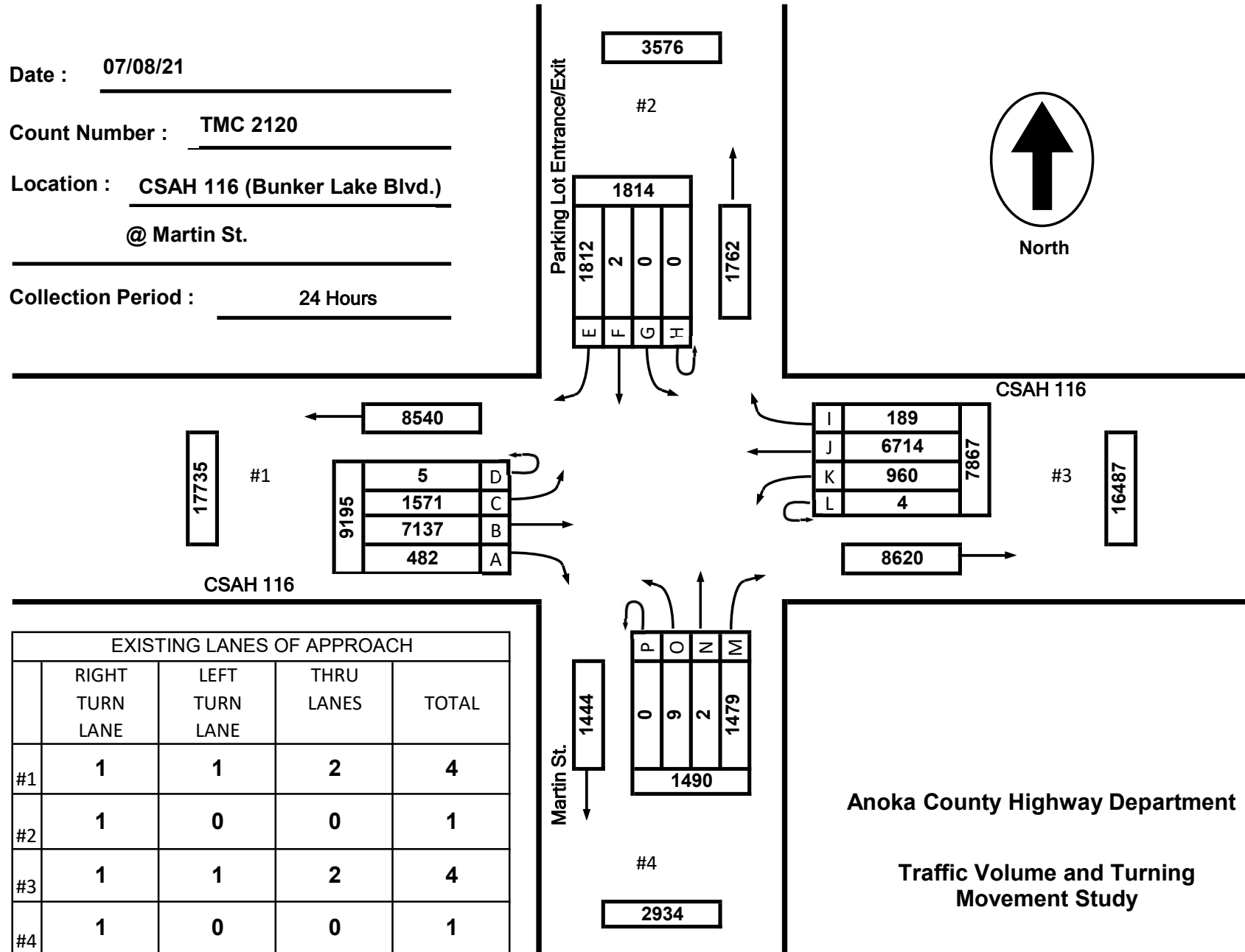


Date : 07/08/21

Count Number : TMC 2120

Location : CSAH 116 (Bunker Lake Blvd.)  
@ Martin St.

Collection Period : 24 Hours



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

Anoka County Highway Department  
 Traffic Volume and Turning Movement Study

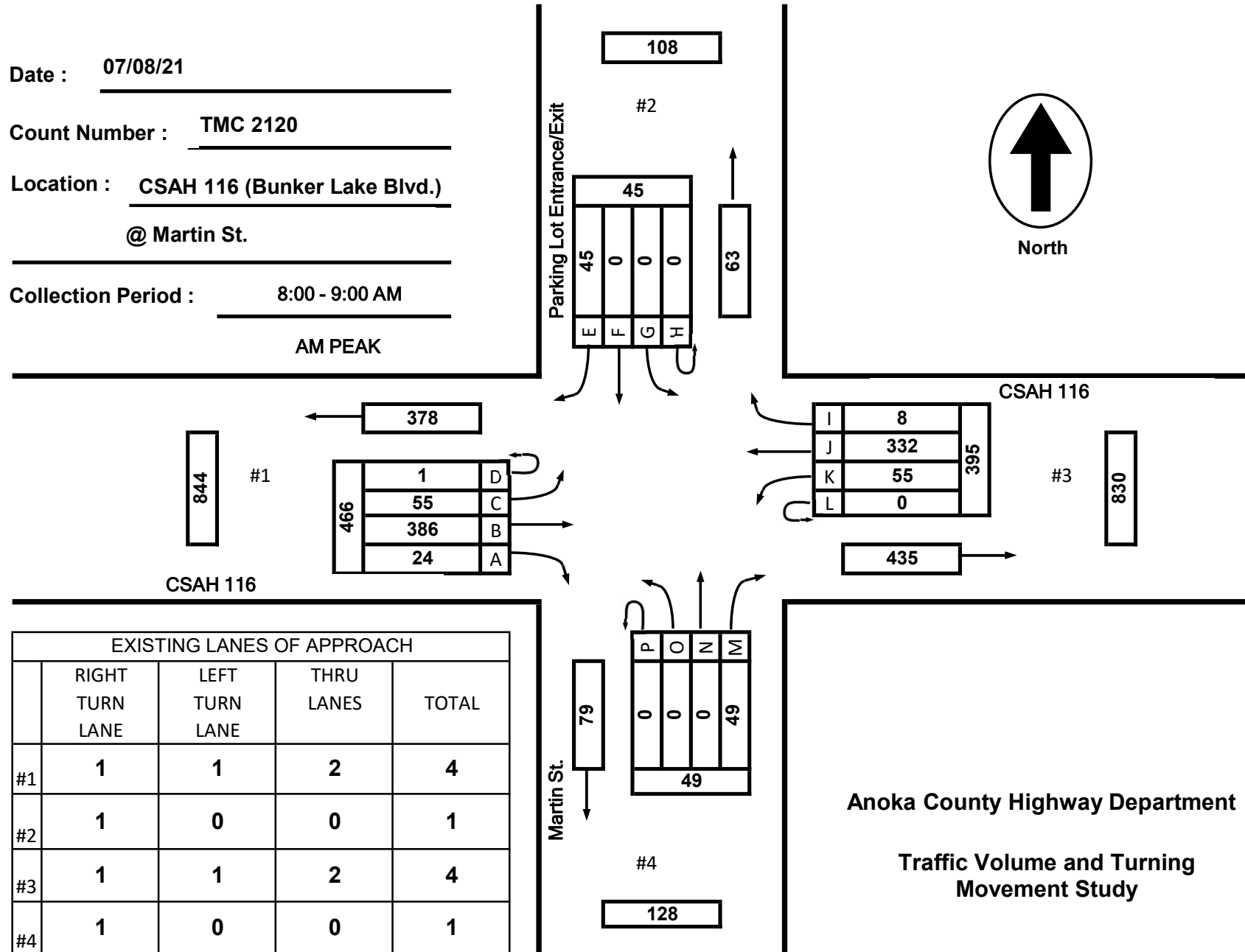
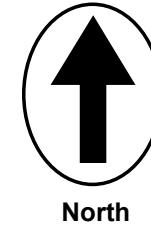
Date : 07/08/21

Count Number : TMC 2120

Location : CSAH 116 (Bunker Lake Blvd.)  
@ Martin St.

