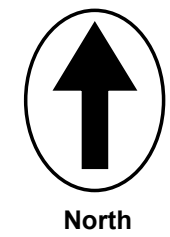
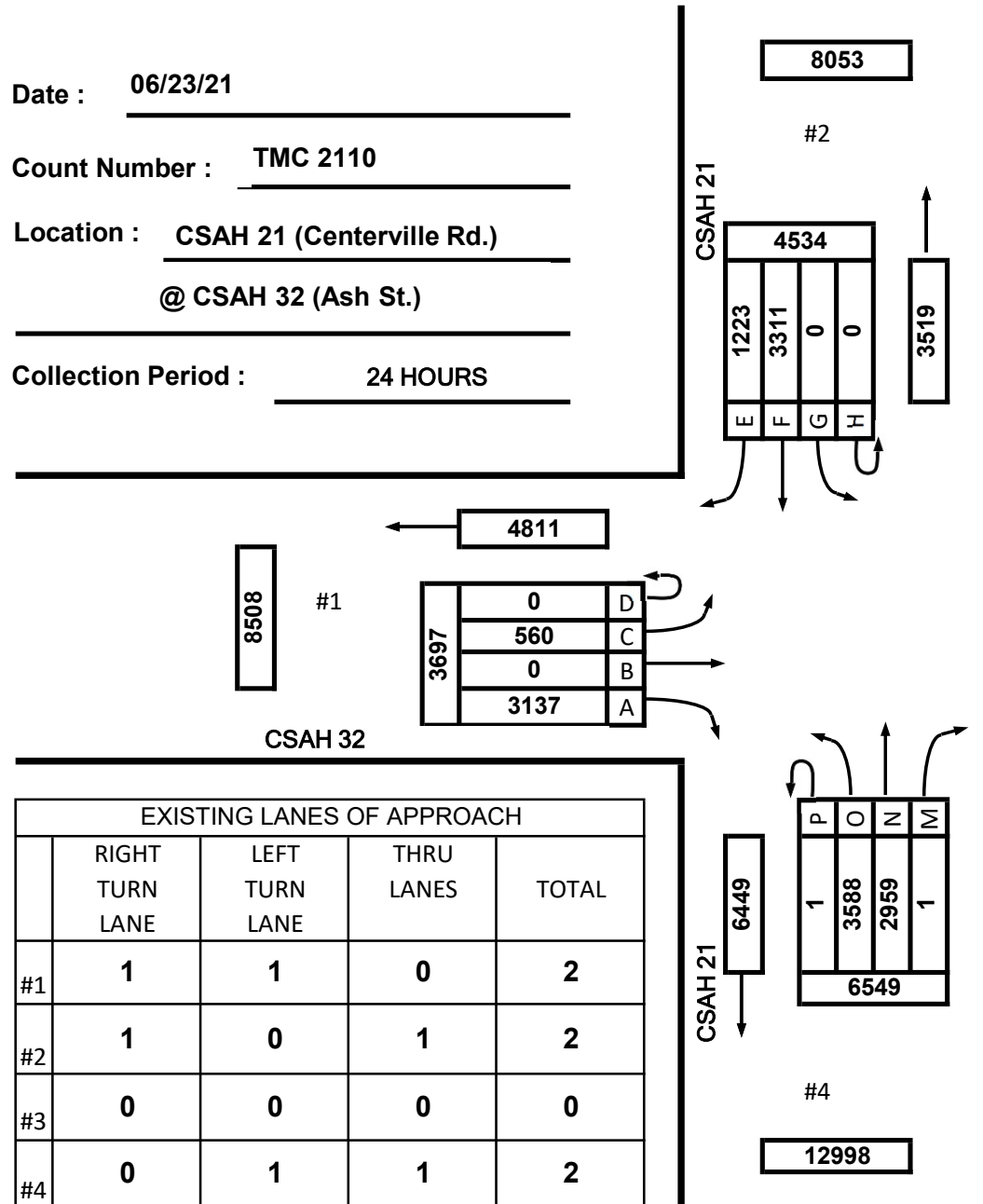


Date : 06/23/21

Count Number : TMC 2110

Location : CSAH 21 (Centerville Rd.)  
@ CSAH 32 (Ash St.)

Collection Period : 24 HOURS



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

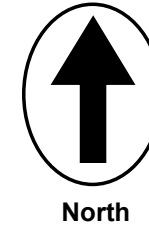
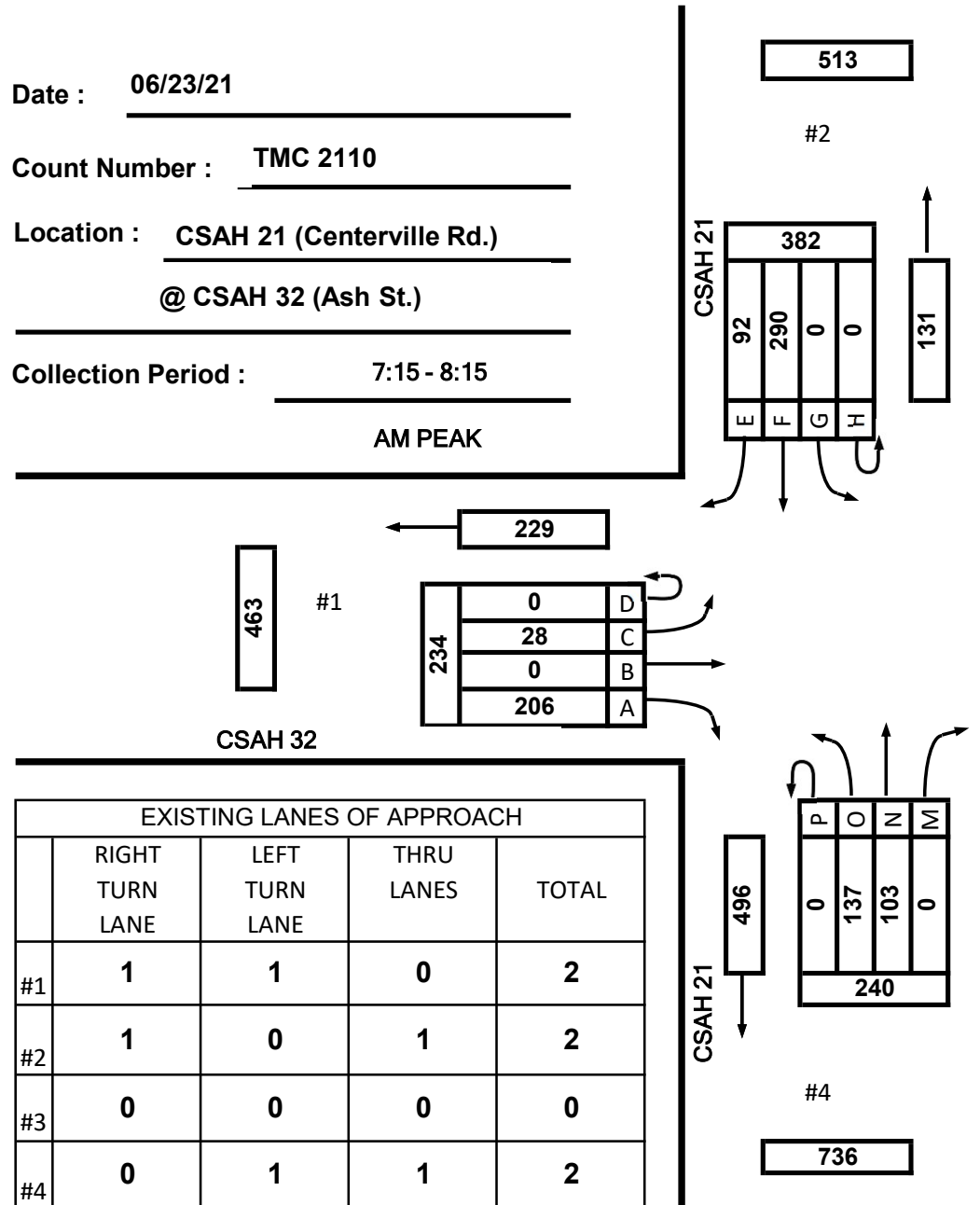
Anoka County Highway Department  
 Traffic Volume and Turning Movement Study

Date : 06/23/21

Count Number : TMC 2110

Location : CSAH 21 (Centerville Rd.)  
@ CSAH 32 (Ash St.)

