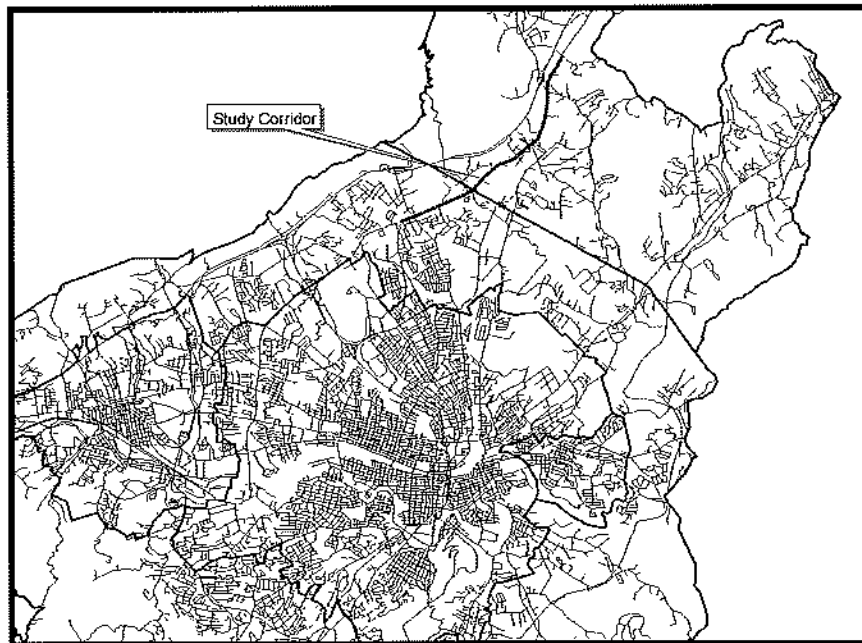


DRAFT

Travel Time Survey Data Supplement

US Route 11 (Williamson Road/South Lee Highway)



