

# Planning Level Preliminary Cost Estimate

## Planning Level Cost Estimate

Project: SR 140 Corridor Study

Project ID: #14 - E Cherokee Dr

Date prepared: 6/10/2019

Description: Convert right-turn lanes to shared through/right-turn lanes along SR 140

### Construction Costs

	Measurement		DESCRIPTION	Estimate			Total Cost
	UNIT	Quantity		Quantity	UNIT	Unit Price	
	LS	1	Traffic Control	1	LS	\$ 206,000.00	\$ 206,000.00
	Centerline LF	2800	Erosion Control (mulch, silt fence) - both sides of road	2800	LF	\$ 10.00	\$ 28,000.00
	Centerline LF	0	Erosion Control (mulch, silt fence) - one side of road	0	LF	\$ 5.00	\$ -
<b>Grading</b>							
	LS	1	Grading (including removal, fill, prep)	1	LS	\$ 457,000.00	\$ 457,000.00
	CY	0	Grading (if significant fill required)	0	CY		\$ -
	SF	0	Retaining Walls	0	SF		\$ -
	LF	340	Retaining Walls	340	LF	\$ 808.00	\$ 274,720.00
	LF	1150	Guardrail	1150	LF	\$ 20.00	\$ 23,000.00
	EA	6	Guardrail anchorage	6	EA	\$ 2,000.00	\$ 12,000.00
<b>Pavement</b>							
	SY	0	New Pavement Patching - small areas (concrete or GAB & asphalt)	0	SY	\$ 85.20	\$ -
	SY	4075	New Pavement - Full section (GAB, asphalt and tack)	4075	SY	\$ 85.20	\$ 347,190.00
	SY	17300	Pavement Resurfacing (incl. edge milling and restriping)	17300	SY	\$ 10.90	\$ 188,570.00
	SY	100	Mill Asphalt	100	SY	\$ 5.00	\$ 500.00
<b>Concrete</b>							
	EA	0	Residential Concrete Driveway (remove & rebuild) (assume 15'x25' area)	0	SY	\$ 80.00	\$ -
	EA	6	Commercial Concrete Driveway (remove & rebuild) (assume 30'x25' area)	500	SY	\$ 80.00	\$ 40,000.00
	LF	3350	Concrete Curb & Gutter (8x24) or (8 x 30)	3350	LF	\$ 22.00	\$ 73,700.00
	SF	0	Concrete - Roundabout Truck Apron	0	SY	\$ 92.00	\$ -
	SF	0	Concrete Island/Median	0	SY	\$ 51.60	\$ -
	EA	0	Roundabout Splitter Island	0	EA	\$ 5,000.00	\$ -
	LF	0	5-foot Concrete Sidewalk, 4 in	0	LF	\$ 45.00	\$ -
	LF	3350	6-foot Concrete Sidewalk, 4 in	3350	LF	\$ 49.20	\$ 164,820.00
	EA	18	ADA Crosswalk Ramps	18	EA	\$ 500.00	\$ 9,000.00
<b>Drainage</b>							
	LF	3800	Pipe - 18in	3800	LF	\$ 45.00	\$ 171,000.00
	LF	0	Pipe - 24in	0	LF	\$ 60.00	\$ -
	EA	16	Catch Basin	16	EA	\$ 2,600.00	\$ 41,600.00
	EA	2	Flared End	2	EA	\$ 750.00	\$ 1,500.00
	LS	1	Culvert crossing	1	LS	\$ 30,000.00	\$ 30,000.00
<b>Features</b>							
	LS	0	Signing and Marking	0	LS	\$ -	\$ -
	LF	3400	Signing and Marking	3400	LF	\$ 22.70	\$ 77,180.00
	EA	4	Crosswalk Striping	4	EA	\$ 250.00	\$ 1,000.00
	LS	1	Traffic Signal (new, modification)	1	LS	\$ 30,000.00	\$ 30,000.00
	EA	24	Lighting (mix roadway and pedestrian poles)	24	EA	\$ 12,000.00	\$ 288,000.00
	LS	1	Landscaping - minor improvement	1	LS	\$ 25,000.00	\$ 25,000.00
	LS	0	Landscaping - major improvement	0	LS	\$ -	\$ -
	LS	2	Remove and rebuild Entrance Sign/Monument	2	LS	\$ 15,000.00	\$ 30,000.00
<b>Other</b>							
	LS	1	Modification to existing parking/business impacts	1	LS	\$ 200,000.00	\$ 200,000.00
	LS	1	MS4 infrastructure (assume 1 pond)	1	LS	\$ 230,000.00	\$ 230,000.00
							\$ -

