

Prepared By Sanil Taori  
4/14/06

**Route 15 Corridor Safety Study**  
**Summary of Crash History and Traffic Data**

# **Distribution of Crash Types and Crash Rates**

Location: US 15 From VIRGINIA St/L To US 340  
 County: Frederick Period: Jan 1, 1998 To Approx. Aug 31, 2005  
 Type Controls: 4R-94% 3R-3% 3U-3%

Logmile: From 000.00 To 007.22 Length: 7.22  
 Note(s): Year 2005 data is unedited.  
 \* Significantly Higher than Statewide

YEAR >	1998	1999	2000	2001	2002	2003	2004	2005	TOTAL	STUDYRATE	STNDRATE
FATAL	2		2			1		1	6	2.0	1.8
NO. KILLED	3		2			1		1	7		
INJURY	13	6	14	6	5	13	13	17	87	28.9	42.9
NO. INJURED	22	8	38	5	9	24	28	36	171		
PROP DAMAGE	14	12	14	12	19	21	13	16	121	40.1	42.9
TOTAL ACC	29	18	30	18	24	35	26	34	214	71.0	87.7
RATE	99.3	55.6	75.7	43.4	56.7	82.8	59.1	112.2			
NAADT	11100	12300	15000	15700	16100	16000	16600	17300			
VMT(millions)	29.2	32.4	39.6	41.5	42.3	42.3	44.0	30.3	301.6		
OPPOSITE DIR	3		3	1	1	1	3	3	15	5.0	7.6
RRAR END	5	3	6	2	1	4	7	11	39	12.9	22.8
SIDESWIPE	1		1	1		1	1		5	1.7	2.6
LEFT TURN			2	1	1	5		1	10	3.3	5.1
ANGLE	1	4	5	3	4	6	4	6	33	10.9	16.9
PEDESTRIAN										0.0	0.7
PARKED VEH										0.7	0.7
FIXED OBJECT	8	6	4	6	4	9	5	7	49	16.3	15.0
OTHER	11	5	9	4	13	9	5	5	61	20.2	5.5
U-TURN				1		1			2		
BACKING									1		
ANIMAL	9	4	8	2	8	6	3	4	44		
RAILROAD											
EXPL./FIRE	1								1		
OVERTURN					1				1		
OTHER/UNK	1	1	1	1	4	2	1	1	12		
TRCK REL ACC	5	1	4	2	2	3	3	4	24	8.0	8.4
NIGHTTIME	14	8	11	5	9	9	8	7	71	33 %	32 %
WET SURFACE	8	2	6	5	3	9	6	6	45	21 %	28 %
ALCOHOL REL	1		1	2		2	1	1	8	3 %	8 %
INTERSEC REL	5	6	12	8	5	13	11	11	71		
TOTAL VEH	42	29	59	29	34	56	49	62	360		
TOTAL TRUCKS	5	1	4	2	2	3	3	4	24		
PERCENT TRKS	11.9	3.4	6.8	6.9	5.9	5.4	6.1	6.5	6.7		

Comments:

NAADT's provided by Neil Parrott, P.E., PTOE of District Seven Traffic.  
 Year 2005 data is incomplete & unedited.

**Distribution of Recorded Traffic Crashes By Severity (1998 to 2005)**

Crash Severity	1998	1999	2000	2001	2002	2003	2004	2005*	TOTAL
Fatal Crash	2			1					3
Injury Crash	20	28	33	28	24	29	40	9	211
Property Damage	40	39	27	52	60	47	53	35	353
<b>TOTAL</b>	<b>62</b>	<b>67</b>	<b>60</b>	<b>81</b>	<b>84</b>	<b>76</b>	<b>93</b>	<b>44</b>	<b>567</b>
AADT Segment 1	15000	15000	17000	18000	18000	19000	21000	-	
AADT Segment 2	11000	11000	11000	11000	16000	16000	17000	-	
Annual VMT (millions)	43.7	43.7	47.1	48.8	56.9	58.6	63.7	-	
Crash Rate	142.01	153.47	127.34	165.82	147.64	129.63	146.01	-	

\*For 2005 - Crash Data is for part year and AADT has not been published yet.

Segment 1:	500 ft N of Little Springs Rd to Lucketts Rd	Length 4.74 mi
Segment 2:	Lucketts Rd to MD State Line	4.41 mi
	Total	<u>9.15 mi</u>

AADT = Annual Average Daily Traffic

VMT = Vehicle Miles of Travel

Crash Rate = Number of Crashes Per 100 Million Vehicle Miles of Travel

# VA Segment

**Distribution of Recorded Traffic Crashes By Type (1998 to 2005\*)**

Crash Type	1998	1999	2000	2001	2002	2003	2004	2005	TOTAL
Rear End	28	29	29	44	46	49	49	22	296
Angle	5	9	8	9	7	3	3	5	49
Fixed Object (Off-Road)	9	16	10	14	12	10	16	12	99
Side-Swipe Opposite Dir	1	1	3	4	2	2	7	1	21
Head-On		1	1	1	1		1		5
Side-Swipe Same Direction	1	1	2		4	1	2	1	12
Fixed Object (In-Road)	2					2			4
Non-Collision	6	3	1	1	1	4	2		18
Deer	9	5	6	7	9	4	12	3	55
Other Animal	1	1				1			3
Pedestrian							1		1
Miscellaneous		1		1	2				4
<b>TOTAL</b>	<b>62</b>	<b>67</b>	<b>60</b>	<b>81</b>	<b>84</b>	<b>76</b>	<b>93</b>	<b>44</b>	<b>567</b>

**Traffic Crashes Involving Injury By Type (1998 to 2005\*)**

Crash Type	1998	1999	2000	2001	2002	2003	2004	2005	TOTAL
Rear End	10	14	14	10	14	19	28	7	116
Angle	3	6	4	5	5	1		2	26
Fixed Object (Off-Road)	2	3	8	8	3	6	6		36
Side-Swipe Opposite Dir			2	2	1	1	2		8
Head-On		1	1	1	1		1		5
Side-Swipe Same Direction		1	1						2
Non-Collision	5	3	1	1		2	1		13
Deer			2				1		3
Pedestrian							1		1
Miscellaneous				1					1
<b>TOTAL</b>	<b>20</b>	<b>28</b>	<b>33</b>	<b>28</b>	<b>24</b>	<b>29</b>	<b>40</b>	<b>9</b>	<b>211</b>

**Traffic Crashes Involving Fatality By Type (1998 to 2005\*)**

Crash Type	1998	2001	TOTAL
Head-On		1	1
Non-Collision	2		2
<b>TOTAL</b>	<b>2</b>	<b>1</b>	<b>3</b>

\* For 2005, Crash Data is for part of the year

**Distribution of Recorded Crashes By Type - Phase 1 Improvement Segment (1998 to 2005)\***

<b>Crash Type</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>TOTAL</b>
Rear End	2	5	5	3	9	8	3	2	<b>37</b>
Angle	2	5	4	4	4	1		1	<b>21</b>
Fixed Object (Off-Road)	2		1	1		1		1	<b>6</b>
Side-Swipe Same Direction		1							<b>1</b>
Fixed Object (In-Road)	2								<b>2</b>
Non-Collision		1							<b>1</b>
Deer		1		1	1		3	1	<b>7</b>
Other Animal						1			<b>1</b>
<b>TOTAL</b>	<b>8</b>	<b>13</b>	<b>10</b>	<b>9</b>	<b>14</b>	<b>11</b>	<b>6</b>	<b>5</b>	<b>76</b>

\* Phase 1 Segment For Crash Analysis is from 500ft N of Little Springs Rd to 500 ft N of Whites Ferry Rd  
 For 2005 Crash Data is for part of the year

Distribution of Crashes on Route 15 By Type in the Vicinity of Limestone School Rd Intersection

Crash Type	1998	1999	2000	2001	2002	2003	2004	2005*	TOTAL
Rear End			2				3	2	7
Fixed Object (Off-Road)			1	1	1				3
Side-Swipe Opposite Dir								1	1
Deer							1		1
<b>TOTAL</b>			<b>3</b>	<b>1</b>	<b>1</b>		<b>4</b>	<b>3</b>	<b>12</b>

Distribution of Crashes on Route 15 By Type in the Vicinity of Montesor Rd Intersection