Collection Period : 8:00 - 9:00 AM

AM PEAK



CSAH 116

CSAH 116

Martin St.

Anoka County Highway Department

Traffic Volume and Turning  
Movement Study

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

79	P	O	N	N
	0	0	0	49
	49			

466	1	D
	55	C
	386	B
	24	A

I	8	395
J	332	
K	55	
L	0	

45	45	0	0	0
	E	F	G	H

108

#2

63

830

#3

435

79

#4

128

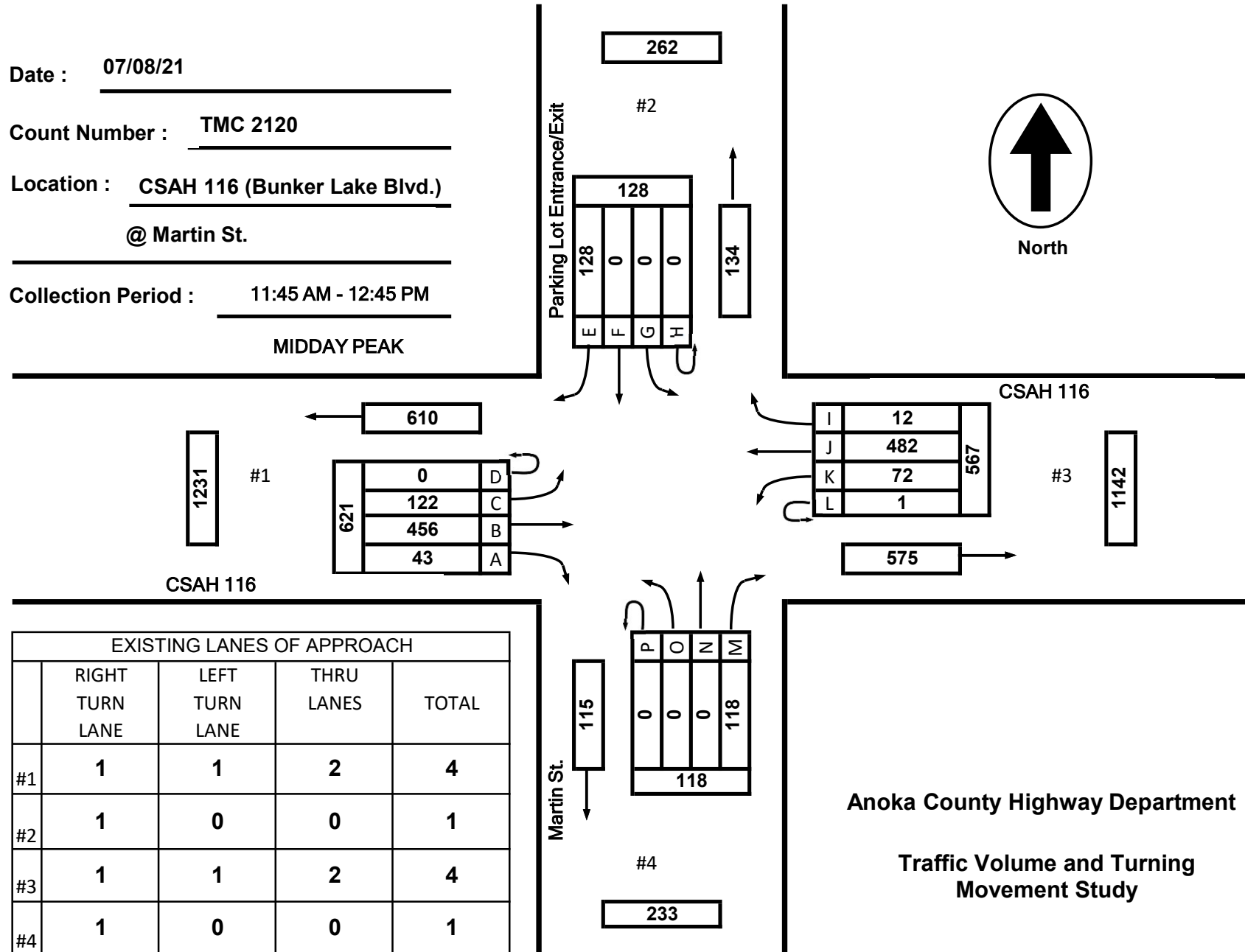
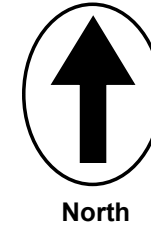
Date : 07/08/21

Count Number : TMC 2120

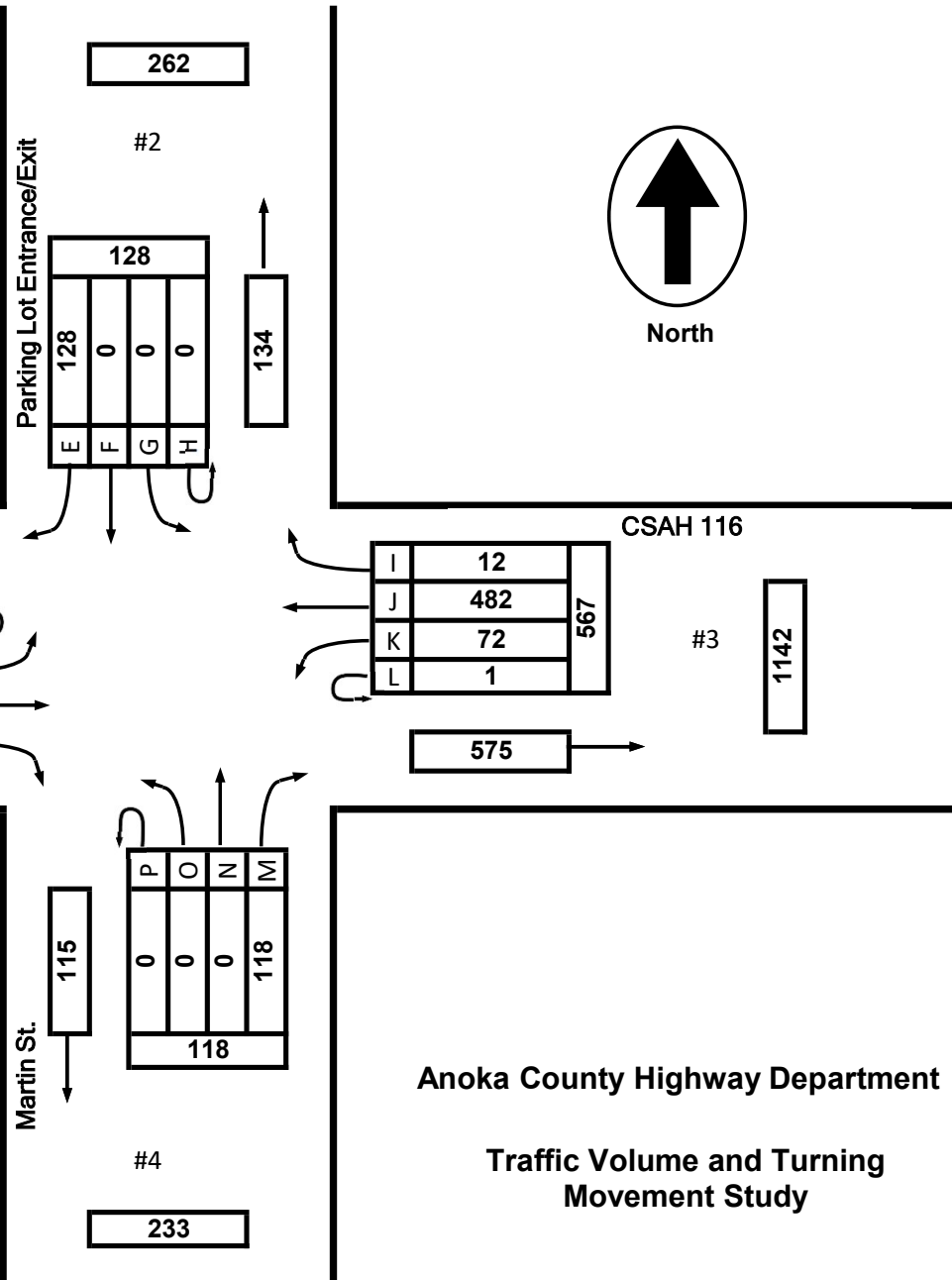
Location : CSAH 116 (Bunker Lake Blvd.)  
@ Martin St.