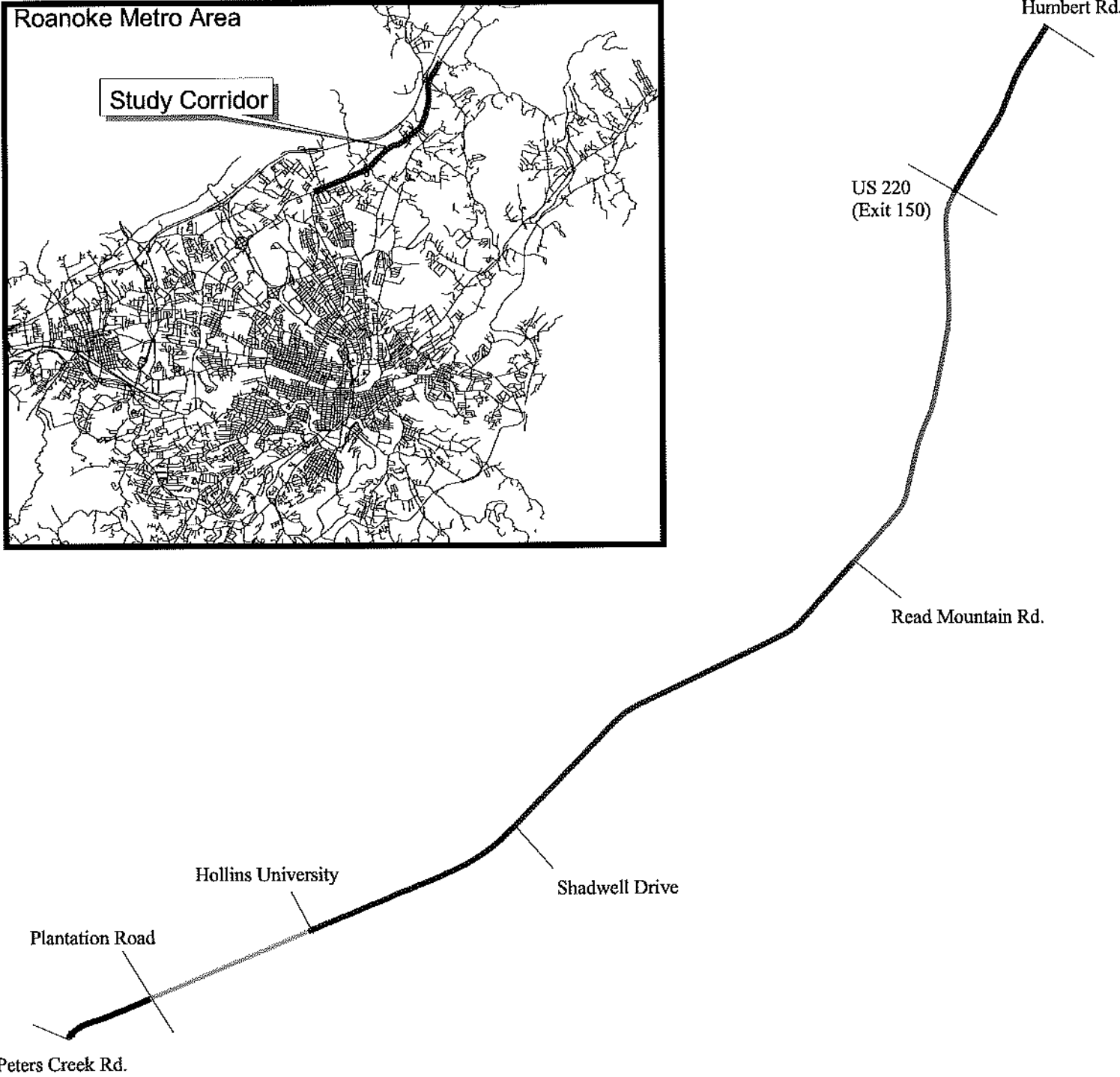
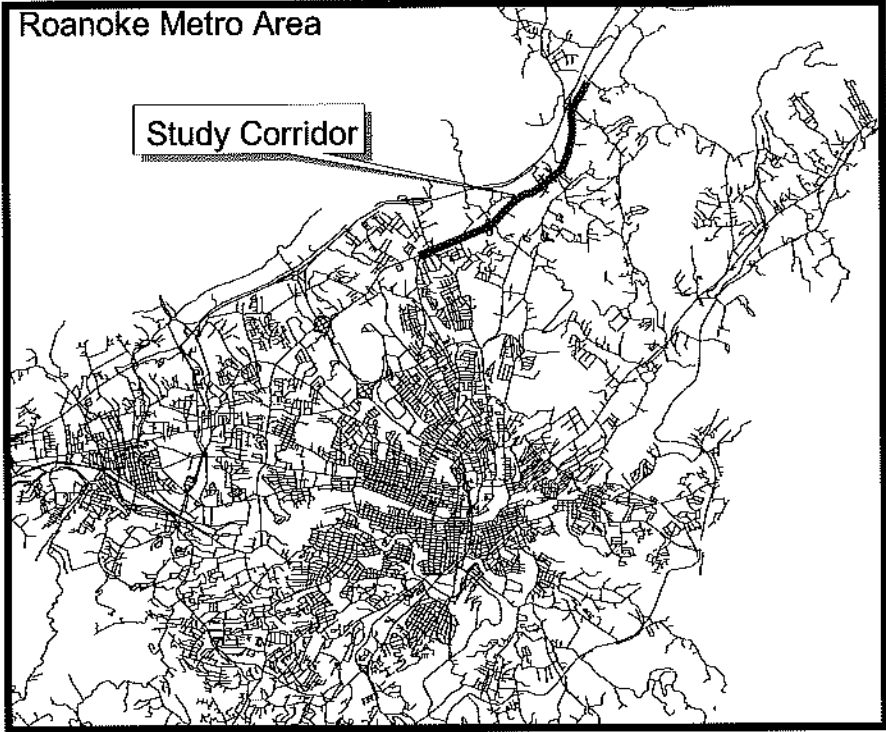
Prepared by the

Roanoke Valley Area Metropolitan Planning Organization

June 2001



US Route 11 Study Area



Background

The data included in this report is part of an ongoing project conducted by the Roanoke Valley Area Metropolitan Planning Organization. For a complete overview of the project, including a methodology, please refer to the report *Travel Time Survey Pilot Study-Technical Report-GPS Travel Time Data Collection on the Route 419 Corridor*, which was published in August 2000 (revised December 2000).

