

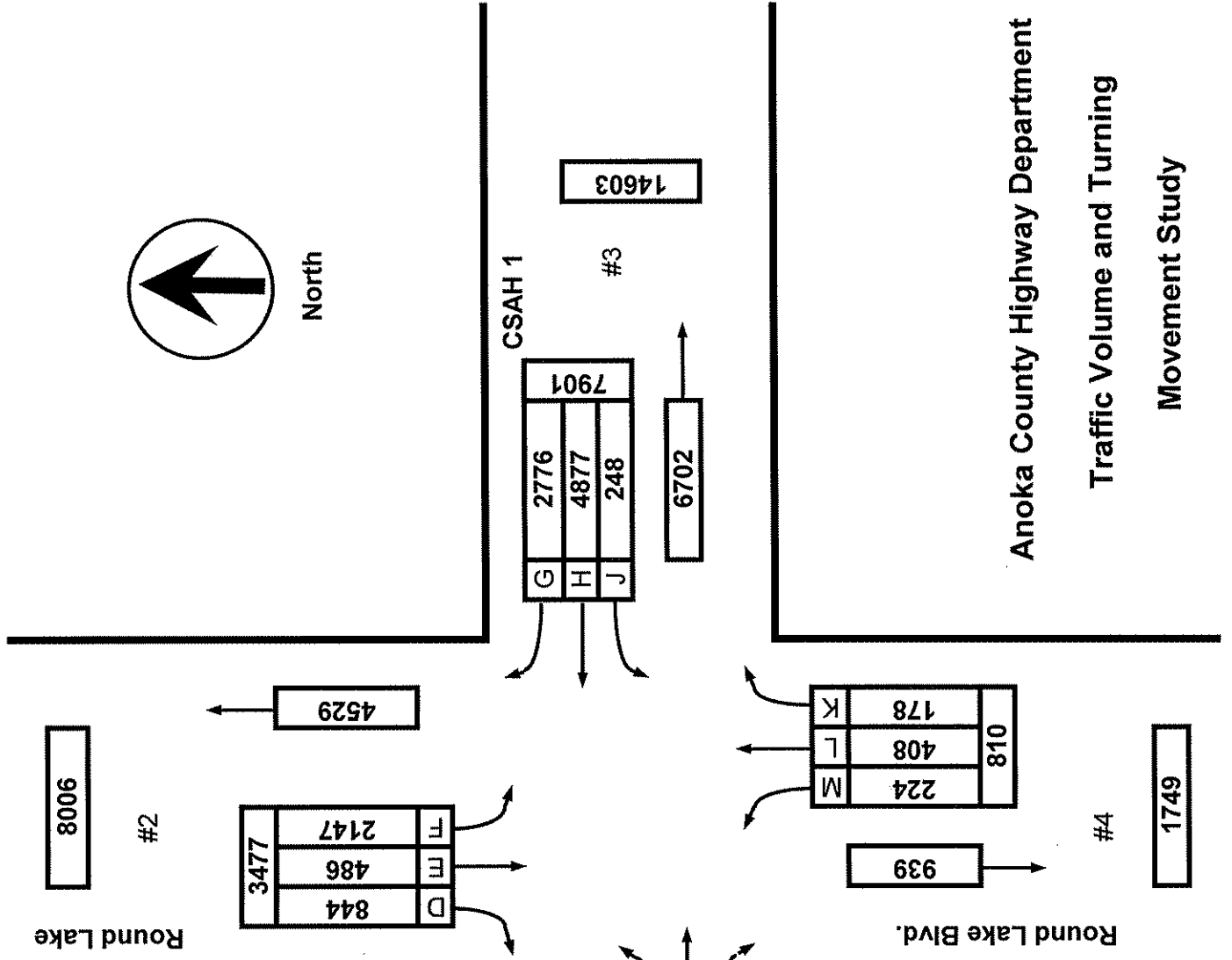
Date : 08/03/11

Count Number : TMC1126

Location : CSAH 1 (Coon Rapids Blvd.)

@ Round Lake Blvd.

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



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

Anoka County Highway Department  
 Traffic Volume and Turning  
 Movement Study

Date : 08/05/11

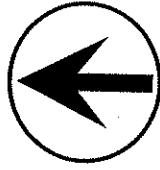
Count Number : TMC1126

Location : CSAH 1 (Coon Rapids Blvd.)