Collection Period : 7:15 - 8:15  
AM PEAK



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

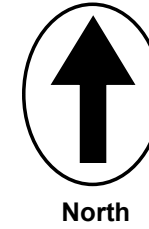
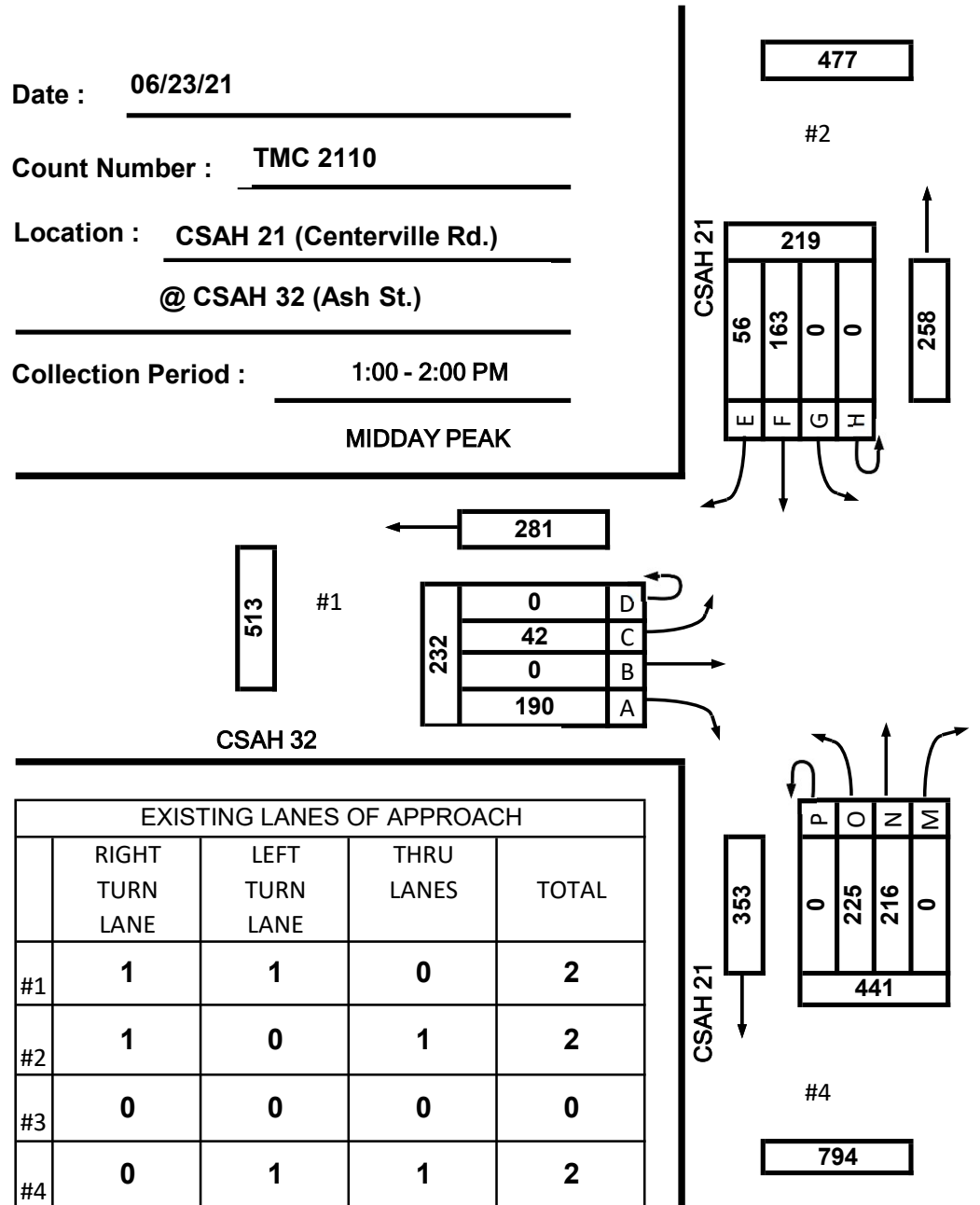
Anoka County Highway Department  
 Traffic Volume and Turning  
 Movement Study

Date : 06/23/21

Count Number : TMC 2110

Location : CSAH 21 (Centerville Rd.)  
@ CSAH 32 (Ash St.)

Collection Period : 1:00 - 2:00 PM  
**MIDDAY PEAK**



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

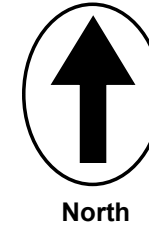
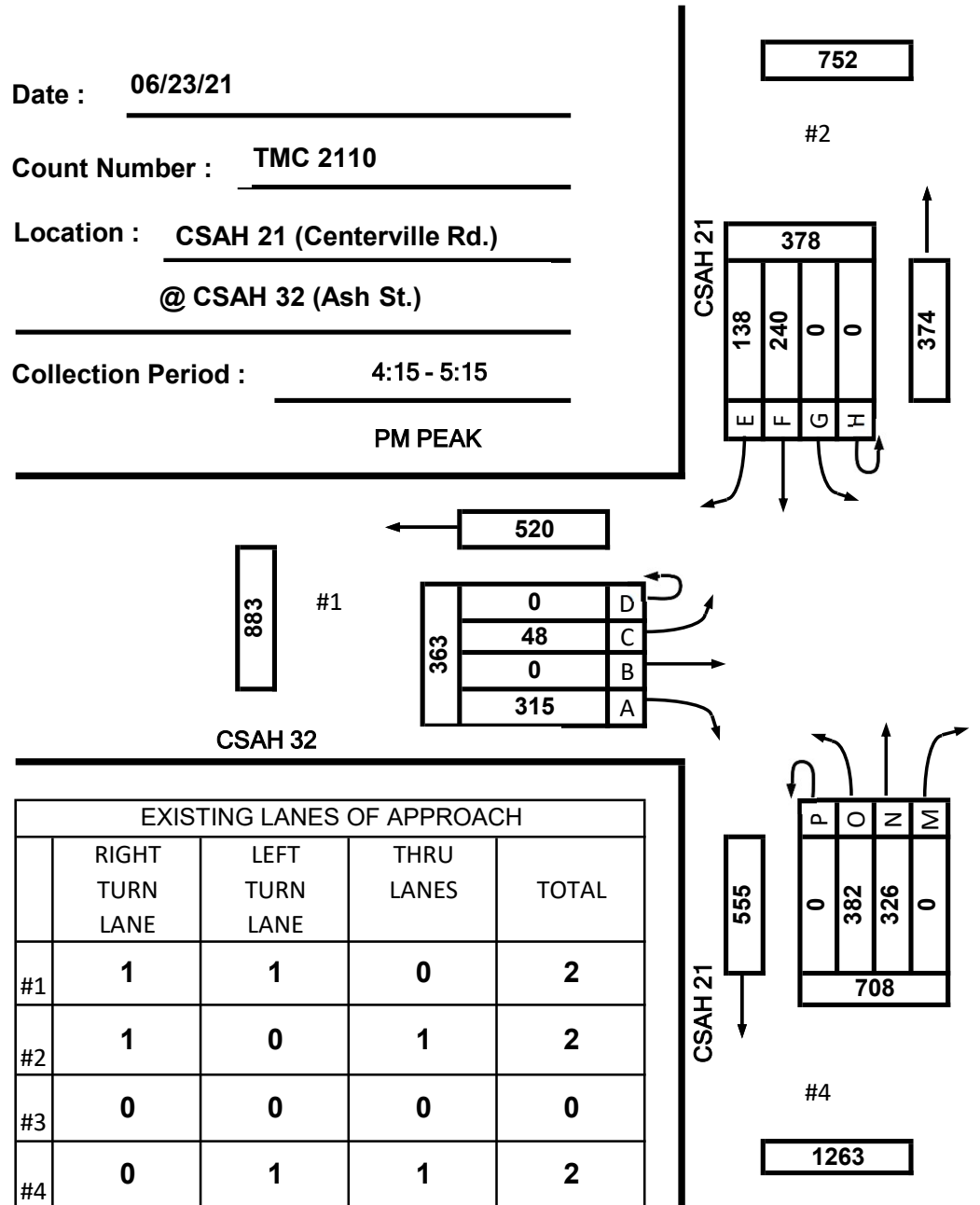
**Anoka County Highway Department**  
**Traffic Volume and Turning Movement Study**