### Construction Costs

<b>Subtotal Construction Cost</b>	<b>\$ 2,949,780.00</b>
Inflation Rate 2.0 % @ 10 Years	\$ 645,985.36
<b>Sub Total</b>	<b>\$ 3,595,765.36</b>
Contingency 12%	\$ 431,491.84
<b>TOTAL CONSTRUCTION COST</b>	<b>\$4,027,257.20</b>
<b>Additional Costs</b>	
Engineering Design 10%	\$ 402,725.72
Right Of Way Cost - Commercial (\$16/SF)	\$ 699,840.00
Right Of Way Cost - Residential (\$6/SF)	\$ -
Easement Cost (\$6/SF)	\$ 244,800.00
Utilities 10%	\$ 402,725.72
Subtotal	\$ 1,750,091.44
<b>GRAND TOTAL</b>	<b>\$5,777,348.64</b>

### Right-of-Way Areas:

SF	29160
SF	
SF	40800

### For SR 140 report table

PE	\$ 403,000.00
ROW	\$ 945,000.00
CST	\$3,998,000.00
Cont	\$ 431,000.00
<b>Total</b>	<b>\$5,777,000.00</b>



# Planning Level Preliminary Cost Estimate

## Planning Level Cost Estimate

Project: SR 140 Corridor Study

Project ID: Horizontal Curve Correction north of Batesville Rd

Date prepared: 5/21/2019

Description: Increase horizontal curve radius; include 5-lane road between project limits at #14 and #15

### Construction Costs

	Measurement		DESCRIPTION	Estimate			Total Cost
	UNIT	Quantity		Quantity	UNIT	Unit Price	
	LS	1	Traffic Control	1	LS	\$ 142,000.00	\$ 142,000.00
	Centerline LF	1650	Erosion Control (mulch, silt fence) - both sides of road	1650	LF	\$ 10.00	\$ 16,500.00
	Centerline LF	0	Erosion Control (mulch, silt fence) - one side of road	0	LF	\$ 5.00	\$ -
<b>Grading</b>							
	LS	1	Grading (including removal, fill, prep)	1	LS	\$ 315,000.00	\$ 315,000.00
	CY	0	Grading (if significant fill required)	0	CY		\$ -
	SF	0	Retaining Walls	0	SF		\$ -
	LF	0	Retaining Walls	0	LF	\$ 808.00	\$ -
	LF	500	Guardrail	500	LF	\$ 20.00	\$ 10,000.00
	EA	2	Guardrail anchorage	2	EA	\$ 2,000.00	\$ 4,000.00
<b>Pavement</b>							
	SY	0	New Pavement Patching - small areas (concrete or GAB & asphalt)	0	SY	\$ 85.20	\$ -
	SY	5800	New Pavement - Full section (GAB, asphalt and tack)	5800	SY	\$ 85.20	\$ 494,160.00
	SY	5870	Pavement Resurfacing (incl. edge milling and restriping)	5870	SY	\$ 10.90	\$ 63,983.00
	SY	120	Mill Asphalt	120	SY	\$ 5.00	\$ 600.00
<b>Concrete</b>							
	EA	2	Residential Concrete Driveway (remove & rebuild) (assume 15'x25' area)	83	SY	\$ 80.00	\$ 6,666.67
	EA	3	Commercial Concrete Driveway (remove & rebuild) (assume 30'x25' area)	250	SY	\$ 80.00	\$ 20,000.00
	LF	2740	Concrete Curb & Gutter (8x24) or (8 x 30)	2740	LF	\$ 22.00	\$ 60,280.00
	SF	0	Concrete - Roundabout Truck Apron	0	SY	\$ 92.00	\$ -
	SF	0	Concrete Island/Median	0	SY	\$ 51.60	\$ -
	EA	0	Roundabout Splitter Island	0	EA	\$ 5,000.00	\$ -
	LF	2740	5-foot Concrete Sidewalk, 4 in	2740	LF	\$ 45.00	\$ 123,300.00
	LF	0	6-foot Concrete Sidewalk, 4 in	0	LF	\$ 49.20	\$ -
	EA	0	ADA Crosswalk Ramps	0	EA	\$ 500.00	\$ -
<b>Drainage</b>							
	LF	1650	Pipe - 18in	1650	LF	\$ 45.00	\$ 74,250.00
	LF	800	Pipe - 24in	800	LF	\$ 60.00	\$ 48,000.00
	EA	12	Catch Basin	12	EA	\$ 2,600.00	\$ 31,200.00
	EA	2	Flared End	2	EA	\$ 750.00	\$ 1,500.00
	LS	0	Culvert crossing	0	LS	\$ -	\$ -
<b>Features</b>							
	LS	0	Signing and Marking	0	LS		\$ -
	LF	3300	Signing and Marking	3300	LF	\$ 22.70	\$ 74,910.00
	EA	0	Crosswalk Striping	0	EA	\$ 250.00	\$ -
	LS	0	Traffic Signal (new, modification)	0	LS	\$ -	\$ -
	EA	22	Lighting (mix roadway and pedestrian poles)	22	EA	\$ 12,000.00	\$ 264,000.00
	LS	4	Landscaping - minor improvement	4	LS	\$ 4,000.00	\$ 16,000.00
	LS	0	Landscaping - major improvement	0	LS	\$ -	\$ -
	LS	1	Remove and rebuild Entrance Sign/Monument	1	LS	\$ 10,000.00	\$ 10,000.00
<b>Other</b>							
	LS	1	Modification to existing parking/business impacts	1	LS	\$ 25,000.00	\$ 25,000.00
	LS	1	MS4 infrastructure (assume 1 pond)	1	LS	\$ 230,000.00	\$ 230,000.00
							\$ -

