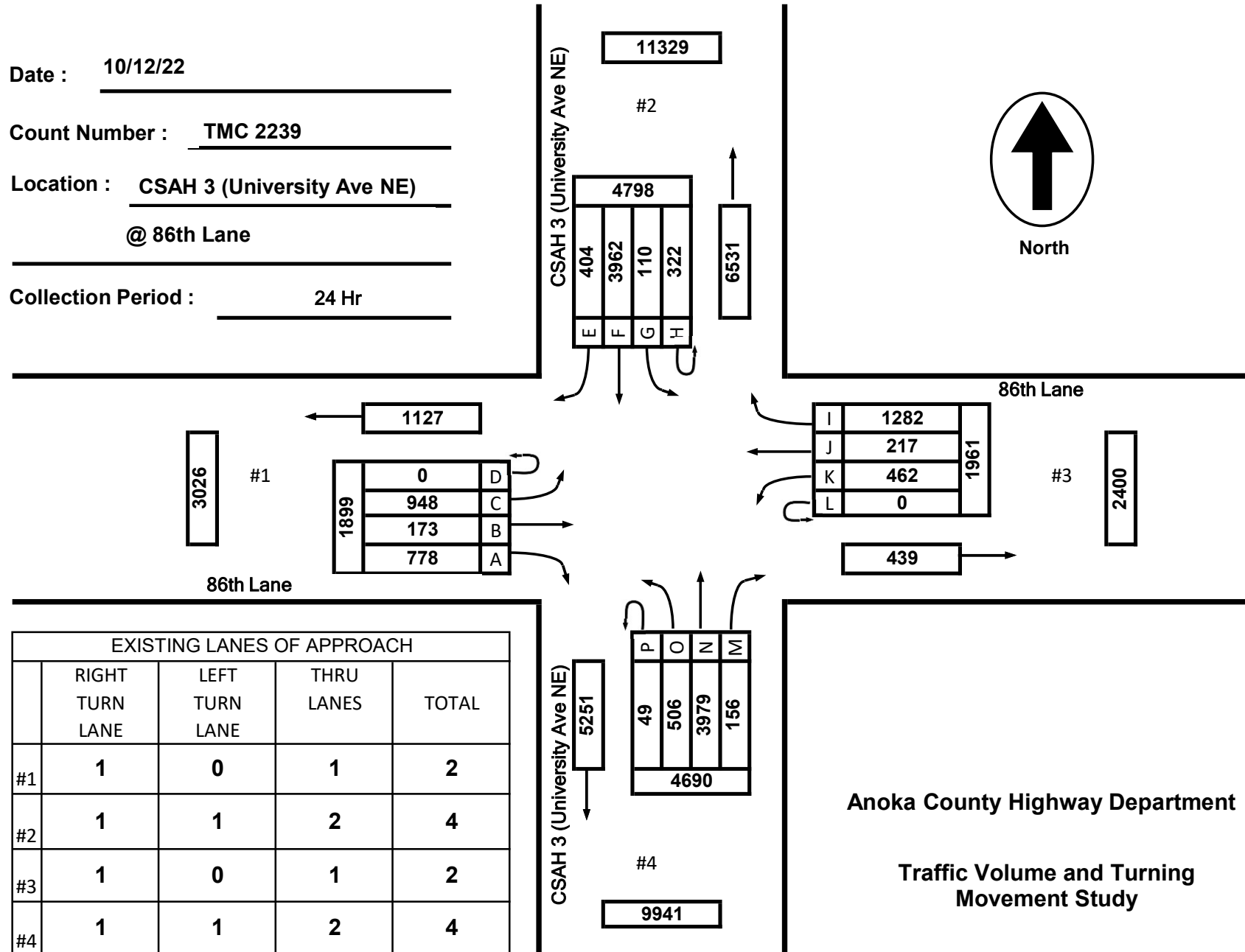


Date : 10/12/22

Count Number : TMC 2239

Location : CSAH 3 (University Ave NE)
@ 86th Lane

Collection Period : 24 Hr



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

Anoka County Highway Department

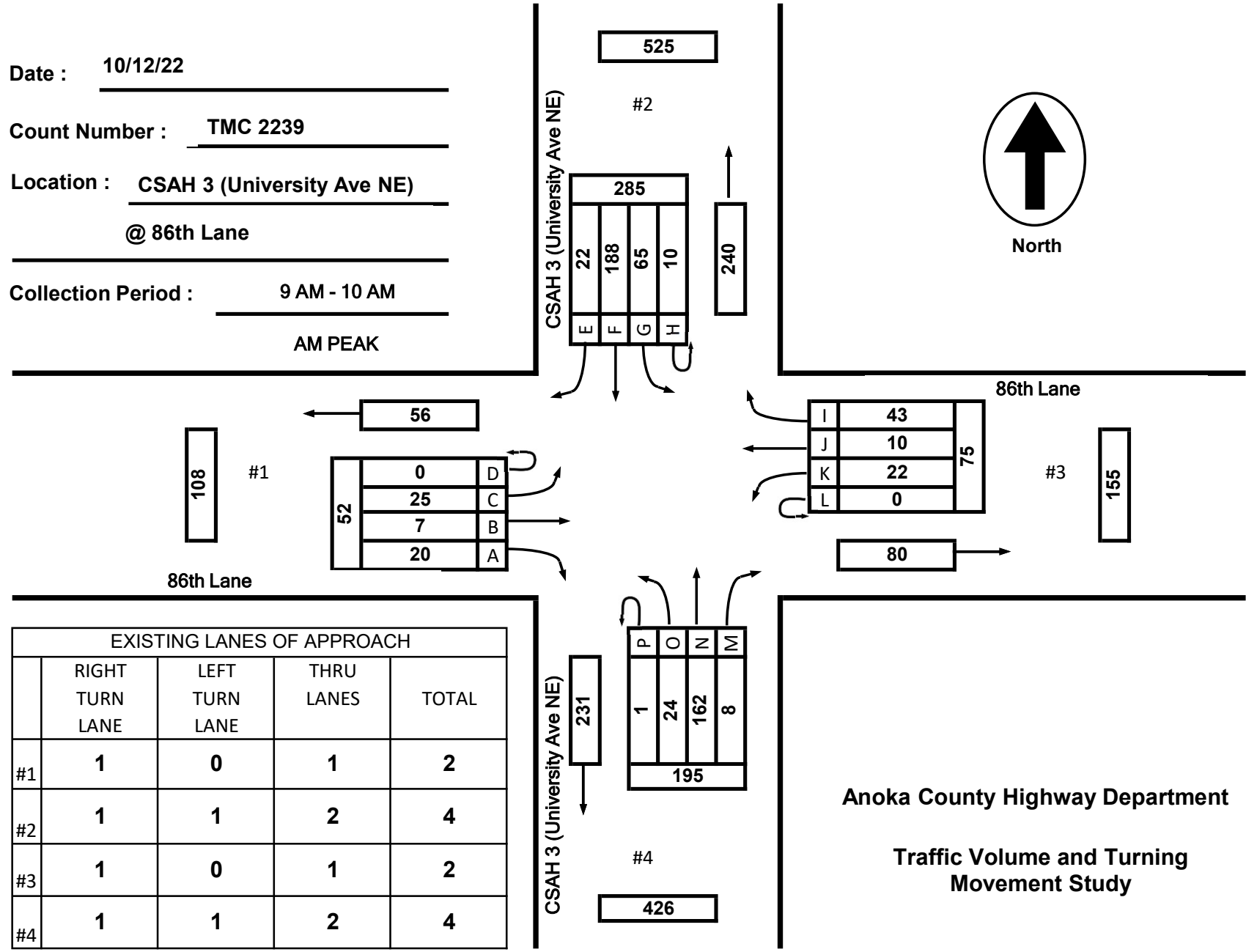
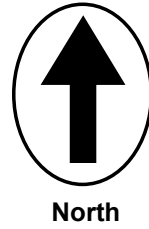
Traffic Volume and Turning Movement Study