Collection Period : 11:45 AM - 12:45 PM

MIDDAY PEAK



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



Anoka County Highway Department  
 Traffic Volume and Turning  
 Movement Study

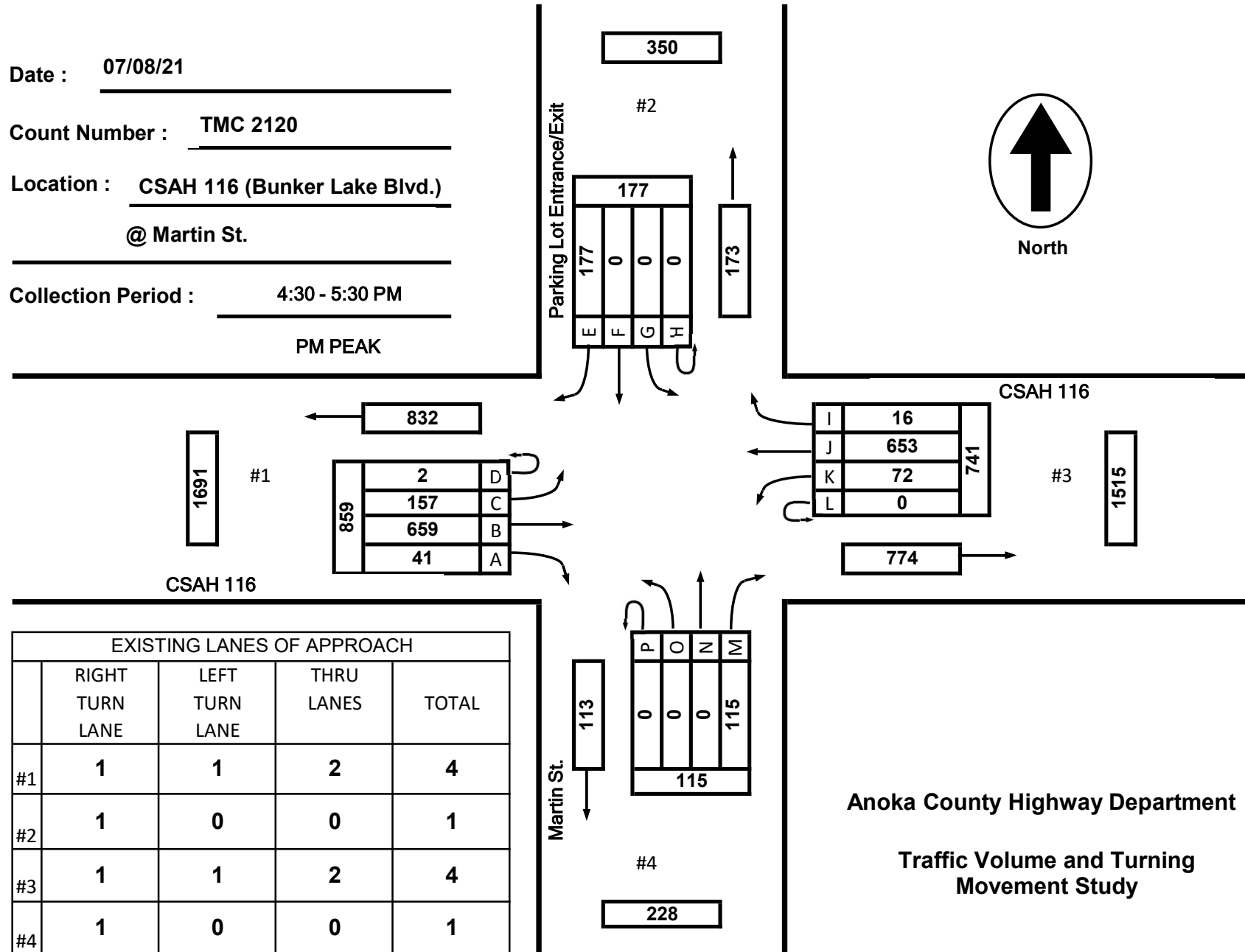
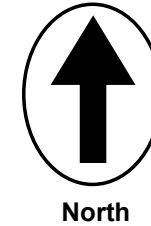
Date : 07/08/21

Count Number : TMC 2120

Location : CSAH 116 (Bunker Lake Blvd.)  
@ Martin St.

Collection Period : 4:30 - 5:30 PM

PM PEAK



EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	1	1	2	4
#2	1	0	0	1
#3	1	1	2	4
#4	1	0	0	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 : TMC 2120  
 Site Code :  
 Start Date : 07/08/2021  
 Page No : 1

Weather: Cool & P Cloudy  
 CountCAM 2  
 Study Conducted By: Matt

Groups Printed- Cars + - Trucks

Start Time	Parking Lot Entrance/Exit Southbound						CSAH 116 (Bunker Lake Blvd.) Westbound						Martin St. Northbound						CSAH 116 (Bunker Lake Blvd.) 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	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	12	1	0	13	0	18	18
00:15	0	0	0	1	0	1	0	0	6	0	0	6	0	0	0	3	0	3	0	0	8	0	0	8	0	18	18
00:30	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	6	0	0	6	0	15	15
00:45	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	2	0	2	0	0	2	1	0	3	0	11	11
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>2</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>62</b>	<b>62</b>
01:00	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	4	0	4	0	0	3	0	0	3	0	18	18
01:15	0	0	0	0	0	0	0	1	2	1	0	4	0	0	0	0	0	0	0	0	1	0	0	1	0	5	5
01:30	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	2	0	2	0	0	4	0	0	4	0	11	11
01:45	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	0	4	4
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>19</b>	<b>1</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>38</b>	<b>38</b>
02:00	0	0	0	2	0	2	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3	0	0	3	0	8	8
02:15	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	2	0	2	0	0	4	0	0	4	0	10	10
02:30	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	1	0	1	0	0	0	0	0	0	0	4	4
02:45	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	2	2	0	0	4	0	7	7
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>29</b>	<b>29</b>
03:00	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	0	5	5
03:15	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	1	0	1	0	0	1	0	0	1	0	5	5
03:30	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	3	0	0	3	0	8	8
03:45	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	0	5	5
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>23</b>	<b>23</b>
04:00	0	0	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	0	1	4	0	0	5	0	10	10
04:15	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	6	0	0	6	0	10	10
04:30	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	2	16	0	0	18	0	24	24
04:45	0	0	0	0	0	0	0	0	15	1	0	16	0	0	0	0	0	0	0	5	32	0	0	37	0	53	53
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>2</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>58</b>	<b>0</b>	<b>0</b>	<b>66</b>	<b>0</b>	<b>97</b>	<b>97</b>
05:00	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	2	15	0	0	17	0	27	27
05:15	0	0	0	0	0	0	0	0	18	0	0	18	0	0	0	0	2	0	0	3	23	3	0	29	2	47	49
05:30	0	0	0	1	0	1	0	2	28	1	0	31	0	0	1	0	4	1	0	1	32	2	0	35	4	68	72
05:45	0	0	0	1	0	1	0	3	43	2	0	48	0	0	0	5	0	5	0	2	42	4	0	48	0	102	102
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>99</b>	<b>3</b>	<b>0</b>	<b>107</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>8</b>	<b>112</b>	<b>9</b>	<b>0</b>	<b>129</b>	<b>6</b>	<b>244</b>	<b>250</b>