Crash Type	1998	1999	2000	2001	2002	2003	2004	2005*	TOTAL
Rear End	1				3	2		2	8
Angle			1	1					2
Head-On			1						1
Fixed Object (Off-Road)		1							1
Non-Collision	1				1				2
Deer					2			1	3
<b>TOTAL</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>2</b>		<b>3</b>	<b>17</b>

Distribution of Crashes on Route 15 By Type in the Vicinity of New Valley Church Rd Intersection

Crash Type	1998	1999	2000	2001	2002	2003	2004	2005*	TOTAL
Rear End	1		2	3	1	1	3	3	14
Angle				1	1			1	3
Fixed Object (Off-Road)	1				1		1		3
<b>TOTAL</b>	<b>2</b>		<b>2</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>20</b>

Distribution of Crashes on Route 15 By Type in the Vicinity of Spinks Ferry Rd Intersection

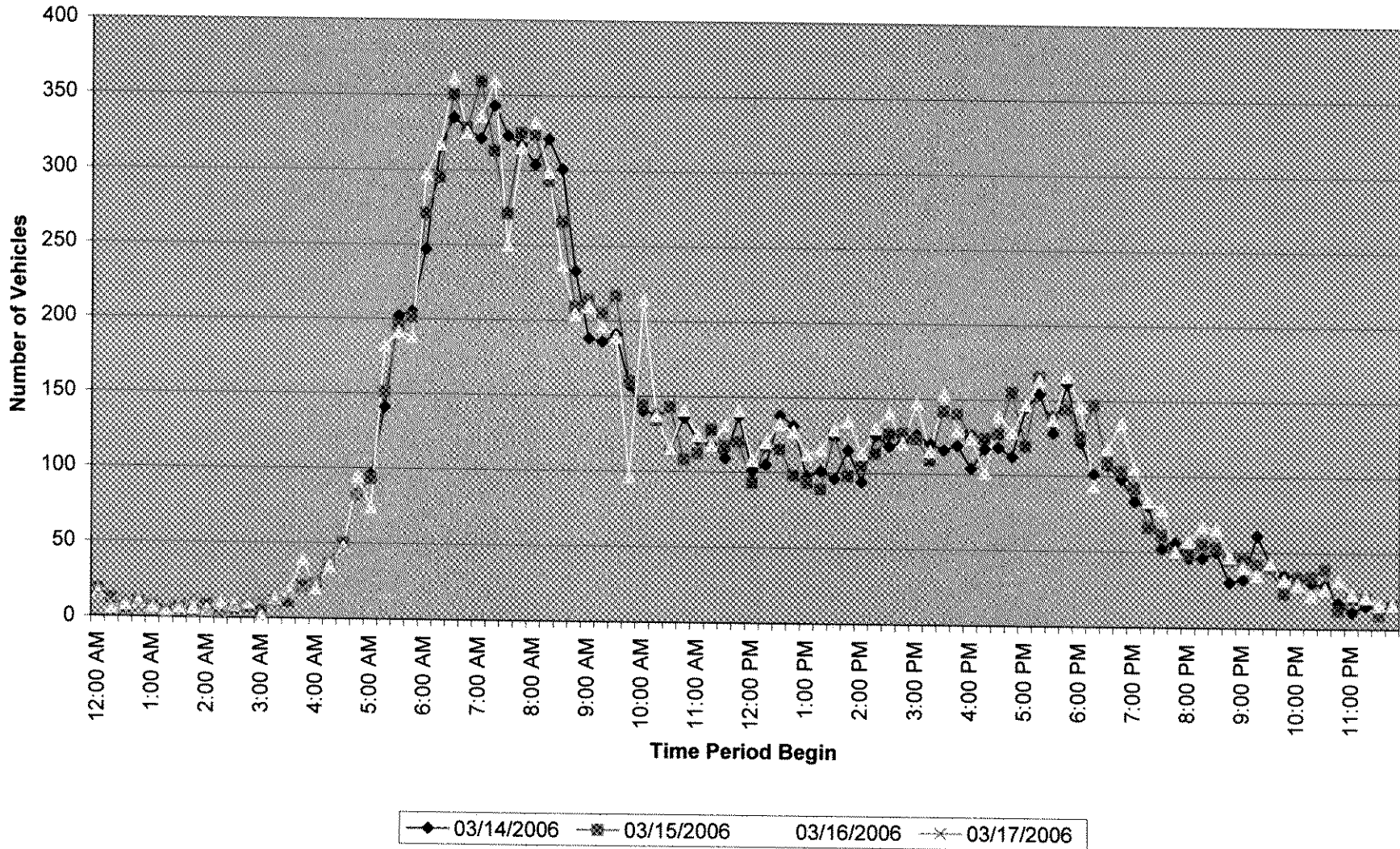
Crash Type	1998	1999	2000	2001	2002	2003	2004	2005*	TOTAL
Rear End	2	2		1	4	2			11
Angle				1					1
Side-Swipe Opposite Dir							1		1
Fixed Object (Off-Road)				1					1
Non-Collision	1								1
Deer		1			1		1		3
<b>TOTAL</b>	<b>3</b>	<b>3</b>		<b>3</b>	<b>5</b>	<b>2</b>	<b>2</b>		<b>18</b>