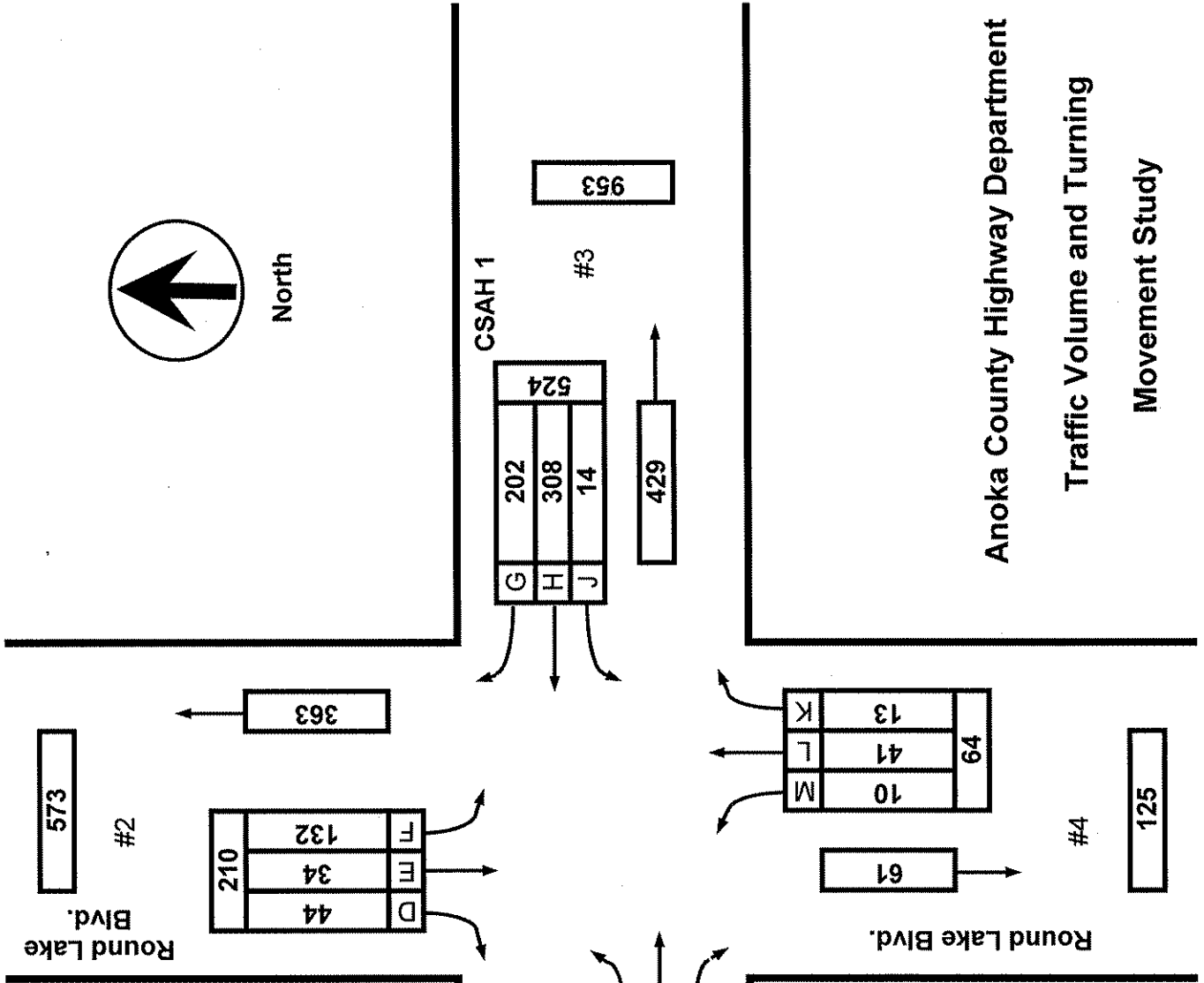
@ Round Lake Blvd.

Collection Period : AM PEAK

Hour : 11:00 AM - 12:00 PM



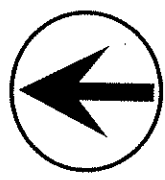
North



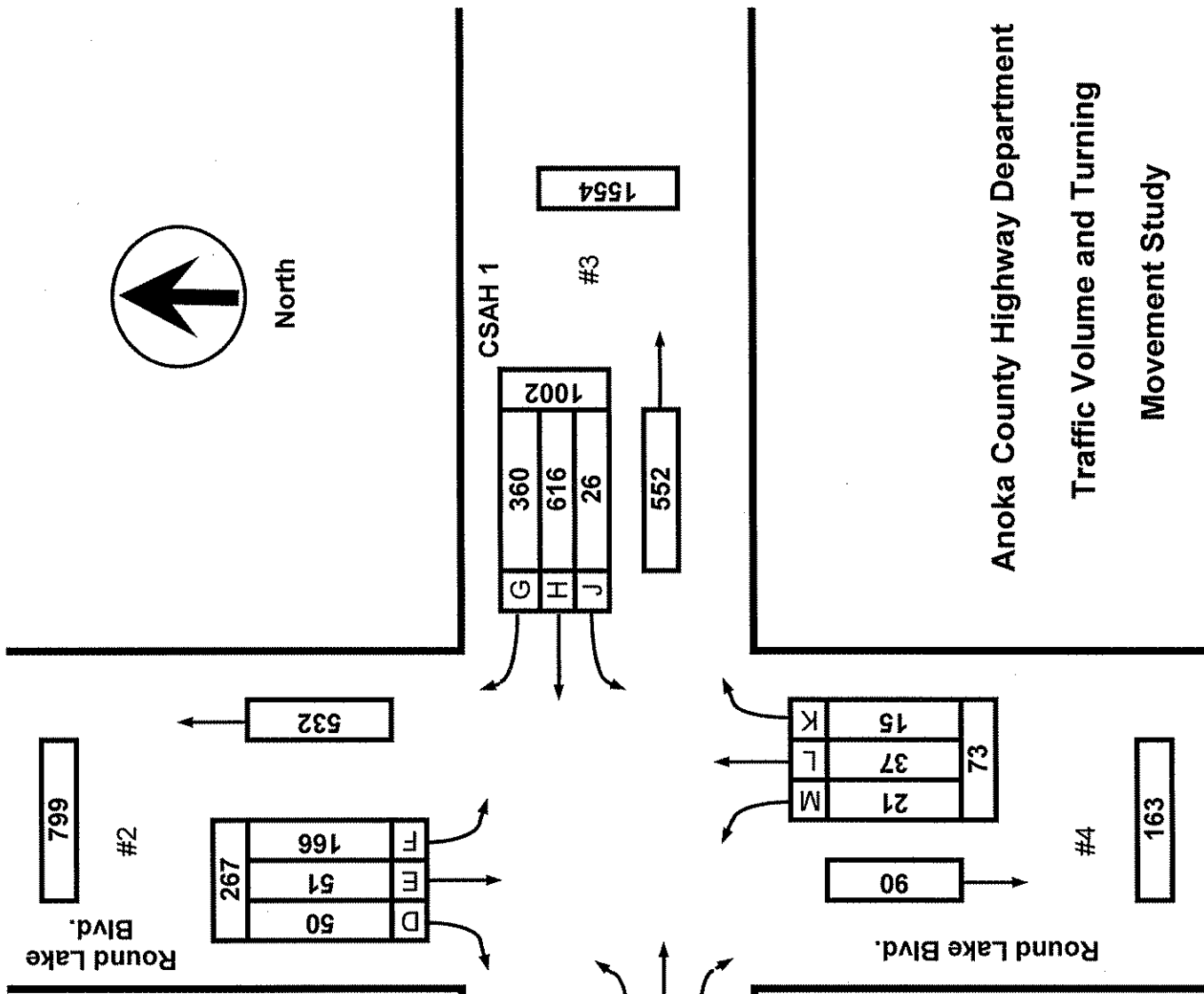
	EXISTING LANES OF APPROACH			TOTAL
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	
#1	1	1	2	4
#2	0	1	1	2
#3	1	1	2	4
#4	0	0	1	1

