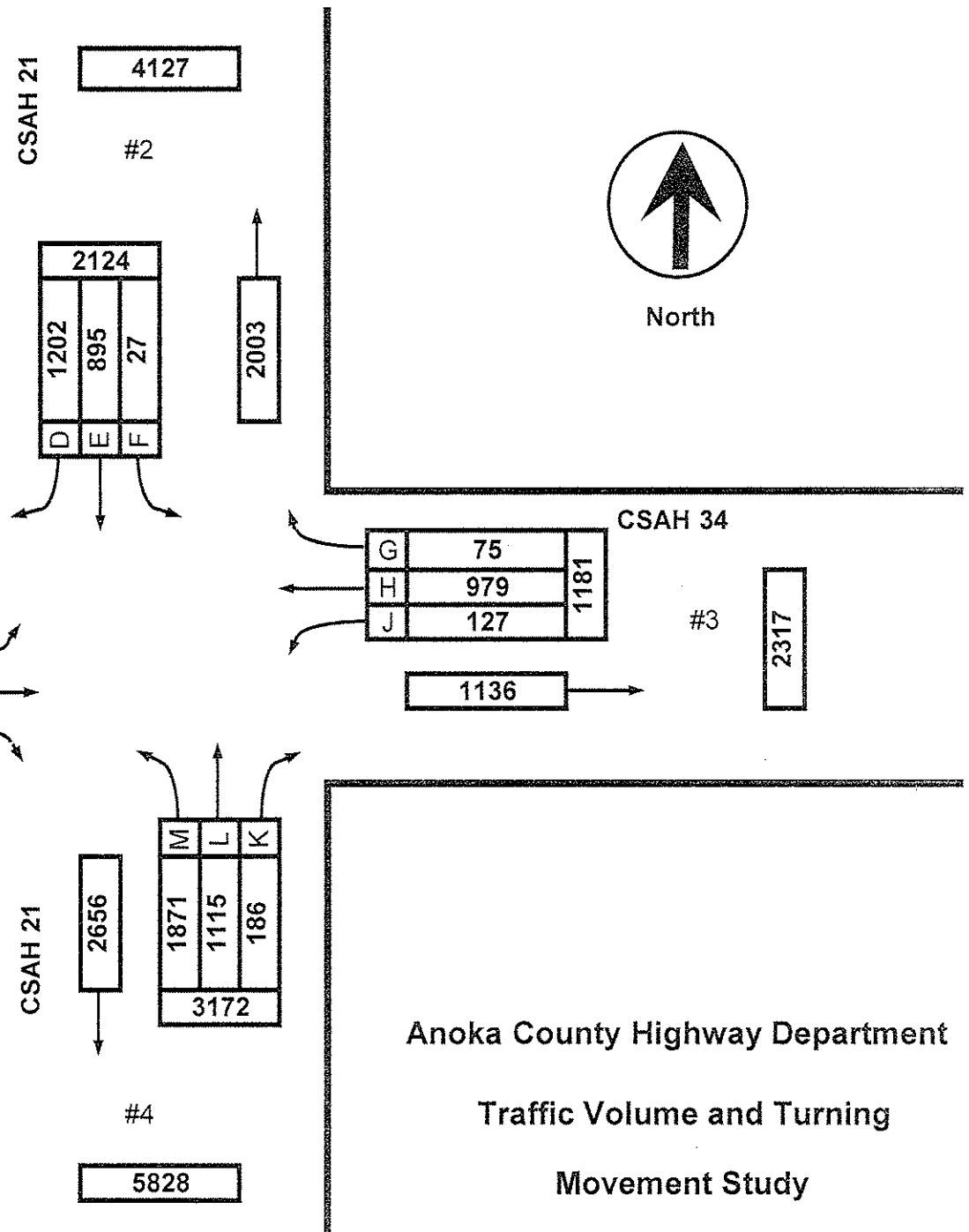


Date : 07/19/12

Count Number : TMC1224

Location : CSAH 21 (Centerville Road)  
@ CSAH 34 (Birch St.)

Collection Period : 6:00 AM - 10:00 PM



EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	1	0	1	2
#2	0	0	1	1
#3	0	0	1	1
#4	0	0	1	1