Date : 06/23/21

Count Number : TMC 2110

Location : CSAH 21 (Centerville Rd.)  
@ CSAH 32 (Ash St.)

Collection Period : 4:15 - 5:15  
 PM PEAK



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 : tmc 2110-csah 21 @ csah 32-t  
 Site Code :  
 Start Date : 06/23/2021  
 Page No : 1

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Will

Groups Printed- Cars + - Trucks

Start Time	CSAH 21 (Centerville Road) Southbound						Westbound						CSAH 21 (Centerville Road) Northbound						CSAH 32 (Ash Street) Eastbound						Exclu. Total	Inclu. Total	Int. Total
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total			
00:00	0	0	2	1	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	3	0	4	0	8	8
00:15	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	2	1	2	1	4	5
00:30	0	0	2	1	0	3	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	3	0	3	0	8	8
00:45	0	0	5	0	0	5	0	0	0	0	0	0	0	6	4	0	0	10	0	1	0	3	0	4	0	19	19
<b>Total</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>10</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>13</b>	<b>1</b>	<b>39</b>	<b>40</b>
01:00	0	0	2	0	0	2	0	0	0	0	0	0	0	2	1	0	0	3	0	1	0	2	0	3	0	8	8
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	1	0	1	0	5	5
01:30	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	3	0	3	0	6	6
01:45	0	0	1	0	0	1	0	0	0	0	0	0	0	1	2	0	0	3	0	1	0	1	0	2	0	6	6
<b>Total</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>25</b>	<b>25</b>
02:00	0	0	4	0	0	4	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	7	7
02:15	0	0	2	1	0	3	0	0	0	0	0	0	0	3	4	0	0	7	0	1	0	0	0	1	0	11	11
02:30	0	0	3	0	0	3	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	2	0	2	0	8	8
02:45	0	0	1	3	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	5	5
<b>Total</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>4</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>31</b>	<b>31</b>
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	2	0	2	0	5	5
03:15	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0	2	0	4	4
03:30	0	0	1	2	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0	2	0	6	6
03:45	0	0	4	0	0	4	0	0	0	0	0	0	0	1	1	0	0	2	0	1	0	3	0	4	0	10	10
<b>Total</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>25</b>	<b>25</b>
04:00	0	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	5	5
04:15	0	0	4	0	0	4	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	2	0	2	0	10	10
04:30	0	0	11	4	0	15	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	9	0	9	0	28	28
04:45	0	0	11	6	0	17	0	0	0	0	0	0	0	8	0	0	0	8	0	1	0	7	0	8	0	33	33
<b>Total</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>11</b>	<b>0</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>76</b>	<b>76</b>
05:00	0	0	19	7	0	26	0	0	0	0	0	0	0	4	1	0	0	5	0	1	0	10	0	11	0	42	42
05:15	0	0	36	6	0	42	0	0	0	0	0	0	0	4	0	0	0	4	0	1	0	20	0	21	0	67	67
05:30	0	0	46	5	0	51	0	0	0	0	0	0	0	12	3	0	0	15	0	4	0	29	0	33	0	99	99
05:45	0	0	54	10	0	64	0	0	0	0	0	0	0	15	8	0	0	23	0	8	0	34	0	42	0	129	129
<b>Total</b>	<b>0</b>	<b>0</b>	<b>155</b>	<b>28</b>	<b>0</b>	<b>183</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>93</b>	<b>0</b>	<b>107</b>	<b>0</b>	<b>337</b>	<b>337</b>



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : tmc 2110-csah 21 @ csah 32-t  
 Site Code :  
 Start Date : 06/23/2021  
 Page No : 2