Anoka County Highway Department  
 Traffic Volume and Turning  
 Movement Study

Date : 08/03/11  
 Count Number : TMC1126  
 Location : CSAH 1 (Coon Rapids Blvd.)  
 @ Round Lake Blvd.  
 Collection Period : PM PEAK  
 Hour : 4:45 PM - 5:45 PM



North



	EXISTING LANES OF APPROACH			TOTAL
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	
#1	1	1	2	4
#2	0	1	1	2
#3	1	1	2	4
#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 : TMC1126A  
 Site Code : 11260202  
 Start Date : 08/03/2011  
 Page No : 1

Weather: Warm/Stormy  
 Counter: DB-400  
 Counted by: Rachel/Kristen

#### Groups Printed- Unshifted

Start Time	Round Lake Blvd. Southbound					CSAH 1 Westbound					Round Lake Blvd. Northbound					CSAH 1 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	27	2	5	0	34	1	26	10	0	37	1	0	4	0	5	5	30	0	2	35	2	111	113
06:15	26	1	4	0	31	0	21	6	0	27	5	1	5	0	11	1	55	0	1	56	1	125	126
06:30	36	0	11	1	47	0	45	12	2	57	2	0	2	0	4	4	54	2	2	60	5	168	173
06:45	34	2	12	1	48	0	63	13	4	76	5	4	2	0	11	4	48	3	1	55	6	190	196
<b>Total</b>	<b>123</b>	<b>5</b>	<b>32</b>	<b>2</b>	<b>160</b>	<b>1</b>	<b>155</b>	<b>41</b>	<b>6</b>	<b>197</b>	<b>13</b>	<b>5</b>	<b>13</b>	<b>0</b>	<b>31</b>	<b>14</b>	<b>187</b>	<b>5</b>	<b>6</b>	<b>206</b>	<b>14</b>	<b>594</b>	<b>608</b>
07:00	40	4	9	2	53	2	42	12	1	56	1	3	0	0	4	2	79	2	2	83	5	196	201
07:15	49	9	8	3	66	5	59	18	1	82	1	3	4	0	8	11	70	7	2	88	6	244	250
07:30	48	10	13	3	71	5	57	15	3	77	1	4	7	0	12	11	82	4	1	97	7	257	264
07:45	35	11	21	0	67	7	71	25	4	103	2	4	5	0	11	13	79	1	2	93	6	274	280
<b>Total</b>	<b>172</b>	<b>34</b>	<b>51</b>	<b>8</b>	<b>257</b>	<b>19</b>	<b>229</b>	<b>70</b>	<b>9</b>	<b>318</b>	<b>5</b>	<b>14</b>	<b>16</b>	<b>0</b>	<b>35</b>	<b>37</b>	<b>310</b>	<b>14</b>	<b>7</b>	<b>361</b>	<b>24</b>	<b>971</b>	<b>995</b>
08:00	31	9	17	1	57	4	66	27	7	97	1	1	4	0	6	11	60	0	2	71	10	231	241
08:15	38	6	19	3	63	2	60	26	3	88	0	4	3	0	7	11	46	1	5	58	11	216	227
08:30	27	6	18	2	51	4	67	22	6	93	5	4	2	0	11	17	63	6	1	86	9	241	250
08:45	22	10	17	1	49	11	66	29	1	106	3	10	6	0	19	18	66	6	0	90	2	264	266
<b>Total</b>	<b>118</b>	<b>31</b>	<b>71</b>	<b>7</b>	<b>220</b>	<b>21</b>	<b>259</b>	<b>104</b>	<b>17</b>	<b>364</b>	<b>9</b>	<b>19</b>	<b>15</b>	<b>0</b>	<b>43</b>	<b>57</b>	<b>235</b>	<b>13</b>	<b>8</b>	<b>305</b>	<b>32</b>	<b>952</b>	<b>984</b>
09:00	28	5	16	2	49	1	63	26	8	90	7	4	2	0	13	14	40	4	1	58	11	210	221
09:15	19	4	16	1	39	3	63	24	4	90	2	10	3	1	15	12	50	3	2	65	8	209	217
09:30	33	9	13	4	55	3	65	26	6	94	4	8	2	0	14	19	53	2	0	74	10	237	247
09:45	34	10	8	1	52	2	56	37	1	95	4	9	2	0	15	12	78	1	1	91	3	253	256
<b>Total</b>	<b>114</b>	<b>28</b>	<b>53</b>	<b>8</b>	<b>195</b>	<b>9</b>	<b>247</b>	<b>113</b>	<b>19</b>	<b>369</b>	<b>17</b>	<b>31</b>	<b>9</b>	<b>1</b>	<b>57</b>	<b>57</b>	<b>221</b>	<b>10</b>	<b>4</b>	<b>288</b>	<b>32</b>	<b>909</b>	<b>941</b>
10:00	31	8	20	0	59	1	72	41	2	114	11	4	2	0	17	28	49	5	1	82	3	272	275
10:15	27	7	20	3	54	2	69	38	1	109	6	8	4	1	18	24	69	3	4	96	9	277	286
10:30	33	16	17	1	66	2	78	24	3	104	4	7	0	0	11	24	57	4	1	85	5	266	271
10:45	25	4	16	0	45	6	69	34	6	109	6	10	6	0	22	38	70	6	2	114	8	290	298
<b>Total</b>	<b>116</b>	<b>35</b>	<b>73</b>	<b>4</b>	<b>224</b>	<b>11</b>	<b>288</b>	<b>137</b>	<b>12</b>	<b>436</b>	<b>27</b>	<b>29</b>	<b>12</b>	<b>1</b>	<b>68</b>	<b>114</b>	<b>245</b>	<b>18</b>	<b>8</b>	<b>377</b>	<b>25</b>	<b>1105</b>	<b>1130</b>
11:00	28	7	11	1	46	1	85	52	2	138	3	7	2	1	12	38	62	5	1	105	5	301	306
11:15	44	10	9	2	63	3	61	52	4	116	2	13	2	1	17	23	103	3	2	129	9	325	334
11:30	28	6	12	3	46	5	90	52	4	147	3	12	2	0	17	25	55	1	0	81	7	291	298