\* For 2005, Crash Data is for part of the year

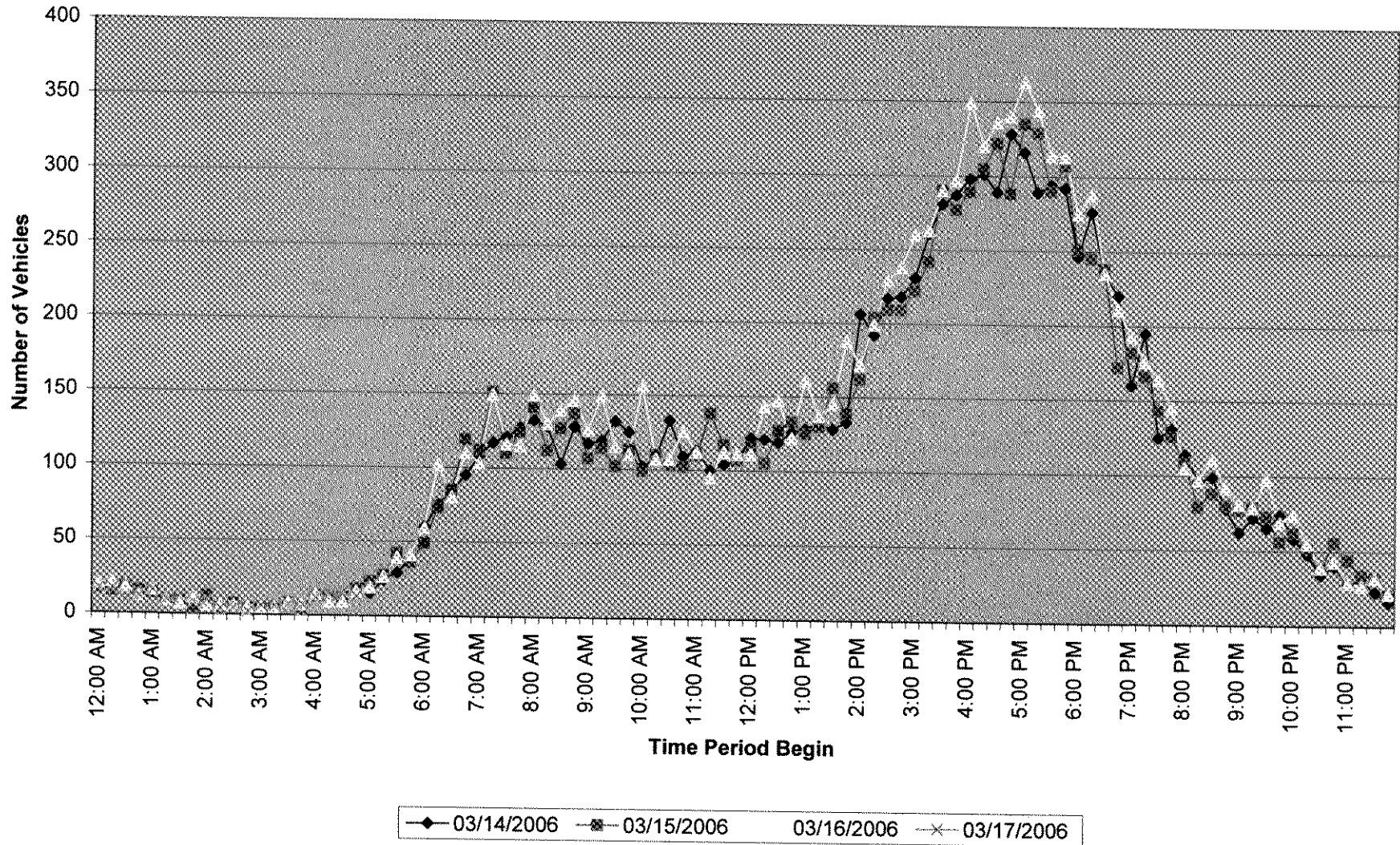
## **Traffic Volume Data**



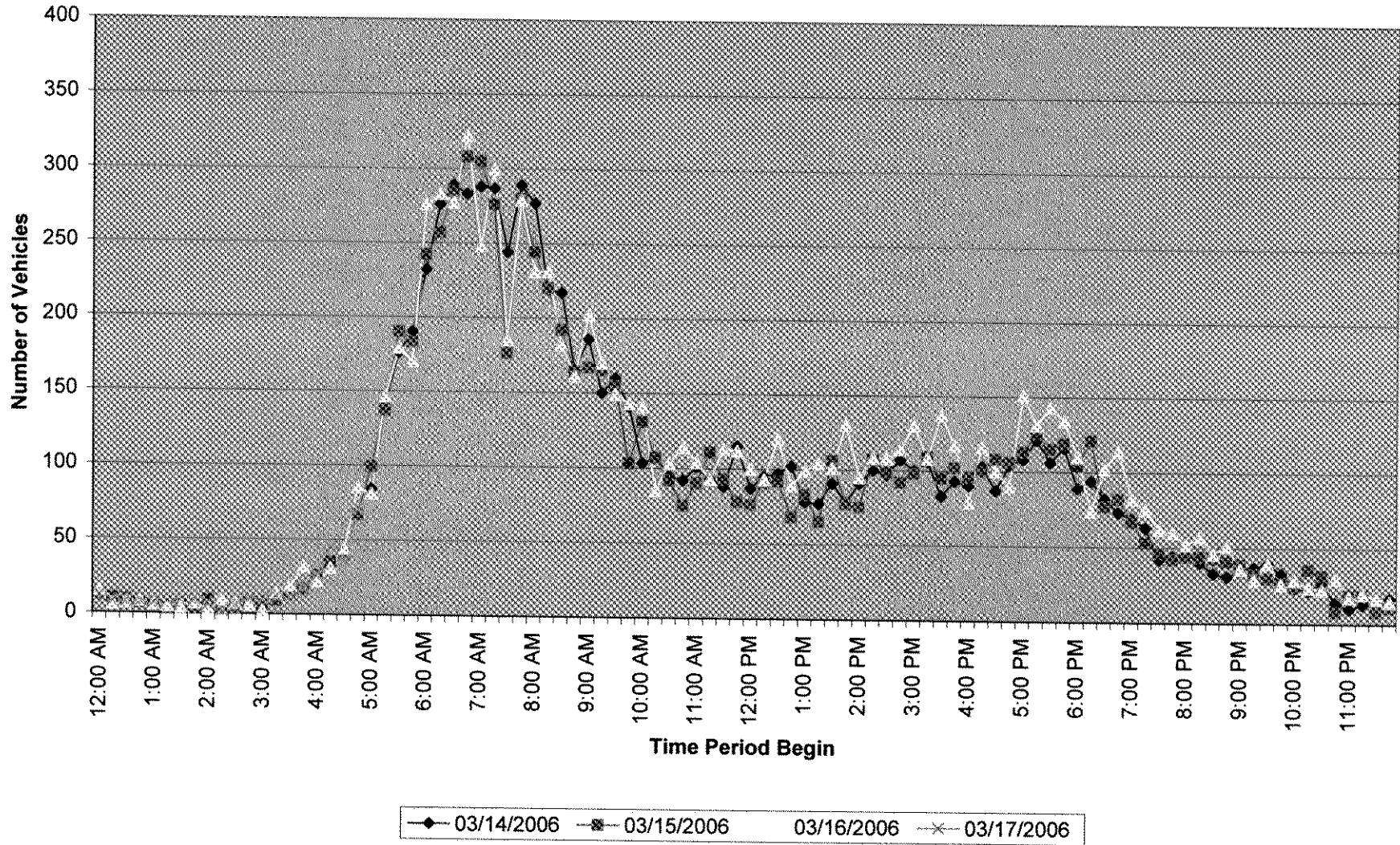
### Southbound Route 15 Traffic Counts By 15-Minute Interval South of Limestone School Road



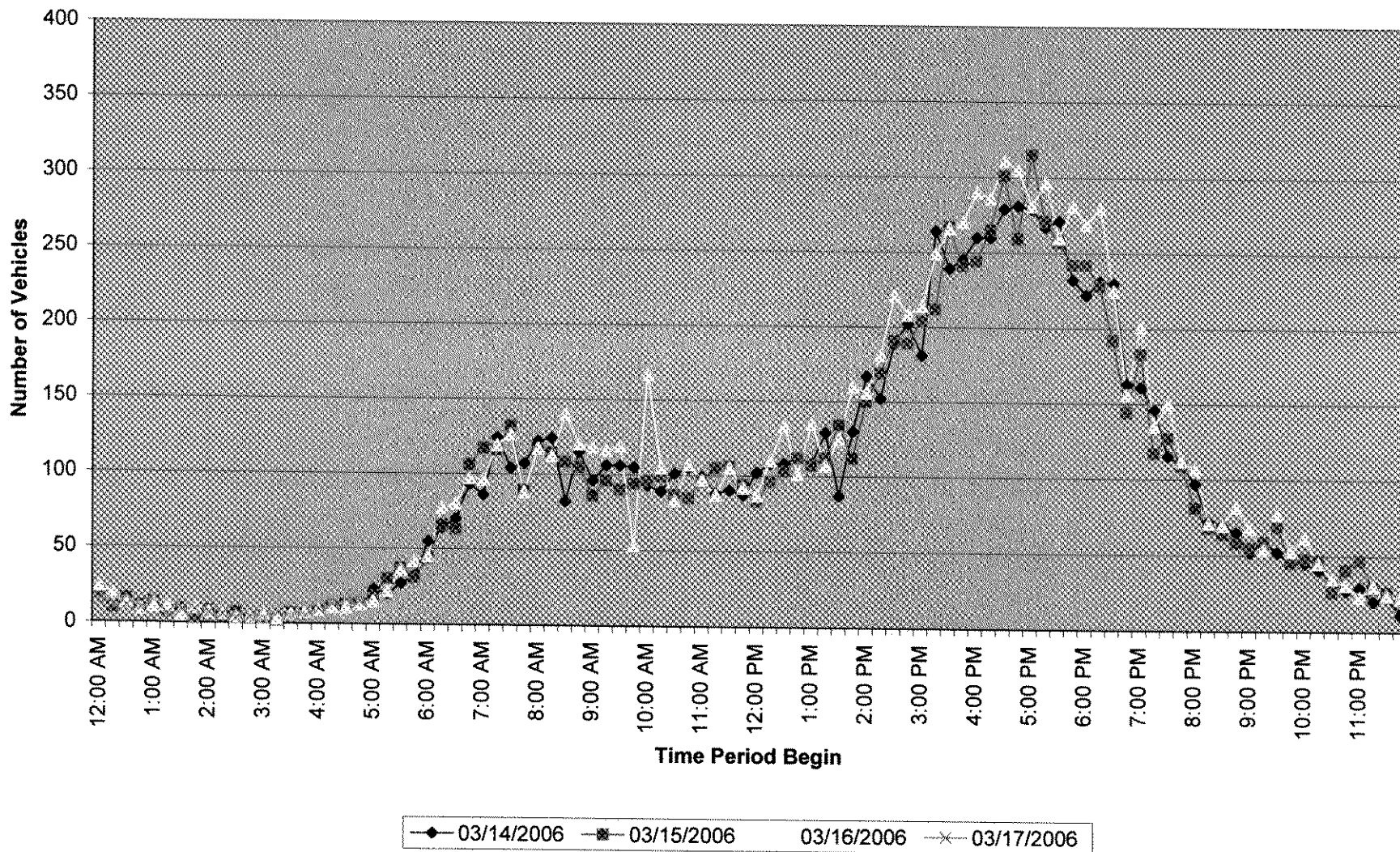
### Northbound Route 15 Traffic Counts By 15-Minute Interval South of Limestone School Road