Anoka County Highway Department  
 Traffic Volume and Turning  
 Movement Study

Date : 07/19/12

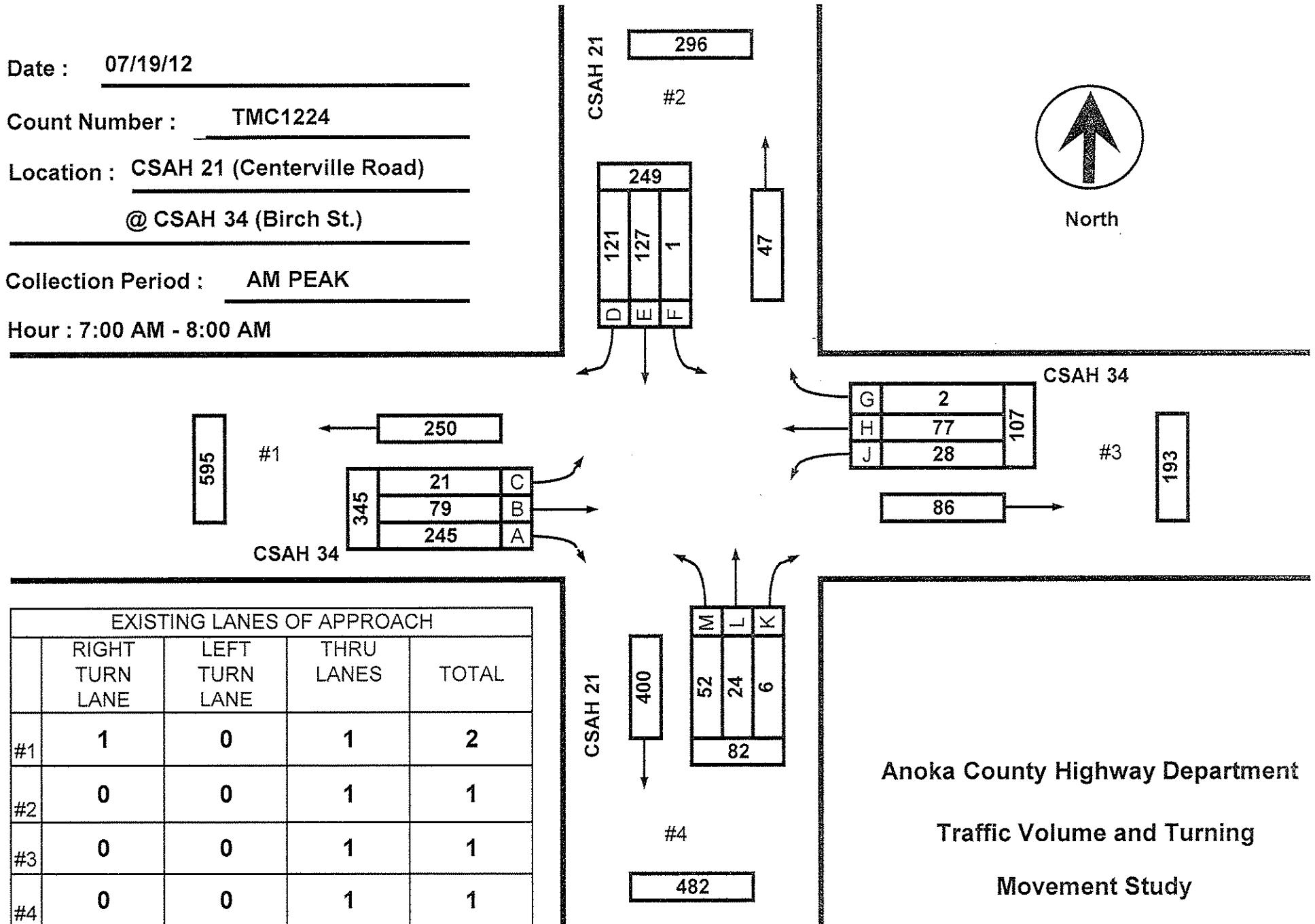
Count Number : TMC1224

Location : CSAH 21 (Centerville Road)

@ CSAH 34 (Birch St.)

Collection Period : AM PEAK

Hour : 7:00 AM - 8:00 AM



EXISTING LANES OF APPROACH

	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	1	0	1	2
#2	0	0	1	1
#3	0	0	1	1
#4	0	0	1	1