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Will

Groups Printed- Cars + - Trucks

Start Time	CSAH 21 (Centerville Road) Southbound						Westbound						CSAH 21 (Centerville Road) Northbound						CSAH 32 (Ash Street) Eastbound						Exclu. Total	Inclu. Total	Int. Total
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total			
	06:00	0	0	48	11	0	59	0	0	0	0	0	0	0	23	4	0	0	27	0	10	0	16	0			
06:15	0	0	57	17	0	74	0	0	0	0	0	0	0	23	11	0	0	34	0	7	0	35	0	42	0	150	150
06:30	0	0	75	22	0	97	0	0	0	0	0	0	0	30	9	0	0	39	0	3	0	41	0	44	0	180	180
06:45	0	0	80	12	0	92	0	0	0	0	0	0	0	26	15	0	0	41	0	6	0	47	0	53	0	186	186
<b>Total</b>	<b>0</b>	<b>0</b>	<b>260</b>	<b>62</b>	<b>0</b>	<b>322</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>141</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>139</b>	<b>0</b>	<b>165</b>	<b>0</b>	<b>628</b>	<b>628</b>
07:00	0	0	72	22	0	94	0	0	0	0	0	0	0	32	14	0	0	46	0	9	0	51	0	60	0	200	200
07:15	0	0	77	30	0	107	0	0	0	0	0	0	0	39	23	0	0	62	0	3	0	48	0	51	0	220	220
07:30	0	0	79	18	0	97	0	0	0	0	0	0	0	25	18	0	0	43	0	2	0	53	0	55	0	195	195
07:45	0	0	70	23	0	93	0	0	0	0	0	0	0	37	32	0	0	69	0	10	0	61	0	71	0	233	233
<b>Total</b>	<b>0</b>	<b>0</b>	<b>298</b>	<b>93</b>	<b>0</b>	<b>391</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>133</b>	<b>87</b>	<b>0</b>	<b>0</b>	<b>220</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>213</b>	<b>0</b>	<b>237</b>	<b>0</b>	<b>848</b>	<b>848</b>
08:00	0	0	64	21	0	85	0	0	0	0	0	0	0	36	30	0	0	66	0	13	0	44	0	57	0	208	208
08:15	0	0	54	19	0	73	0	0	0	0	0	0	0	37	17	0	0	54	0	8	0	43	0	51	0	178	178
08:30	0	0	52	22	0	74	0	0	0	0	0	0	0	35	29	0	0	64	0	15	0	54	0	69	0	207	207
08:45	0	0	54	25	0	79	0	0	0	0	0	0	0	40	26	0	0	66	0	13	0	49	0	62	0	207	207
<b>Total</b>	<b>0</b>	<b>0</b>	<b>224</b>	<b>87</b>	<b>0</b>	<b>311</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>148</b>	<b>102</b>	<b>0</b>	<b>0</b>	<b>250</b>	<b>0</b>	<b>49</b>	<b>0</b>	<b>190</b>	<b>0</b>	<b>239</b>	<b>0</b>	<b>800</b>	<b>800</b>
09:00	0	0	59	12	0	71	0	0	0	0	0	0	0	26	33	0	0	59	0	7	0	39	0	46	0	176	176
09:15	0	0	66	18	0	84	0	0	0	0	0	0	0	36	27	0	0	63	0	6	0	55	0	61	0	208	208
09:30	0	0	60	13	0	73	0	0	0	0	0	0	0	38	22	0	0	60	0	5	0	36	0	41	0	174	174
09:45	0	0	51	12	0	63	0	0	0	0	0	0	0	40	30	0	0	70	0	9	0	53	0	62	0	195	195
<b>Total</b>	<b>0</b>	<b>0</b>	<b>236</b>	<b>55</b>	<b>0</b>	<b>291</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>140</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>252</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>183</b>	<b>0</b>	<b>210</b>	<b>0</b>	<b>753</b>	<b>753</b>
10:00	0	0	55	18	0	73	0	0	0	0	0	0	0	42	25	0	0	67	0	5	0	55	0	60	0	200	200
10:15	0	0	44	12	0	56	0	0	0	0	0	0	0	33	31	0	0	64	0	3	0	43	0	46	0	166	166
10:30	0	0	49	9	0	58	0	0	0	0	0	0	0	45	32	0	0	77	0	6	0	47	0	53	0	188	188
10:45	0	0	59	11	0	70	0	0	0	0	0	0	0	39	28	0	0	67	0	5	0	39	0	44	0	181	181
<b>Total</b>	<b>0</b>	<b>0</b>	<b>207</b>	<b>50</b>	<b>0</b>	<b>257</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>159</b>	<b>116</b>	<b>0</b>	<b>0</b>	<b>275</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>184</b>	<b>0</b>	<b>203</b>	<b>0</b>	<b>735</b>	<b>735</b>
11:00	0	0	38	11	0	49	0	0	0	0	0	0	0	41	40	0	0	81	0	8	0	46	0	54	0	184	184
11:15	0	0	60	22	0	82	0	0	0	0	0	0	0	54	46	0	0	100	0	12	0	55	0	67	0	249	249
11:30	0	0	44	15	0	59	0	0	0	0	0	0	0	60	48	0	0	108	0	7	0	54	0	61	0	228	228
11:45	0	0	50	19	0	69	0	0	0	0	0	0	0	54	38	0	0	92	0	4	0	47	0	51	0	212	212
<b>Total</b>	<b>0</b>	<b>0</b>	<b>192</b>	<b>67</b>	<b>0</b>	<b>259</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>209</b>	<b>172</b>	<b>0</b>	<b>0</b>	<b>381</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>202</b>	<b>0</b>	<b>233</b>	<b>0</b>	<b>873</b>	<b>873</b>
12:00	0	0	32	10	0	42	0	0	0	0	0	0	0	34	54	0	0	88	0	4	0	44	0	48	0	178	178



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : tmc 2110-csah 21 @ csah 32-t  
 Site Code :  
 Start Date : 06/23/2021  
 Page No : 3

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Will

Groups Printed- Cars + - Trucks

Start Time	CSAH 21 (Centerville Road) Southbound						Westbound						CSAH 21 (Centerville Road) Northbound						CSAH 32 (Ash Street) Eastbound						Exclu. Total	Inclu. Total	Int. Total
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total			
12:15	0	0	67	15	0	82	0	0	0	0	0	0	0	62	40	0	0	102	0	7	0	43	0	50	0	234	234
12:30	0	0	47	19	0	66	0	0	0	0	0	0	0	54	43	0	0	97	0	8	0	41	0	49	0	212	212
12:45	0	0	35	18	0	53	0	0	0	0	0	0	0	45	41	0	0	86	0	7	0	39	0	46	0	185	185
<b>Total</b>	<b>0</b>	<b>0</b>	<b>181</b>	<b>62</b>	<b>0</b>	<b>243</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>195</b>	<b>178</b>	<b>0</b>	<b>0</b>	<b>373</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>167</b>	<b>0</b>	<b>193</b>	<b>0</b>	<b>809</b>	<b>809</b>
13:00	0	0	37	10	0	47	0	0	0	0	0	0	0	71	45	0	0	116	0	10	0	47	0	57	0	220	220
13:15	0	0	28	15	0	43	0	0	0	0	0	0	0	48	56	0	0	104	0	6	0	53	0	59	0	206	206
13:30	0	0	46	14	0	60	0	0	0	0	0	0	0	56	48	0	0	104	0	13	0	42	0	55	0	219	219
13:45	0	0	52	17	0	69	0	0	0	0	0	0	0	50	67	0	0	117	0	13	0	48	0	61	0	247	247
<b>Total</b>	<b>0</b>	<b>0</b>	<b>163</b>	<b>56</b>	<b>0</b>	<b>219</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>225</b>	<b>216</b>	<b>0</b>	<b>0</b>	<b>441</b>	<b>0</b>	<b>42</b>	<b>0</b>	<b>190</b>	<b>0</b>	<b>232</b>	<b>0</b>	<b>892</b>	<b>892</b>
14:00	0	0	45	19	0	64	0	0	0	0	0	0	0	57	51	0	0	108	0	9	0	45	0	54	0	226	226
14:15	0	0	44	13	0	57	0	0	0	0	0	0	0	63	60	0	0	123	0	10	0	54	0	64	0	244	244
14:30	0	0	47	17	0	64	0	0	0	0	0	0	0	101	63	0	0	164	0	17	0	43	0	60	0	288	288
14:45	0	0	36	14	0	50	0	0	0	0	0	0	0	83	59	0	0	142	0	11	0	52	0	63	0	255	255
<b>Total</b>	<b>0</b>	<b>0</b>	<b>172</b>	<b>63</b>	<b>0</b>	<b>235</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>304</b>	<b>233</b>	<b>0</b>	<b>0</b>	<b>537</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>194</b>	<b>0</b>	<b>241</b>	<b>0</b>	<b>1013</b>	<b>1013</b>
15:00	0	0	33	27	0	60	0	0	0	0	0	0	0	102	65	0	0	167	0	11	0	54	0	65	0	292	292
15:15	0	0	49	26	0	75	0	0	0	0	0	0	0	83	58	0	0	141	0	11	0	51	0	62	0	278	278
15:30	0	0	40	24	0	64	0	0	0	0	0	0	0	87	77	0	0	164	0	11	0	62	0	73	0	301	301
15:45	0	0	58	23	0	81	0	0	0	0	0	0	0	102	78	0	0	180	0	12	0	80	0	92	0	353	353
<b>Total</b>	<b>0</b>	<b>0</b>	<b>180</b>	<b>100</b>	<b>0</b>	<b>280</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>374</b>	<b>278</b>	<b>0</b>	<b>0</b>	<b>652</b>	<b>0</b>	<b>45</b>	<b>0</b>	<b>247</b>	<b>0</b>	<b>292</b>	<b>0</b>	<b>1224</b>	<b>1224</b>
16:00	0	0	47	27	0	74	0	0	0	0	0	0	0	90	73	0	0	163	0	13	0	73	0	86	0	323	323
16:15	0	0	60	35	0	95	0	0	0	0	0	0	0	91	92	0	0	183	0	11	0	77	0	88	0	366	366
16:30	0	0	65	41	0	106	0	0	0	0	0	0	0	122	70	0	0	192	0	10	0	69	0	79	0	377	377
16:45	0	0	68	31	0	99	0	0	0	0	0	0	0	82	93	0	0	175	0	15	0	92	0	107	0	381	381
<b>Total</b>	<b>0</b>	<b>0</b>	<b>240</b>	<b>134</b>	<b>0</b>	<b>374</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>385</b>	<b>328</b>	<b>0</b>	<b>0</b>	<b>713</b>	<b>0</b>	<b>49</b>	<b>0</b>	<b>311</b>	<b>0</b>	<b>360</b>	<b>0</b>	<b>1447</b>	<b>1447</b>
17:00	0	0	47	31	0	78	0	0	0	0	0	0	0	87	71	0	0	158	0	12	0	77	0	89	0	325	325
17:15	0	0	60	26	0	86	0	0	0	0	0	0	0	81	82	0	0	163	0	12	0	83	0	95	0	344	344
17:30	0	0	53	36	0	89	0	0	0	0	0	0	0	75	79	0	0	154	0	14	0	54	0	68	0	311	311
17:45	0	0	50	18	0	68	0	0	0	0	0	0	0	77	76	0	0	153	0	14	0	64	0	78	0	299	299
<b>Total</b>	<b>0</b>	<b>0</b>	<b>210</b>	<b>111</b>	<b>0</b>	<b>321</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>320</b>	<b>308</b>	<b>0</b>	<b>0</b>	<b>628</b>	<b>0</b>	<b>52</b>	<b>0</b>	<b>278</b>	<b>0</b>	<b>330</b>	<b>0</b>	<b>1279</b>	<b>1279</b>
18:00	0	0	72	15	0	87	0	0	0	0	0	0	0	78	65	0	0	143	0	4	0	64	0	68	0	298	298
18:15	0	0	59	32	0	91	0	0	0	0	0	0	0	72	54	0	0	126	0	8	0	43	0	51	0	268	268