Date : 10/12/22

Count Number : TMC 2239

Location : CSAH 3 (University Ave NE)
@ 86th Lane

Collection Period : 9 AM - 10 AM
AM PEAK



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

Anoka County Highway Department
Traffic Volume and Turning Movement Study

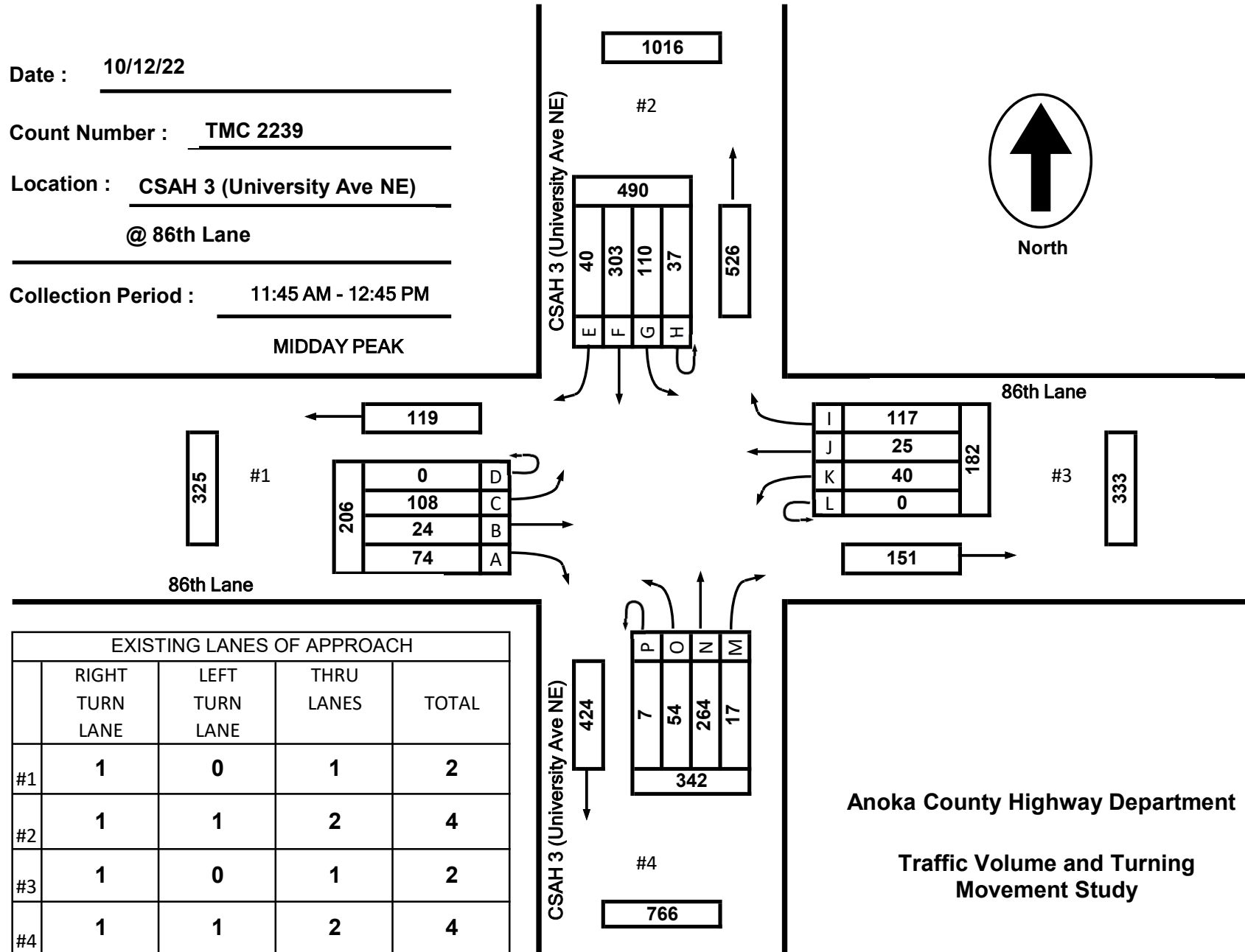
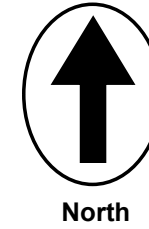
Date : 10/12/22