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

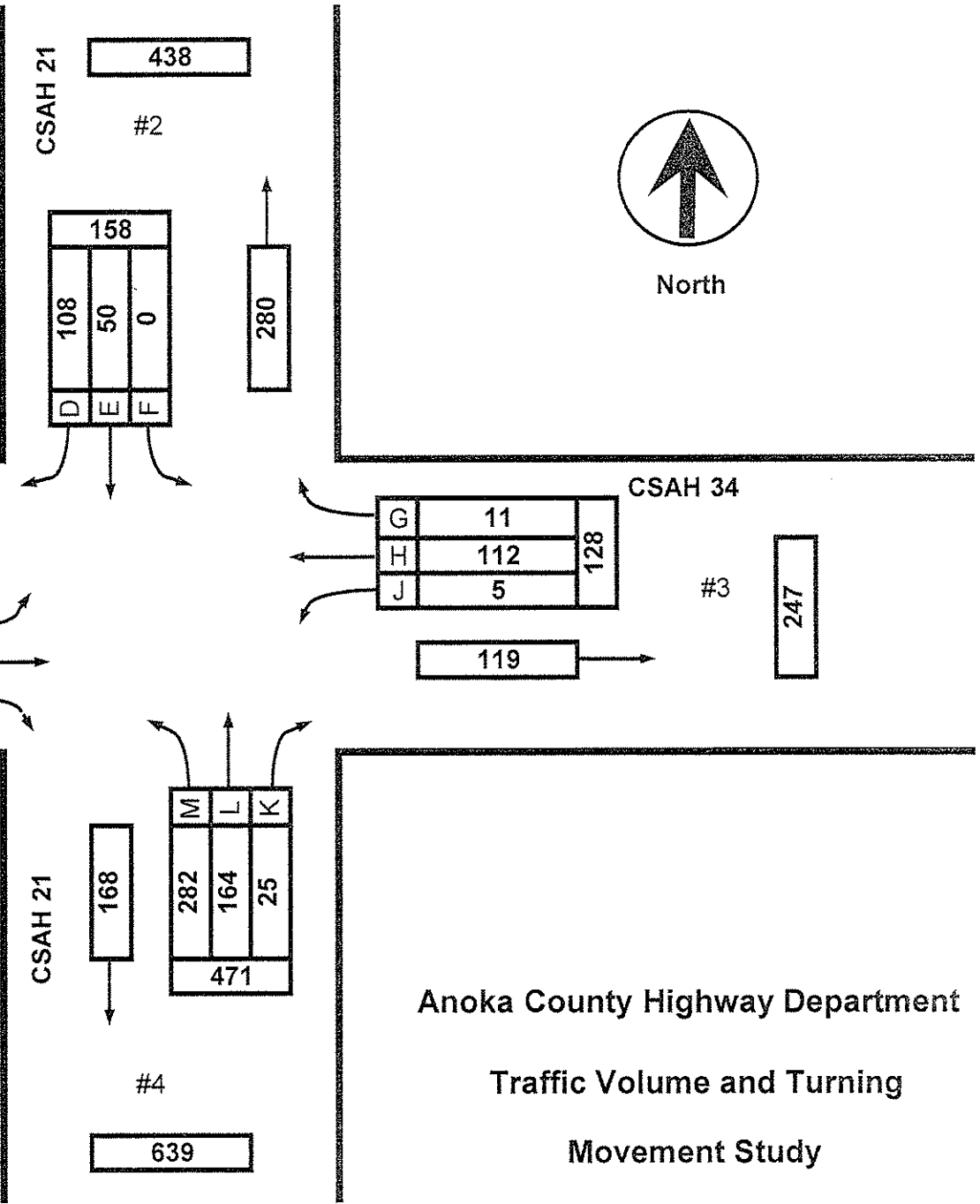
Date : 07/17/12

Count Number : TMC1224

Location : CSAH 21 (Centerville Road)  
@ CSAH 34 (Birch St.)

Collection Period : PM PEAK

Hour : 4:45 PM - 5:45 PM



EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	1	0	1	2
#2	0	0	1	1
#3	0	0	1	1
#4	0	0	1	1

Anoka County Highway Department  
 Traffic Volume and Turning  
 Movement Study



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : tmc1224  
 Site Code : 12240202  
 Start Date : 07/17/2012  
 Page No : 1