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : tmc 2110-csah 21 @ csah 32-t  
 Site Code :  
 Start Date : 06/23/2021  
 Page No : 4

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Will

Groups Printed- Cars + - Trucks

Start Time	CSAH 21 (Centerville Road) Southbound						Westbound						CSAH 21 (Centerville Road) Northbound						CSAH 32 (Ash Street) Eastbound						Exclu. Total	Inclu. Total	Int. Total
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total			
18:30	0	0	31	20	0	51	0	0	0	0	0	0	0	45	52	0	0	97	0	8	0	42	0	50	0	198	198
18:45	0	0	45	18	0	63	0	0	0	0	0	0	0	47	30	0	0	77	0	2	0	36	0	38	0	178	178
<b>Total</b>	<b>0</b>	<b>0</b>	<b>207</b>	<b>85</b>	<b>0</b>	<b>292</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>242</b>	<b>201</b>	<b>0</b>	<b>0</b>	<b>443</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>185</b>	<b>0</b>	<b>207</b>	<b>0</b>	<b>942</b>	<b>942</b>
19:00	0	0	25	7	0	32	0	0	0	0	0	0	0	54	45	0	0	99	0	6	0	36	0	42	0	173	173
19:15	0	0	45	21	0	66	0	0	0	0	0	0	0	34	31	0	0	65	0	7	0	34	0	41	0	172	172
19:30	0	0	27	17	0	44	0	0	0	0	0	0	0	44	38	0	0	82	0	3	0	27	0	30	0	156	156
19:45	0	0	27	8	0	35	0	0	0	0	0	0	0	48	43	0	0	91	0	3	0	33	0	36	0	162	162
<b>Total</b>	<b>0</b>	<b>0</b>	<b>124</b>	<b>53</b>	<b>0</b>	<b>177</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>180</b>	<b>157</b>	<b>0</b>	<b>0</b>	<b>337</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>130</b>	<b>0</b>	<b>149</b>	<b>0</b>	<b>663</b>	<b>663</b>
20:00	0	0	15	12	0	27	0	0	0	0	0	0	0	60	49	0	0	109	0	11	0	19	0	30	0	166	166
20:15	0	0	18	6	0	24	0	0	0	0	0	0	0	44	32	0	0	76	0	4	0	16	0	20	0	120	120
20:30	0	0	23	10	0	33	0	0	0	0	0	0	0	52	56	0	0	108	0	10	0	19	0	29	0	170	170
20:45	0	0	19	11	0	30	0	0	0	0	0	0	0	37	42	0	0	79	0	6	0	23	0	29	0	138	138
<b>Total</b>	<b>0</b>	<b>0</b>	<b>75</b>	<b>39</b>	<b>0</b>	<b>114</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>193</b>	<b>179</b>	<b>0</b>	<b>0</b>	<b>372</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>77</b>	<b>0</b>	<b>108</b>	<b>0</b>	<b>594</b>	<b>594</b>
21:00	0	0	22	11	0	33	0	0	0	0	0	0	0	32	44	0	0	76	0	5	0	25	0	30	0	139	139
21:15	0	0	23	8	0	31	0	0	0	0	0	0	0	31	30	0	0	61	0	5	0	14	0	19	0	111	111
21:30	0	0	18	7	0	25	0	0	0	0	0	0	0	32	30	0	0	62	0	3	0	12	0	15	0	102	102
21:45	0	0	22	5	0	27	0	0	0	0	0	0	0	25	31	0	0	56	0	4	0	10	0	14	0	97	97
<b>Total</b>	<b>0</b>	<b>0</b>	<b>85</b>	<b>31</b>	<b>0</b>	<b>116</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>120</b>	<b>135</b>	<b>0</b>	<b>0</b>	<b>255</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>61</b>	<b>0</b>	<b>78</b>	<b>0</b>	<b>449</b>	<b>449</b>
22:00	0	0	12	3	0	15	0	0	0	0	0	0	0	18	26	0	0	44	0	3	0	7	0	10	0	69	69
22:15	0	0	12	9	0	21	0	0	0	0	0	0	0	15	17	0	0	32	0	5	0	17	0	22	0	75	75
22:30	0	0	5	2	0	7	0	0	0	0	0	0	0	11	14	0	0	25	0	1	0	2	0	3	0	35	35
22:45	0	0	3	5	0	8	0	0	0	0	0	0	0	8	7	0	0	15	0	0	0	5	0	5	0	28	28
<b>Total</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>19</b>	<b>0</b>	<b>51</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52</b>	<b>64</b>	<b>0</b>	<b>0</b>	<b>116</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>40</b>	<b>0</b>	<b>207</b>	<b>207</b>
23:00	0	0	4	2	0	6	0	0	0	0	0	0	0	7	5	0	0	12	0	1	0	2	0	3	0	21	21
23:15	0	0	2	3	0	5	0	0	0	0	0	0	0	8	9	0	0	17	0	1	0	5	0	6	0	28	28
23:30	0	0	1	3	0	4	0	0	0	0	0	0	0	2	8	0	0	10	0	0	0	4	0	4	0	18	18
23:45	0	0	4	1	0	5	0	0	0	0	0	0	0	10	3	0	0	13	0	2	0	3	0	5	0	23	23
<b>Total</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>9</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>52</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>90</b>	<b>90</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>3311</b>	<b>1223</b>	<b>0</b>	<b>4534</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3588</b>	<b>2959</b>	<b>0</b>	<b>0</b>	<b>6548</b>	<b>0</b>	<b>560</b>	<b>0</b>	<b>3137</b>	<b>1</b>	<b>3697</b>	<b>1</b>	<b>14779</b>	<b>14780</b>
Apprch %	0	0	73	27			0	0	0	0			0	54.8	45.2	0			0	15.1	0	84.9					
Total %	0	0	22.4	8.3		30.7	0	0	0	0			0	24.3	20	0		44.3	0	3.8	0	21.2		25	0	100	
Cars +	0	0	3255	1165		4420	0	0	0	0			0	3499	2903	0		6402	0	524	0	3057		3582	0	0	14404
% Cars +	0	0	98.3	95.3		97.5	0	0	0	0			0	97.5	98.1	0	0	97.8	0	93.6	0	97.4	100	96.9	0	0	97.5
Trucks	0	0	56	58		114	0	0	0	0			1	89	56	0		146	0	36	0	80		116	0	0	376
% Trucks	0	0	1.7	4.7		2.5	0	0	0	0			100	2.5	1.9	0	0	2.2	0	6.4	0	2.6	0	3.1	0	0	2.5