Count Number : TMC 2239

Location : CSAH 3 (University Ave NE)
@ 86th Lane

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	0	1	2
#2	1	1	2	4
#3	1	0	1	2
#4	1	1	2	4

Anoka County Highway Department
 Traffic Volume and Turning Movement Study

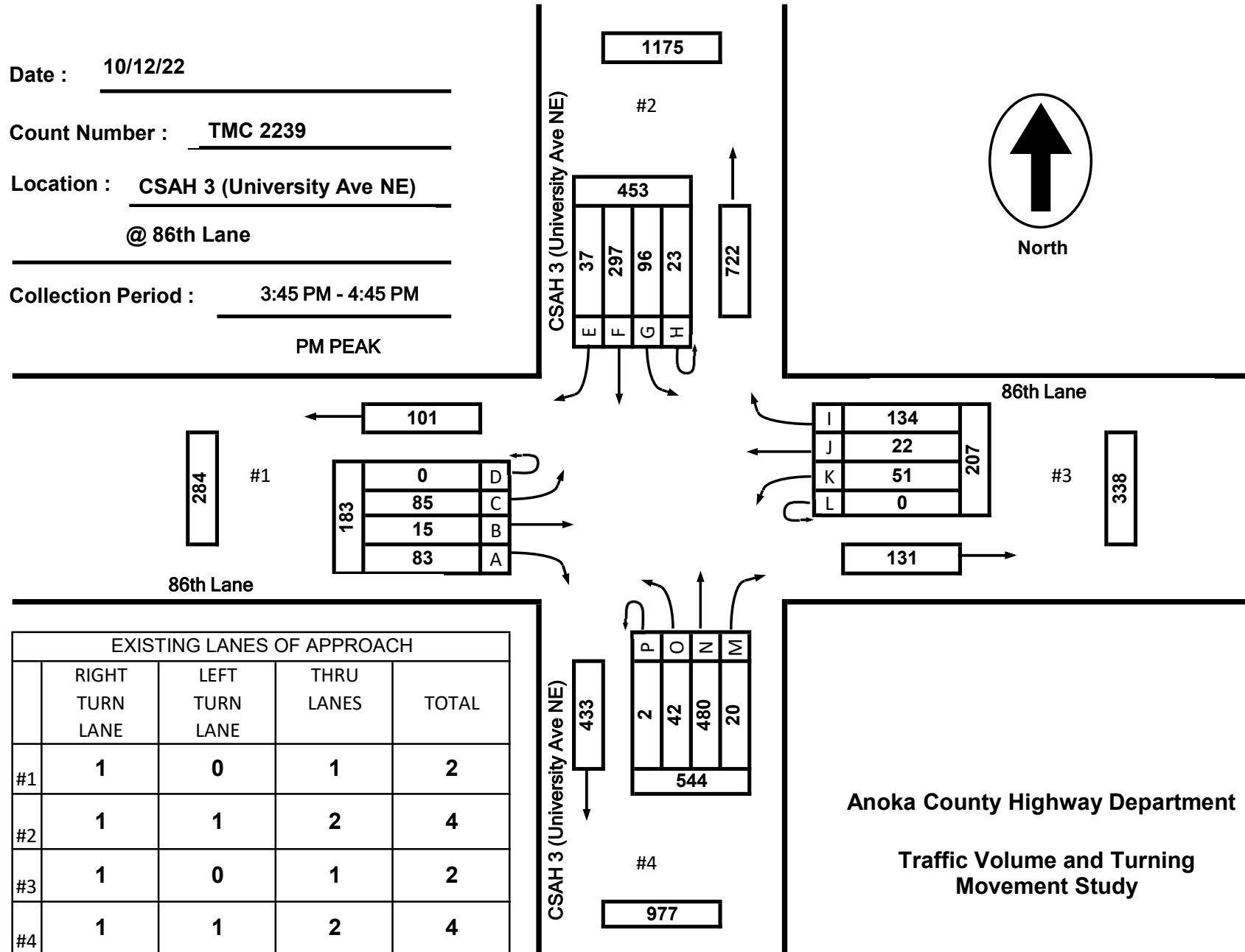
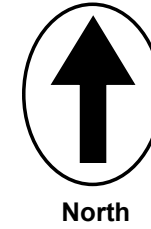
Date : 10/12/22

Count Number : TMC 2239

Location : CSAH 3 (University Ave NE)
@ 86th Lane

Collection Period : 3:45 PM - 4:45 PM

PM PEAK



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

Anoka County Highway Department
 Traffic Volume and Turning Movement Study



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Warm & Sunny
 CountCAM 3
 Study Conducted by: Kevin