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

Weather: Cool & P Cloudy  
 CountCAM 2  
 Study Conducted By: Matt

File Name : TMC 2120  
 Site Code :  
 Start Date : 07/08/2021  
 Page No : 2

Groups Printed- Cars + - Trucks

Start Time	Parking Lot Entrance/Exit Southbound						CSAH 116 (Bunker Lake Blvd.) Westbound						Martin St. Northbound						CSAH 116 (Bunker Lake Blvd.) 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	0	1	0	1	0	2	26	0	0	28	0	0	0	4	0	4	0	4	57	2	0	63	0	96	96
06:15	0	0	0	2	0	2	0	5	30	0	0	35	0	0	0	3	4	3	0	4	74	3	0	81	4	121	125
06:30	0	0	0	3	0	3	0	4	70	1	0	75	0	1	0	0	1	1	0	3	74	2	0	79	1	158	159
06:45	0	0	0	7	0	7	0	5	55	0	0	60	0	0	0	2	0	2	0	12	70	4	0	86	0	155	155
<b>Total</b>	0	0	0	13	0	13	0	16	181	1	0	198	0	1	0	9	5	10	0	23	275	11	0	309	5	530	535
07:00	0	0	0	6	0	6	0	8	48	0	0	56	0	0	0	11	4	11	0	11	72	5	0	88	4	161	165
07:15	0	0	0	10	0	10	0	15	56	1	0	72	0	0	0	8	5	8	0	9	90	4	0	103	5	193	198
07:30	0	0	0	8	0	8	1	9	84	0	0	94	0	0	0	5	1	5	0	7	110	6	0	123	1	230	231
07:45	0	0	0	3	0	3	0	17	90	2	0	109	0	0	0	11	0	11	1	12	96	6	0	115	0	238	238
<b>Total</b>	0	0	0	27	0	27	1	49	278	3	0	331	0	0	0	35	10	35	1	39	368	21	0	429	10	822	832
08:00	0	0	0	4	0	4	0	7	66	3	0	76	0	0	0	7	1	7	0	17	110	6	0	133	1	220	221
08:15	0	0	0	17	0	17	0	14	84	3	0	101	0	0	0	11	0	11	0	16	95	2	0	113	0	242	242
08:30	0	0	0	7	1	7	0	17	86	1	0	104	0	0	0	15	0	15	0	13	78	6	0	97	1	223	224
08:45	0	0	0	17	0	17	0	17	96	1	1	114	0	0	0	16	0	16	1	9	103	10	0	123	1	270	271
<b>Total</b>	0	0	0	45	1	45	0	55	332	8	1	395	0	0	0	49	1	49	1	55	386	24	0	466	3	955	958
09:00	0	0	0	10	0	10	0	7	61	1	0	69	0	0	0	9	2	9	0	11	72	4	0	87	2	175	177
09:15	0	0	0	12	0	12	0	16	89	1	0	106	0	0	0	14	0	14	0	15	78	6	0	99	0	231	231
09:30	0	0	0	17	0	17	0	19	90	2	0	111	0	0	0	19	1	19	0	17	89	2	0	108	1	255	256
09:45	0	0	0	18	0	18	0	21	85	1	0	107	0	0	0	14	0	14	0	22	95	8	0	125	0	264	264
<b>Total</b>	0	0	0	57	0	57	0	63	325	5	0	393	0	0	0	56	3	56	0	65	334	20	0	419	3	925	928
10:00	0	0	0	32	1	32	0	14	106	1	0	121	0	0	0	17	1	17	0	24	91	5	0	120	2	290	292
10:15	0	0	0	31	0	31	0	17	88	1	0	106	0	0	0	18	0	18	0	22	108	4	0	134	0	289	289
10:30	0	0	0	21	0	21	0	14	90	3	0	107	0	0	0	23	0	23	0	23	102	4	0	129	0	280	280
10:45	0	0	0	33	0	33	1	16	77	2	0	96	0	1	0	15	0	16	0	25	102	9	0	136	0	281	281
<b>Total</b>	0	0	0	117	1	117	1	61	361	7	0	430	0	1	0	73	1	74	0	94	403	22	0	519	2	1140	1142
11:00	0	0	0	23	0	23	0	16	101	2	0	119	0	0	0	25	0	25	0	34	113	6	0	153	0	320	320
11:15	0	0	0	27	1	27	0	17	112	1	0	130	0	0	0	25	2	25	0	21	121	8	0	150	3	332	335
11:30	0	0	0	36	0	36	0	25	115	3	0	143	0	0	0	22	0	22	0	29	111	11	0	151	0	352	352
11:45	0	0	0	34	0	34	0	19	103	3	0	125	0	0	0	36	1	36	0	27	109	22	0	158	1	353	354
<b>Total</b>	0	0	0	120	1	120	0	77	431	9	0	517	0	0	0	108	3	108	0	111	454	47	0	612	4	1357	1361
12:00	0	0	0	21	0	21	0	21	120	2	0	143	0	0	0	31	1	31	0	29	108	8	0	145	1	340	341