### Construction Costs

<b>Subtotal Construction Cost</b>	<b>\$ 2,031,349.67</b>
Inflation Rate 2.0 % @ 5 Years	\$ 211,424.50
<b>Sub Total</b>	<b>\$ 2,242,774.17</b>
Contingency 15%	\$ 336,416.13
<b>TOTAL CONSTRUCTION COST</b>	<b>\$2,579,190.30</b>
<b>Additional Costs</b>	
Engineering Design 12%	\$ 309,502.84
Right Of Way Cost - Commercial (\$16/SF)	\$ 991,920.00
Right Of Way Cost - Residential (\$6/SF)	\$ -
Easement Cost (\$6/SF)	\$ 70,500.00
Utilities 5%	\$ 128,959.51
Subtotal	\$ 1,500,882.35
<b>GRAND TOTAL</b>	<b>\$4,080,072.65</b>

### Right-of-Way Areas:

SF	41330
SF	0
SF	11750

### For SR 140 report table

PE	\$ 310,000.00
ROW	\$1,062,000.00
CST	\$2,372,000.00
Cont	\$ 336,000.00
<b>Total</b>	<b>\$4,080,000.00</b>

# Planning Level Preliminary Cost Estimate

## Planning Level Cost Estimate

Project: SR 140 Corridor Study

Project ID: #15 - Batesville Rd / Hickory Rd

Date prepared: 5/20/2019

Description: Add travel lanes along SR 140 and add EB through lane

### Construction Costs

	Measurement		DESCRIPTION	Estimate			Total Cost
	UNIT	Quantity		Quantity	UNIT	Unit Price	
	LS	1	Traffic Control	1	LS	\$ 172,000.00	\$ 172,000.00
	Centerline LF	3500	Erosion Control (mulch, silt fence) - both sides of road	3500	LF	\$ 10.00	\$ 35,000.00
	Centerline LF	1230	Erosion Control (mulch, silt fence) - one side of road	1230	LF	\$ 5.00	\$ 6,150.00
Grading							
	LS	1	Grading (including removal, fill, prep)	1	LS	\$ 382,000.00	\$ 382,000.00
	CY	0	Grading (if significant fill required)	0	CY		\$ -
	SF	0	Retaining Walls	0	SF		\$ -
	LF	0	Retaining Walls	0	LF	\$ 808.00	\$ -
	LF	530	Guardrail	530	LF	\$ 20.00	\$ 10,600.00
	EA	2	Guardrail anchorage	2	EA	\$ 2,000.00	\$ 4,000.00
Pavement							
	SY	0	New Pavement Patching - small areas (concrete or GAB & asphalt)	0	SY	\$ 85.20	\$ -
	SY	5770	New Pavement - Full section (GAB, asphalt and tack)	5770	SY	\$ 85.20	\$ 491,604.00
	SY	20780	Pavement Resurfacing (incl. edge milling and restriping)	20780	SY	\$ 10.90	\$ 226,502.00
	SY	0	Mill Asphalt	0	SY	\$ 5.00	\$ -
Concrete							
	EA	1	Residential Concrete Driveway (remove & rebuild) (assume 15'x25' area)	42	SY	\$ 80.00	\$ 3,333.33
	EA	6	Commercial Concrete Driveway (remove & rebuild) (assume 30'x25' area)	500	SY	\$ 80.00	\$ 40,000.00
	LF	3100	Concrete Curb & Gutter (8x24) or (8 x 30)	3100	LF	\$ 22.00	\$ 68,200.00