File Name : TMC 2239-t
 Site Code :
 Start Date : 08/04/2022
 Page No : 1

Groups Printed- Cars + - Trucks

Start Time	CSAH 3 Southbound						86th Lane Westbound						CSAH 3 Northbound						86th Lane Eastbound						Exclu. Total	Inclu. Total	Int. Total	
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total				
00:00	0	8	0	1	0	9	0	0	0	0	0	0	0	5	0	0	0	0	5	1	0	3	0	0	4	0	18	18
00:15	0	3	1	2	0	6	1	0	0	0	0	1	0	5	0	0	0	0	5	1	0	0	0	0	1	0	13	13
00:30	0	2	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	5	5
00:45	0	2	0	1	0	3	1	0	0	0	0	1	0	4	0	0	0	0	4	1	0	1	0	0	2	0	10	10
Total	0	15	1	4	0	20	2	0	0	0	0	2	0	17	0	0	0	17	3	0	4	0	0	7	0	46	46	
01:00	0	4	1	2	0	7	2	0	0	0	0	2	0	8	0	0	0	8	0	0	1	0	0	1	0	18	18	
01:15	0	4	0	0	0	4	1	1	0	0	0	2	0	8	0	0	0	8	0	1	0	0	0	1	0	15	15	
01:30	0	1	0	0	0	1	1	0	0	0	0	1	0	4	0	0	0	4	0	0	1	0	0	1	0	7	7	
01:45	0	2	0	0	0	2	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	12	12	
Total	0	11	1	2	0	14	4	1	0	0	0	5	0	30	0	0	0	30	0	1	2	0	0	3	0	52	52	
02:00	0	2	0	0	0	2	0	0	0	0	0	0	0	17	1	0	0	18	1	0	0	0	0	1	0	21	21	
02:15	0	1	0	1	0	2	0	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	0	9	9	
02:30	0	2	0	1	0	3	0	0	1	0	0	1	0	7	1	0	0	8	0	0	2	0	0	2	0	14	14	
02:45	0	4	0	1	0	5	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	8	8	
Total	0	9	0	3	0	12	0	0	1	0	0	1	0	34	2	0	0	36	1	0	2	0	0	3	0	52	52	
03:00	0	5	0	0	0	5	0	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	0	12	12	
03:15	0	4	0	0	0	4	0	1	0	0	0	1	0	5	0	0	0	5	0	0	0	0	0	0	0	10	10	
03:30	0	5	0	0	0	5	0	0	0	0	0	0	0	25	0	0	0	25	1	0	1	0	0	2	0	32	32	
03:45	0	7	0	0	0	7	0	0	0	0	0	0	0	4	0	0	0	4	0	0	3	0	0	3	0	14	14	
Total	0	21	0	0	0	21	0	1	0	0	0	1	0	41	0	0	0	41	1	0	4	0	0	5	0	68	68	
04:00	0	5	1	0	0	6	0	0	0	0	0	0	0	4	0	0	0	4	0	0	1	0	0	1	0	11	11	
04:15	1	15	1	0	0	17	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	19	19	
04:30	0	32	2	0	0	34	0	0	0	0	0	0	0	2	1	0	0	3	1	0	0	0	0	1	0	38	38	
04:45	0	30	2	0	0	32	0	0	1	0	0	1	0	4	1	0	0	5	0	0	1	0	0	1	0	39	39	
Total	1	82	6	0	0	89	0	0	1	0	0	1	0	12	2	0	0	14	1	0	2	0	0	3	0	107	107	
05:00	0	17	2	0	0	19	1	1	0	0	0	2	0	4	0	0	0	4	0	0	1	0	0	1	0	26	26	
05:15	1	20	2	0	0	23	0	0	0	0	0	0	0	6	0	0	0	6	0	0	1	0	0	1	0	30	30	
05:30	0	30	2	0	0	32	1	0	0	0	0	1	0	10	0	0	0	10	3	0	1	0	0	4	0	47	47	
05:45	0	45	2	0	0	47	1	0	0	0	0	1	0	10	2	0	0	12	3	0	4	0	0	7	0	67	67	
Total	1	112	8	0	0	121	3	1	0	0	0	4	0	30	2	0	0	32	6	0	7	0	0	13	0	170	170	



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2239-t
 Site Code :
 Start Date : 08/04/2022
 Page No : 2

Groups Printed- Cars + - Trucks

Start Time	CSAH 3 Southbound						86th Lane Westbound						CSAH 3 Northbound						86th Lane Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
06:00	0	35	5	0	0	40	2	0	0	0	0	2	0	12	1	0	0	13	3	1	1	0	0	5	0	60	60
06:15	0	29	4	1	0	34	0	0	1	0	0	1	0	22	1	1	0	24	0	0	0	0	0	0	0	59	59
06:30	0	39	4	0	0	43	2	0	3	0	0	5	0	18	3	0	0	21	3	0	2	0	0	5	0	74	74
06:45	1	70	9	1	1	81	0	0	0	0	0	0	0	21	1	0	1	22	4	1	1	0	0	6	2	109	111
Total	1	173	22	2	1	198	4	0	4	0	0	8	0	73	6	1	1	80	10	2	4	0	0	16	2	302	304
07:00	0	47	6	2	0	55	9	1	2	0	2	12	0	14	1	0	1	15	2	0	2	0	0	4	3	86	89
07:15	0	47	4	3	0	54	2	1	4	0	0	7	1	26	3	0	2	30	3	0	5	0	1	8	3	99	102
07:30	1	46	4	1	0	52	5	1	3	0	0	9	1	31	2	1	0	35	1	0	3	0	0	4	0	100	100
07:45	0	51	10	1	0	62	8	0	0	0	0	8	1	27	2	1	1	31	4	1	3	0	0	8	1	109	110
Total	1	191	24	7	0	223	24	3	9	0	2	36	3	98	8	2	4	111	10	1	13	0	1	24	7	394	401
08:00	3	45	8	7	0	63	2	0	3	0	0	5	0	25	3	1	0	29	3	1	0	0	0	4	0	101	101
08:15	0	48	14	1	0	63	6	0	1	0	0	7	1	16	5	1	0	23	0	0	4	0	0	4	0	97	97
08:30	2	39	16	2	1	59	7	1	2	0	1	10	3	22	4	0	0	29	3	2	7	0	0	12	2	110	112
08:45	3	51	12	2	0	68	11	0	1	0	0	12	0	27	4	0	0	31	4	1	1	0	0	6	0	117	117
Total	8	183	50	12	1	253	26	1	7	0	1	34	4	90	16	2	0	112	10	4	12	0	0	26	2	425	427
09:00	3	37	16	0	1	56	11	1	2	0	0	14	1	46	4	1	0	52	4	1	5	0	0	10	1	132	133
09:15	5	49	7	2	0	63	5	3	4	0	0	12	0	29	5	0	1	34	5	1	9	0	0	15	1	124	125
09:30	5	43	22	7	0	77	13	1	12	0	0	26	2	53	7	0	0	62	7	4	3	0	0	14	0	179	179
09:45	9	59	20	1	0	89	14	5	4	0	1	23	5	34	8	0	0	47	4	1	8	0	1	13	2	172	174
Total	22	188	65	10	1	285	43	10	22	0	1	75	8	162	24	1	1	195	20	7	25	0	1	52	4	607	611
10:00	14	50	17	6	0	87	14	5	4	0	0	23	3	42	12	0	1	57	4	1	7	0	0	12	1	179	180
10:15	8	65	18	3	0	94	16	6	6	0	0	28	1	37	12	0	1	50	16	3	15	0	0	34	1	206	207
10:30	7	63	19	10	3	99	18	2	4	0	0	24	3	48	15	1	0	67	11	2	13	0	0	26	3	216	219
10:45	6	62	14	14	0	96	14	7	3	0	0	24	1	59	10	1	0	71	18	5	13	0	0	36	0	227	227
Total	35	240	68	33	3	376	62	20	17	0	0	99	8	186	49	2	2	245	49	11	48	0	0	108	5	828	833
11:00	13	65	24	6	0	108	15	3	6	0	0	24	1	51	14	1	0	67	20	5	19	0	0	44	0	243	243
11:15	8	73	25	3	0	109	17	3	8	0	0	28	6	60	9	0	0	75	18	6	29	0	0	53	0	265	265
11:30	9	54	17	3	0	83	36	10	10	0	0	56	5	54	15	2	1	76	11	5	30	0	0	46	1	261	262
11:45	10	72	34	8	0	124	24	10	12	0	0	46	4	77	13	1	0	95	11	7	19	0	0	37	0	302	302
Total	40	264	100	20	0	424	92	26	36	0	0	154	16	242	51	4	1	313	60	23	97	0	0	180	1	1071	1072
12:00	10	88	27	11	0	136	33	7	5	0	0	45	5	70	16	1	0	92	21	3	31	0	0	55	0	328	328
12:15	11	73	24	9	0	117	24	5	12	0	0	41	5	55	10	4	0	74	23	12	36	0	0	71	0	303	303
12:30	9	70	25	9	2	113	36	3	11	0	0	50	3	62	15	1	0	81	19	2	22	0	0	43	2	287	289
12:45	12	68	27	11	1	118	25	10	18	0	0	53	3	61	9	0	2	73	21	1	20	0	1	42	4	286	290
Total	42	299	103	40	3	484	118	25	46	0	0	189	16	248	50	6	2	320	84	18	109	0	1	211	6	1204	1210