11:45	32	11	12	0	55	5	72	46	0	123	2	9	7	0	18	34	64	4	3	102	3	298	301
<b>Total</b>	<b>132</b>	<b>34</b>	<b>44</b>	<b>6</b>	<b>210</b>	<b>14</b>	<b>308</b>	<b>202</b>	<b>10</b>	<b>524</b>	<b>10</b>	<b>41</b>	<b>13</b>	<b>2</b>	<b>64</b>	<b>120</b>	<b>284</b>	<b>13</b>	<b>6</b>	<b>417</b>	<b>24</b>	<b>1215</b>	<b>1239</b>
12:00	31	10	13	1	54	3	71	49	1	123	4	12	3	0	19	31	82	2	1	115	3	311	314
12:15	49	10	12	0	71	7	76	47	0	130	4	13	3	0	20	23	66	3	2	92	2	313	315
12:30	39	12	10	1	61	1	84	57	3	142	6	13	6	0	25	17	75	5	2	97	6	325	331
12:45	39	9	16	1	64	2	96	48	1	146	5	7	9	0	21	32	71	2	3	105	5	336	341
<b>Total</b>	<b>158</b>	<b>41</b>	<b>51</b>	<b>3</b>	<b>250</b>	<b>13</b>	<b>327</b>	<b>201</b>	<b>5</b>	<b>541</b>	<b>19</b>	<b>45</b>	<b>21</b>	<b>0</b>	<b>85</b>	<b>103</b>	<b>294</b>	<b>12</b>	<b>8</b>	<b>409</b>	<b>16</b>	<b>1285</b>	<b>1301</b>
13:00	40	9	23	4	72	6	96	47	5	149	5	6	2	0	13	30	64	6	0	100	9	334	343
13:15	44	14	23	0	81	2	77	45	1	124	5	2	2	0	9	36	91	9	4	136	5	350	355
13:30	58	9	16	1	83	7	74	46	3	127	3	12	2	1	17	23	68	5	1	96	6	323	329
13:45	41	8	20	2	69	6	71	51	2	128	1	5	1	0	7	26	78	5	2	109	6	313	319
<b>Total</b>	<b>183</b>	<b>40</b>	<b>82</b>	<b>7</b>	<b>305</b>	<b>21</b>	<b>318</b>	<b>189</b>	<b>11</b>	<b>528</b>	<b>14</b>	<b>25</b>	<b>7</b>	<b>1</b>	<b>46</b>	<b>115</b>	<b>301</b>	<b>25</b>	<b>7</b>	<b>441</b>	<b>26</b>	<b>1320</b>	<b>1346</b>
14:00	45	6	20	1	71	1	73	51	7	125	7	12	5	1	24	30	77	3	3	110	12	330	342
14:15	52	10	26	3	88	5	81	47	4	133	6	6	2	0	14	15	74	6	0	95	7	330	337
14:30	41	7	17	1	65	6	80	43	3	129	4	12	1	2	17	43	94	7	4	144	10	355	365
14:45	39	7	18	1	64	5	128	61	2	194	6	5	0	1	11	24	119	6	2	149	6	418	424
<b>Total</b>	<b>177</b>	<b>30</b>	<b>81</b>	<b>6</b>	<b>288</b>	<b>17</b>	<b>362</b>	<b>202</b>	<b>16</b>	<b>581</b>	<b>23</b>	<b>35</b>	<b>8</b>	<b>4</b>	<b>66</b>	<b>112</b>	<b>364</b>	<b>22</b>	<b>9</b>	<b>498</b>	<b>35</b>	<b>1433</b>	<b>1468</b>
15:00	49	11	23	2	83	6	82	43	6	131	5	14	3	1	22	27	84	8	0	119	9	355	364
15:15	41	7	15	0	63	10	102	63	3	175	6	4	2	0	12	40	89	6	1	135	4	385	389
15:30	39	7	10	1	56	4	122	96	4	222	3	6	1	0	10	38	133	6	5	177	10	465	475
15:45	47	22	25	0	94	11	131	62	4	204	4	6	2	0	12	37	89	5	1	131	5	441	446
<b>Total</b>	<b>176</b>	<b>47</b>	<b>73</b>	<b>3</b>	<b>296</b>	<b>31</b>	<b>437</b>	<b>264</b>	<b>17</b>	<b>732</b>	<b>18</b>	<b>30</b>	<b>8</b>	<b>1</b>	<b>56</b>	<b>142</b>	<b>395</b>	<b>25</b>	<b>7</b>	<b>562</b>	<b>28</b>	<b>1646</b>	<b>1674</b>
16:00	40	12	13	2	65	4	119	78	7	201	4	13	6	0	23	25	112	3	1	140	10	429	439
16:15	32	8	15	1	55	4	124	85	3	213	2	4	2	0	8	30	91	2	0	123	4	399	403
16:30	36	8	11	1	55	5	131	72	2	208	5	4	1	0	10	34	93	5	1	132	4	405	409
16:45	39	7	17	1	63	10	145	96	2	251	8	8	7	0	23	34	114	2	2	150	5	487	492
<b>Total</b>	<b>147</b>	<b>35</b>	<b>56</b>	<b>5</b>	<b>238</b>	<b>23</b>	<b>519</b>	<b>331</b>	<b>14</b>	<b>873</b>	<b>19</b>	<b>29</b>	<b>16</b>	<b>0</b>	<b>64</b>	<b>123</b>	<b>410</b>	<b>12</b>	<b>4</b>	<b>545</b>	<b>23</b>	<b>1720</b>	<b>1743</b>
17:00	39	17	13	1	69	5	145	75	1	225	5	13	6	0	24	33	99	3	4	135	6	453	459
17:15	37	15	14	0	66	4	181	101	2	286	7	8	1	0	16	46	83	5	1	134	3	502	505
17:30	51	12	6	0	69	7	145	88	1	240	1	8	1	0	10	22	75	3	1	100	2	419	421
17:45	27	5	22	0	54	11	119	82	4	212	1	6	2	0	9	23	65	7	0	95	4	370	374
<b>Total</b>	<b>154</b>	<b>49</b>	<b>55</b>	<b>1</b>	<b>258</b>	<b>27</b>	<b>590</b>	<b>346</b>	<b>8</b>	<b>963</b>	<b>14</b>	<b>35</b>	<b>10</b>	<b>0</b>	<b>59</b>	<b>124</b>	<b>322</b>	<b>18</b>	<b>6</b>	<b>464</b>	<b>15</b>	<b>1744</b>	<b>1759</b>