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

Start Time	CSAH 21 (Centerville Road) Southbound					Westbound					CSAH 21 (Centerville Road) Northbound					CSAH 32 (Ash Street) Eastbound					Int. Total
	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	
Peak Hour Analysis From 00:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	0	77	30	107	0	0	0	0	0	0	39	23	0	62	0	3	0	48	51	220
07:30	0	0	79	18	97	0	0	0	0	0	0	25	18	0	43	0	2	0	53	55	195
07:45	0	0	70	23	93	0	0	0	0	0	0	37	32	0	69	0	10	0	61	71	233
08:00	0	0	64	21	85	0	0	0	0	0	0	36	30	0	66	0	13	0	44	57	208
Total Volume	0	0	290	92	382	0	0	0	0	0	0	137	103	0	240	0	28	0	206	234	856
% App. Total	0	0	75.9	24.1		0	0	0	0	0	0	57.1	42.9	0		0	12	0	88		
PHF	.000	.000	.918	.767	.893	.000	.000	.000	.000	.000	.000	.878	.805	.000	.870	.000	.538	.000	.844	.824	.918

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 13:00																					
13:00	0	0	37	10	47	0	0	0	0	0	0	71	45	0	116	0	10	0	47	57	220
13:15	0	0	28	15	43	0	0	0	0	0	0	48	56	0	104	0	6	0	53	59	206
13:30	0	0	46	14	60	0	0	0	0	0	0	56	48	0	104	0	13	0	42	55	219
13:45	0	0	52	17	69	0	0	0	0	0	0	50	67	0	117	0	13	0	48	61	247
Total Volume	0	0	163	56	219	0	0	0	0	0	0	225	216	0	441	0	42	0	190	232	892
% App. Total	0	0	74.4	25.6		0	0	0	0	0	0	51	49	0		0	18.1	0	81.9		
PHF	.000	.000	.784	.824	.793	.000	.000	.000	.000	.000	.000	.792	.806	.000	.942	.000	.808	.000	.896	.951	.903

Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:15																					
16:15	0	0	60	35	95	0	0	0	0	0	0	91	92	0	183	0	11	0	77	88	366
16:30	0	0	65	41	106	0	0	0	0	0	0	122	70	0	192	0	10	0	69	79	377
16:45	0	0	68	31	99	0	0	0	0	0	0	82	93	0	175	0	15	0	92	107	381
17:00	0	0	47	31	78	0	0	0	0	0	0	87	71	0	158	0	12	0	77	89	325
Total Volume	0	0	240	138	378	0	0	0	0	0	0	382	326	0	708	0	48	0	315	363	1449
% App. Total	0	0	63.5	36.5		0	0	0	0	0	0	54	46	0		0	13.2	0	86.8		
PHF	.000	.000	.882	.841	.892	.000	.000	.000	.000	.000	.000	.783	.876	.000	.922	.000	.800	.000	.856	.848	.951



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Will

File Name : TMC 2110-CSAH 21 @ CSAH 32-t  
 Site Code :  
 Start Date : 06/23/2021  
 Page No : 1

Groups Printed- Trucks

Start Time	CSAH 21 (Centerville Road) Southbound					Westbound					CSAH 21 (Centerville Road) Northbound					CSAH 32 (Ash Street) Eastbound					Int. Total	
	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total		
00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	1	1	1	3
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	1	1	1	3
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3	3
05:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3	5
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
06:15	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4	4	7
06:30	0	0	1	2	3	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	4
06:45	0	0	0	2	2	0	0	0	0	0	0	3	0	3	0	1	0	1	2	2	2	7
Total	0	0	3	5	8	0	0	0	0	0	0	3	1	4	0	3	0	4	7	7	19	
07:00	0	0	1	3	4	0	0	0	0	0	0	2	1	3	0	1	0	3	4	4	11	
07:15	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3	4	
07:30	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	4	
07:45	0	0	4	0	4	0	0	0	0	0	0	3	1	4	0	1	0	2	3	3	11	
Total	0	0	6	6	12	0	0	0	0	0	0	5	2	7	0	3	0	8	11	11	30	
08:00	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3	
08:15	0	0	0	2	2	0	0	0	0	0	0	2	4	6	0	0	0	1	1	1	9	
08:30	0	0	2	2	4	0	0	0	0	0	0	0	4	4	0	0	0	2	2	2	10	
08:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3	
Total	0	0	5	5	10	0	0	0	0	0	0	2	8	10	0	2	0	3	5	5	25	



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2110-CSAH 21 @ CSAH 32-t

Site Code :

Start Date : 06/23/2021

Page No : 2

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Will

Groups Printed- Trucks

Start Time	CSAH 21 (Centerville Road) Southbound					Westbound					CSAH 21 (Centerville Road) Northbound					CSAH 32 (Ash Street) Eastbound					Int. Total
	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	
09:00	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	1
09:30	0	0	6	0	6	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0
09:45	0	0	2	1	3	0	0	0	0	0	0	1	3	0	4	0	2	0	2	4	4
Total	0	0	8	1	9	0	0	0	0	0	0	3	7	0	10	0	2	0	3	5	24
10:00	0	0	2	2	4	0	0	0	0	0	0	3	1	0	4	0	0	0	4	4	4
10:15	0	0	1	2	3	0	0	0	0	0	0	2	2	0	4	0	1	0	1	2	9
10:30	0	0	2	1	3	0	0	0	0	0	0	4	0	0	4	0	1	0	3	4	11
10:45	0	0	3	1	4	0	0	0	0	0	0	1	0	0	1	0	2	0	2	4	9
Total	0	0	8	6	14	0	0	0	0	0	0	10	3	0	13	0	4	0	10	14	41
11:00	0	0	2	2	4	0	0	0	0	0	0	4	0	0	4	0	0	0	3	3	11
11:15	0	0	2	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
11:30	0	0	1	0	1	0	0	0	0	0	0	2	3	0	5	0	1	0	1	2	8
11:45	0	0	0	1	1	0	0	0	0	0	0	0	2	0	2	0	0	0	2	2	5
Total	0	0	5	6	11	0	0	0	0	0	0	6	5	0	11	0	1	0	6	7	29
12:00	0	0	1	1	2	0	0	0	0	0	0	3	1	0	4	0	0	0	2	2	8
12:15	0	0	1	2	3	0	0	0	0	0	0	3	1	0	4	0	1	0	1	2	9
12:30	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	6
12:45	0	0	0	1	1	0	0	0	0	0	0	1	1	0	2	0	1	0	1	2	5
Total	0	0	2	5	7	0	0	0	0	0	0	7	3	0	10	0	2	0	9	11	28
13:00	0	0	0	1	1	0	0	0	0	0	0	3	2	0	5	0	1	0	0	1	7
13:15	0	0	1	0	1	0	0	0	0	0	0	1	2	0	3	0	1	0	3	4	8
13:30	0	0	2	2	4	0	0	0	0	0	0	3	1	0	4	0	0	0	3	3	11
13:45	0	0	1	4	5	0	0	0	0	0	0	4	2	0	6	0	1	0	3	4	15
Total	0	0	4	7	11	0	0	0	0	0	0	11	7	0	18	0	3	0	9	12	41
14:00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
14:15	0	0	1	0	1	0	0	0	0	0	0	3	0	0	3	0	1	0	1	2	6
14:30	0	0	2	0	2	0	0	0	0	0	0	3	0	0	3	0	2	0	2	4	9
14:45	0	0	1	1	2	0	0	0	0	0	0	7	1	0	8	0	1	0	2	3	13
Total	0	0	4	1	5	0	0	0	0	0	0	16	1	0	17	0	4	0	5	9	31
15:00	0	0	0	1	1	0	0	0	0	0	0	3	3	0	6	0	2	0	0	2	9
15:15	0	0	1	3	4	0	0	0	0	0	0	1	2	0	3	0	0	0	2	2	9
15:30	0	0	0	1	1	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	4
15:45	0	0	2	0	2	0	0	0	0	0	0	2	2	0	4	0	0	0	2	2	8
Total	0	0	3	5	8	0	0	0	0	0	0	7	8	0	15	0	3	0	4	7	30
16:00	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	3	0	1	4	7
16:15	0	0	0	2	2	0	0	0	0	0	0	3	2	0	5	0	0	0	1	1	8
16:30	0	0	1	0	1	0	0	0	0	0	0	3	1	0	4	0	0	0	1	1	6
16:45	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	1	0	2	3	5
Total	0	0	1	2	3	0	0	0	0	0	0	9	5	0	14	0	4	0	5	9	26
17:00	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	3	4	6
17:15	0	0	0	1	1	0	0	0	0	0	0	2	1	0	3	0	1	0	1	2	6
17:30	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
17:45	0	0	1	2	3	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	5
Total	0	0	3	3	6	0	0	0	0	0	0	5	2	0	7	0	2	0	4	6	19
18:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
18:15	0	0	0	1	1	0	0	0	0	0	0	1	1	0	2	0	0	0	2	2	5