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2239-t
 Site Code :
 Start Date : 08/04/2022
 Page No : 3

Groups Printed- Cars + - Trucks

Start Time	CSAH 3 Southbound						86th Lane Westbound						CSAH 3 Northbound						86th Lane Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
13:00	7	61	35	6	0	109	27	5	10	0	0	42	2	71	9	1	1	83	18	6	23	0	0	47	1	281	282
13:15	12	68	23	8	0	111	25	5	9	0	1	39	4	84	16	1	2	105	19	5	17	0	0	41	3	296	299
13:30	11	75	26	12	0	124	26	4	15	0	0	45	4	55	16	2	1	77	15	5	22	0	0	42	1	288	289
13:45	10	55	25	5	0	95	27	5	6	0	1	38	3	56	8	0	1	67	18	4	26	0	0	48	2	248	250
Total	40	259	109	31	0	439	105	19	40	0	2	164	13	266	49	4	5	332	70	20	88	0	0	178	7	1113	1120
14:00	8	74	26	4	0	112	31	7	12	0	0	50	1	65	9	1	2	76	16	2	23	0	0	41	2	279	281
14:15	7	80	30	11	0	128	33	1	5	0	0	39	2	76	5	0	2	83	17	1	17	0	0	35	2	285	287
14:30	6	70	25	9	0	110	30	5	8	0	0	43	8	83	17	1	0	109	12	1	17	0	0	30	0	292	292
14:45	6	75	32	6	0	119	20	7	8	0	0	35	3	80	6	3	0	92	9	5	20	0	0	34	0	280	280
Total	27	299	113	30	0	469	114	20	33	0	0	167	14	304	37	5	4	360	54	9	77	0	0	140	4	1136	1140
15:00	15	64	18	7	2	104	31	4	14	0	0	49	1	106	3	0	0	110	23	1	21	0	0	45	2	308	310
15:15	5	73	48	5	1	131	35	6	10	0	0	51	6	102	14	0	0	122	12	3	12	0	0	27	1	331	332
15:30	6	58	22	3	2	89	32	7	14	0	0	53	6	120	7	0	1	133	8	2	17	0	0	27	3	302	305
15:45	7	72	25	5	0	109	30	8	13	0	1	51	4	132	9	0	1	145	22	3	13	0	0	38	2	343	345
Total	33	267	113	20	5	433	128	25	51	0	1	204	17	460	33	0	2	510	65	9	63	0	0	137	8	1284	1292
16:00	7	62	17	10	1	96	38	4	16	0	0	58	6	119	10	1	1	136	19	5	24	0	0	48	2	338	340
16:15	12	84	31	5	0	132	28	4	11	0	1	43	5	110	13	0	1	128	25	4	29	0	0	58	2	361	363
16:30	11	79	23	3	0	116	38	6	11	0	0	55	5	119	10	1	0	135	17	3	19	0	0	39	0	345	345
16:45	9	69	32	6	1	116	35	6	4	0	4	45	6	106	10	1	2	123	13	6	30	0	0	49	7	333	340
Total	39	294	103	24	2	460	139	20	42	0	5	201	22	454	43	3	4	522	74	18	102	0	0	194	11	1377	1388
17:00	13	58	15	9	0	95	25	2	17	0	0	44	3	95	13	0	0	111	10	7	21	0	0	38	0	288	288
17:15	13	83	14	5	0	115	38	8	20	0	0	66	0	87	9	1	0	97	18	3	27	0	0	48	0	326	326
17:30	6	90	18	2	2	116	28	2	7	0	0	37	3	72	10	0	0	85	26	3	26	0	0	55	2	293	295
17:45	11	64	18	6	0	99	22	4	5	0	0	31	1	76	8	2	0	87	16	8	13	0	0	37	0	254	254
Total	43	295	65	22	2	425	113	16	49	0	0	178	7	330	40	3	0	380	70	21	87	0	0	178	2	1161	1163
18:00	6	66	25	7	0	104	20	3	7	0	0	30	2	69	12	1	0	84	15	2	26	0	0	43	0	261	261
18:15	6	68	14	7	0	95	29	0	14	0	0	43	2	64	11	2	0	79	19	1	12	0	0	32	0	249	249
18:30	3	59	17	4	0	83	24	2	7	0	0	33	5	56	7	3	0	71	12	2	10	0	0	24	0	211	211
18:45	3	62	14	5	0	84	22	0	4	0	0	26	3	66	10	0	1	79	15	1	20	0	0	36	1	225	226
Total	18	255	70	23	0	366	95	5	32	0	0	132	12	255	40	6	1	313	61	6	68	0	0	135	1	946	947
19:00	5	59	12	5	1	81	29	3	9	0	0	41	1	57	7	0	0	65	17	2	15	0	0	34	1	221	222
19:15	6	57	7	1	0	71	23	1	5	0	0	29	0	55	7	0	0	62	18	5	17	0	0	40	0	202	202
19:30	4	44	13	6	0	67	20	4	7	0	0	31	1	63	5	1	0	70	11	2	14	0	0	27	0	195	195
19:45	4	43	9	0	0	56	24	2	7	0	0	33	1	48	7	2	0	58	5	2	11	0	0	18	0	165	165
Total	19	203	41	12	1	275	96	10	28	0	0	134	3	223	26	3	0	255	51	11	57	0	0	119	1	783	784