	SF	0	Concrete - Roundabout Truck Apron	0	SY	\$ 92.00	\$ -
	SF	0	Concrete Island/Median	0	SY	\$ 51.60	\$ -
	EA	0	Roundabout Splitter Island	0	EA	\$ 5,000.00	\$ -
	LF	3100	5-foot Concrete Sidewalk, 4 in	3100	LF	\$ 45.00	\$ 139,500.00
	LF	0	6-foot Concrete Sidewalk, 4 in	0	LF	\$ 49.20	\$ -
	EA	8	ADA Crosswalk Ramps	8	EA	\$ 500.00	\$ 4,000.00
Drainage							
	LF	1200	Pipe - 18in	1200	LF	\$ 45.00	\$ 54,000.00
	LF	600	Pipe - 24in	600	LF	\$ 60.00	\$ 36,000.00
	EA	10	Catch Basin	10	EA	\$ 2,600.00	\$ 26,000.00
	EA	2	Flared End	2	EA	\$ 750.00	\$ 1,500.00
	LS	0	Culvert crossing	0	LS	\$ -	\$ -
Features							
	LS	0	Signing and Marking	0	LS		\$ -
	LF	4730	Signing and Marking	4730	LF	\$ 22.70	\$ 107,371.00
	EA	4	Crosswalk Striping	4	EA	\$ 250.00	\$ 1,000.00
	LS	1	Traffic Signal (new, modification)	1	LS	\$ 175,000.00	\$ 175,000.00
	EA	24	Lighting (mix roadway and pedestrian poles)	24	EA	\$ 7,500.00	\$ 180,000.00
	LS	6	Landscaping - minor improvement	6	LS	\$ 4,000.00	\$ 24,000.00
	LS	0	Landscaping - major improvement	0	LS	\$ -	\$ -
	LS	3	Remove and rebuild Entrance Sign/Monument	3	LS	\$ 15,000.00	\$ 45,000.00
Other							
	LS			0	LS	\$ -	\$ -
	LS	1	MS4 infrastructure (assume 1 pond)	1	LS	\$ 230,000.00	\$ 230,000.00
							\$ -

### Construction Costs

<b>Subtotal Construction Cost</b>		<b>\$ 2,462,760.33</b>
Inflation Rate 2.0 % @ 5 Years		\$ 256,326.07
<b>Sub Total</b>		<b>\$ 2,719,086.41</b>
Contingency 16%		\$ 435,053.83
<b>TOTAL CONSTRUCTION COST</b>		<b>\$3,154,140.23</b>
Additional Costs		
Engineering Design 12%		\$ 378,496.83
Right Of Way Cost - Commercial (\$16/SF)		\$ 335,400.00
Right Of Way Cost - Residential (\$6/SF)		\$ -
Easement Cost (\$6/SF)		\$ 41,550.00
	\$ 1,200,000.00	\$ 1,200,000.00
	\$ (800,000.00)	\$ (800,000.00)
Utilities 6%		\$ 189,248.41
	Subtotal	\$ 1,344,695.24
<b>GRAND TOTAL</b>		<b>\$4,498,835.47</b>

### Right-of-Way Areas:

SF	13975
SF	0
SF	6925
LS	1
LS	1

Property Acquisition - Antique Business  
Property Resell - Antique Business

### For SR 140 report table

PE	\$ 378,000.00
ROW	\$ 777,000.00
CST	\$2,908,000.00
Cont	\$ 435,000.00
<b>Total</b>	<b>\$4,498,000.00</b>

# Planning Level Preliminary Cost Estimate

## Planning Level Cost Estimate

Project: SR 140 Corridor Study

Project ID: #16 - Sugar Pike Rd

Date prepared: 5/20/2019

Description: Install traffic signal (no geometric modifications)