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2110-CSAH 21 @ CSAH 32-t

Site Code :

Start Date : 06/23/2021

Page No : 3

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Will

Groups Printed- Trucks

Start Time	CSAH 21 (Centerville Road) Southbound					Westbound					CSAH 21 (Centerville Road) Northbound					CSAH 32 (Ash Street) Eastbound					Int. Total
	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	
18:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
18:45	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	1
<b>Total</b>	0	0	1	1	2	0	0	0	0	0	0	3	2	0	5	0	0	0	3	3	3
19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	3
19:30	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:45	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	5
20:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
20:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	2
20:30	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
20:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	0	1	1	0	0	0	0	0	0	1	1	0	2	0	0	0	1	1	4
21:00	0	0	0	1	1	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	3
21:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	1	1	2	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	4
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
<b>Grand Total</b>	0	0	56	58	114	0	0	0	0	0	1	89	56	0	146	0	36	0	80	116	376
Apprch %	0	0	49.1	50.9		0	0	0	0		0.7	61	38.4	0		0	31	0	69		
Total %	0	0	14.9	15.4	30.3	0	0	0	0	0	0.3	23.7	14.9	0	38.8	0	9.6	0	21.3	30.9	

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2110 SWS

Study Date : 07/16/2021

## Signal Warrants - Summary

---

### Major Street Approaches

Northbound: CSAH 21 (Centerville Road)

Number of Lanes : 1

Total Approach Volume: 6,549

Southbound: CSAH 21 (Centerville Road)

Number of Lanes : 1

Total Approach Volume: 4,534

### Minor Street Approaches

Eastbound: CSAH 32 (Ash Street)

Number of Lanes : 1

Total Approach Volume: 3,698

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### Warrant Summary (Rural Values Apply)

**Warrant 1 - Eight Hour Vehicular Volumes.....Satisfied**

**Warrant 1A - Minimum Vehicular Volume.....Satisfied**

Required volumes reached for 15 hours, 8 are needed

**Warrant 1B - Interruption of Continuous Traffic.....Satisfied**

Required volumes reached for 13 hours, 8 are needed

**Warrant 1C - Combination of Warrants.....Satisfied**

Required 1A volumes reached for 16 hours, 8 are needed

Required 1B volumes reached for 15 hours, 8 are needed

**Warrant 2 - Four Hour Volumes.....Satisfied**

Number of hours (14) volumes exceed minimum >= minimum required (4).

**Warrant 3 - Peak Hour.....Satisfied**

**Warrant 3A - Peak Hour Delay.....Satisfied**

Number of one hour periods (53) volumes exceed minimum >= required (1). Delay data not evaluated.

**Warrant 3B - Peak Hour Volumes.....Satisfied**

Volumes exceed minimums for at least one hour period.

**Warrant 4 - Pedestrian Volumes.....Not Evaluated**

**Warrant 5 - School Crossing.....Not Evaluated**

**Warrant 6 - Coordinated Signal System.....Not Evaluated**

**Warrant 7 - Crash Experience.....Not Evaluated**

**Warrant 8 - Roadway Network.....Not Evaluated**

**Warrant 9 - Intersection Near a Grade Crossing.....Not Evaluated**

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2110 SWS

Study Date : 07/16/2021

## Warrant 1A - Minimum Volumes

#### Description

Intended for sites where the volume of intersecting traffic is the principal reason for consideration of a signal installation.

#### Summary

15 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

Rural Settings Apply = **True**  
Number of Major Lanes = **1**  
Number of Minor Lanes = **1**

#### Volume Requirements

Rural Factor of 70 % applied  
Veh/Hr Major = **350**  
  
Veh/Hr Minor = **105**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
15:45 - 16:45	718	+	356	=	1074	345	0	Yes
16:45 - 17:45	650	+	352	=	1002	359	0	Yes
14:45 - 15:45	614	+	249	=	863	263	0	Yes
17:45 - 18:45	519	+	297	=	816	247	0	Yes
13:45 - 14:45	512	+	254	=	766	239	0	Yes
11:45 - 12:45	379	+	259	=	638	198	0	Yes
10:45 - 11:45	356	+	260	=	616	226	0	Yes
12:45 - 13:45	410	+	203	=	613	217	0	Yes
06:45 - 07:45	192	+	390	=	582	219	0	Yes
07:45 - 08:45	253	+	325	=	578	248	0	Yes
08:45 - 09:45	248	+	307	=	555	210	0	Yes
18:45 - 19:45	323	+	205	=	528	151	0	Yes
09:45 - 10:45	278	+	250	=	528	221	0	Yes
19:45 - 20:45	384	+	119	=	503	115	0	Yes
05:45 - 06:45	124	+	294	=	418	154	0	Yes
20:45 - 21:45	278	+	119	=	397	93	0	No
21:00 - 22:00	255	+	116	=	371	78	0	No
05:30 - 06:30	100	+	248	=	348	143	0	No
21:15 - 22:15	223	+	98	=	321	58	0	No
05:15 - 06:15	70	+	216	=	286	122	0	No
21:30 - 22:30	194	+	88	=	282	61	0	No
05:00 - 06:00	48	+	183	=	231	107	0	No
21:45 - 22:45	157	+	70	=	227	49	0	No
04:45 - 05:45	32	+	136	=	168	73	0	No
22:00 - 23:00	116		51		167	40	0	No

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2110 SWS

Study Date : 07/16/2021

## Warrant 1B - Interruption of Continuous Traffic

#### Description

Intended for sites where the volume of the major street is so heavy that traffic on the minor street suffers excessive delay or hazard.