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

Weather: Cool & P Cloudy  
 CountCAM 2  
 Study Conducted By: Matt

File Name : TMC 2120  
 Site Code :  
 Start Date : 07/08/2021  
 Page No : 3

Groups Printed- Cars + - Trucks

Start Time	Parking Lot Entrance/Exit Southbound						CSAH 116 (Bunker Lake Blvd.) Westbound						Martin St. Northbound						CSAH 116 (Bunker Lake Blvd.) 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	0	41	0	41	1	10	119	1	0	131	0	0	0	19	1	19	0	38	125	9	0	172	1	363	364
12:30	0	0	0	32	0	32	0	22	140	6	1	168	0	0	0	32	1	32	0	28	114	4	0	146	2	378	380
12:45	0	0	0	38	0	38	0	21	103	6	0	130	0	0	0	28	1	28	0	31	119	6	0	156	1	352	353
Total	0	0	0	132	0	132	1	74	482	15	1	572	0	0	0	110	4	110	0	126	466	27	0	619	5	1433	1438
13:00	0	0	0	33	0	33	0	15	113	4	0	132	0	0	0	32	0	32	0	40	96	8	0	144	0	341	341
13:15	0	0	0	33	0	33	0	21	93	2	0	116	0	0	0	25	2	25	0	32	110	3	0	145	2	319	321
13:30	0	0	0	37	1	37	0	14	107	2	0	123	0	0	0	29	0	29	0	34	128	10	0	172	1	361	362
13:45	0	0	0	39	0	39	0	15	91	4	0	110	0	0	0	29	2	29	0	28	112	6	0	146	2	324	326
Total	0	0	0	142	1	142	0	65	404	12	0	481	0	0	0	115	4	115	0	134	446	27	0	607	5	1345	1350
14:00	0	0	0	49	0	49	0	19	95	2	0	116	0	0	0	26	1	26	0	48	124	3	0	175	1	366	367
14:15	0	0	0	46	0	46	0	12	107	6	0	125	0	0	0	18	1	18	0	45	122	2	0	169	1	358	359
14:30	0	0	0	47	0	47	0	14	119	3	0	136	0	0	0	26	0	26	0	29	115	6	0	150	0	359	359
14:45	0	0	0	32	0	32	0	11	117	5	0	133	0	0	0	12	3	12	0	33	122	6	0	161	3	338	341
Total	0	0	0	174	0	174	0	56	438	16	0	510	0	0	0	82	5	82	0	155	483	17	0	655	5	1421	1426
15:00	0	0	0	42	0	42	0	15	108	2	0	125	0	1	0	17	1	18	0	22	114	2	0	138	1	323	324
15:15	0	0	0	35	0	35	0	15	119	11	0	145	0	0	0	30	0	30	0	40	136	5	0	181	0	391	391
15:30	0	0	0	34	2	34	1	14	140	7	0	162	0	0	0	26	5	26	0	44	146	8	1	198	8	420	428
15:45	0	0	0	42	0	42	0	16	154	9	0	179	0	0	0	25	0	25	0	26	171	11	0	208	0	454	454
Total	0	0	0	153	2	153	1	60	521	29	0	611	0	1	0	98	6	99	0	132	567	26	1	725	9	1588	1597
16:00	0	0	0	46	0	46	0	22	146	5	0	173	0	0	1	35	0	36	0	19	128	7	0	154	0	409	409
16:15	0	0	0	35	0	35	0	24	177	6	0	207	0	0	0	37	1	37	0	35	142	6	0	183	1	462	463
16:30	0	0	0	53	0	53	0	20	183	4	0	207	0	0	0	30	1	30	0	45	153	10	0	208	1	498	499
16:45	0	0	0	45	0	45	0	16	168	4	0	188	0	0	0	31	0	31	2	39	167	9	0	217	0	481	481
Total	0	0	0	179	0	179	0	82	674	19	0	775	0	0	1	133	2	134	2	138	590	32	0	762	2	1850	1852
17:00	0	0	0	39	0	39	0	22	142	4	1	168	0	0	0	27	1	27	0	32	166	8	0	206	2	440	442
17:15	0	0	0	40	0	40	0	14	160	4	0	178	0	0	0	27	2	27	0	41	173	14	0	228	2	473	475
17:30	0	0	0	37	0	37	0	18	163	3	0	184	0	0	0	31	1	31	0	39	149	10	0	198	1	450	451
17:45	0	0	0	37	1	37	0	25	169	2	0	196	0	0	0	17	1	17	0	31	159	6	0	196	2	446	448
Total	0	0	0	153	1	153	0	79	634	13	1	726	0	0	0	102	5	102	0	143	647	38	0	828	7	1809	1816
18:00	0	0	1	46	0	47	0	22	137	2	0	161	0	0	0	30	0	30	0	24	106	7	0	137	0	375	375
18:15	0	0	0	39	0	39	0	14	120	4	0	138	0	0	0	20	1	20	0	36	119	19	0	174	1	371	372



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2120  
 Site Code :  
 Start Date : 07/08/2021  
 Page No : 4

Weather: Cool & P Cloudy  
 CountCAM 2  
 Study Conducted By: Matt

Groups Printed- Cars + - Trucks

Start Time	Parking Lot Entrance/Exit Southbound						CSAH 116 (Bunker Lake Blvd.) Westbound						Martin St. Northbound						CSAH 116 (Bunker Lake Blvd.) 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	0	42	1	42	0	15	103	3	0	121	0	0	0	32	1	32	0	37	110	6	0	153	2	348	350
18:45	0	0	0	36	0	36	0	13	102	4	0	119	0	0	0	26	0	26	0	20	115	6	0	141	0	322	322
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>163</b>	<b>1</b>	<b>164</b>	<b>0</b>	<b>64</b>	<b>462</b>	<b>13</b>	<b>0</b>	<b>539</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>108</b>	<b>2</b>	<b>108</b>	<b>0</b>	<b>117</b>	<b>450</b>	<b>38</b>	<b>0</b>	<b>605</b>	<b>3</b>	<b>1416</b>	<b>1419</b>
19:00	0	0	1	29	0	30	0	11	102	1	1	114	0	0	0	15	2	15	0	24	104	6	0	134	3	293	296
19:15	0	0	0	27	0	27	0	18	72	3	0	93	0	1	0	23	1	24	1	22	89	7	3	119	4	263	267
19:30	0	0	0	34	0	34	0	18	86	4	1	108	0	0	0	19	1	19	0	25	89	19	0	133	2	294	296
19:45	0	0	0	31	0	31	0	13	58	0	0	71	0	1	0	31	1	32	0	18	71	14	1	103	2	237	239
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>121</b>	<b>0</b>	<b>122</b>	<b>0</b>	<b>60</b>	<b>318</b>	<b>8</b>	<b>2</b>	<b>386</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>88</b>	<b>5</b>	<b>90</b>	<b>1</b>	<b>89</b>	<b>353</b>	<b>46</b>	<b>4</b>	<b>489</b>	<b>11</b>	<b>1087</b>	<b>1098</b>
20:00	0	0	0	29	0	29	0	14	68	6	0	88	0	1	0	38	2	39	0	22	87	8	3	117	5	273	278
20:15	0	0	0	23	1	23	0	10	96	2	0	108	0	0	0	33	1	33	0	9	63	11	0	83	2	247	249
20:30	0	0	0	13	0	13	0	15	70	2	0	87	0	0	0	22	0	22	0	23	95	5	0	123	0	245	245
20:45	0	0	0	27	1	27	0	19	64	4	1	87	0	0	0	25	1	25	0	13	79	15	0	107	3	246	249
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>92</b>	<b>2</b>	<b>92</b>	<b>0</b>	<b>58</b>	<b>298</b>	<b>14</b>	<b>1</b>	<b>370</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>118</b>	<b>4</b>	<b>119</b>	<b>0</b>	<b>67</b>	<b>324</b>	<b>39</b>	<b>3</b>	<b>430</b>	<b>10</b>	<b>1011</b>	<b>1021</b>
21:00	0	0	0	21	0	21	0	5	66	1	0	72	0	1	0	30	0	31	0	9	53	7	0	69	0	193	193
21:15	0	0	0	21	0	21	0	13	63	1	0	77	0	0	0	28	0	28	0	15	55	8	0	78	0	204	204
21:30	0	0	0	17	0	17	0	6	46	1	0	53	0	0	0	23	0	23	0	12	54	4	0	70	0	163	163
21:45	0	0	0	15	0	15	0	3	35	2	0	40	0	1	0	19	0	20	0	12	50	2	0	64	0	139	139
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>74</b>	<b>0</b>	<b>74</b>	<b>0</b>	<b>27</b>	<b>210</b>	<b>5</b>	<b>0</b>	<b>242</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>102</b>	<b>0</b>	<b>48</b>	<b>212</b>	<b>21</b>	<b>0</b>	<b>281</b>	<b>0</b>	<b>699</b>	<b>699</b>
22:00	0	0	0	13	0	13	0	5	35	2	0	42	0	0	0	17	0	17	0	8	43	4	0	55	0	127	127
22:15	0	0	0	11	0	11	0	0	37	2	0	39	0	0	0	17	0	17	0	5	29	2	0	36	0	103	103
22:30	0	0	0	6	0	6	0	0	31	2	0	33	0	0	0	13	0	13	0	3	19	3	0	25	0	77	77
22:45	0	0	0	6	0	6	0	0	18	0	0	18	0	1	0	6	0	7	0	1	22	1	2	24	2	55	57
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>5</b>	<b>121</b>	<b>6</b>	<b>0</b>	<b>132</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>53</b>	<b>0</b>	<b>54</b>	<b>0</b>	<b>17</b>	<b>113</b>	<b>10</b>	<b>2</b>	<b>140</b>	<b>2</b>	<b>362</b>	<b>364</b>
23:00	0	0	0	6	0	6	0	0	13	0	0	13	0	0	0	7	0	7	0	0	10	4	0	14	0	40	40
23:15	0	0	0	2	0	2	0	1	10	0	0	11	0	0	0	2	0	2	0	0	14	0	0	14	0	29	29
23:30	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	5	0	5	0	0	8	0	0	8	0	23	23
23:45	0	0	0	1	0	1	0	0	14	0	0	14	0	0	0	8	0	8	0	0	7	1	0	8	0	31	31
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>39</b>	<b>5</b>	<b>0</b>	<b>44</b>	<b>0</b>	<b>123</b>	<b>123</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1812</b>	<b>10</b>	<b>1814</b>	<b>4</b>	<b>960</b>	<b>6714</b>	<b>189</b>	<b>6</b>	<b>7867</b>	<b>0</b>	<b>9</b>	<b>2</b>	<b>1479</b>	<b>66</b>	<b>1490</b>	<b>5</b>	<b>1571</b>	<b>7137</b>	<b>482</b>	<b>10</b>	<b>9195</b>	<b>92</b>	<b>20366</b>	<b>20458</b>
Apprch %	0	0	0.1	99.9			0.1	12.2	85.3	2.4			0	0.6	0.1	99.3			0.1	17.1	77.6	5.2					
Total %	0	0	0	8.9		8.9	0	4.7	33	0.9		38.6	0	0	0	7.3		7.3	0	7.7	35	2.4		45.1	0.4	99.6	
Cars +	0	0	2	1799		1811	4	956	6594	187		7747	0	9	2	1474		1551	5	1559	6984	475		9033	0	0	20142
% Cars +	0	0	100	99.3		100	99.6	98.2	98.9	100		98.4	0	100	100	99.7		100	100	99.2	97.9	98.5		98.1	0	0	98.5
Trucks	0	0	0	13		13	0	4	120	2		126	0	0	0	5		5	0	12	153	7		172	0	0	316
% Trucks	0	0	0	0.7		0.7	0	0.4	1.8	1.1		1.6	0	0	0	0.3		0.3	0	0.8	2.1	1.5		1.9	0	0	1.5