No attempt has been made to interpret the data in this report. The report merely attempts to record data to for use and comparison for later studies. The first few pages contain summary tables of selected data. The bulk of the document contains data on each of the travel surveys.

Table 1-US 11 Travel Time Summary

Date	Period	Direction	Time (h:m:s)	Speed (mph)
3/19/2001	non-peak	south	0:07:53	38.2
2/20/2001	non-peak	south	0:09:21	32.2
3/5/2001	non-peak	north	0:09:27	31.9
3/19/2001	peak	south	0:09:43	31.0
3/5/2001	non-peak	south	0:09:45	30.9
3/19/2001	peak	north	0:10:26	28.9
4/2/2001	non-peak	north	0:10:27	28.8
2/26/2001	non-peak	south	0:10:46	28.0
6/1/2001	peak	north	0:11:08	27.1
2/26/2001	non-peak	north	0:11:21	26.6
3/19/2001	peak	south	0:11:59	25.1
6/1/2001	peak	south	0:12:13	24.7
4/18/2001	peak	north	0:12:50	23.5
Average			0:11:27	31.4

Table 2-Longest Signal Stops

Travel Run	Intersection	Seconds
Southbound Peak	US 220 (Exit 150)	162
Southbound Peak	US 220 (Exit 150)	140
Northbound Peak	US 220 (Exit 150)	127
Northbound Non-Peak	US 220 (Exit 150)	95
Southbound Peak	Plantation Road	90
Northbound Peak	US 220 (Exit 150)	78
Northbound Peak	Read Mountain Road	78
Southbound Non-Peak	US 220 (Exit 150)	72
Southbound Non-Peak	US 220 (Exit 150)	71

Table 3-Overall Slowest Travel Segments*

Travel Run	From/To	MPH
Southbound Peak	Plantation/Peters Creek	8.2
Northbound Peak	Peters Creek/Plantation	9.1
Southbound Peak	Humbert/US 220	9.3
Southbound Non-Peak	Plantation/Peters Creek	10.3
Southbound Peak	Humbert/US 220	10.7
Northbound Non-Peak	Peters Creek/Plantation	11.2
Northbound Non-Peak	Peters Creek/Plantation	11.3
Northbound Non-Peak	Peters Creek/Plantation	12.2
Southbound Peak	Plantation/Peters Creek	14.5

*includes running and stopped times

Table 4-Slowest Running Travel Segments*

Travel Run	From/To	MPH	Speed Limit
Northbound Peak	Peters Creek/Plantation	19.6	35
Northbound Peak	Peters Creek/Plantation	22.6	35
Southbound Non-Peak	Plantation/Peters Creek	25.3	35
Northbound Non-Peak	Peters Creek/Plantation	25.3	35
Northbound Non-Peak	Peters Creek/Plantation	25.9	35
Southbound Non-Peak	Plantation/Peters Creek	25.9	35
Southbound Peak	Plantation/Peters Creek	26.5	35
Southbound Non-Peak	Plantation/Peters Creek	26.5	35
Southbound Peak	Plantation/Peters Creek	26.5	35
Northbound Peak	Plantation/Hollins Univ.	26.8	35

*includes running time only (does not include stopped delay time)

Table 5-Fastest Travel and Running Segments*

Travel Run	From/To	MPH	Speed Limit
Southbound Non-Peak	Read Mountain/Shadwell	45.6	35
Southbound Non-Peak	Shadwell/Hollins Univ.	43.9	35
Southbound Non-Peak	US 220/Read Mountain	43.5	45
Southbound Peak	Read Mountain/Shadwell	43	35
Southbound Non-Peak	US 220/Read Mountain	42	45