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC1126A  
 Site Code : 11260202  
 Start Date : 08/03/2011  
 Page No : 2

Weather: Warm/Stormy  
 Counter: DB-400  
 Counted by: Rachel/Kristen

#### Groups Printed- Unshifted

Start Time	Round Lake Blvd. Southbound					CSAH 1 Westbound					Round Lake Blvd. Northbound					CSAH 1 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			
18:00	28	9	6	2	43	3	105	61	3	169	1	7	3	2	11	15	50	2	0	67	7	290	297
18:15	31	6	12	0	49	0	84	61	2	145	3	12	2	0	17	27	88	0	0	115	2	326	328
18:30	35	6	6	0	47	7	96	53	1	156	6	9	4	0	19	19	64	2	2	85	3	307	310
18:45	27	6	17	0	50	3	68	44	2	115	4	8	2	0	14	13	54	1	1	68	3	247	250
<b>Total</b>	<b>121</b>	<b>27</b>	<b>41</b>	<b>2</b>	<b>189</b>	<b>13</b>	<b>353</b>	<b>219</b>	<b>8</b>	<b>585</b>	<b>14</b>	<b>36</b>	<b>11</b>	<b>2</b>	<b>61</b>	<b>74</b>	<b>256</b>	<b>5</b>	<b>3</b>	<b>335</b>	<b>15</b>	<b>1170</b>	<b>1185</b>
19:00	26	6	6	0	38	3	55	51	2	109	5	5	2	0	12	21	55	0	1	76	3	235	238
19:15	26	4	12	0	42	2	46	36	1	84	4	5	1	0	10	17	49	4	1	70	2	206	208
19:30	18	7	9	0	34	4	48	35	2	87	3	6	0	0	9	19	52	2	1	73	3	203	206
19:45	28	8	10	0	46	5	51	29	0	85	2	4	2	0	8	11	54	1	0	66	0	205	205
<b>Total</b>	<b>98</b>	<b>25</b>	<b>37</b>	<b>0</b>	<b>160</b>	<b>14</b>	<b>200</b>	<b>151</b>	<b>5</b>	<b>365</b>	<b>14</b>	<b>20</b>	<b>5</b>	<b>0</b>	<b>39</b>	<b>68</b>	<b>210</b>	<b>7</b>	<b>3</b>	<b>285</b>	<b>8</b>	<b>849</b>	<b>857</b>
20:00	27	4	5	0	36	1	46	44	1	91	1	1	5	0	7	16	49	1	0	66	1	200	201
20:15	22	5	8	0	35	2	43	26	0	71	2	7	1	0	10	14	41	1	1	56	1	172	173
20:30	17	3	2	0	22	3	45	25	1	73	2	0	0	0	2	13	54	1	0	68	1	165	166
20:45	14	5	6	0	25	2	49	17	0	68	2	0	2	0	4	10	42	0	0	52	0	149	149
<b>Total</b>	<b>80</b>	<b>17</b>	<b>21</b>	<b>0</b>	<b>118</b>	<b>8</b>	<b>183</b>	<b>112</b>	<b>2</b>	<b>303</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>23</b>	<b>53</b>	<b>186</b>	<b>3</b>	<b>1</b>	<b>242</b>	<b>3</b>	<b>686</b>	<b>689</b>
21:00	18	0	9	1	27	1	29	24	0	54	0	1	1	0	2	8	50	1	0	59	1	142	143
21:15	25	4	7	0	36	4	22	26	0	52	0	3	1	0	4	8	41	1	1	50	1	142	143
21:30	15	2	5	0	22	0	28	26	0	54	1	2	2	0	5	7	37	0	0	44	0	125	125
21:45	20	2	2	0	24	1	23	18	1	42	0	0	2	0	2	9	29	1	1	39	2	107	109
<b>Total</b>	<b>78</b>	<b>8</b>	<b>23</b>	<b>1</b>	<b>109</b>	<b>6</b>	<b>102</b>	<b>94</b>	<b>1</b>	<b>202</b>	<b>1</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>13</b>	<b>32</b>	<b>157</b>	<b>3</b>	<b>2</b>	<b>192</b>	<b>4</b>	<b>516</b>	<b>520</b>
<b>Grand Total</b>	<b>2147</b>	<b>486</b>	<b>844</b>	<b>63</b>	<b>3477</b>	<b>248</b>	<b>4877</b>	<b>2776</b>	<b>160</b>	<b>7901</b>	<b>224</b>	<b>408</b>	<b>178</b>	<b>12</b>	<b>810</b>	<b>1345</b>	<b>4377</b>	<b>205</b>	<b>89</b>	<b>5927</b>	<b>324</b>	<b>18115</b>	<b>18439</b>
<b>Apprch %</b>	<b>61.7</b>	<b>14</b>	<b>24.3</b>			<b>3.1</b>	<b>61.7</b>	<b>35.1</b>			<b>27.7</b>	<b>50.4</b>	<b>22</b>			<b>22.7</b>	<b>73.8</b>	<b>3.5</b>					
<b>Total %</b>	<b>11.9</b>	<b>2.7</b>	<b>4.7</b>		<b>19.2</b>	<b>1.4</b>	<b>26.9</b>	<b>15.3</b>		<b>43.6</b>	<b>1.2</b>	<b>2.3</b>	<b>1</b>		<b>4.5</b>	<b>7.4</b>	<b>24.2</b>	<b>1.1</b>		<b>32.7</b>	<b>1.8</b>	<b>98.2</b>	