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

Start Time	Parking Lot Entrance/Exit Southbound					CSAH 116 (Bunker Lake Blvd.) Westbound					Martin St. Northbound					CSAH 116 (Bunker Lake Blvd.) 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 08:00																					
08:00	0	0	0	4	4	0	7	66	3	76	0	0	0	7	7	0	17	110	6	133	220
08:15	0	0	0	17	17	0	14	84	3	101	0	0	0	11	11	0	16	95	2	113	242
08:30	0	0	0	7	7	0	17	86	1	104	0	0	0	15	15	0	13	78	6	97	223
08:45	0	0	0	17	17	0	17	96	1	114	0	0	0	16	16	1	9	103	10	123	270
Total Volume	0	0	0	45	45	0	55	332	8	395	0	0	0	49	49	1	55	386	24	466	955
% App. Total	0	0	0	100		0	13.9	84.1	2		0	0	0	100		0.2	11.8	82.8	5.2		
PHF	.000	.000	.000	.662	.662	.000	.809	.865	.667	.866	.000	.000	.000	.766	.766	.250	.809	.877	.600	.876	.884

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45																					
11:45	0	0	0	34	34	0	19	103	3	125	0	0	0	36	36	0	27	109	22	158	353
12:00	0	0	0	21	21	0	21	120	2	143	0	0	0	31	31	0	29	108	8	145	340
12:15	0	0	0	41	41	1	10	119	1	131	0	0	0	19	19	0	38	125	9	172	363
12:30	0	0	0	32	32	0	22	140	6	168	0	0	0	32	32	0	28	114	4	146	378
Total Volume	0	0	0	128	128	1	72	482	12	567	0	0	0	118	118	0	122	456	43	621	1434
% App. Total	0	0	0	100		0.2	12.7	85	2.1		0	0	0	100		0	19.6	73.4	6.9		
PHF	.000	.000	.000	.780	.780	.250	.818	.861	.500	.844	.000	.000	.000	.819	.819	.000	.803	.912	.489	.903	.948

Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	0	0	53	53	0	20	183	4	207	0	0	0	30	30	0	45	153	10	208	498
16:45	0	0	0	45	45	0	16	168	4	188	0	0	0	31	31	2	39	167	9	217	481
17:00	0	0	0	39	39	0	22	142	4	168	0	0	0	27	27	0	32	166	8	206	440
17:15	0	0	0	40	40	0	14	160	4	178	0	0	0	27	27	0	41	173	14	228	473
Total Volume	0	0	0	177	177	0	72	653	16	741	0	0	0	115	115	2	157	659	41	859	1892
% App. Total	0	0	0	100		0	9.7	88.1	2.2		0	0	0	100		0.2	18.3	76.7	4.8		
PHF	.000	.000	.000	.835	.835	.000	.818	.892	1.00	.895	.000	.000	.000	.927	.927	.250	.872	.952	.732	.942	.950



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2120  
 Site Code :  
 Start Date : 07/08/2021  
 Page No : 1

Weather: Cool & P Cloudy  
 CountCAM 2  
 Study Conducted By: Matt

Groups Printed- Trucks

Start Time	Parking Lot Entrance/Exit Southbound					CSAH 116 (Bunker Lake Blvd.) Westbound					Martin St. Northbound					CSAH 116 (Bunker Lake Blvd.) 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	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
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	0	0	0	0	0	0	0	1	0	0	1	1
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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
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	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
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	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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
06:15	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	1	0	0	1	5
06:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
06:45	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	2	0	0	2	5
Total	0	0	0	0	0	0	0	8	0	8	0	0	0	0	0	0	0	5	0	0	5	13
07:00	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	1	0	0	1	5
07:15	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	1	3	0	0	4	6
07:30	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	5	0	0	5	7
07:45	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3	0	0	3	5
Total	0	0	0	1	1	0	0	9	0	9	0	0	0	0	0	0	1	12	0	0	13	23
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
08:15	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3	0	0	3	5
08:30	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	1	0	0	1	5
08:45	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	2	1	0	3	6
Total	0	0	0	0	0	0	0	9	0	9	0	0	0	0	0	0	0	8	1	0	9	18



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2120

Site Code :