#### Summary

13 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

Rural Settings Apply = **True**  
Number of Major Lanes = **1**  
Number of Minor Lanes = **1**

#### Volume Requirements

Rural Factor of 70 % applied  
Veh/Hr Major = **525**  
  
Veh/Hr Minor = **52**

Time	Major Road				Minor Road		Met?	
	Major NB	+	Major SB	=	Total	Minor EB		Minor WB
16:30 - 17:30	688	+	369	=	1057	370	0	Yes
15:30 - 16:30	690	+	314	=	1004	339	0	Yes
17:30 - 18:30	576	+	335	=	911	265	0	Yes
14:30 - 15:30	614	+	249	=	863	250	0	Yes
13:30 - 14:30	452	+	250	=	702	234	0	Yes
11:30 - 12:30	390	+	252	=	642	210	0	Yes
12:30 - 13:30	403	+	209	=	612	211	0	Yes
10:30 - 11:30	325	+	259	=	584	218	0	Yes
07:30 - 08:30	232	+	348	=	580	234	0	Yes
06:30 - 07:30	188	+	390	=	578	208	0	Yes
08:30 - 09:30	252	+	308	=	560	238	0	Yes
18:30 - 19:30	338	+	212	=	550	171	0	Yes
09:30 - 10:30	261	+	265	=	526	209	0	Yes
06:15 - 07:15	160	+	357	=	517	199	0	No
19:45 - 20:45	384	+	119	=	503	115	0	No
19:30 - 20:30	358	+	130	=	488	116	0	No
20:00 - 21:00	372	+	114	=	486	108	0	No
06:00 - 07:00	141	+	322	=	463	165	0	No
20:15 - 21:15	339	+	120	=	459	108	0	No
20:30 - 21:30	324	+	127	=	451	107	0	No
05:45 - 06:45	124	+	294	=	418	154	0	No
20:45 - 21:45	278	+	119	=	397	93	0	No
21:00 - 22:00	255	+	116	=	371	78	0	No
05:30 - 06:30	100	+	248	=	348	143	0	No
21:15 - 22:15	223		98		321	58	0	No

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2110 SWS

Study Date : 07/16/2021

## Warrant 1C Combination of Warrants

#### Description

Intended for sites where the traffic volumes don't meet individual warrants but where Warrants 1A and 1B are both met to 80% of their stated values.

#### Summary

16 hours meet 1A minimums.  
15 hours meet 1B minimums.  
Warrant IS met.

#### Site Data Required

Rural Settings Apply = **True**  
Number of Major Lanes = **1**  
Number of Minor Lanes = **1**

#### Volume Requirements

Rural Factor of 70% applied  
Warrant 1A 1B  
Veh/Hr Major = **280 420**

Veh/Hr Minor = **84 42**

#### Major Road CSAH 21 (Centerville Road)

#### Minor Road CSAH 32 (Ash Street)

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
16:15 - 17:15	708	+	378	=	1086	363	0	Yes
17:15 - 18:15	613	+	330	=	943	309	0	Yes
15:15 - 16:15	648	+	294	=	942	313	0	Yes
14:15 - 15:15	596	+	231	=	827	252	0	Yes
13:15 - 14:15	433	+	236	=	669	229	0	Yes
12:15 - 13:15	401	+	248	=	649	202	0	Yes
11:15 - 12:15	388	+	252	=	640	227	0	Yes
18:15 - 19:15	399	+	237	=	636	181	0	Yes
07:15 - 08:15	240	+	382	=	622	234	0	Yes
09:15 - 10:15	260	+	293	=	553	224	0	Yes
08:15 - 09:15	243	+	297	=	540	228	0	Yes
10:15 - 11:15	289	+	233	=	522	197	0	Yes

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:00 - 17:00	713	+	374	=	1087	360	0	Yes
17:00 - 18:00	628	+	321	=	949	330	0	Yes
15:00 - 16:00	652	+	280	=	932	292	0	Yes
14:00 - 15:00	537	+	235	=	772	241	0	Yes
18:00 - 19:00	443	+	292	=	735	207	0	Yes
13:00 - 14:00	441	+	219	=	660	232	0	Yes
11:00 - 12:00	381	+	259	=	640	233	0	Yes
12:00 - 13:00	373	+	243	=	616	193	0	Yes
07:00 - 08:00	220	+	391	=	611	237	0	Yes
08:00 - 09:00	250	+	311	=	561	239	0	Yes
09:00 - 10:00	252	+	291	=	543	210	0	Yes
10:00 - 11:00	275	+	257	=	532	203	0	Yes



# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2110 SWS

Study Date : 07/16/2021

## Warrant 2 - Four Hour Volumes

#### Description

Intended for sites where the volume of intersecting traffic during any four hours of the day is the principal reason for consideration of a signal installation.

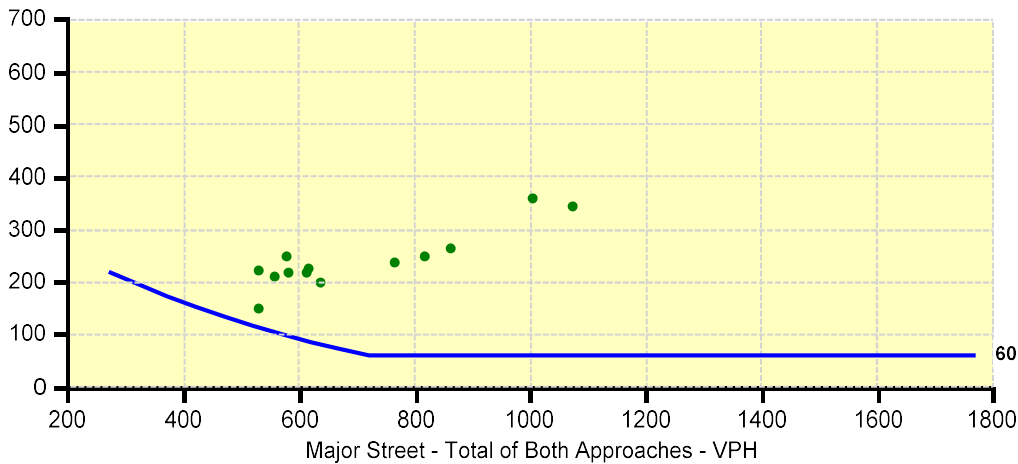
#### Summary

14 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **1**  
 Number of Minor Lanes = **1**

Time	Major Road				Total	Minor Road		Met?
	CSAH 21 (Centerville Road)	Major NB	+	Major SB		=	Minor EB	
15:45 - 16:45	718	+	356	=	1074	345	0	Yes
16:45 - 17:45	650	+	352	=	1002	359	0	Yes
14:45 - 15:45	614	+	249	=	863	263	0	Yes
17:45 - 18:45	519	+	297	=	816	247	0	Yes
13:45 - 14:45	512	+	254	=	766	239	0	Yes
11:45 - 12:45	379	+	259	=	638	198	0	Yes
10:45 - 11:45	356	+	260	=	616	226	0	Yes
12:45 - 13:45	410	+	203	=	613	217	0	Yes
06:45 - 07:45	192	+	390	=	582	219	0	Yes
07:45 - 08:45	253	+	325	=	578	248	0	Yes
08:45 - 09:45	248	+	307	=	555	210	0	Yes



# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2110 SWS

Study Date : 07/16/2021

## Warrant 3B - Peak Hour Volumes

#### Description

Intended for sites where the volume of intersecting traffic during one hour of the day is the principal reason for consideration of a signal installation.

#### Summary

46 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **1**  
 Number of Minor Lanes = **1**

Time	Major Road CSAH 21 (Centerville Road)				Total	Minor Road CSAH 32 (Ash Street)		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:00 - 17:00	713	+	374	=	1087	360	0	Yes
16:15 - 17:15	708	+	378	=	1086	363	0	Yes
15:45 - 16:45	718	+	356	=	1074	345	0	Yes
16:30 - 17:30	688	+	369	=	1057	370	0	Yes
15:30 - 16:30	690	+	314	=	1004	339	0	Yes
16:45 - 17:45	650	+	352	=	1002	359	0	Yes
17:00 - 18:00	628	+	321	=	949	330	0	Yes
17:15 - 18:15	613	+	330	=	943	309	0	Yes
15:15 - 16:15	648	+	294	=	942	313	0	Yes
15:00 - 16:00	652	+	280	=	932	292	0	Yes
17:30 - 18:30	576	+	335	=	911	265	0	Yes