Construction Costs

	Measurement		DESCRIPTION	Estimate			Total Cost
	UNIT	Quantity		Quantity	UNIT	Unit Price	
	LS	1	Traffic Control	1	LS	\$ 8,000.00	\$ 8,000.00
	Centerline LF	0	Erosion Control (mulch, silt fence) - both sides of road	0	LF	\$ 10.00	\$ -
	Centerline LF	100	Erosion Control (mulch, silt fence) - one side of road	100	LF	\$ 5.00	\$ 500.00
Grading							
	LS	1	Grading (including removal, fill, prep)	1	LS	\$ 26,000.00	\$ 26,000.00
	CY	0	Grading (if significant fill required)	0	CY		\$ -
	SF	0	Retaining Walls	0	SF		\$ -
	LF	0	Retaining Walls	0	LF	\$ 808.00	\$ -
	LF	200	Guardrail	200	LF	\$ 20.00	\$ 4,000.00
	EA	1	Guardrail anchorage	1	EA	\$ 2,000.00	\$ 2,000.00
Pavement							
	SY	0	New Pavement Patching - small areas (concrete or GAB & asphalt)	0	SY	\$ 85.20	\$ -
	SY	0	New Pavement - Full section (GAB, asphalt and tack)	0	SY	\$ 85.20	\$ -
	SY	0	Pavement Resurfacing (incl. edge milling and restriping)	0	SY	\$ 10.90	\$ -
	SY	0	Mill Asphalt	0	SY	\$ 5.00	\$ -
Concrete							
	EA	0	Residential Concrete Driveway (remove & rebuild) (assume 15'x25' area)	0	SY	\$ 80.00	\$ -
	EA	0	Commercial Concrete Driveway (remove & rebuild) (assume 30'x25' area)	0	SY	\$ 80.00	\$ -
	LF	0	Concrete Curb & Gutter (8x24) or (8 x 30)	0	LF	\$ 22.00	\$ -
	SF	0	Concrete - Roundabout Truck Apron	0	SY	\$ 92.00	\$ -
	SF	0	Concrete Island/Median	0	SY	\$ 51.60	\$ -
	EA	0	Roundabout Splitter Island	0	EA	\$ 5,000.00	\$ -
	LF	40	5-foot Concrete Sidewalk, 4 in	40	LF	\$ 45.00	\$ 1,800.00
	LF	0	6-foot Concrete Sidewalk, 4 in	0	LF	\$ 49.20	\$ -
	EA	6	ADA Crosswalk Ramps	6	EA	\$ 500.00	\$ 3,000.00
Drainage							
	LF	0	Pipe - 18in	0	LF	\$ 45.00	\$ -
	LF	0	Pipe - 24in	0	LF	\$ 60.00	\$ -
	EA	0	Catch Basin	0	EA	\$ 2,600.00	\$ -
	EA	0	Flared End	0	EA	\$ 750.00	\$ -
	LS	0	Culvert crossing	0	LS	\$ -	\$ -
Features							
	LS	1	Signing and Marking	1	LS	\$ 5,500.00	\$ 5,500.00
	LF	0	Signing and Marking	0	LF	\$ 22.70	\$ -
	EA	3	Crosswalk Striping	3	EA	\$ 250.00	\$ 750.00
	LS	1	Traffic Signal (new, modification)	1	LS	\$ 175,000.00	\$ 175,000.00
	EA	0	Lighting (mix roadway and pedestrian poles)	0	EA	\$ 12,000.00	\$ -
	LS	0	Landscaping - minor improvement	0	LS	\$ -	\$ -
	LS	0	Landscaping - major improvement	0	LS	\$ -	\$ -
	LS	0	Remove and rebuild Entrance Sign/Monument	0	LS	\$ -	\$ -
Other							
	LS			0	LS	\$ -	\$ -
	LS			0	LS	\$ -	\$ -
							\$ -

Construction Costs

<b>Subtotal Construction Cost</b>	<b>\$ 226,550.00</b>
Inflation Rate 2.0 % @ 2 Years	\$ 9,152.62
<b>Sub Total</b>	<b>\$ 235,702.62</b>
Contingency 10%	\$ 23,570.26
<b>TOTAL CONSTRUCTION COST</b>	<b>\$ 259,272.88</b>
Additional Costs	
Engineering Design 8%	\$ 20,741.83
Right Of Way Cost - Commercial (\$16/SF)	\$ -
Right Of Way Cost - Residential (\$6/SF)	\$ -
Easement Cost (\$6/SF)	\$ 7,200.00
Utilities 5%	\$ 12,963.64
Subtotal	\$ 40,905.47
<b>GRAND TOTAL</b>	<b>\$ 300,178.36</b>

Right-of-Way Areas:

SF	0
SF	0
SF	800

For SR 140 report table

PE	\$ 21,000.00
ROW	\$ 7,000.00
CST	\$ 249,000.00
Cont	\$ 24,000.00
<b>Total</b>	<b>\$ 301,000.00</b>



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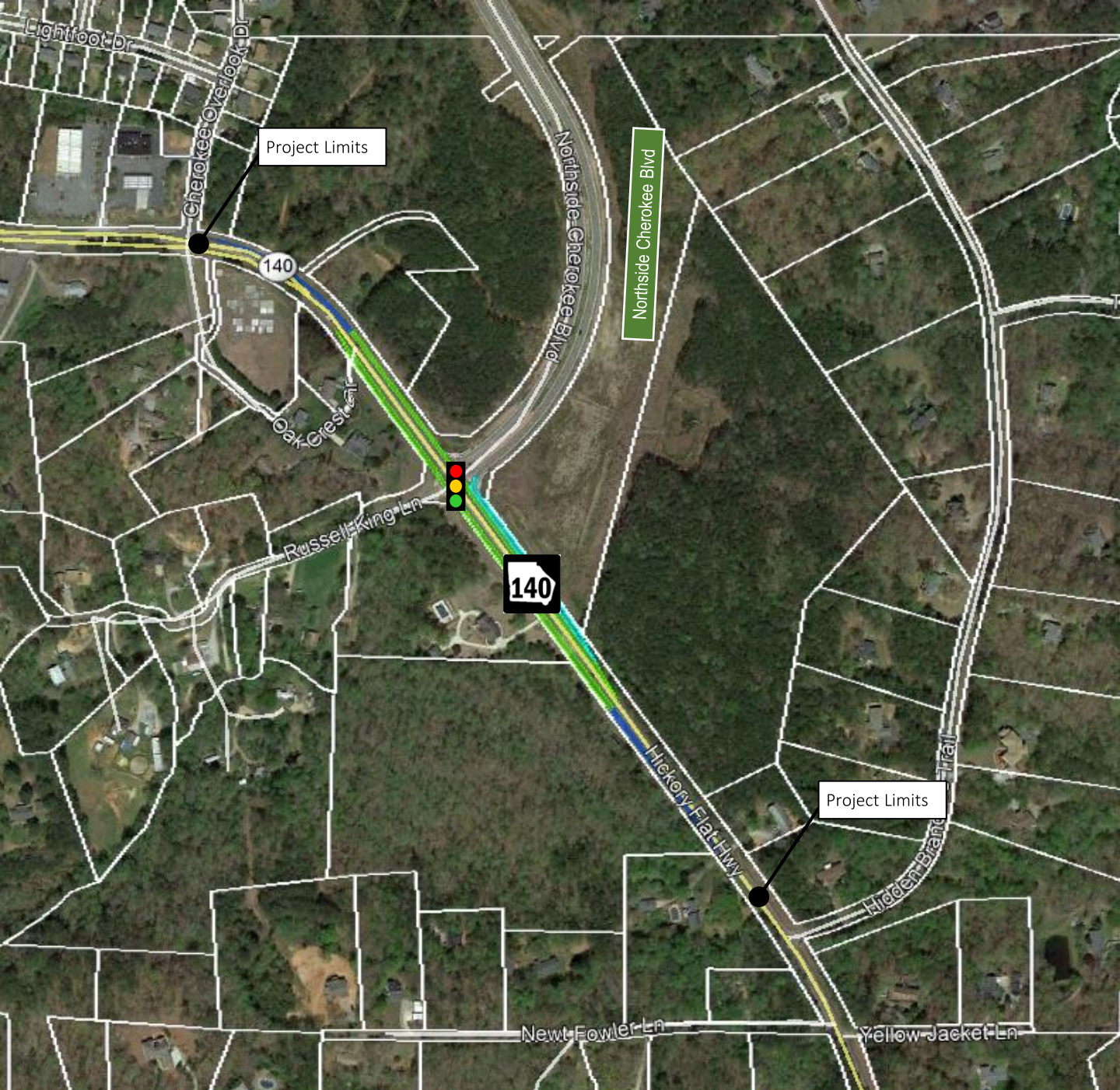
## 6. Project Schematic Layouts

The study developed schematic layouts for five projects. These were developed in Google Earth and saved as one “kmz” file. The google earth file provide aerial and context for reviewing the proposed project. County GIS parcel data was inserted to provide an estimate of right-of-way impacts. The project recommendations were then drawn and utilized at meetings with Cherokee County staff and GDOT staff to discuss the options. The schematic layouts were also utilized to develop the planning level cost estimates. The “kmz” file was provided to Cherokee County upon completion of the study.