Start Time	Round Lake Blvd. Southbound				CSAH 1 Westbound				Round Lake Blvd. Northbound				CSAH 1 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 11:00																	
11:00	28	7	11	46	1	85	52	138	3	7	2	12	38	62	5	105	301
11:15	44	10	9	63	3	61	52	116	2	13	2	17	23	103	3	129	325
11:30	28	6	12	46	5	90	52	147	3	12	2	17	25	55	1	81	291
11:45	32	11	12	55	5	72	46	123	2	9	7	18	34	64	4	102	298
<b>Total Volume</b>	<b>132</b>	<b>34</b>	<b>44</b>	<b>210</b>	<b>14</b>	<b>308</b>	<b>202</b>	<b>524</b>	<b>10</b>	<b>41</b>	<b>13</b>	<b>64</b>	<b>120</b>	<b>284</b>	<b>13</b>	<b>417</b>	<b>1215</b>
<b>% App. Total</b>	<b>62.9</b>	<b>16.2</b>	<b>21</b>		<b>2.7</b>	<b>58.8</b>	<b>38.5</b>		<b>15.6</b>	<b>64.1</b>	<b>20.3</b>		<b>28.8</b>	<b>68.1</b>	<b>3.1</b>		
<b>PHF</b>	<b>.750</b>	<b>.773</b>	<b>.917</b>	<b>.833</b>	<b>.700</b>	<b>.856</b>	<b>.971</b>	<b>.891</b>	<b>.833</b>	<b>.788</b>	<b>.464</b>	<b>.889</b>	<b>.789</b>	<b>.689</b>	<b>.650</b>	<b>.808</b>	<b>.935</b>

Start Time	Round Lake Blvd. Southbound				CSAH 1 Westbound				Round Lake Blvd. Northbound				CSAH 1 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 12:00 to 21:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	39	7	17	63	10	145	96	251	8	8	7	23	34	114	2	150	487
17:00	39	17	13	69	5	145	75	225	5	13	6	24	33	99	3	135	453
17:15	37	15	14	66	4	181	101	286	7	8	1	16	46	83	5	134	502
17:30	51	12	6	69	7	145	88	240	1	8	1	10	22	75	3	100	419
<b>Total Volume</b>	<b>166</b>	<b>51</b>	<b>50</b>	<b>267</b>	<b>26</b>	<b>616</b>	<b>360</b>	<b>1002</b>	<b>21</b>	<b>37</b>	<b>15</b>	<b>73</b>	<b>135</b>	<b>371</b>	<b>13</b>	<b>519</b>	<b>1861</b>
<b>% App. Total</b>	<b>62.2</b>	<b>19.1</b>	<b>18.7</b>		<b>2.6</b>	<b>61.5</b>	<b>35.9</b>		<b>28.8</b>	<b>50.7</b>	<b>20.5</b>		<b>26</b>	<b>71.5</b>	<b>2.5</b>		
<b>PHF</b>	<b>.814</b>	<b>.750</b>	<b>.735</b>	<b>.967</b>	<b>.650</b>	<b>.851</b>	<b>.891</b>	<b>.876</b>	<b>.656</b>	<b>.712</b>	<b>.536</b>	<b>.760</b>	<b>.734</b>	<b>.814</b>	<b>.650</b>	<b>.865</b>	<b>.927</b>