Weather: Warm and Cloudy  
 Counter: DB-400  
 Counted by: Reno and Hannah

#### Groups Printed- Unshifted

Start Time	CSAH 21 Southbound					CSAH 34 Westbound					CSAH 21 Northbound					CSAH 34 Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total			
06:00	0	26	12	0	38	0	9	0	0	9	5	3	2	0	10	2	6	51	0	59	0	116	116
06:15	0	30	21	0	51	1	14	0	0	15	8	6	1	0	15	2	8	44	0	54	0	135	135
06:30	0	26	31	1	57	3	18	0	0	21	12	3	2	2	17	4	16	47	1	67	4	162	166
06:45	1	37	31	0	69	4	17	0	1	21	10	4	1	0	15	5	14	62	2	81	3	186	189
Total	1	119	95	1	215	8	58	0	1	66	35	16	6	2	57	13	44	204	3	261	7	599	606
07:00	0	20	33	2	53	7	14	0	2	21	5	5	0	0	10	4	22	69	1	95	5	179	184
07:15	0	31	23	1	54	8	14	1	0	23	17	9	0	0	26	9	18	65	4	92	5	195	200
07:30	0	41	35	4	76	10	25	0	2	35	12	3	4	0	19	2	21	64	1	87	7	217	224
07:45	1	35	30	2	66	3	24	1	2	28	18	7	2	0	27	6	18	47	4	71	8	192	200
Total	1	127	121	9	249	28	77	2	6	107	52	24	6	0	82	21	79	245	10	345	25	783	808
08:00	1	20	25	2	46	2	15	0	2	17	17	7	0	2	24	12	20	47	1	79	7	166	173
08:15	0	24	24	2	48	3	10	0	0	13	15	8	2	1	25	9	12	36	1	57	4	143	147
08:30	2	19	17	0	38	0	16	0	0	16	15	9	2	2	26	6	14	53	2	73	4	153	157
08:45	0	21	25	0	46	3	17	0	2	20	18	11	1	2	30	11	19	40	2	70	6	166	172
Total	3	84	91	4	178	8	58	0	4	66	65	35	5	7	105	38	65	176	6	279	21	628	649
09:00	0	16	29	1	45	3	7	2	1	12	20	10	1	0	31	9	12	29	0	50	2	138	140
09:15	0	15	16	1	31	1	13	0	4	14	12	7	2	1	21	8	10	8	0	26	6	92	98
09:30	0	22	12	1	34	5	11	1	1	17	12	6	1	2	19	11	14	24	3	49	7	119	126
09:45	0	16	17	0	33	2	10	1	0	13	7	10	1	1	18	7	10	25	3	42	4	106	110
Total	0	69	74	3	143	11	41	4	6	56	51	33	5	4	89	35	46	86	6	167	19	455	474
10:00	1	18	19	1	38	2	16	1	1	19	3	12	2	0	17	9	10	25	3	44	5	118	123
10:15	1	14	11	0	26	2	6	1	0	9	18	9	4	1	31	7	16	29	4	52	5	118	123
10:30	0	14	11	1	25	3	5	0	1	8	13	16	3	4	32	13	10	33	2	56	8	121	129
10:45	0	13	6	2	19	1	3	0	0	4	22	9	2	1	33	11	12	20	4	43	7	99	106
Total	2	59	47	4	108	8	30	2	2	40	56	46	11	6	113	40	48	107	13	195	25	456	481
11:00	1	20	17	0	38	1	18	1	1	20	24	12	4	3	40	7	12	26	4	45	8	143	151
11:15	0	14	13	1	27	1	11	2	1	14	22	18	7	1	47	10	9	14	4	33	7	121	128
11:30	0	15	14	3	29	0	9	0	0	9	20	12	3	1	35	18	12	20	1	50	5	123	128
11:45	0	12	20	1	32	2	14	0	2	16	22	18	3	1	43	8	16	21	1	45	5	136	141
Total	1	61	64	5	126	4	52	3	4	59	88	60	17	6	165	43	49	81	10	173	25	523	548
12:00	1	16	15	1	32	3	31	3	1	37	12	21	3	0	36	11	26	12	1	49	3	154	157
12:15	1	10	16	1	27	5	9	1	3	15	19	31	5	3	55	12	11	19	2	42	9	139	148
12:30	1	7	14	1	22	4	9	0	2	13	17	18	4	1	39	16	3	19	2	38	6	112	118
12:45	0	10	15	0	25	1	15	0	0	16	28	16	0	0	44	13	20	17	3	50	3	135	138
Total	3	43	60	3	106	13	64	4	6	81	76	86	12	4	174	52	60	67	8	179	21	540	561
13:00	1	14	19	1	34	0	12	0	1	12	23	16	5	1	44	11	8	17	2	36	5	126	131
13:15	0	9	18	1	27	0	16	1	1	17	30	16	4	1	50	14	15	24	3	53	6	147	153
13:30	1	6	15	0	22	0	13	0	0	13	20	18	1	2	39	18	10	18	2	46	4	120	124
13:45	0	3	12	1	15	2	7	1	1	10	23	15	3	0	41	8	11	15	4	34	6	100	106
Total	2	32	64	3	98	2	48	2	3	52	96	65	13	4	174	51	44	74	11	169	21	493	514
14:00	3	10	16	0	29	0	13	2	2	15	22	16	1	1	39	5	6	24	1	35	4	118	122
14:15	1	20	17	1	38	0	17	0	2	17	35	19	5	1	59	10	15	23	4	48	8	162	170
14:30	1	10	15	1	26	2	11	0	0	13	35	29	2	2	66	11	15	23	3	49	6	154	160
14:45	0	9	11	0	20	0	10	0	2	10	34	30	7	1	71	15	16	22	1	53	4	154	158
Total	5	49	59	2	113	2	51	2	6	55	126	94	15	5	235	41	52	92	9	185	22	588	610
15:00	0	11	11	0	22	5	13	1	2	19	42	24	5	1	71	18	16	21	1	55	4	167	171
15:15	1	14	21	0	36	2	14	2	0	18	41	22	2	0	65	17	9	15	0	41	0	160	160
15:30	1	7	15	0	23	1	16	1	1	18	46	37	3	2	86	12	15	21	3	48	6	175	181
15:45	1	11	28	0	40	2	17	4	1	23	59	39	3	1	101	27	26	18	4	71	6	235	241
Total	3	43	75	0	121	10	60	8	4	78	188	122	13	4	323	74	66	75	8	215	16	737	753
16:00	0	9	15	1	24	4	26	2	0	32	60	34	2	0	96	14	30	15	1	59	2	211	213
16:15	1	9	23	0	33	1	25	3	0	29	61	31	10	2	102	25	16	20	0	61	2	225	227
16:30	0	11	30	1	41	3	32	1	0	36	63	25	4	1	92	14	23	23	3	60	5	229	234
16:45	0	10	29	0	39	2	32	6	1	40	77	52	4	2	133	25	19	28	1	72	4	284	288
Total	1	39	97	2	137	10	115	12	1	137	261	142	20	5	423	78	88	86	5	252	13	949	962
17:00	0	14	21	0	35	0	24	3	2	27	61	34	6	0	101	25	18	24	1	67	3	230	233
17:15	0	12	24	1	36	2	35	1	0	37	81	40	7	2	128	28	26	43	0	97	3	299	302
17:30	0	14	34	0	48	1	21	1	0	23	63	38	8	0	109	27	31	18	1	76	1	256	257
17:45	0	15	42	0	57	3	18	1	0	22	55	35	7	1	97	24	18	34	0	76	1	252	253
Total	0	55	121	1	176	6	98	6	2	110	260	147	28	3	435	104	93	119	2	316	8	1037	1045



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : tmc1224  
 Site Code : 12240202  
 Start Date : 07/17/2012  
 Page No : 2