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2239-t
 Site Code :
 Start Date : 08/04/2022
 Page No : 4

Groups Printed- Cars + - Trucks

Start Time	CSAH 3 Southbound						86th Lane Westbound						CSAH 3 Northbound						86th Lane Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
20:00	1	39	7	4	0	51	18	3	7	0	0	28	1	50	4	2	1	57	11	5	11	0	0	27	1	163	164
20:15	5	29	3	5	0	42	19	3	6	0	0	28	1	43	7	1	3	52	9	2	12	0	0	23	3	145	148
20:30	1	34	4	4	0	43	15	3	2	0	0	20	2	40	1	1	0	44	3	0	10	0	0	13	0	120	120
20:45	4	28	7	1	0	40	11	0	4	0	0	15	2	32	5	0	1	39	8	0	6	0	1	14	2	108	110
Total	11	130	21	14	0	176	63	9	19	0	0	91	6	165	17	4	5	192	31	7	39	0	1	77	6	536	542
21:00	5	16	3	0	0	24	12	0	8	0	0	20	1	38	2	2	0	43	10	2	9	0	0	21	0	108	108
21:15	8	26	2	1	0	37	5	1	1	0	0	7	0	31	2	0	0	33	10	0	10	0	0	20	0	97	97
21:30	4	24	4	2	0	34	5	1	0	0	0	6	1	31	1	0	0	33	6	1	2	0	0	9	0	82	82
21:45	0	25	2	3	0	30	1	0	1	0	0	2	0	29	2	0	0	31	2	0	1	0	0	3	0	66	66
Total	17	91	11	6	0	125	23	2	10	0	0	35	2	129	7	2	0	140	28	3	22	0	0	53	0	353	353
22:00	1	16	1	2	0	20	9	1	2	0	0	12	0	24	2	0	0	26	2	1	1	0	0	4	0	62	62
22:15	4	8	0	3	0	15	3	2	2	0	0	7	0	24	0	1	0	25	4	1	2	0	0	7	0	54	54
22:30	1	15	0	1	0	17	3	0	2	0	0	5	1	19	0	0	0	20	1	0	4	0	0	5	0	47	47
22:45	0	15	2	0	0	17	2	0	6	0	0	8	1	19	2	0	0	22	6	0	3	0	0	9	0	56	56
Total	6	54	3	6	0	69	17	3	12	0	0	32	2	86	4	1	0	93	13	2	10	0	0	25	0	219	219
23:00	0	10	0	1	0	11	4	0	0	0	0	4	2	19	0	0	0	21	2	0	3	0	0	5	0	41	41
23:15	0	9	1	0	0	10	4	0	2	0	0	6	1	11	0	0	0	12	1	0	0	0	0	1	0	29	29
23:30	0	4	0	0	0	4	0	0	1	0	0	1	0	7	0	0	0	7	1	0	1	0	0	2	0	14	14
23:45	0	4	2	0	0	6	3	0	0	0	0	3	0	7	0	0	0	7	2	0	2	0	0	4	0	20	20
Total	0	27	3	1	0	31	11	0	3	0	0	14	3	44	0	0	0	47	6	0	6	0	0	12	0	104	104
Grand Total	404	3962	1100	322	19	5788	1282	217	462	0	12	1961	156	3979	506	49	32	4690	778	173	948	0	4	1899	67	14338	14405
Apprch %	7	68.5	19	5.6			65.4	11.1	23.6	0			3.3	84.8	10.8	1			41	9.1	49.9	0			0.5	99.5	
Total %	2.8	27.6	7.7	2.2		40.4	8.9	1.5	3.2	0		13.7	1.1	27.8	3.5	0.3		32.7	5.4	1.2	6.6	0		13.2			
Cars +	401	3808	1083	320		5631	1262	213	453	0		1940	154	3790	500	49		4525	771	170	935	0		1880	0	0	13976
% Cars +	99.3	96.1	98.5	99.4	100	97	98.4	98.2	98.1	0	100	98.3	98.7	95.3	98.8	100	100	95.8	99.1	98.3	98.6	0	100	98.8	0	0	97
Trucks	3	154	17	2		176	20	4	9	0		33	2	189	6	0		197	7	3	13	0		23	0	0	429
% Trucks	0.7	3.9	1.5	0.6	0	3	1.6	1.8	1.9	0	0	1.7	1.3	4.7	1.2	0	0	4.2	0.9	1.7	1.4	0	0	1.2	0	0	3



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2239-t
 Site Code :
 Start Date : 08/04/2022
 Page No : 5