**Anoka County Highway**  
**PC-WARRANTS**  
 Traffic Signal Warrant Analysis

Study Name : TMC1126  
 Study Date : 08/09/11  
 Page No. : 1

**Signal Warrants - Summary**

**Major Street Approaches**

**Eastbound: CSAH 1**  
 Number of Lanes: 2  
 Approach Speed: 50  
 Total Approach Volume: 5,927

**Westbound: CSAH 1**  
 Number of Lanes: 2  
 Approach Speed: 50  
 Total Approach Volume: 7,901

**Minor Street Approaches**

**Northbound: Round Lake Blvd.**  
 Number of Lanes: 2  
 Total Approach Volume: 810

**Southbound: Round Lake Blvd.**  
 Number of Lanes: 2  
 Total Approach Volume: 3,477

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

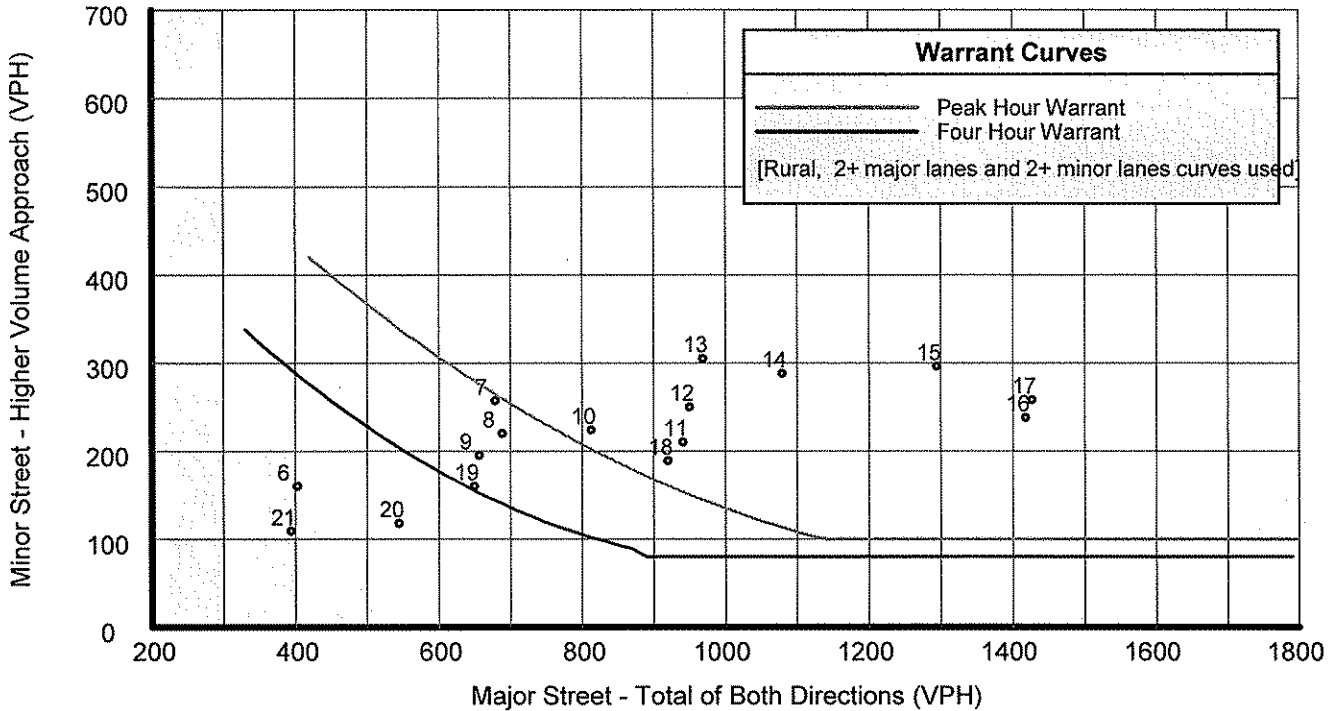
<b>Warrant 1 - Eight Hour Vehicular Volumes</b> .....	<b>Satisfied</b>
<b>Warrant 1A - Minimum Vehicular Volume</b> ..... Satisfied	
Required volumes reached for 13 hours, 8 are needed	
<b>Warrant 1B - Interruption of Continuous Traffic</b> ..... Satisfied	
Required volumes reached for 13 hours, 8 are needed	
<b>Warrant 1 A&amp;B - Combination of Warrants</b> ..... Satisfied	
Required volumes reached for 14 hours, 8 are needed	
<b>Warrant 2 - Four Hour Volumes</b> .....	<b>Satisfied</b>
Number of hours (13) volumes exceed minimum >= minimum required (4).	
<b>Warrant 3 - Peak Hour</b> .....	<b>Satisfied</b>
<b>Warrant 3A - Peak Hour Delay</b> ..... Satisfied	
Number of hours (51) volumes exceed minimum >= required (1). Delay data not evaluated.	
<b>Warrant 3B - Peak Hour Volumes</b> ..... Satisfied	
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>



# Anoka County Highway PC-WARRANTS Traffic Signal Warrant Analysis

Study Name : TMC1126  
Study Date : 08/09/11  
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	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
01:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
02:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
03:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
04:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
05:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
06:00	403	160	SB	420-No	140-Yes	Minor	630-No	70-Yes	Minor	504-No	112-Yes	Minor
07:00	679	257	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
08:00	689	220	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
09:00	657	195	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
10:00	813	224	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
11:00	941	210	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
12:00	950	250	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
13:00	969	305	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
14:00	1,079	288	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
15:00	1,294	296	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
16:00	1,418	238	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
17:00	1,427	258	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
18:00	920	189	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
19:00	650	160	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
20:00	545	118	SB	420-Yes	140-No	Major	630-No	70-Yes	Minor	504-Yes	112-Yes	Both
21:00	394	109	SB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-No	---
22:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
23:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---



**Anoka County Highway**  
**PC-WARRANTS**  
 Traffic Signal Warrant Analysis

Study Name : TMC1126  
 Study Date : 08/09/11  
 Page No. : 1

**Multi-Way Stop Warrant Report**

**Major Street Approaches**

**Eastbound: CSAH 1**  
 Total Approach Volume: 5,927  
 Approach Speed: 50

**Westbound: CSAH 1**  
 Total Approach Volume: 7,901  
 Approach Speed: 50

**Minor Street Approaches**

**Northbound: Round Lake Blvd.**  
 Total Approach Volume: 810

**Southbound: Round Lake Blvd.**  
 Total Approach Volume: 3,477

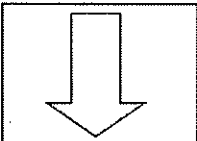
**Warrant Summary**

- 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 15 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 15 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	403	191	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
07:00 - 08:00	679	292	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
08:00 - 09:00	689	263	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
09:00 - 10:00	657	252	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
10:00 - 11:00	813	292	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
11:00 - 12:00	941	274	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
12:00 - 13:00	950	335	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
13:00 - 14:00	969	351	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
14:00 - 15:00	1,079	354	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
15:00 - 16:00	1,294	352	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
16:00 - 17:00	1,418	302	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
17:00 - 18:00	1,427	317	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
18:00 - 19:00	920	250	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
19:00 - 20:00	650	199	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
20:00 - 21:00	545	141	210-Yes	140-Yes	Both	240-Yes	160-No	Major
05:45 - 06:45	272	132	210-Yes	140-No	Major	240-Yes	160-No	Major
21:00 - 22:00	394	122	210-Yes	140-No	Major	240-Yes	160-No	Major
21:15 - 22:15	281	93	210-Yes	140-No	Major	240-Yes	160-No	Major
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





COUNT LOCATION:

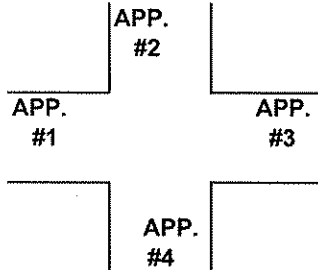
CSAH 1 (Coon Rapids Blvd.) @

DATE:

08/05/2011

Round Lake Blvd.