*no stop delays occurred in these segments

Table 6-Highest Number of Access Points Per Mile

Direction	Segment From	Segment To	Access/Per Mile
Northbound	Peters Creek	Plantation	47.5
Northbound	Plantation	Hollins University	37.5
Southbound	Plantation	Peters Creek	37.3
Southbound	Hollins University	Plantation	35.8

Table 7-Lowest Number of Access Points Per Mile

Direction	Segment From	Segment To	Access/Per Mile
Southbound	Shadwell	Hollins University	5.1
Southbound	Humbert	US 220	10
Southbound	Read Mountain	Shadwell	11.8
Southbound	US 220	Read Mountain	12.7
Northbound	Read Mountain	US 220	12.7

Table 8-2000 VDOT Traffic Volume Estimates

Segment End	Segment End	AADT*
Roanoke City Limits	Botetourt County Line	14,000
Botetourt County Line	601-Hollins	14,000
601-Shadwell	US 220	12,000
US 220	Troutville Limits	6,600

*[Annual] Average Daily Traffic

Date: 2/20/01, Southbound, non-peak, 2:23pm-2:32pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped Delay Time	Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)		
Humbert Road (Rt. 653) Segment 1>	6	10.0	35	0.60	0:02:13	62	34.9	72	16.3
US 220 (Exit 150) Segment 2>	17	12.7	45	1.34	0:01:55	115	42.0	0	42.0
Read Mountain Rd. Segment 3>	17	11.8	35	1.44	0:01:54	114	45.6	0	45.6
Shadwell Drive Segment 4>	4	5.1	35	0.78	0:01:04	64	43.9	0	43.9
Hollins University Segment 5>	20	35.8	35	0.56	0:01:06	66	30.5	0	30.5
Plantation Road Segment 6>	11	37.3	35	0.29	0:01:09	41	25.9	28	15.4
Peters Creek Road Totals/Average	75	14.9	-	5.02	0:09:21	462	39.1	100	32.22

Date: 02/26/2001, Southbound, Non-Peak, 2:22pm-2:33pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped Delay Time	Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)		
Humbert Road (Rt. 653) Segment 1>	6	10.0	35	0.60	0:02:13	63	34.3	71	16.3
US 220 (Exit 150) Segment 2>	17	12.7	45	1.34	0:02:12	125	38.7	7	36.6
Read Mountain Rd. Segment 3>	17	11.8	35	1.44	0:02:09	129	40.3		40.3
Shadwell Drive Segment 4>	4	5.1	35	0.78	0:01:32	67	41.9	25	30.5
Hollins University Segment 5>	20	35.8	35	0.56	0:00:57	57	35.3		35.3
Plantation Road Segment 6>	11	37.3	35	0.29	0:01:43	42	25.3	61	10.3
Peters Creek Road Totals/Average	75	14.9	-	5.02	0:10:46	483	37.4	164	27.98

Date: 3/05/2001 Southbound Non-Peak, 1:58pm-2:08pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)	Delay Time	Time	
Humbert Road (Rt. 653) Segment 1>	6	10.0	35	0.60	0:01:25	62	34.9	24		25.5
US 220 (Exit 150) Segment 2>	17	12.7	45	1.34	0:02:05	125	38.7	0		38.7
Read Mountain Rd. Segment 3>	17	11.8	35	1.44	0:02:08	128	40.6	0		40.6
Shadwell Drive Segment 4>	4	5.1	35	0.78	0:01:25	80	35.1	5		33.0
Hollins University Segment 5>	20	35.8	35	0.56	0:02:07	60	33.6	67		15.9
Plantation Road Segment 6>	11	37.3	35	0.29	0:00:35	35	30.3	0		30.3
Peters Creek Road										
Totals/Average	75	14.9	-	5.02	0:09:45	490	36.9	96		30.90