Start Time	CSAH 3 Southbound					86th Lane Westbound					CSAH 3 Northbound					86th Lane Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
Peak Hour Analysis From 00:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 09:00																					
09:00	3	37	16	0	56	11	1	2	0	14	1	46	4	1	52	4	1	5	0	10	132
09:15	5	49	7	2	63	5	3	4	0	12	0	29	5	0	34	5	1	9	0	15	124
09:30	5	43	22	7	77	13	1	12	0	26	2	53	7	0	62	7	4	3	0	14	179
09:45	9	59	20	1	89	14	5	4	0	23	5	34	8	0	47	4	1	8	0	13	172
Total Volume	22	188	65	10	285	43	10	22	0	75	8	162	24	1	195	20	7	25	0	52	607
% App. Total	7.7	66	22.8	3.5		57.3	13.3	29.3	0		4.1	83.1	12.3	0.5		38.5	13.5	48.1	0		
PHF	.611	.797	.739	.357	.801	.768	.500	.458	.000	.721	.400	.764	.750	.250	.786	.714	.438	.694	.000	.867	.848
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45																					
11:45	10	72	34	8	124	24	10	12	0	46	4	77	13	1	95	11	7	19	0	37	302
12:00	10	88	27	11	136	33	7	5	0	45	5	70	16	1	92	21	3	31	0	55	328
12:15	11	73	24	9	117	24	5	12	0	41	5	55	10	4	74	23	12	36	0	71	303
12:30	9	70	25	9	113	36	3	11	0	50	3	62	15	1	81	19	2	22	0	43	287
Total Volume	40	303	110	37	490	117	25	40	0	182	17	264	54	7	342	74	24	108	0	206	1220
% App. Total	8.2	61.8	22.4	7.6		64.3	13.7	22	0		5	77.2	15.8	2		35.9	11.7	52.4	0		
PHF	.909	.861	.809	.841	.901	.813	.625	.833	.000	.910	.850	.857	.844	.438	.900	.804	.500	.750	.000	.725	.930
Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:45																					
15:45	7	72	25	5	109	30	8	13	0	51	4	132	9	0	145	22	3	13	0	38	343
16:00	7	62	17	10	96	38	4	16	0	58	6	119	10	1	136	19	5	24	0	48	338
16:15	12	84	31	5	132	28	4	11	0	43	5	110	13	0	128	25	4	29	0	58	361
16:30	11	79	23	3	116	38	6	11	0	55	5	119	10	1	135	17	3	19	0	39	345
Total Volume	37	297	96	23	453	134	22	51	0	207	20	480	42	2	544	83	15	85	0	183	1387
% App. Total	8.2	65.6	21.2	5.1		64.7	10.6	24.6	0		3.7	88.2	7.7	0.4		45.4	8.2	46.4	0		
PHF	.771	.884	.774	.575	.858	.882	.688	.797	.000	.892	.833	.909	.808	.500	.938	.830	.750	.733	.000	.789	.961



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2239-t
 Site Code :
 Start Date : 08/04/2022
 Page No : 1

Weather: Warm & Sunny
 CountCAM 3
 Study Conducted by: Kevin

Groups Printed- Trucks

Start Time	CSAH 3 Southbound					86th Lane Westbound					CSAH 3 Northbound					86th Lane Eastbound					Int. Total	
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	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	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	0	0	0	0	0	0	0	0	0	0	0	0
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	1	0	0	1	0	0	0	0	0	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	1	0	0	1	0	0	0	0	0	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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
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	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
04:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
Total	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4
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	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
05:30	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3
05:45	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	1	5
Total	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	1	10



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2239-t
 Site Code :
 Start Date : 08/04/2022
 Page No : 2

Groups Printed- Trucks

Start Time	CSAH 3 Southbound					86th Lane Westbound					CSAH 3 Northbound					86th Lane Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
06:00	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	1	0	2	7
06:15	0	1	1	0	2	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	11
06:30	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
06:45	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Total	0	6	1	0	7	0	0	0	0	0	0	16	0	0	16	1	0	1	0	2	25
07:00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
07:15	0	3	0	1	4	1	0	1	0	2	0	0	0	0	0	0	0	3	0	3	9
07:30	0	1	1	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
07:45	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
Total	0	7	1	1	9	1	0	1	0	2	0	9	0	0	9	0	0	3	0	3	23
08:00	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8
08:15	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
08:30	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
08:45	0	5	0	0	5	1	0	0	0	1	0	3	1	0	4	0	0	0	0	0	10
Total	0	13	1	0	14	1	0	0	0	1	0	13	1	0	14	0	0	0	0	0	29
09:00	0	2	0	0	2	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	8
09:15	0	1	0	1	2	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	6
09:30	0	2	1	0	3	2	0	0	0	2	0	5	0	0	5	0	1	0	0	1	11
09:45	0	8	1	0	9	1	0	1	0	2	0	5	0	0	5	1	0	0	0	1	17
Total	0	13	2	1	16	5	0	1	0	6	0	18	0	0	18	1	1	0	0	2	42
10:00	0	2	0	0	2	1	0	0	0	1	0	6	0	0	6	0	0	1	0	1	10
10:15	0	3	0	0	3	0	0	0	0	0	0	3	1	0	4	1	0	0	0	1	8
10:30	0	4	2	0	6	0	0	0	0	0	0	4	1	0	5	0	0	1	0	1	12
10:45	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	11	2	0	13	1	0	0	0	1	0	13	2	0	15	1	0	2	0	3	32
11:00	0	3	0	0	3	0	0	2	0	2	0	6	0	0	6	0	0	0	0	0	11
11:15	0	7	0	0	7	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	10
11:30	0	1	1	0	2	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	7
11:45	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	12
Total	0	19	1	0	20	1	0	2	0	3	0	15	1	0	16	0	0	1	0	1	40
12:00	0	2	0	0	2	0	2	0	0	2	0	7	0	0	7	0	1	0	0	1	12
12:15	0	2	0	0	2	0	0	1	0	1	0	0	1	0	1	3	0	2	0	5	9
12:30	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
12:45	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total	0	10	1	0	11	0	2	1	0	3	0	10	1	0	11	3	1	2	0	6	31



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2239-t
 Site Code :
 Start Date : 08/04/2022
 Page No : 3