Five project schematic layout sheets are included here.



LOCATION: **NORTHSIDE CHEROKEE BLVD**



**Proposed Features:**

- Through Lane
- Right-turn Lane
- Lane Merge

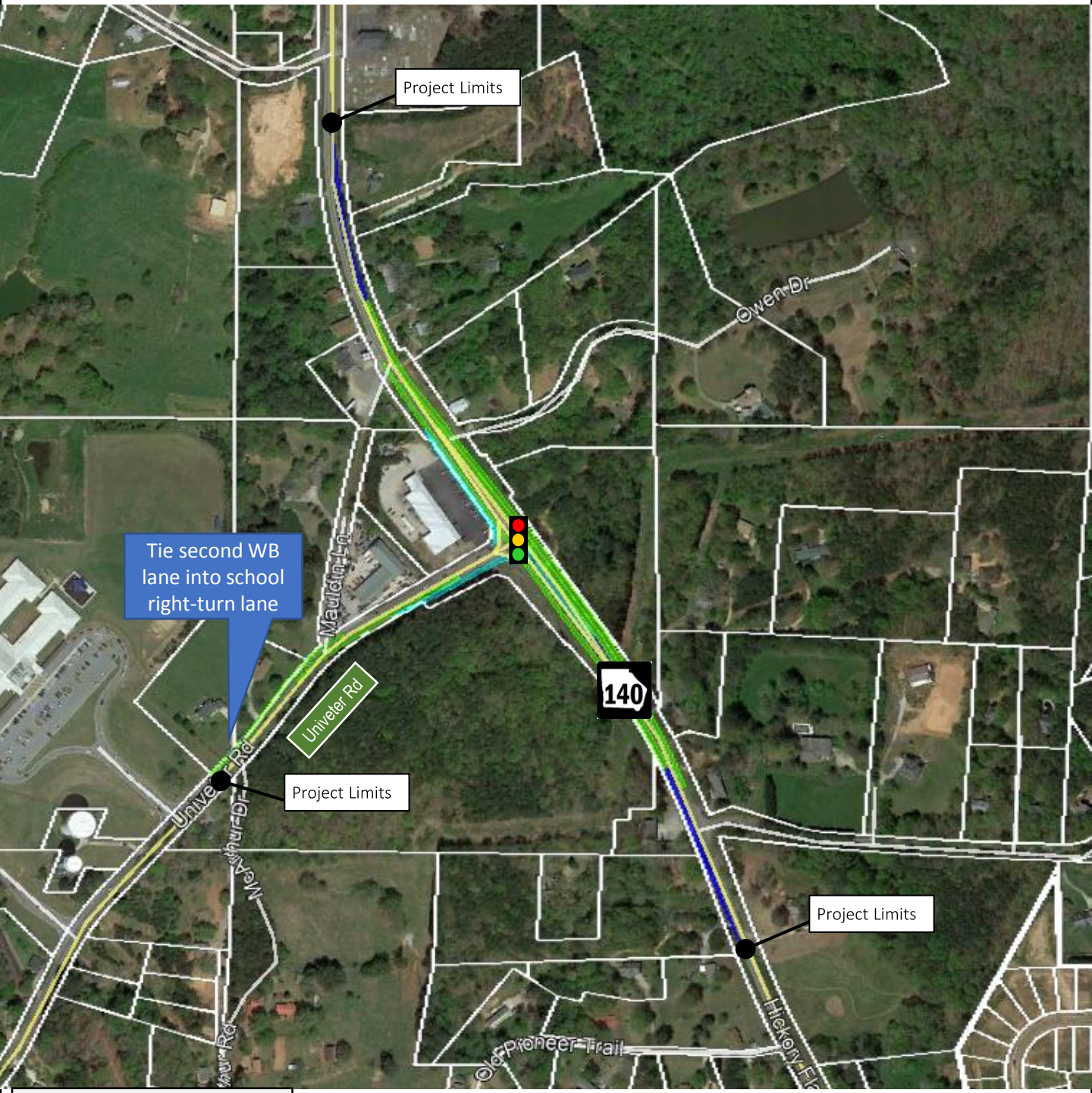


Not to Scale

PREPARED BY  
**POND**  
 Updated: 6/18/19



LOCATION: **UNIVETER RD**



Not to Scale

PREPARED BY



Updated: 6/18/19



LOCATION: **E CHEROKEE DR**



Add WB left-turn lane at White Columns Blvd