Weather: Warm and Cloudy  
 Counter: DB-400  
 Counted by: Reno and Hannah

#### Groups Printed- Unshifted

Start Time	CSAH 21 Southbound					CSAH 34 Westbound					CSAH 21 Northbound					CSAH 34 Eastbound					Excl. Total	Incl. Total	Int. Total
	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total			
18:00	1	7	20	0	28	1	15	2	0	18	41	24	5	0	70	16	20	20	0	56	0	172	172
18:15	0	10	30	0	40	2	19	3	0	24	45	17	1	1	63	19	18	17	1	54	2	181	183
18:30	0	10	10	0	20	1	20	4	1	25	35	21	1	2	57	18	14	17	0	49	3	151	154
18:45	0	12	18	2	30	2	6	5	0	13	39	23	5	1	67	14	13	21	1	48	4	158	162
<b>Total</b>	<b>1</b>	<b>39</b>	<b>78</b>	<b>2</b>	<b>118</b>	<b>6</b>	<b>60</b>	<b>14</b>	<b>1</b>	<b>80</b>	<b>160</b>	<b>85</b>	<b>12</b>	<b>4</b>	<b>257</b>	<b>67</b>	<b>65</b>	<b>75</b>	<b>2</b>	<b>207</b>	<b>9</b>	<b>662</b>	<b>671</b>
19:00	0	8	17	0	25	1	13	3	0	17	32	21	1	0	54	21	16	11	0	48	0	144	144
19:15	3	8	13	0	24	2	8	1	0	11	48	20	3	1	71	13	14	17	0	44	1	150	151
19:30	0	11	9	1	20	1	9	1	0	11	30	15	3	1	48	16	14	23	0	53	2	132	134
19:45	1	5	14	0	20	2	17	1	0	20	24	15	0	2	39	13	9	17	0	39	2	118	120
<b>Total</b>	<b>4</b>	<b>32</b>	<b>53</b>	<b>1</b>	<b>89</b>	<b>6</b>	<b>47</b>	<b>6</b>	<b>0</b>	<b>59</b>	<b>134</b>	<b>71</b>	<b>7</b>	<b>4</b>	<b>212</b>	<b>63</b>	<b>53</b>	<b>68</b>	<b>0</b>	<b>184</b>	<b>5</b>	<b>544</b>	<b>549</b>
20:00	0	4	10	0	14	0	8	1	0	9	32	11	3	0	46	13	7	19	0	39	0	108	108
20:15	0	6	17	0	23	0	11	3	0	14	28	17	3	0	48	12	7	12	0	31	0	116	116
20:30	0	6	19	0	25	0	20	2	0	22	35	9	2	0	46	11	6	8	0	25	0	118	118
20:45	0	3	11	0	14	2	18	0	1	20	25	9	2	0	36	7	9	7	0	23	1	93	94
<b>Total</b>	<b>0</b>	<b>19</b>	<b>57</b>	<b>0</b>	<b>76</b>	<b>2</b>	<b>57</b>	<b>6</b>	<b>1</b>	<b>65</b>	<b>120</b>	<b>46</b>	<b>10</b>	<b>0</b>	<b>176</b>	<b>43</b>	<b>29</b>	<b>46</b>	<b>0</b>	<b>118</b>	<b>1</b>	<b>435</b>	<b>436</b>
21:00	0	8	16	0	24	2	13	1	0	16	33	13	2	1	48	7	16	9	0	32	1	120	121
21:15	0	5	11	0	16	0	26	1	1	27	26	13	1	0	40	17	10	5	0	32	1	115	116
21:30	0	8	11	0	19	0	13	1	0	14	22	5	0	0	27	17	8	11	0	36	0	96	96
21:45	0	4	8	0	12	1	11	1	0	13	22	12	3	0	37	9	8	8	0	25	0	87	87
<b>Total</b>	<b>0</b>	<b>25</b>	<b>46</b>	<b>0</b>	<b>71</b>	<b>3</b>	<b>63</b>	<b>4</b>	<b>1</b>	<b>70</b>	<b>103</b>	<b>43</b>	<b>6</b>	<b>1</b>	<b>152</b>	<b>50</b>	<b>42</b>	<b>33</b>	<b>0</b>	<b>125</b>	<b>2</b>	<b>418</b>	<b>420</b>
<b>Grand Total</b>	<b>27</b>	<b>895</b>	<b>1202</b>	<b>40</b>	<b>2124</b>	<b>127</b>	<b>979</b>	<b>75</b>	<b>48</b>	<b>1181</b>	<b>1871</b>	<b>1115</b>	<b>186</b>	<b>59</b>	<b>3172</b>	<b>813</b>	<b>923</b>	<b>1634</b>	<b>93</b>	<b>3370</b>	<b>240</b>	<b>9847</b>	<b>10087</b>
Apprch %	1.3	42.1	56.6			10.8	82.9	6.4			59	35.2	5.9			24.1	27.4	48.5					
Total %	0.3	9.1	12.2	21.6		1.3	9.9	0.8			19	11.3	1.9			8.3	9.4	16.6	34.2		2.4	97.6	

Start Time	CSAH 21 Southbound				CSAH 34 Westbound				CSAH 21 Northbound				CSAH 34 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 11:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00																	
07:00	0	20	33	53	7	14	0	21	5	5	0	10	4	22	69	95	179
07:15	0	31	23	54	8	14	1	23	17	9	0	26	9	18	65	92	195
07:30	0	41	35	76	10	25	0	35	12	3	4	19	2	21	64	87	217
07:45	1	35	30	66	3	24	1	28	18	7	2	27	6	18	47	71	192
<b>Total Volume</b>	<b>1</b>	<b>127</b>	<b>121</b>	<b>249</b>	<b>28</b>	<b>77</b>	<b>2</b>	<b>107</b>	<b>52</b>	<b>24</b>	<b>6</b>	<b>82</b>	<b>21</b>	<b>79</b>	<b>245</b>	<b>345</b>	<b>783</b>
% App. Total	0.4	51	48.6		26.2	72	1.9		63.4	29.3	7.3		6.1	22.9	71		
PHF	.250	.774	.864	.819	.700	.770	.500	.764	.722	.667	.375	.759	.583	.898	.888	.908	.902