Start Date : 07/08/2021

Page No : 2

Weather: Cool & P Cloudy

CountCAM 2

Study Conducted By: Matt

Groups Printed- Trucks

Start Time	Parking Lot Entrance/Exit Southbound					CSAH 116 (Bunker Lake Blvd.) Westbound					Martin St. Northbound					CSAH 116 (Bunker Lake Blvd.) 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	3	0	3	0	0	0	0	0	0	0	3	0	3	6
09:15	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	4	0	5	8
09:30	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
09:45	0	0	0	1	1	0	0	3	0	3	0	0	0	0	0	0	0	5	0	5	9
Total	0	0	0	1	1	0	0	12	0	12	0	0	0	0	0	0	1	12	0	13	26
10:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	6	0	6	7
10:15	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	4	0	4	6
10:30	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	1	7	0	8	13
10:45	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	4	0	4	6
Total	0	0	0	0	0	0	0	9	1	10	0	0	0	0	0	0	1	21	0	22	32
11:00	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	4	2	6	10
11:15	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0	0	7	0	7	11
11:30	0	0	0	0	0	0	1	3	0	4	0	0	0	1	1	0	0	3	0	3	8
11:45	0	0	0	1	1	0	0	3	0	3	0	0	0	0	0	0	0	2	0	2	6
Total	0	0	0	1	1	0	4	11	0	15	0	0	0	1	1	0	0	16	2	18	35
12:00	0	0	0	1	1	0	0	5	0	5	0	0	0	0	0	0	1	5	0	6	12
12:15	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	6	0	6	8
12:30	0	0	0	1	1	0	0	2	1	3	0	0	0	1	1	0	0	1	1	2	7
12:45	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3	0	3	5
Total	0	0	0	2	2	0	0	11	1	12	0	0	0	1	1	0	1	15	1	17	32
13:00	0	0	0	1	1	0	0	4	0	4	0	0	0	0	0	0	0	1	0	1	6
13:15	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	0	0	6	1	7	9
13:30	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	3	0	4	6
13:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	7	0	7	8
Total	0	0	0	1	1	0	0	8	0	8	0	0	0	1	1	0	1	17	1	19	29
14:00	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	2	2	0	4	7
14:15	0	0	0	2	2	0	0	5	0	5	0	0	0	0	0	0	0	1	0	1	8
14:30	0	0	0	0	0	0	0	6	0	6	0	0	0	0	0	0	1	1	0	2	8
14:45	0	0	0	1	1	0	0	2	0	2	0	0	0	0	0	0	0	2	0	2	5
Total	0	0	0	3	3	0	0	16	0	16	0	0	0	0	0	0	3	6	0	9	28
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	4
15:15	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	5	0	6	7
15:30	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	4	1	5	8
15:45	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	3	0	4	6
Total	0	0	0	1	1	0	0	5	0	5	0	0	0	0	0	0	3	15	1	19	25
16:00	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	3	0	3	5
16:15	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3	0	3	5
16:30	0	0	0	1	1	0	0	1	0	1	0	0	0	1	1	0	0	2	0	2	5
16:45	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	3	3	0	0	5	0	5	0	0	0	1	1	0	0	8	0	8	17
17:00	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	1	0	1	4
17:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3	1	4	5
17:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	3
17:45	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	1	0	1	4
Total	0	0	0	0	0	0	0	8	0	8	0	0	0	0	0	0	0	7	1	8	16
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2120  
 Site Code :  
 Start Date : 07/08/2021  
 Page No : 3

Weather: Cool & P Cloudy  
 CountCAM 2  
 Study Conducted By: Matt

Groups Printed- Trucks

Start Time	Parking Lot Entrance/Exit Southbound					CSAH 116 (Bunker Lake Blvd.) Westbound					Martin St. Northbound					CSAH 116 (Bunker Lake Blvd.) 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	0	0	1	1	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	1
<b>Total</b>	0	0	0	0	0	0	0	2	0	2	0	0	0	1	1	0	0	1	0	1	4
19:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
19:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	2
19:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
19:45	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	2	0	2	0	0	0	0	0	0	0	2	0	2	4
20:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3	0	3	4
20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0	1	0	1	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	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3	0	3	5
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
22:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
<b>Total</b>	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	0	2	3
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	0	0	0
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	0	0	0
<b>Grand Total</b>	0	0	0	13	13	0	4	120	2	126	0	0	0	5	5	0	12	153	7	172	316
Apprch %	0	0	0	100		0	3.2	95.2	1.6		0	0	0	100		0	7	89	4.1		
Total %	0	0	0	4.1	4.1	0	1.3	38	0.6	39.9	0	0	0	1.6	1.6	0	3.8	48.4	2.2	54.4	

# ANOKA COUNTY HIGHWAY DEPARTMENT

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2120

Study Date: 07/22/2021

Page No: 1

## Signal Warrants - Summary

### Major Street Approaches

Eastbound: CSAH 116 (Bunker Lake Blvd.)

Number of Lanes : 2

Total Approach Volume: 9,195

Westbound: CSAH 116 (Bunker Lake Blvd.)

Number of Lanes : 2

Total Approach Volume: 7,867

### Minor Street Approaches

Northbound: Martin St.

Number of Lanes : 1

Total Approach Volume: 1,493

Southbound: Martin St.

Number of Lanes : 1

Total Approach Volume: 1,814

### Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 11 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 12 hours, 8 are needed

Required 1B volumes reached for 14 hours, 8 are needed

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

Number of hours (12) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

Warrant 3A - Peak Hour Delay.....Not Satisfied

Approach volumes on minor street don't exceed minimums for any hour. Delay data not evaluated.

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

Volumes exceed minimums for at least one hour.

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 DEPARTMENT

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 2120**

Study Date: **07/22/2021**

Page No: **2**

## 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

11 hours meet minimums.  
Warrant IS met.

### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **2 or more**  
 Number of Minor Lanes = **1**

### Volume Requirements

Rural Factor of 70 % applied  
 Veh/Hr Major = **420**  
 Veh/Hr Minor = **105**

Time	Major Road CSAH 116 (Bunker Lake Blvd.)				Total	Minor Road Martin St.		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
17:00 - 18:00	828	+	726	=	1554	102	153	Yes
16:00 - 17:00	762	+	775	=	1537	134	179	Yes
15:00 - 16:00	725	+	611	=	1336	99	153	Yes
12:00 - 13:00	619	+	572	=	1191	110	132	Yes
14:00 - 15:00	655	+	510	=	1165	82	174	Yes
18:00 - 19:00	605	+	539	=	1144	108	164	Yes
11:00 - 12:00	612	+	517	=	1129	110	120	Yes
13:00 - 14:00	607	+	481	=	1088	115	142	Yes
10:00 - 11:00	519	+	430	=	949	75	117	Yes
19:00 - 20:00	489	+	386	=	875	90	122	Yes
20:00 - 21:00	430	+	370	=	800	119	92	Yes
09:45 - 10:45	508	+	441	=	949	73	102	No
09:30 - 10:30	487	+	445	=	932	68	98	No
09:15 - 10:15	452	+	445	=	897	64	79	No
07:30 - 08:30	484	+	380	=	864	34	32	No
08:00 - 09:00	466	+	395	=	861	49	45	No
07:45 - 08:45	458	+	390	=	848	44	31	No
07:15 - 08:15	474	+	351	=	825	31	25	No
08:45 - 09:45	417	+	400	=	817	58	56	No
09:00 - 10:00	419	+	393	=	812	56	57	No
08:15 - 09:15	420	+	388	=	808	51	51	No
08:30 - 09:30	406	+	393	=	799	54	46	No
07:00 - 08:00	429	+	331	=	760	35	27	No
06:45 - 07:45	400	+	282	=	682	26	31	No
06:30 - 07:30	356		263		619	22	26	No

# ANOKA COUNTY HIGHWAY DEPARTMENT

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 2120**

Study Date: **07/22/2021**

Page No: **3**

## 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 hours meet minimums.  
Warrant IS met.

### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **2 or more**  
 Number of Minor Lanes = **1**