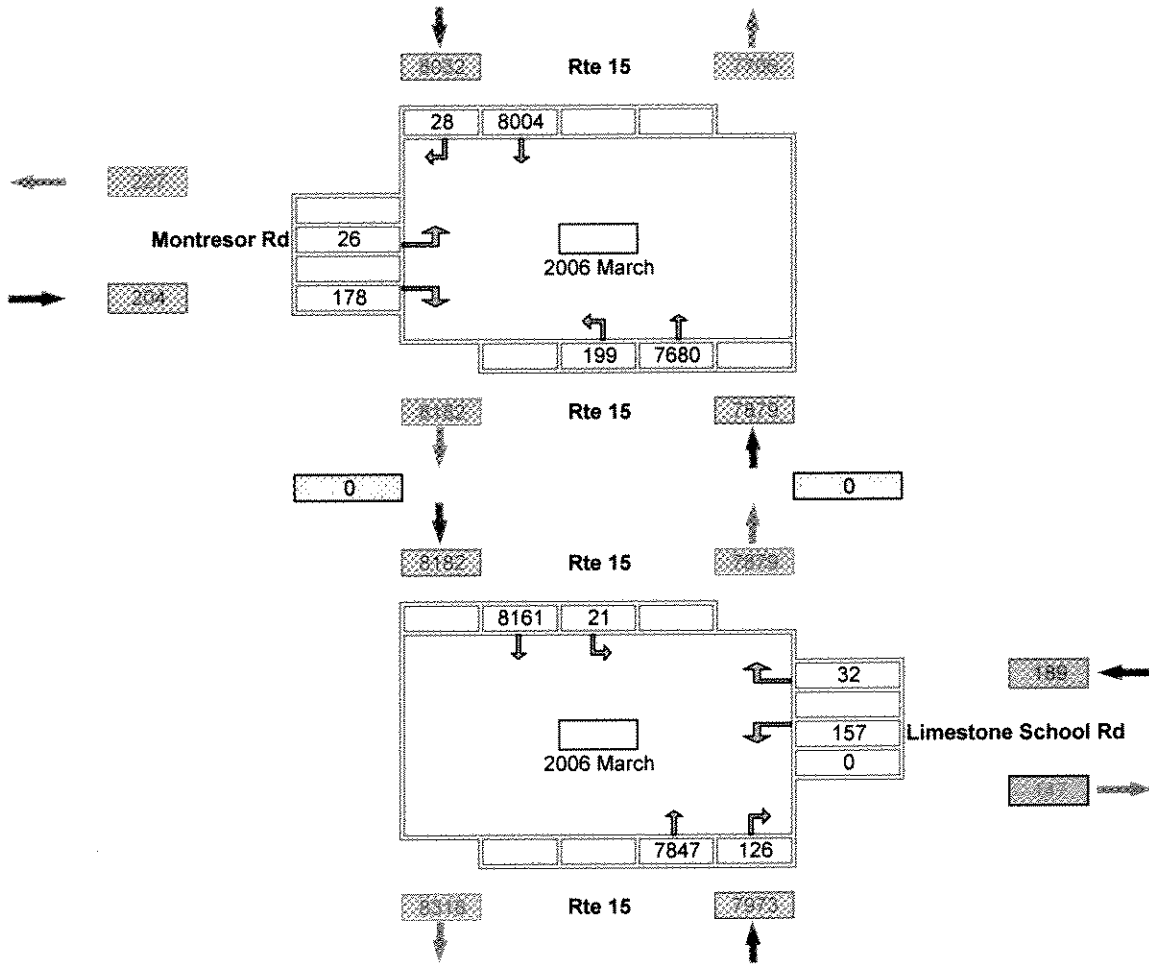
### Southbound Route 15 Traffic Counts By 15-Minute Interval North of Spinks Ferry Road



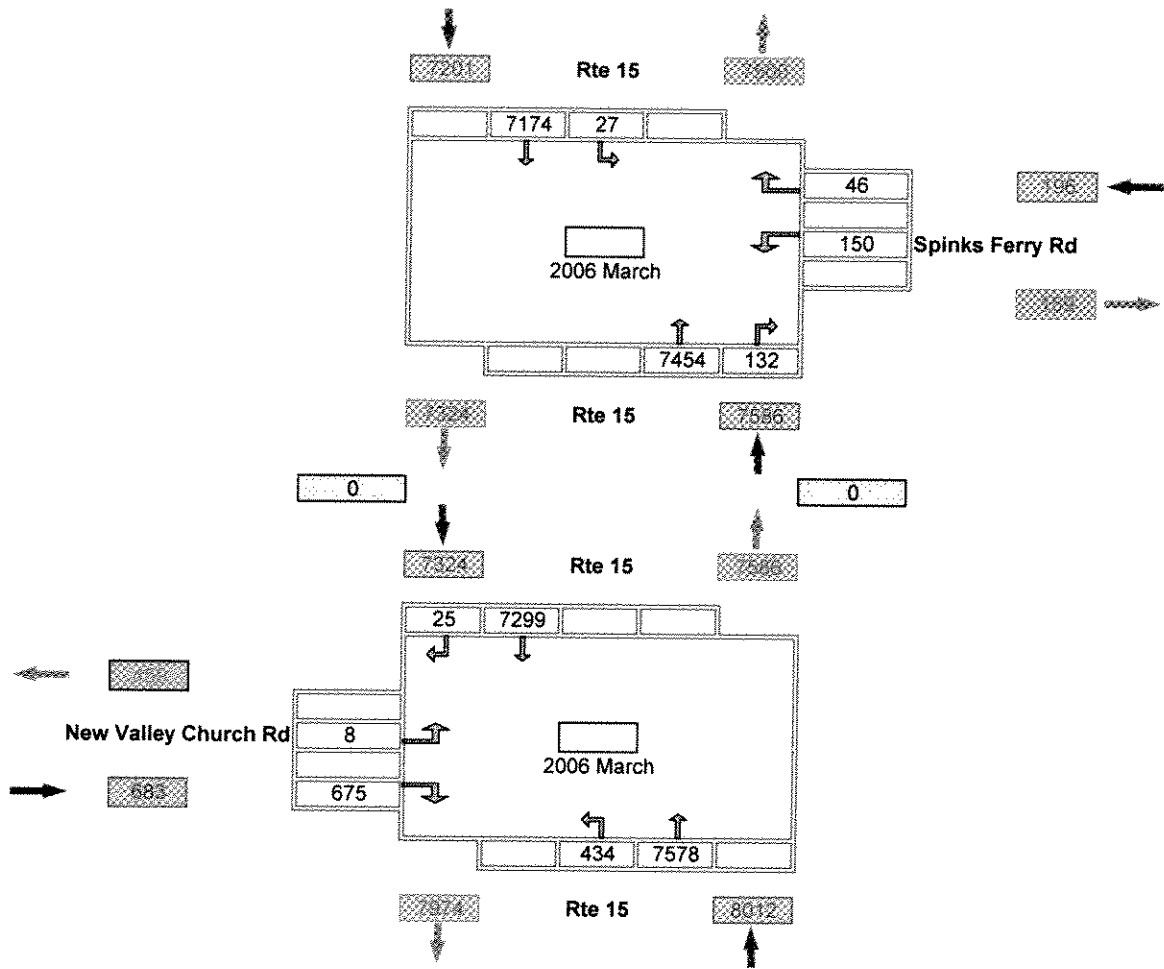
### Northbound Route 15 Traffic Counts By 15-Minute Interval North of Spinks Ferry Road