Date: 3/5/2001, Northbound, Non-Peak, 1:46pm-1:55pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)	Delay Time		
Peters Creek Road Segment 1 >	14	47.5	35	0.29	0:01:35	42	25.3	54		11.2
Plantation Road Segment 2 >	21	37.5	35	0.56	0:01:01	61	33.0			33.0
Hollins University Segment 3 >	14	18.0	45	0.78	0:01:08	68	41.3			41.3
Shadwell Drive Segment 4 >	24	16.6	35	1.44	0:02:27	134	38.8	13		35.4
Read Mountain Rd. Segment 5 >	17	12.7	35	1.34	0:02:21	138	35.0	3		34.3
US 220 (Exit 150) Segment 6 >	18	30.0	35	0.60	0:00:55	55	39.3			39.3
Humbert Road (Rt. 653)										
Totals/Average	108	21.5	-	5.02	0:09:27	498	36.3	70		31.88

Date: 03/19/2001 Southbound Peak 5:21pm-5:31pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)	Delay Time	Mean Speed	
Humbert Road (Rt. 653) Segment 1>	6	10.0	35	0.60	0:01:20	70	30.9	11	27.0	
US 220 (Exit 150) Segment 2>	17	12.7	45	1.34	0:02:14	134	36.1	0	36.1	
Read Mountain Rd. Segment 3>	17	11.8	35	1.44	0:02:19	135	38.5	4	37.4	
Shadwell Drive Segment 4>	4	5.1	35	0.78	0:01:09	69	40.7	0	40.7	
Hollins University Segment 5>	20	35.8	35	0.56	0:01:44	62	32.5	42	19.4	
Plantation Road Segment 6>	11	37.3	35	0.29	0:00:57	40	26.5	17	18.6	
Peters Creek Road Totals/Average	75	14.9	-	5.02	0:09:43	510	35.4	74	31.01	

Date: 3/19/01 Northbound Peak 5:09pm-5:20pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)	Delay Time		
Peters Creek Road Segment 1>	14	47.5	35	0.29	0:00:59	47	22.6	13		18.0
Plantation Road Segment 2>	21	37.5	35	0.56	0:01:06	66	30.5	0		30.5
Hollins University Segment 3>	14	18.0	45	0.78	0:01:21	81	34.7	0		34.7
Shadwell Drive Segment 4>	24	16.6	35	1.44	0:02:42	158	32.9	4		32.1
Read Mountain Rd. Segment 5>	17	12.7	35	1.34	0:03:19	121	39.9	78		24.3
US 220 (Exit 150) Segment 6>	18	30.0	35	0.60	0:00:59	59	36.7	0		36.7
Humbert Road (Rt. 653) T Totals/Average	108	21.5	-	5.02	0:10:26	532	34.0	95		28.88

Date: 4/18/01 Northbound Peak 5:09pm-5:22pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped Delay Time	Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)		
Peters Creek Road Segment 1>	14	47.5	35	0.29	0:00:38	38	27.9	0	27.9
Plantation Road Segment 2>	21	37.5	35	0.56	0:00:55	55	36.6	0	36.6
Hollins University Segment 3>	14	18.0	45	0.78	0:01:40	77	36.5	23	28.1
Shadwell Drive Segment 4>	24	16.6	35	1.44	0:03:57	159	32.7	78	21.9
Read Mountain Rd. Segment 5>	17	12.7	35	1.34	0:04:38	151	32.0	127	17.4
US 220 (Exit 150) Segment 6>	18	30.0	35	0.60	0:01:02	62	34.9	0	34.9
Humbert Road (Rt. 653)									
Totals/Average	108	21.5	-	5.02	0:12:50	542	33.4	228	23.48

Date: 04/02/2001 Southbound Non-Peak 2:13pm-2:50pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)	Delay Time	Mean Speed	
Humbert Road (Rt. 653) Segment 1 >	6	10.0	35	0.60	0:01:03	63	34.3	0	34.3	
US 220 (Exit 150) Segment 2 >	17	12.7	45	1.34	0:01:51	111	43.5	0	43.5	
Read Mountain Rd. Segment 3 >	17	11.8	35	1.44	0:02:05	122	42.6	3	41.6	
Shadwell Drive Segment 4 >	4	5.1	35	0.78	0:01:09	69	40.7	0	40.7	
Hollins University Segment 5 >	20	35.8	35	0.56	0:00:52	52	38.7	0	38.7	
Plantation Road Segment 6 >	11	37.3	35	0.29	0:00:53	40	26.5	13	20.0	
Peters Creek Road										
Totals/Average	75	14.9	-	5.02	0:07:53	457	39.6	16	38.22	