<b>NORTH</b>
APP. #1 = CSAH 1
APP. #2 = Round Lake Blvd.
APP. #3 = CSAH 1
APP. #4 = Round Lake Blvd.



HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT

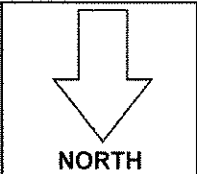
A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.

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		1			1	2		
6:15-6:30	1				1			1
6:30-6:45	1	1	2		4	3		2
6:45-7:00	1			1	2	4		2
<b>HOURLY TOTAL</b>					<b>8</b>	<b>HOURLY TOTAL</b>		<b>14</b>
7:00-7:15		1			1	3		2
7:15-7:30	1	2	1		4	4		2
7:30-7:45		1	1		2	5		2
7:45-8:00						5		1
<b>HOURLY TOTAL</b>					<b>7</b>	<b>HOURLY TOTAL</b>		<b>24</b>
8:00-8:15						10		
8:15-8:30		1	1		2	8		3
8:30-8:45	2				2	8		1
8:45-9:00	1				1	2		
<b>HOURLY TOTAL</b>					<b>5</b>	<b>HOURLY TOTAL</b>		<b>32</b>
9:00-9:15	1	1		1	3	10		1
9:15-9:30						7		1
9:30-9:45	1	1			2	7		3
9:45-10:00		1			1	2		1
<b>HOURLY TOTAL</b>					<b>6</b>	<b>HOURLY TOTAL</b>		<b>32</b>
10:00-10:15				1	1	2		1
10:15-10:30		1	4	1	6	7		2
10:30-10:45		1		2	3	7		2
10:45-11:00	1				1	3		2
<b>HOURLY TOTAL</b>					<b>11</b>	<b>HOURLY TOTAL</b>		<b>26</b>
11:00-11:15						3		2
11:15-11:30		1			1	3		4
11:30-11:45			2		2	6		1
11:45-12:00		1	3		4	2		
<b>HOURLY TOTAL</b>					<b>7</b>	<b>HOURLY TOTAL</b>		<b>21</b>
12:00-12:15			1	2	3	3		1
12:15-12:30								
12:30-12:45						3		3
12:45-1:00						5		
<b>HOURLY TOTAL</b>					<b>3</b>	<b>HOURLY TOTAL</b>		<b>15</b>
1:00-1:15	2				2	10		
1:15-1:30						4		1
1:30-1:45	1	4			5	5		1
1:45-2:00			2		2	5		1
<b>HOURLY TOTAL</b>					<b>9</b>	<b>HOURLY TOTAL</b>		<b>27</b>
<b>TOTAL</b>					<b>56</b>	<b>TOTAL</b>		<b>191</b>

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**COUNT LOCATION:**

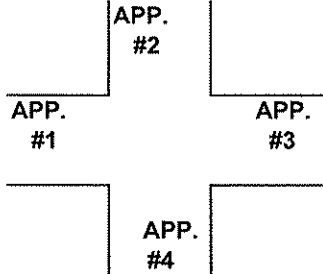
CSAH 1 (Coon Rapids Blvd.) @

**DATE:**

08/03/2011

Round Lake Blvd.

APP. #1 = CSAH 1
APP. #2 = Round Lake Blvd.
APP. #3 = CSAH 1
APP. #4 = Round Lake Blvd.



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
2:00-2:15PM	2		1		3	11		2
2:15-2:30		1			1	5		3
2:30-2:45	8				8	7		1
2:45-3:00	2	2	2		6	4		2
<b>HOURLY TOTAL</b>					<b>18</b>	<b>HOURLY TOTAL</b>		<b>35</b>
3:00-3:15	1				1	7		2
3:15-3:30	2				2	4		
3:30-3:45			5		5	8		2
3:45-4:00			3		3	4		
<b>HOURLY TOTAL</b>					<b>11</b>	<b>HOURLY TOTAL</b>		<b>27</b>
4:00-4:15	2				2	7		3
4:15-4:30						4		
4:30-4:45	1	2	2		5	2		2
4:45-5:00	1				1	3		1
<b>HOURLY TOTAL</b>					<b>8</b>	<b>HOURLY TOTAL</b>		<b>22</b>
5:00-5:15	1		1	1	3	5		1
5:15-5:30	1				1	2		1
5:30-5:45	2	5			7			2
5:45-6:00	2		3		5	3		1
<b>HOURLY TOTAL</b>					<b>16</b>	<b>HOURLY TOTAL</b>		<b>15</b>
6:00-6:15	3		2		5	6		1
6:15-6:30	2	1	2	2	7	1		1
6:30-6:45				1	1	2		1
6:45-7:00	4	1			5	2		1
<b>HOURLY TOTAL</b>					<b>18</b>	<b>HOURLY TOTAL</b>		<b>15</b>
7:00-7:15	3		2	2	7	2		1
7:15-7:30			1	1	2	1		1
7:30-7:45	1	1	3		5	2		1
7:45-8:00		1	1		2			
<b>HOURLY TOTAL</b>	<b>3</b>				<b>16</b>	<b>HOURLY TOTAL</b>		<b>8</b>
8:00-8:15	5	2			7	1		
8:15-8:30				2	2			1
8:30-8:45	1			1	2			1
8:45-9:00			2	1	3			
<b>HOURLY TOTAL</b>	<b>1</b>				<b>14</b>	<b>HOURLY TOTAL</b>		<b>3</b>
9:00-9:15	2				2	1		
9:15-9:30		1			1			
9:30-9:45	1				1	1		1
9:45-10:00								
<b>HOURLY TOTAL</b>					<b>4</b>	<b>HOURLY TOTAL</b>		<b>3</b>
<b>TOTAL</b>					<b>161</b>	<b>TOTAL</b>		<b>319</b>

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