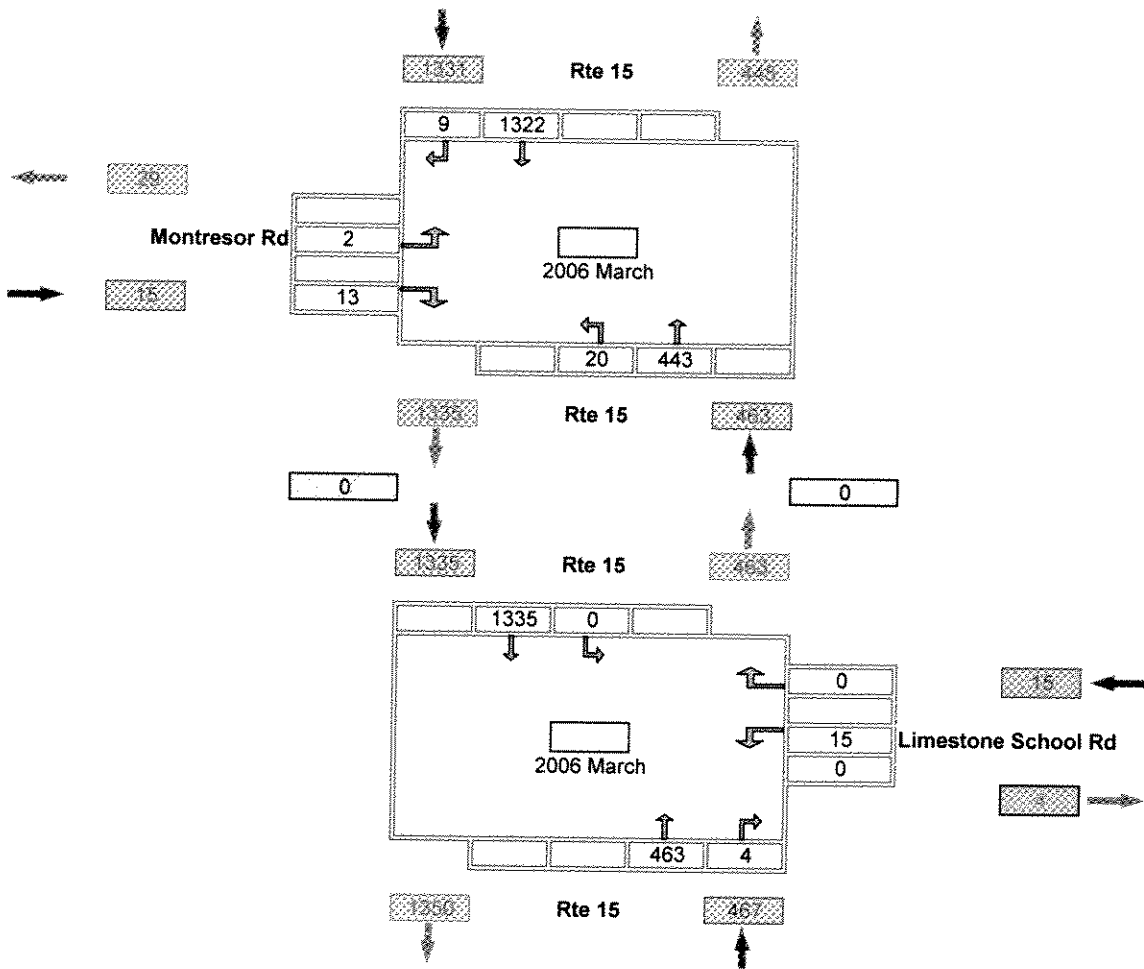
12-Hour Traffic Turning Movement Counts (6 AM to 6 PM)



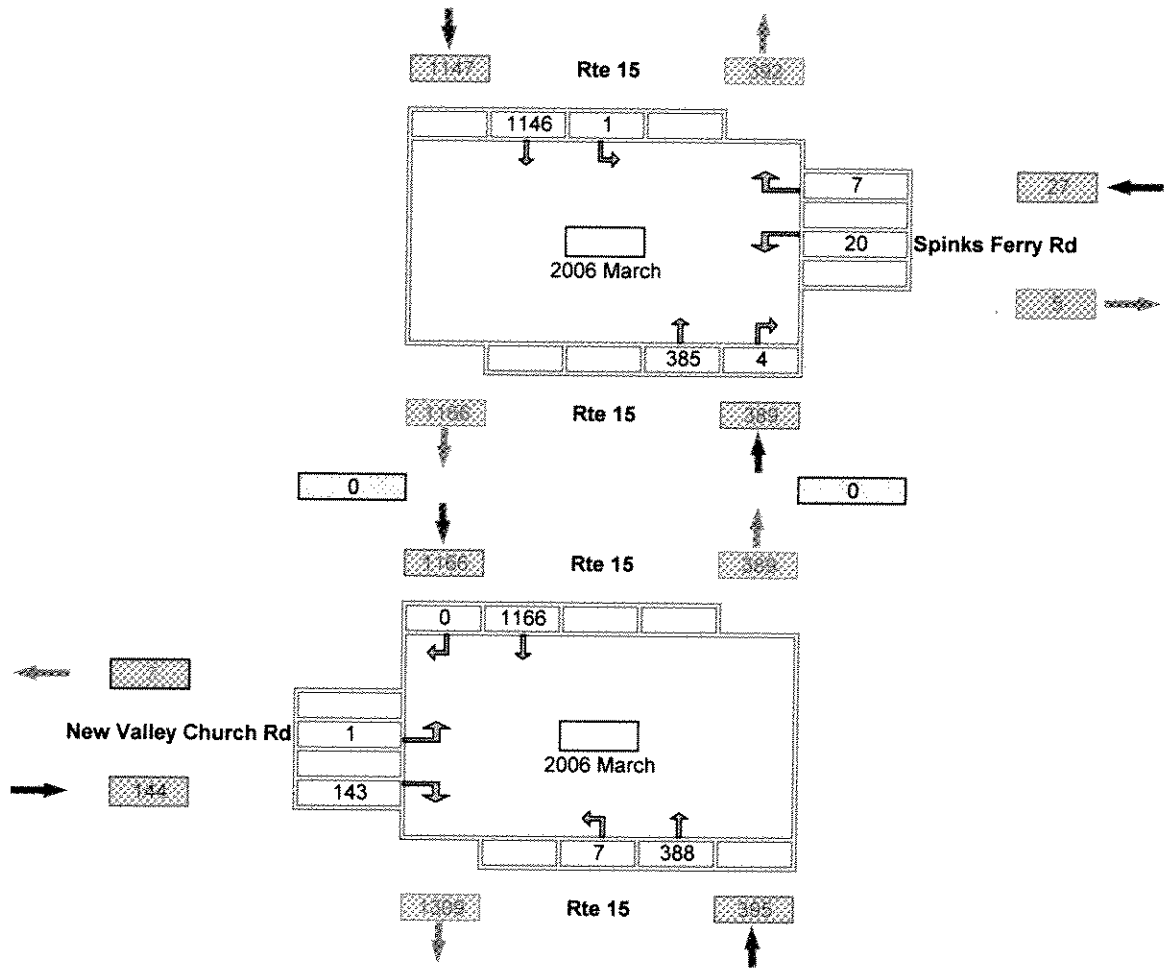
12-Hour Traffic Turning Movement Counts (6 AM to 6 PM)