Date: 4/2/2001 Northbound Non-Peak 1:58pm-2:08pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)	Delay Time		
Peters Creek Road Segment 1>	14	47.5	35	0.29	0:01:34	41	25.9	54		11.3
Plantation Road Segment 2>	21	37.5	35	0.56	0:01:13	69	29.2	4		27.6
Hollins University Segment 3>	14	18.0	45	0.78	0:01:09	69	40.7	0		40.7
Shadwell Drive Segment 4>	24	16.6	35	1.44	0:02:31	132	39.4	19		34.4
Read Mountain Rd. Segment 5>	17	12.7	35	1.34	0:03:03	122	39.6	61		26.4
US 220 (Exit 150) Segment 6>	18	30.0	35	0.60	0:00:57	57	38.0	0		38.0
Humbert Road (Rt. 653) Totals/Average	108	21.5	-	5.02	0:10:27	490	36.9	138		28.83

Date:06/01/2001 Northbound Peak 4:48pm-5:09pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)	Delay Time		
Peters Creek Road Segment 1 >	14	47.5	35	0.29	0:01:56	54	19.6	63	9.1	
Plantation Road Segment 2 >	21	37.5	35	0.56	0:01:15	75	26.8	0	26.8	
Hollins University Segment 3 >	14	18.0	45	0.78	0:01:29	89	31.5	0	31.5	
Shadwell Drive Segment 4 >	24	16.6	35	1.44	0:02:57	166	31.3	11	29.4	
Read Mountain Rd. Segment 5 >	17	12.7	35	1.34	0:02:32	147	32.9	5	31.8	
US 220 (Exit 150) Segment 6 >	18	30.0	35	0.60	0:00:59	59	36.7	0	36.7	
Humbert Road (Rt. 653) Totals/Average	108	21.5	-	5.02	0:11:08	590	30.6	79	27.06	

Date: 06/01/2001 Southbound Peak 5:04pm-5:16pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped		Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)	Delay Time	Mean Speed	
Humbert Road (Rt. 653) Segment 1 >	6	10.0	35	0.60	0:03:22	63	34.3	140	10.7	
US 220 (Exit 150) Segment 2 >	17	12.7	45	1.34	0:02:03	123	39.3	0	39.3	
Read Mountain Rd. Segment 3 >	17	11.8	35	1.44	0:02:20	129	40.3	11	37.1	
Shadwell Drive Segment 4 >	4	5.1	35	0.78	0:01:08	68	41.3	0	41.3	
Hollins University Segment 5 >	20	35.8	35	0.56	0:01:10	66	30.5	4	28.8	
Plantation Road Segment 6 >	11	37.3	35	0.29	0:02:10	40	26.5	90	8.2	
Peters Creek Road										
Totals/Average	75	14.9	-	5.02	0:12:13	489	37.0	245	24.66	

Date: 03/19/2001 Southbound Peak 5:26pm-5:38pm

Signalized Intersections	Access Points		Speed Limit	Segment Length(mi)	Elapsed Time	Running Time		Stopped Delay Time	Overall Mean Speed(mph)
	Number	Per/Mile				Time in Motion(s)	Mean Speed (mph)		
Humbert Road (Rt. 653) Segment 1>	6	10.0	35	0.60	0:03:52	71	30.5	162	9.3
US 220 (Exit 150) Segment 2>	17	12.7	45	1.34	0:01:57	117	41.3	0	41.3
Read Mountain Rd. Segment 3>	17	11.8	35	1.44	0:02:01	121	43.0	0	43.0
Shadwell Drive Segment 4>	4	5.1	35	0.78	0:01:14	66	42.5	8	37.9
Hollins University Segment 5>	20	35.8	35	0.56	0:01:42	63	32.0	39	19.7
Plantation Road Segment 6>	11	37.3	35	0.29	0:01:13	38	27.9	35	14.5
Peters Creek Road									
Totals/Average	75	14.9	-	5.02	0:11:59	476	38.0	244	25.14