### Volume Requirements

Rural Factor of 70 % applied  
 Veh/Hr Major = **630**  
 Veh/Hr Minor = **53**

Time	Major Road CSAH 116 (Bunker Lake Blvd.)				Total	Minor Road Martin St.		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:30 - 17:30	859	+	741	=	1600	115	177	Yes
15:30 - 16:30	743	+	721	=	1464	124	157	Yes
17:30 - 18:30	705	+	679	=	1384	98	160	Yes
14:30 - 15:30	630	+	539	=	1169	86	156	Yes
11:30 - 12:30	626	+	542	=	1168	108	132	Yes
12:30 - 13:30	591	+	546	=	1137	117	136	Yes
13:30 - 14:30	662	+	474	=	1136	102	171	Yes
10:30 - 11:30	568	+	452	=	1020	92	104	Yes
18:30 - 19:30	547	+	447	=	994	97	135	Yes
09:30 - 10:30	487	+	445	=	932	68	98	Yes
19:30 - 20:30	436	+	375	=	811	123	117	Yes
08:30 - 09:30	406	+	393	=	799	54	46	Yes
20:30 - 21:30	377	+	323	=	700	106	82	Yes
07:30 - 08:30	484	+	380	=	864	34	32	No
08:00 - 09:00	466	+	395	=	861	49	45	No
07:45 - 08:45	458	+	390	=	848	44	31	No
07:15 - 08:15	474	+	351	=	825	31	25	No
08:15 - 09:15	420	+	388	=	808	51	51	No
07:00 - 08:00	429	+	331	=	760	35	27	No
06:45 - 07:45	400	+	282	=	682	26	31	No
06:30 - 07:30	356	+	263	=	619	22	26	No
06:15 - 07:15	334	+	226	=	560	17	18	No
06:00 - 07:00	309	+	198	=	507	10	13	No
05:45 - 06:45	271	+	186	=	457	13	7	No
21:30 - 22:30	225		174		399	77	56	No

# ANOKA COUNTY HIGHWAY DEPARTMENT

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 2120**

Study Date: **07/22/2021**

Page No: **4**

## 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

12 hours meet 1A minimums.  
14 hours meet 1B minimums.  
Warrant IS met.

### Site Data Required

Rural Settings Apply = **True**  
Number of Major Lanes = **2 or more**  
Number of Minor Lanes = **1**

### Volume Requirements

Rural Factor of 70% applied  
Warrant 1A 1B  
Veh/Hr Major = **336 504**

Veh/Hr Minor = **84 42**

Time	Major Road				Total	Minor Road		Met1A?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	CSAH 116 (Bunker Lake Blvd.)					Martin St.		
16:30 - 17:30	859	+	741	=	1600	115	177	Yes
15:30 - 16:30	743	+	721	=	1464	124	157	Yes
17:30 - 18:30	705	+	679	=	1384	98	160	Yes
14:30 - 15:30	630	+	539	=	1169	86	156	Yes
11:30 - 12:30	626	+	542	=	1168	108	132	Yes
12:30 - 13:30	591	+	546	=	1137	117	136	Yes
13:30 - 14:30	662	+	474	=	1136	102	171	Yes
10:30 - 11:30	568	+	452	=	1020	92	104	Yes
18:30 - 19:30	547	+	447	=	994	97	135	Yes
09:30 - 10:30	487	+	445	=	932	68	98	Yes
19:30 - 20:30	436	+	375	=	811	123	117	Yes
20:30 - 21:30	377		323		700	106	82	Yes

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:45 - 17:45	849	+	718	=	1567	116	161	Yes
15:45 - 16:45	753	+	766	=	1519	128	176	Yes
17:45 - 18:45	660	+	616	=	1276	99	165	Yes
14:45 - 15:45	678	+	565	=	1243	86	143	Yes
11:45 - 12:45	621	+	567	=	1188	118	128	Yes
13:45 - 14:45	640	+	487	=	1127	99	181	Yes
12:45 - 13:45	617	+	501	=	1118	114	141	Yes
10:45 - 11:45	590	+	488	=	1078	90	119	Yes
18:45 - 19:45	527	+	434	=	961	84	127	Yes
09:45 - 10:45	508	+	441	=	949	73	102	Yes
07:45 - 08:45	458	+	390	=	848	44	31	Yes
08:45 - 09:45	417		400		817	58	56	Yes



# ANOKA COUNTY HIGHWAY DEPARTMENT

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 2120**

Study Date: **07/22/2021**

Page No: **5**

## 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.

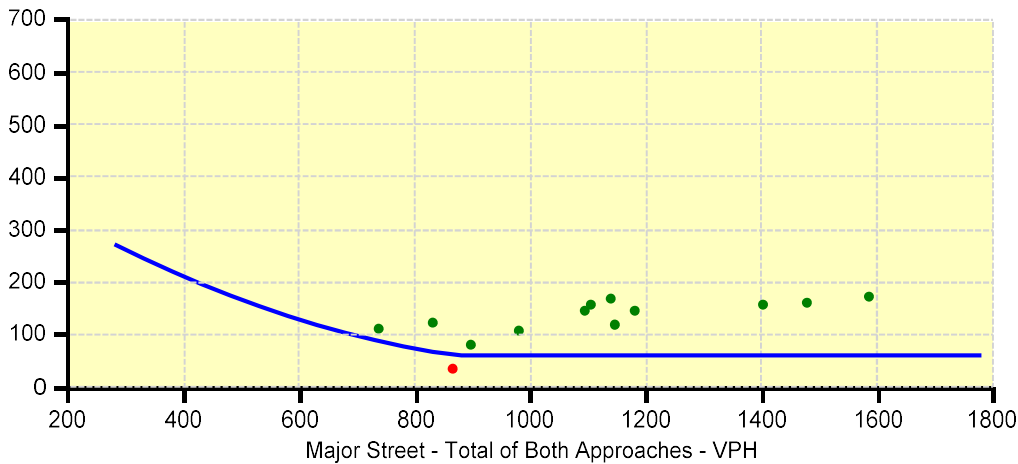
### Summary

12 hours meet minimums.  
Warrant IS met.

### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **2 or more**  
 Number of Minor Lanes = **1**

Time	Major Road CSAH 116 (Bunker Lake Blvd.)				Total	Minor Road Martin St.		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:15 - 17:15	814	+	770	=	1584	125	172	Yes
17:15 - 18:15	759	+	719	=	1478	105	161	Yes
15:15 - 16:15	741	+	659	=	1400	117	157	Yes
12:15 - 13:15	618	+	561	=	1179	111	144	Yes
11:15 - 12:15	604	+	541	=	1145	114	118	Yes
14:15 - 15:15	618	+	519	=	1137	74	167	Yes
13:15 - 14:15	638	+	465	=	1103	109	158	Yes
18:15 - 19:15	602	+	492	=	1094	93	147	Yes
10:15 - 11:15	552	+	428	=	980	85	108	Yes
09:15 - 10:15	452	+	445	=	897	64	79	Yes
19:15 - 20:15	472	+	360	=	832	114	121	Yes
							84	Yes



# ANOKA COUNTY HIGHWAY DEPARTMENT

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 2120**

Study Date: **07/22/2021**

Page No: **6**

## 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

33 hours meet minimums.  
Warrant IS met.

### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **2 or more**  
 Number of Minor Lanes = **1**

Time	Major Road CSAH 116 (Bunker Lake Blvd.)				Total	Minor Road Martin St.		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:30 - 17:30	859	+	741	=	1600	115	177	Yes
16:15 - 17:15	814	+	770	=	1584	125	172	Yes
16:45 - 17:45	849	+	718	=	1567	116	161	Yes
17:00 - 18:00	828	+	726	=	1554	102	153	Yes
16:00 - 17:00	762	+	775	=	1537	134	179	Yes
15:45 - 16:45	753	+	766	=	1519	128	176	Yes
17:15 - 18:15	759	+	719	=	1478	105	161	Yes
15:30 - 16:30	743	+	721	=	1464	124	157	Yes
15:15 - 16:15	741	+	659	=	1400	117	157	Yes
17:30 - 18:30	705	+	679	=	1384	98	160	Yes
15:00 - 16:00	725	+	611	=	1336	99	153	Yes
							165	Yes