**AM Peak Hour Traffic Turning Movement Counts (6:30 - 7:30 AM)**

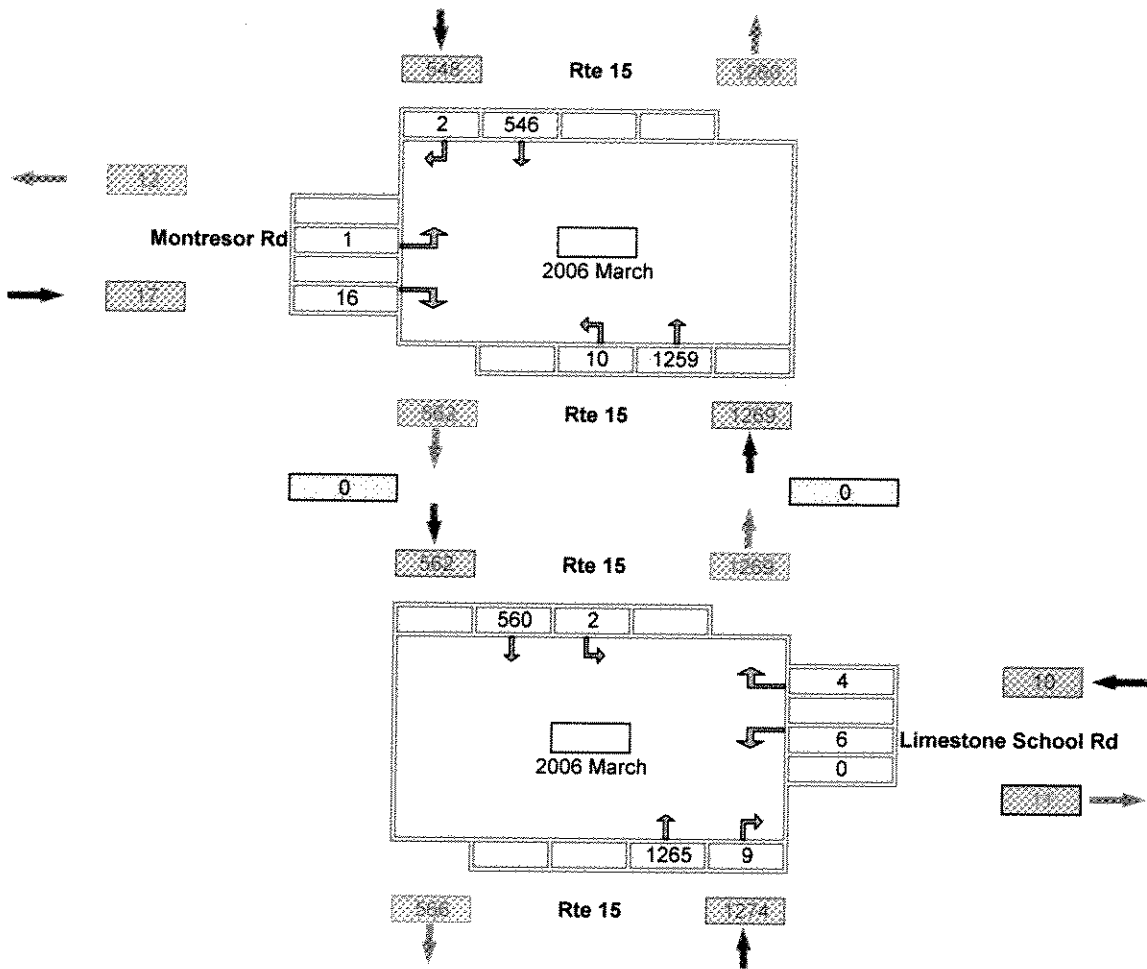


**AM Peak Hour Traffic Turning Movement Counts (6:30 - 7:30 AM)**

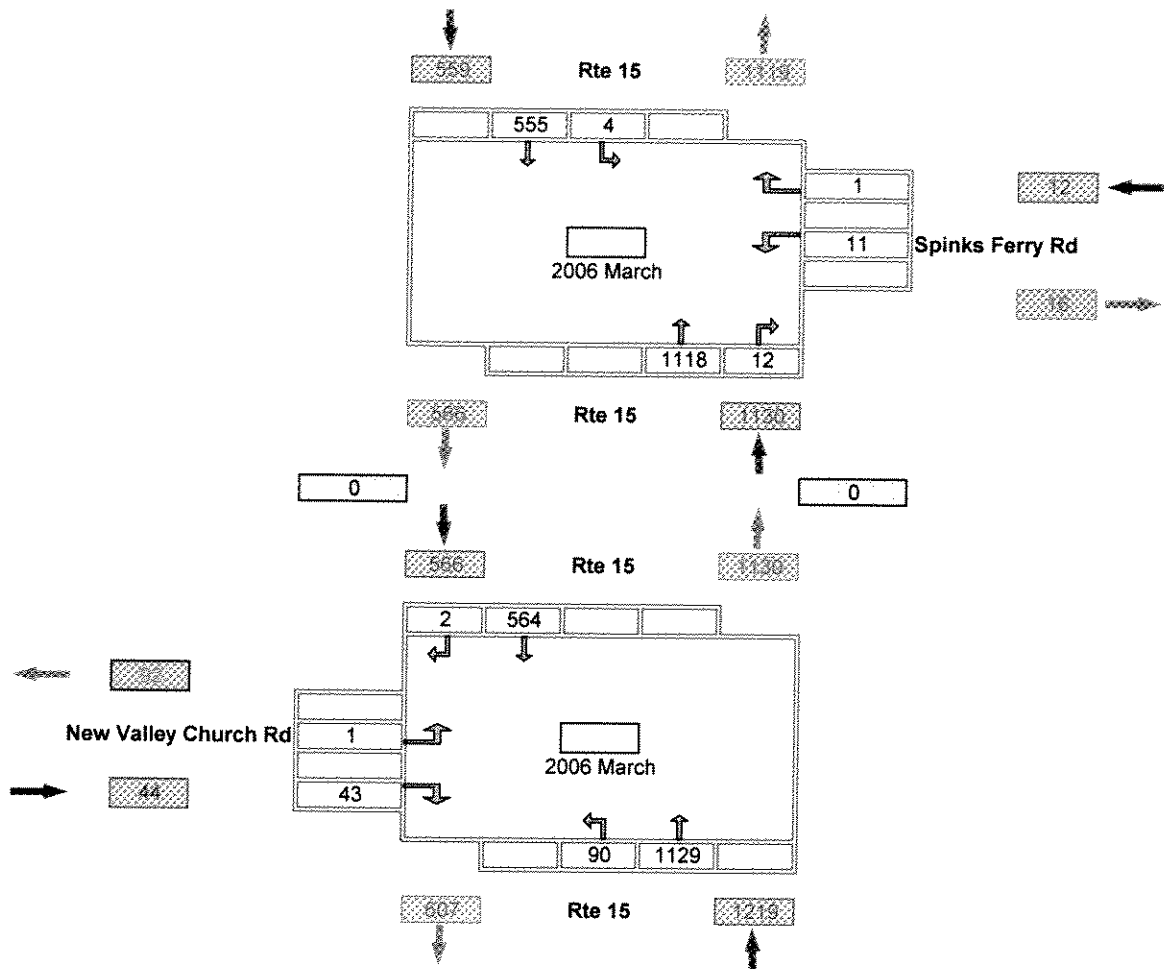




**PM Peak Hour Traffic Turning Movement Counts (4:30 - 5:30 PM)**



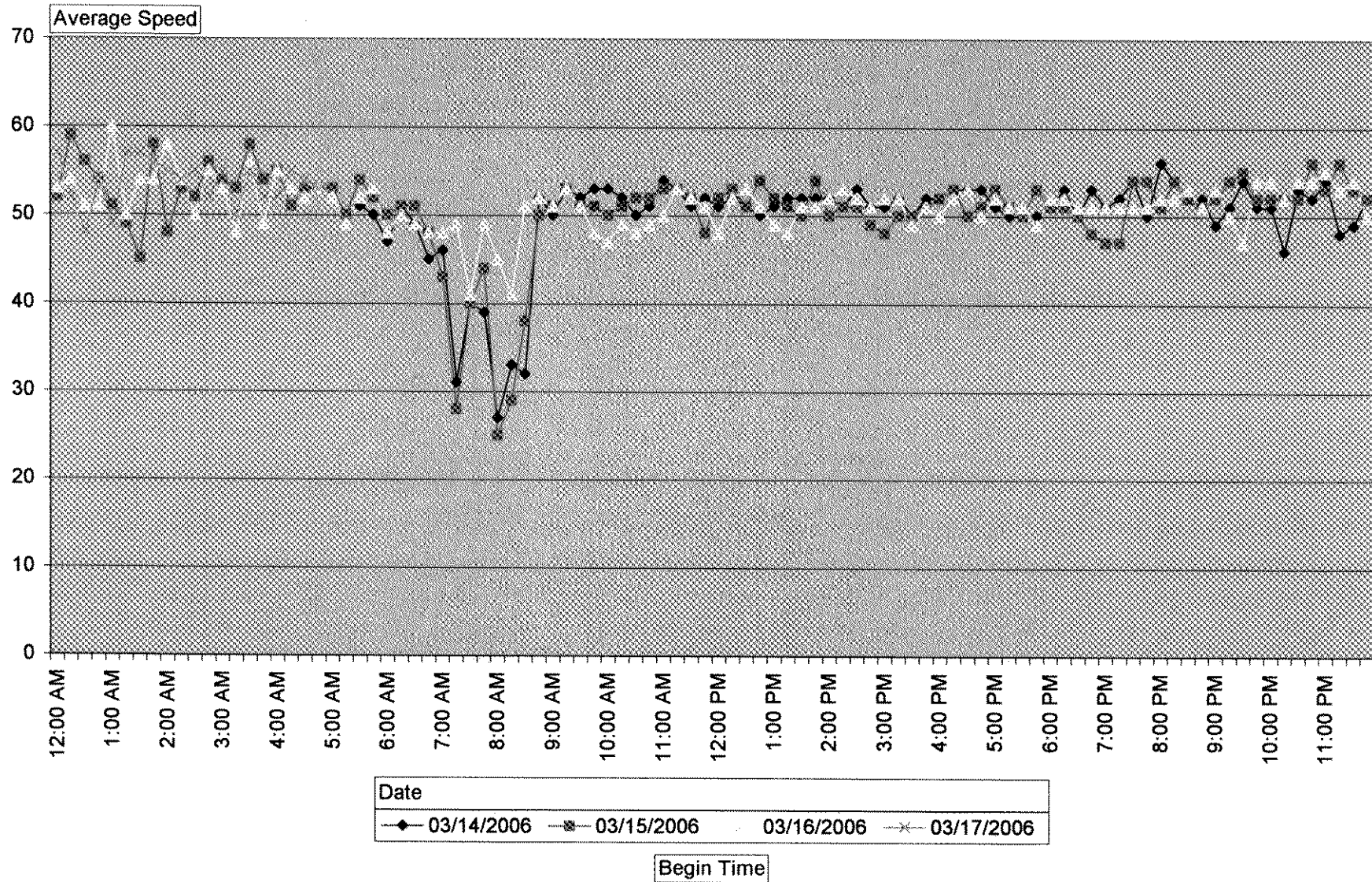
**PM Peak Hour Traffic Turning Movement Counts (5:00 - 6:00 PM)**