Peak Hour Analysis From 12:00 to 21:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	0	10	29	39	2	32	6	40	77	52	4	133	25	19	28	72	284
17:00	0	14	21	35	0	24	3	27	61	34	6	101	25	18	24	67	230
17:15	0	12	24	36	2	35	1	38	81	40	7	128	28	26	43	97	299
17:30	0	14	34	48	1	21	1	23	63	38	8	109	27	31	18	76	256
<b>Total Volume</b>	<b>0</b>	<b>50</b>	<b>108</b>	<b>158</b>	<b>5</b>	<b>112</b>	<b>11</b>	<b>128</b>	<b>282</b>	<b>164</b>	<b>25</b>	<b>471</b>	<b>105</b>	<b>94</b>	<b>113</b>	<b>312</b>	<b>1069</b>
% App. Total	0	31.6	68.4		3.9	87.5	8.6		59.9	34.8	5.3		33.7	30.1	36.2		
PHF	.000	.893	.794	.823	.625	.800	.458	.800	.870	.788	.781	.885	.938	.758	.657	.804	.894



**ANOKA COUNTY HIGHWAY  
PC-WARRANTS  
TRAFFIC SIGNAL WARRANT ANALYSIS**

Study Name : TMC1224  
Study Date : 07/23/12  
Page No. : 1

**Signal Warrants - Summary**

**Major Street Approaches**

**Northbound: CSAH 21**

Number of Lanes: 1  
85% Speed > 40 MPH.  
Total Approach Volume: 3,172

**Southbound: CSAH 21**

Number of Lanes: 1  
85% Speed > 40 MPH.  
Total Approach Volume: 2,124

**Minor Street Approaches**

**Eastbound: CSAH 34**

Number of Lanes: 2  
  
Total Approach Volume: 3,370

**Westbound: CSAH 34**

Number of Lanes: 1  
  
Total Approach Volume: 1,181

**Warrant Summary (Rural values apply.)**

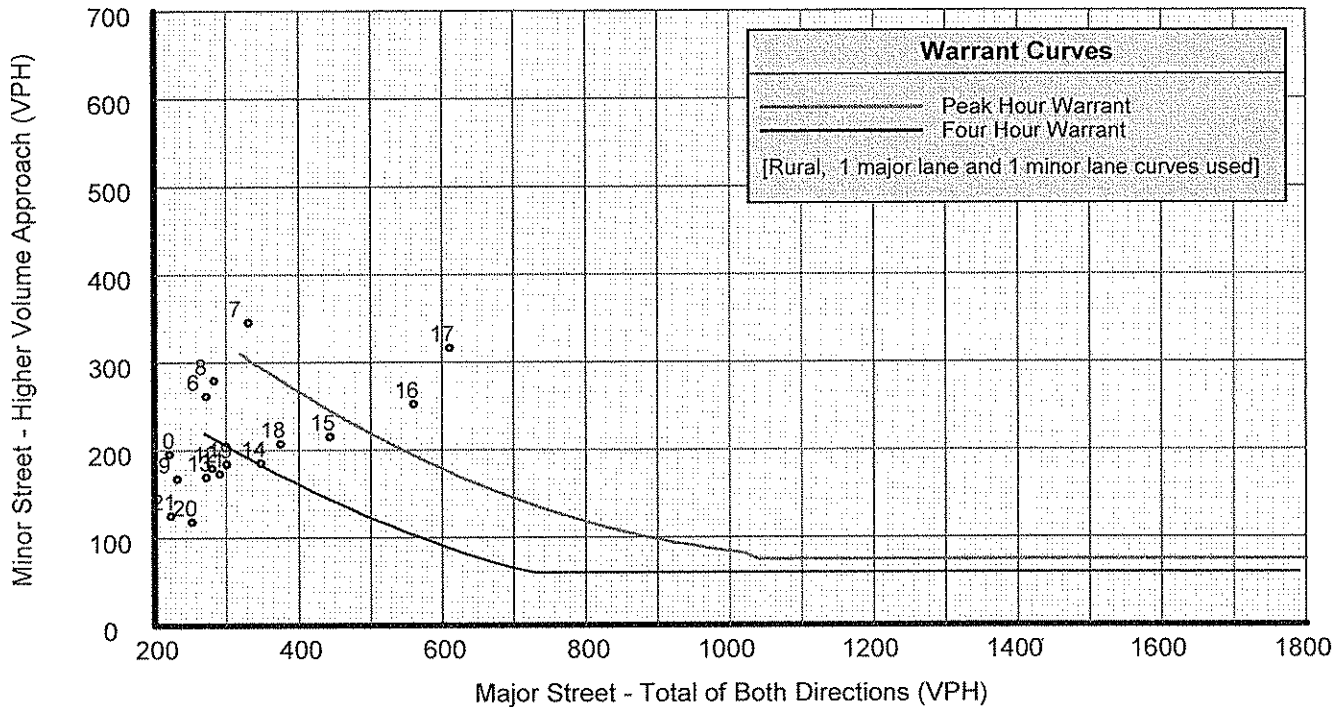
<b>Warrant 1 - Eight Hour Vehicular Volumes</b> .....	<b>Not Satisfied</b>
<b>Warrant 1A - Minimum Vehicular Volume</b> .....	<b>Not Satisfied</b>
Required volumes reached for 4 hours, 8 are needed	
<b>Warrant 1B - Interruption of Continuous Traffic</b> .....	<b>Not Satisfied</b>
Required volumes reached for 2 hours, 8 are needed	
<b>Warrant 1 A&amp;B - Combination of Warrants</b> .....	<b>Not Satisfied</b>
Required volumes reached for 3 hours, 8 are needed	
<b>Warrant 2 - Four Hour Volumes</b> .....	<b>Satisfied</b>
Number of hours (8) volumes exceed minimum >= minimum required (4).	
<b>Warrant 3 - Peak Hour</b> .....	<b>Satisfied</b>
<b>Warrant 3A - Peak Hour Delay</b> .....	<b>Satisfied</b>
Number of hours (9) volumes exceed minimum >= required (1). Delay data not evaluated.	
<b>Warrant 3B - Peak Hour Volumes</b> .....	<b>Satisfied</b>
Volumes exceed minimums for at least one hour.	
<b>Warrant 4 - Pedestrian Volumes</b> .....	<b>Not Evaluated</b>
<b>Warrant 5 - School Crossing</b> .....	<b>Not Evaluated</b>
<b>Warrant 6 - Coordinated Signal System</b> .....	<b>Not Evaluated</b>
<b>Warrant 7 - Crash Experience</b> .....	<b>Not Evaluated</b>
<b>Warrant 8 - Roadway Network</b> .....	<b>Not Evaluated</b>
<b>Warrant 9 - Intersection Near a Grade Crossing</b> .....	<b>Not Evaluated</b>