**Proposed Features:**

- Through Lane
- Right-turn Lane
- Lane Merge



Not to Scale





LOCATION: SHARP CURVE



**Proposed Features:**

- Through Lane
- Right-turn Lane
- 5-lane roadway



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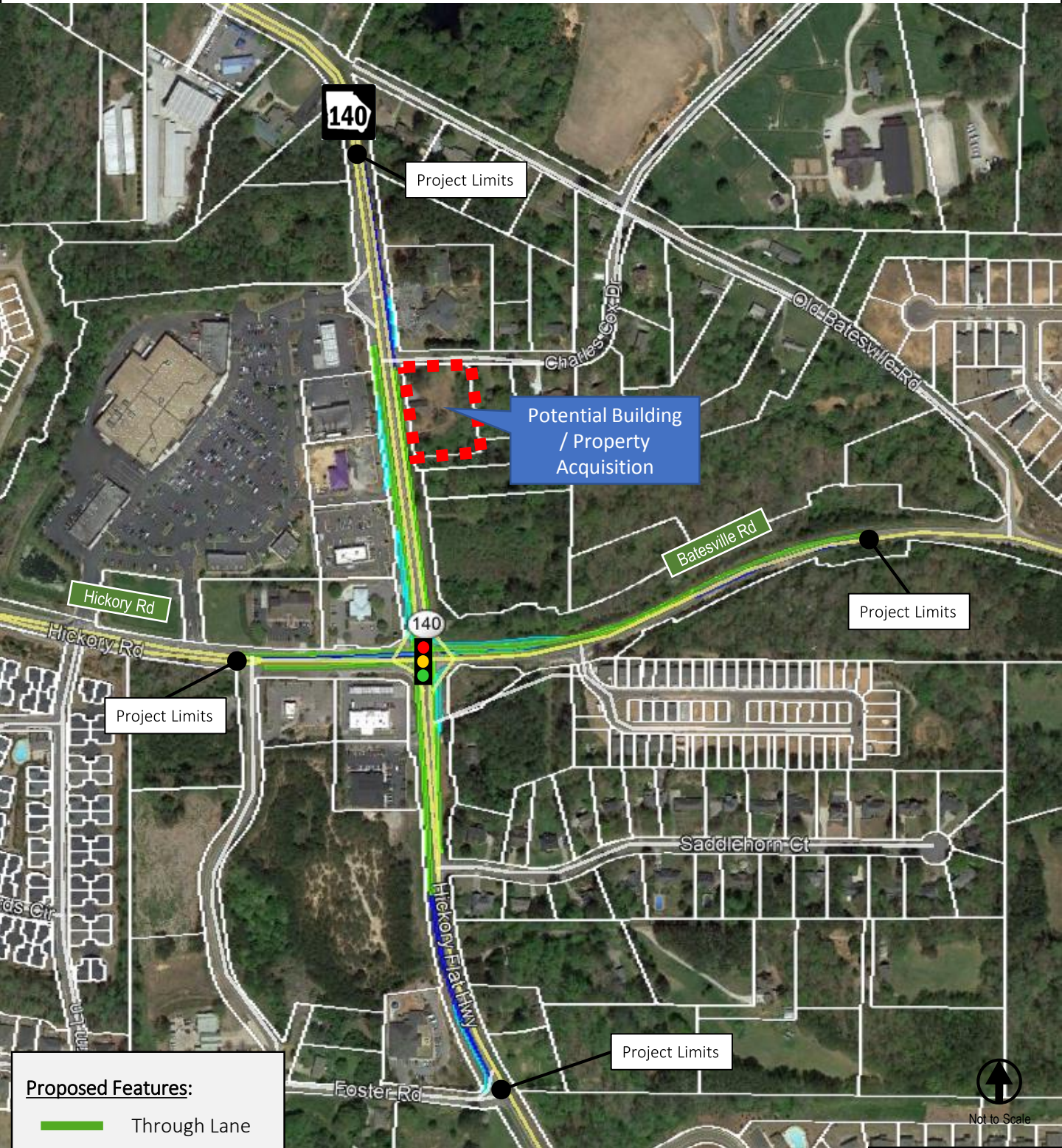
PREPARED BY



Updated: 6/15/19



LOCATION: **BATESVILLE RD / HICKORY RD**



**Proposed Features:**

- █ Through Lane
- █ Right-turn Lane
- █ Lane Merge



Not to Scale