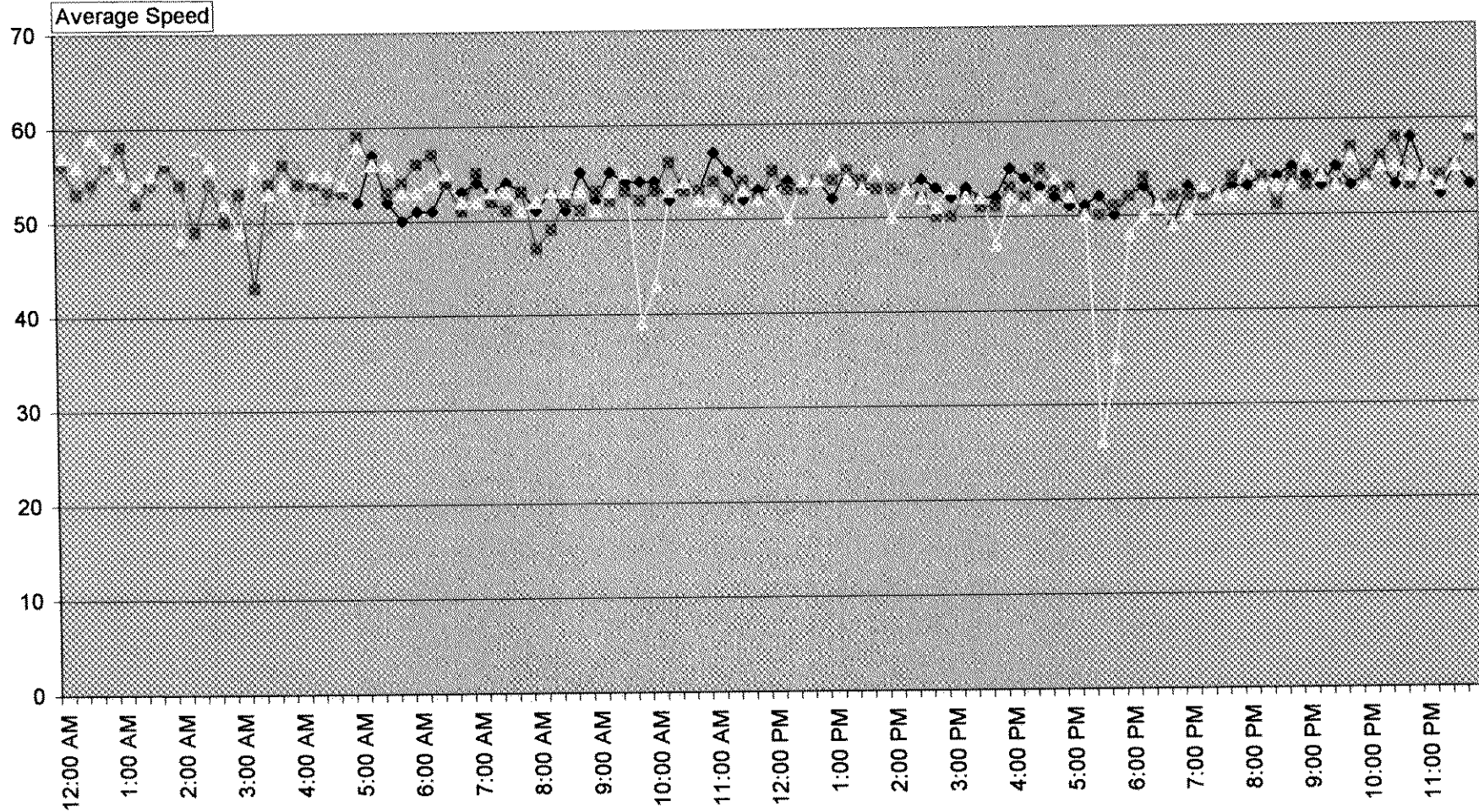
## **Speed Data**

# Limestone School

Location LS SB



Location LS NB



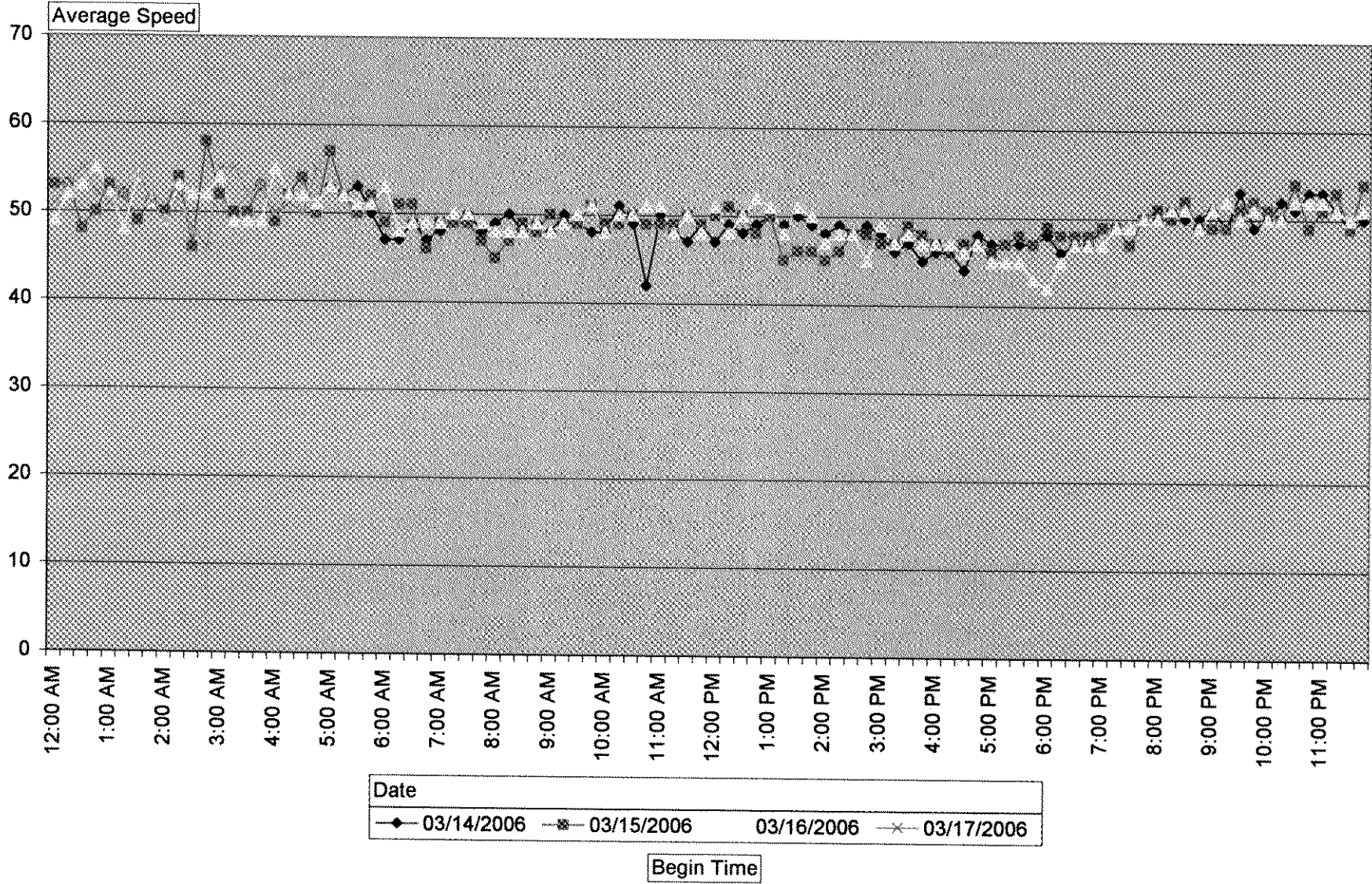
Date

—◆— 03/14/2006    —■— 03/15/2006    ...○... 03/16/2006    —×— 03/17/2006