# ANOKA COUNTY HIGHWAY PC-WARRANTS TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name : TMC1224  
Study Date : 07/23/12  
Page No. : 2

## Signal Warrants - Summary



### Analysis of 8-Hour Volume Warrants:

Hour Begin	Major Total	Higher Minor Vol	Dir	War 1A			War 1B			War 1A&B		
				Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00	0	0	EB	350-No	140-No	---	525-No	70-No	---	420-No	112-No	---
01:00	0	0	EB	350-No	140-No	---	525-No	70-No	---	420-No	112-No	---
02:00	0	0	EB	350-No	140-No	---	525-No	70-No	---	420-No	112-No	---
03:00	0	0	EB	350-No	140-No	---	525-No	70-No	---	420-No	112-No	---
04:00	0	0	EB	350-No	140-No	---	525-No	70-No	---	420-No	112-No	---
05:00	0	0	EB	350-No	140-No	---	525-No	70-No	---	420-No	112-No	---
06:00	272	261	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
07:00	331	345	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
08:00	283	279	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
09:00	232	167	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
10:00	221	195	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
11:00	291	173	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
12:00	280	179	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
13:00	272	169	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
14:00	348	185	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
15:00	444	215	EB	350-Yes	105-Yes	Both	525-No	52-Yes	Minor	420-Yes	84-Yes	Both
16:00	560	252	EB	350-Yes	105-Yes	Both	525-Yes	52-Yes	Both	420-Yes	84-Yes	Both
17:00	611	316	EB	350-Yes	105-Yes	Both	525-Yes	52-Yes	Both	420-Yes	84-Yes	Both
18:00	375	207	EB	350-Yes	105-Yes	Both	525-No	52-Yes	Minor	420-No	84-Yes	Minor
19:00	301	184	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
20:00	252	118	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
21:00	223	125	EB	350-No	105-Yes	Minor	525-No	52-Yes	Minor	420-No	84-Yes	Minor
22:00	0	0	EB	350-No	140-No	---	525-No	70-No	---	420-No	112-No	---
23:00	0	0	EB	350-No	140-No	---	525-No	70-No	---	420-No	112-No	---



**ANOKA COUNTY HIGHWAY  
PC-WARRANTS  
TRAFFIC SIGNAL WARRANT ANALYSIS**

Study Name : TMC1224  
Study Date : 07/23/12  
Page No. : 1

**Multi-Way Stop Warrant Report**

**Major Street Approaches**

**Northbound: CSAH 21**

Total Approach Volume: 3,172  
85% Speed > 40 MPH.

**Southbound: CSAH 21**

Total Approach Volume: 2,124  
85% Speed > 40 MPH.

**Minor Street Approaches**

**Eastbound: CSAH 34**

Total Approach Volume: 3,370

**Westbound: CSAH 34**

Total Approach Volume: 1,181

**Warrant Summary**

**Criteria A - Interim Measure** ..... Not Evaluated  
If traffic signals are justified, stop signs can be installed as an interim measure.