Begin Time

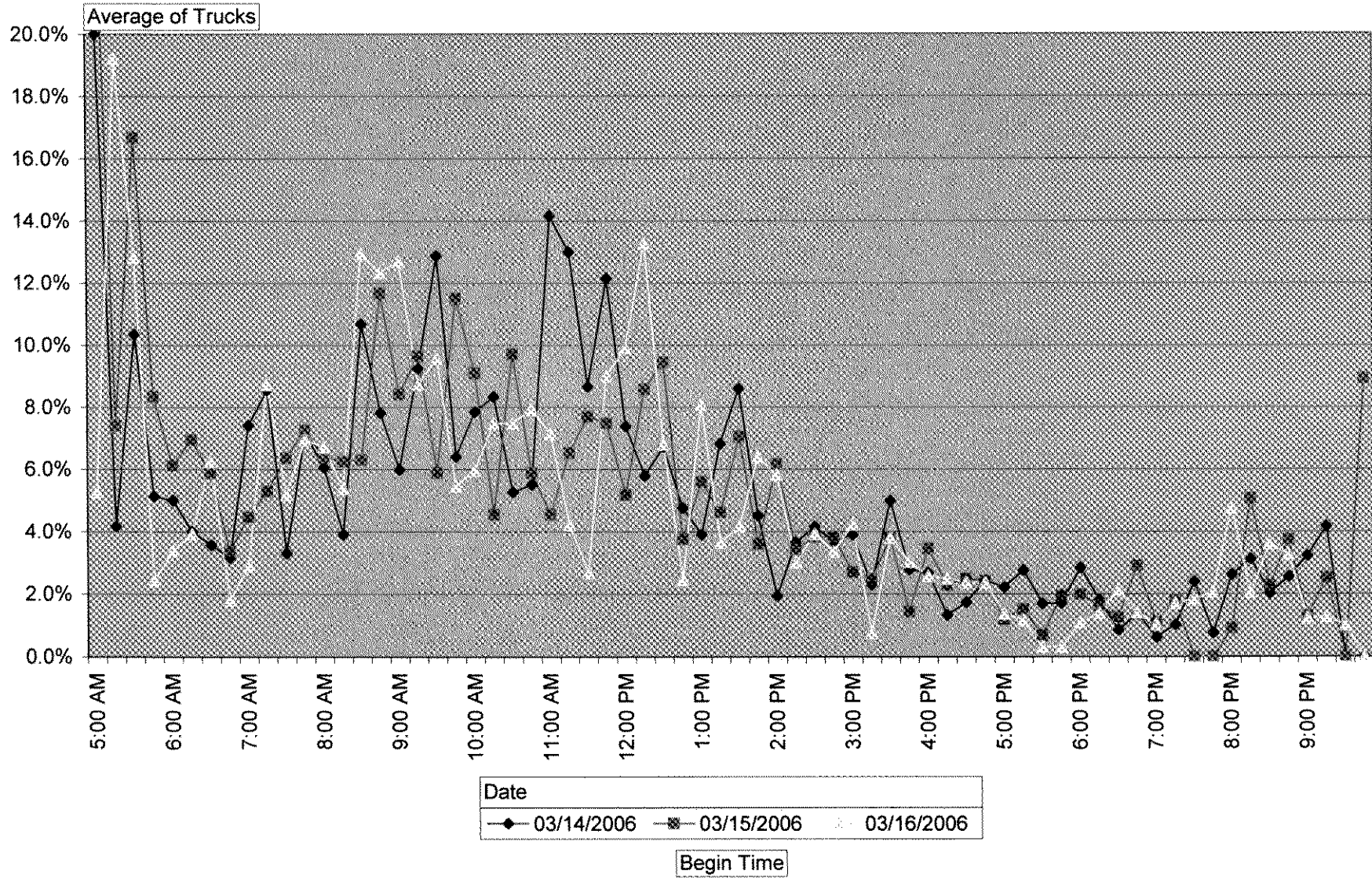
# Spinks Ferry

Location SF NB



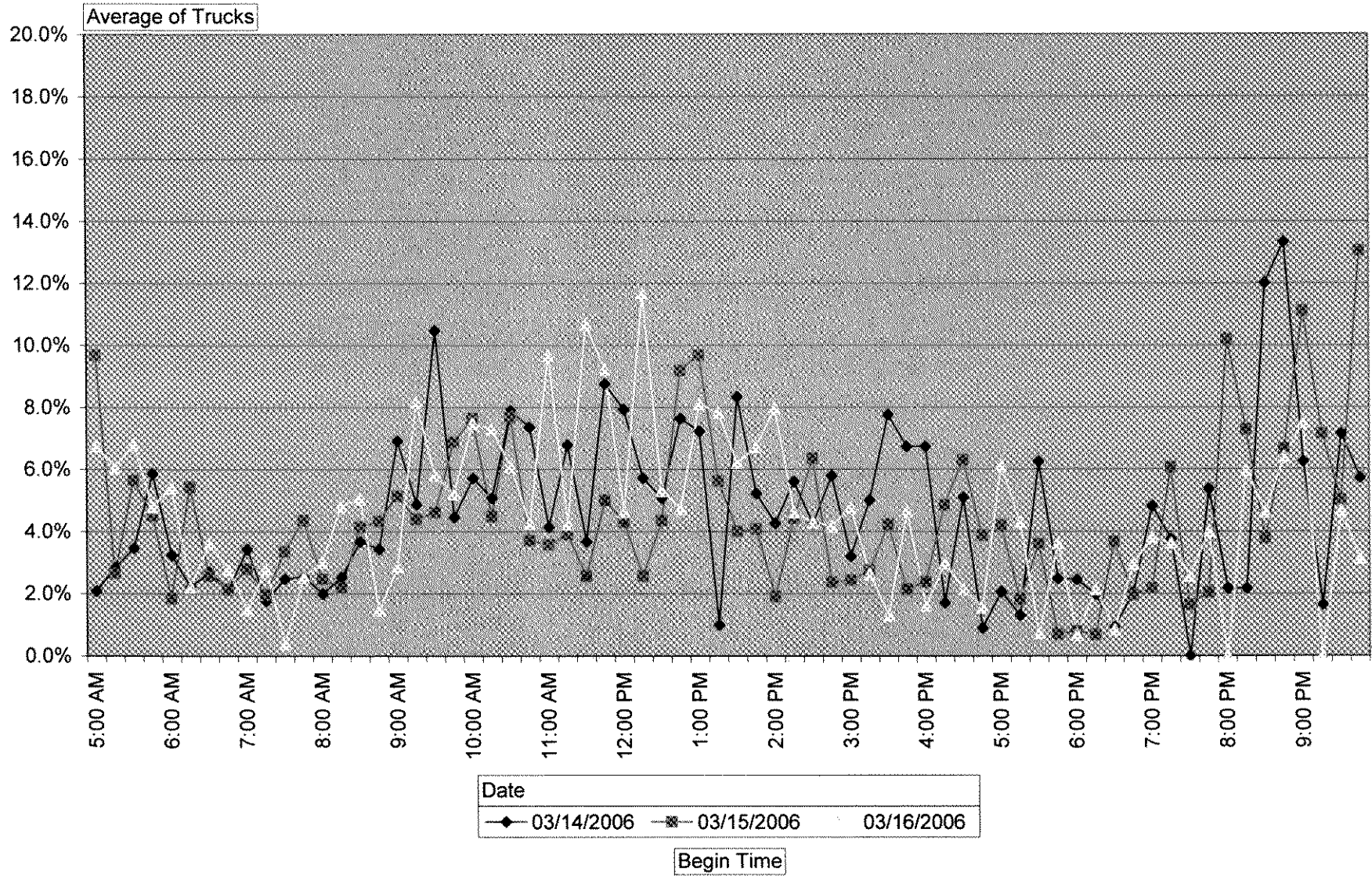
## **Heavy Vehicle Percentage Data**

Location LS NB





Location LS SB



Location SF NB