**Criteria B - Crash Experience** ..... Not Evaluated

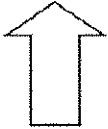
**Criteria C - Minimum Volumes and Delays** ..... Satisfied  
Delay data not evaluated  
Required volumes reached for 16 hours, 8 are needed

**Criteria D - 80% of Volumes, Delays, and Crashes** ..... Not Evaluated  
Delay data not evaluated  
Number of crashes (-1) is less than the minimum required (4).  
Required volumes reached for 0 hours, 8 are needed

**Analysis of 8 Hour Volume Warrants:**

Time	Major Total	Minor Total	Crit C			Crit D		
			Major	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
06:00 - 07:00	272	327	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
07:00 - 08:00	331	452	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
08:00 - 09:00	283	345	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
09:00 - 10:00	232	223	210-Yes	140-Yes	Both	240-No	160-Yes	Minor
10:00 - 11:00	221	235	210-Yes	140-Yes	Both	240-No	160-Yes	Minor
11:00 - 12:00	291	232	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
12:00 - 13:00	280	260	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
13:00 - 14:00	272	221	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
14:00 - 15:00	348	240	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
15:00 - 16:00	444	293	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
16:00 - 17:00	560	389	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
17:00 - 18:00	611	426	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
18:00 - 19:00	375	287	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
19:00 - 20:00	301	243	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
20:00 - 21:00	252	183	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
21:00 - 22:00	223	195	210-Yes	140-Yes	Both	240-No	160-Yes	Minor
00:00 - 01:00	0	0	210-No	140-No	No	240-No	160-No	No
00:15 - 01:15	0	0	210-No	140-No	No	240-No	160-No	No
00:30 - 01:30	0	0	210-No	140-No	No	240-No	160-No	No
00:45 - 01:45	0	0	210-No	140-No	No	240-No	160-No	No
01:00 - 02:00	0	0	210-No	140-No	No	240-No	160-No	No
01:15 - 02:15	0	0	210-No	140-No	No	240-No	160-No	No
01:30 - 02:30	0	0	210-No	140-No	No	240-No	160-No	No
01:45 - 02:45	0	0	210-No	140-No	No	240-No	160-No	No





COUNT LOCATION:

CSAH 21 (Centerville Road)

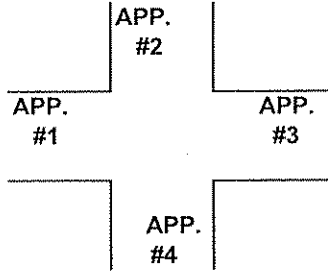
DATE:

07/19/2012

@ CSAH 34 (Birch Street)

NORTH

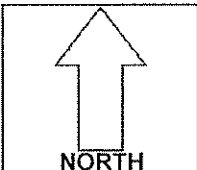
APP. #1 = CSAH 34
APP. #2 = CSAH 21
APP. #3 = CSAH 34
APP. #4 = CSAH 21



- HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT
- A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.
  - B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.
  - C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM								
6:15-6:30				1	1			
6:30-6:45						4		1
6:45-7:00						2		1
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>8</b>
7:00-7:15						4		1
7:15-7:30						3		3
7:30-7:45						5		2
7:45-8:00				1	1	7		1
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>26</b>
8:00-8:15						7		
8:15-8:30						4		
8:30-8:45		1	1		2	3		1
8:45-9:00						3	1	2
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>21</b>
9:00-9:15						2		
9:15-9:30						6		
9:30-9:45						7		
9:45-10:00						4		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>19</b>
10:00-10:15						5		
10:15-10:30						5		
10:30-10:45						8		
10:45-11:00						6		1
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>25</b>
11:00-11:15						8		
11:15-11:30						7		
11:30-11:45						4		1
11:45-12:00						4		1
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>25</b>
12:00-12:15						1		1
12:15-12:30						9		
12:30-12:45						5		1
12:45-1:00						2		1
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>20</b>
1:00-1:15						5		
1:15-1:30						6		
1:30-1:45						3		1
1:45-2:00						6		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>21</b>
				<b>TOTAL</b>	<b>4</b>		<b>TOTAL</b>	<b>165</b>

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COUNT LOCATION:

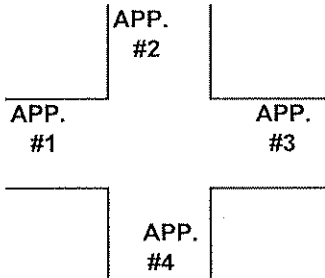
CSAH 21 (Centerville Road)

DATE:

07/17/2012

@ CSAH 34 (Birch Street)

APP. #1 = CSAH 34
APP. #2 = CSAH 21
APP. #3 = CSAH 34
APP. #4 = CSAH 21



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TIME	PEDESTRIANS					HEAVY VEHICLES			
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS	
2:00-2:15PM						4			1
2:15-2:30						8			2
2:30-2:45						6			3
2:45-3:00				1	1	4			4
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>22</b>	
3:00-3:15						4			5
3:15-3:30									6
3:30-3:45						5	1		7
3:45-4:00						6			8
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>16</b>	
4:00-4:15						2			9
4:15-4:30						2			10
4:30-4:45		1			1	5			11
4:45-5:00	1				1	2		2	12
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>13</b>	
5:00-5:15						3			13
5:15-5:30						2		1	14
5:30-5:45						1			15
5:45-6:00		1			1	1			16
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>8</b>	
6:00-6:15									17
6:15-6:30						2			18
6:30-6:45						3			19
6:45-7:00						4			20
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>9</b>	
7:00-7:15									21
7:15-7:30						1			22
7:30-7:45			1		1	2			23
7:45-8:00		1			1	2			24
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>5</b>	
8:00-8:15									25
8:15-8:30			1	1	2				26
8:30-8:45									27
8:45-9:00						1			28
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>1</b>	
9:00-9:15				1	1	1			29
9:15-9:30						1			30
9:30-9:45									31
9:45-10:00									32
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>2</b>	
				<b>TOTAL</b>	<b>13</b>		<b>TOTAL</b>	<b>241</b>	