Groups Printed- Trucks

Start Time	CSAH 3 Southbound					86th Lane Westbound					CSAH 3 Northbound					86th Lane Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
13:00	0	4	2	0	6	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	15
13:15	0	1	2	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
13:30	0	3	0	0	3	1	0	0	0	1	0	2	1	0	3	0	0	0	0	0	7
13:45	0	4	1	0	5	1	1	0	0	2	0	4	0	0	4	0	0	1	0	1	12
Total	0	12	5	0	17	2	1	0	0	3	0	20	1	0	21	0	0	1	0	1	42
14:00	0	1	0	0	1	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	7
14:15	1	2	0	0	3	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	8
14:30	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
14:45	1	5	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	8
Total	2	9	2	0	13	2	0	0	0	2	0	11	0	0	11	0	0	1	0	1	27
15:00	0	0	0	0	0	0	0	1	0	1	0	6	0	0	6	0	0	1	0	1	8
15:15	0	3	0	0	3	1	0	0	0	1	1	5	0	0	6	0	0	0	0	0	10
15:30	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
15:45	0	3	0	0	3	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	6
Total	0	8	0	0	8	1	0	2	0	3	1	15	0	0	16	0	0	1	0	1	28
16:00	0	3	1	0	4	0	1	0	0	1	0	4	0	0	4	0	1	0	0	1	10
16:15	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	9
16:30	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
16:45	0	4	0	0	4	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	6
Total	0	9	1	0	10	1	1	0	0	2	0	15	0	0	15	1	1	0	0	2	29
17:00	0	5	0	0	5	3	0	0	0	3	0	2	0	0	2	0	0	0	0	0	10
17:15	0	2	0	0	2	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	8
17:30	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:45	1	1	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
Total	1	10	0	0	11	4	0	0	0	4	0	12	0	0	12	0	0	0	0	0	27
18:00	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
18:15	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
18:30	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
18:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	0	9	0	0	9	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	16
19:00	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
19:15	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
19:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
19:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2239-t
 Site Code :
 Start Date : 08/04/2022
 Page No : 4

Groups Printed- Trucks

Start Time	CSAH 3 Southbound					86th Lane Westbound					CSAH 3 Northbound					86th Lane Eastbound					Int. Total	
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total		
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
20:45	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
21:00	0	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	0	0	0	0	0
21:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
22:00	0	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	1	0	0	1	0	0	0	0	0	0	1
22:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
22:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4
23:00	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2
23:15	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	2
23:30	0	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	0
Total	0	0	0	0	0	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	0	4
Grand Total	3	154	17	2	176	20	4	9	0	33	2	189	6	0	197	7	3	13	0	23	429	
Apprch %	1.7	87.5	9.7	1.1		60.6	12.1	27.3	0		1	95.9	3	0		30.4	13	56.5	0			
Total %	0.7	35.9	4	0.5	41	4.7	0.9	2.1	0	7.7	0.5	44.1	1.4	0	45.9	1.6	0.7	3	0	5.4		

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 12/02/2022

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 3 (University Ave)

Number of Lanes : 1

Total Approach Volume: 4,690

Southbound: CSAH 3 (University Ave)

Number of Lanes : 1

Total Approach Volume: 5,788

Minor Street Approaches

Eastbound: 86th Lane

Number of Lanes : 1

Total Approach Volume: 1,899

Westbound: 86th Lane

Number of Lanes : 1

Total Approach Volume: 1,961

Warrant Summary (Urban Values Apply)

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

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

Required volumes reached for 8 hours, 8 are needed

Warrant 1B - Interruption of Continuous Traffic.....Not Satisfied

Required volumes reached for 7 hours, 8 are needed

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

Required 1A volumes reached for 10 hours, 8 are needed

Required 1B volumes reached for 9 hours, 8 are needed

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

Number of hours (7) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (36) 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:

Study Date : 12/02/2022

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

8 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Volume Requirements

Veh/Hr Major = **500**

Veh/Hr Minor = **150**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 3 (University Ave)					86th Lane		
15:30 - 16:30	542	+	426	=	968	171	205	Yes
16:30 - 17:30	466	+	442	=	908	174	210	Yes
14:30 - 15:30	433	+	464	=	897	136	178	Yes
11:30 - 12:30	337	+	460	=	797	209	188	Yes
12:30 - 13:30	342	+	451	=	793	173	184	Yes
13:30 - 14:30	303	+	459	=	762	166	172	Yes
17:30 - 18:30	335	+	414	=	749	167	141	Yes
10:30 - 11:30	280	+	412	=	692	159	100	Yes
10:15 - 11:15	255	+	397	=	652	140	100	No
10:00 - 11:00	245	+	376	=	621	108	99	No
18:30 - 19:30	277	+	319	=	596	134	129	No
09:45 - 10:45	221	+	369	=	590	85	98	No
18:45 - 19:45	276	+	303	=	579	137	127	No
09:30 - 10:30	216	+	347	=	563	73	100	No
19:00 - 20:00	255	+	275	=	530	119	134	No
09:15 - 10:15	200	+	316	=	516	54	84	No
19:15 - 20:15	247	+	245	=	492	112	121	No
09:00 - 10:00	195	+	285	=	480	52	75	No
19:30 - 20:30	237	+	216	=	453	95	120	No
08:45 - 09:45	179	+	264	=	443	45	64	No
19:45 - 20:45	211	+	192	=	403	81	109	No
08:30 - 09:30	146	+	246	=	392	43	48	No
08:15 - 09:15	135	+	246	=	381	32	43	No
20:00 - 21:00	192	+	176	=	368	77	91	No
08:00 - 09:00	112		253		365	26	34	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 12/02/2022

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

Only 7 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Veh/Hr Major = **750**

Veh/Hr Minor = **75**

Time	Major Road					Minor Road		Met?
	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	
	CSAH 3 (University Ave)					86th Lane		
15:15 - 16:15	536	+	425	=	961	140	213	Yes
16:15 - 17:15	497	+	459	=	956	184	187	Yes
14:15 - 15:15	394	+	461	=	855	144	166	Yes
11:15 - 12:15	338	+	452	=	790	191	175	Yes
17:15 - 18:15	353	+	434	=	787	183	164	Yes
12:15 - 13:15	311	+	457	=	768	203	186	Yes
13:15 - 14:15	325	+	442	=	767	172	172	Yes
11:00 - 12:00	313	+	424	=	737	180	154	No
10:30 - 11:30	280	+	412	=	692	159	100	No
10:45 - 11:45	289	+	396	=	685	179	132	No
10:15 - 11:15	255	+	397	=	652	140	100	No
18:15 - 19:15	294	+	343	=	637	126	143	No
10:00 - 11:00	245	+	376	=	621	108	99	No
18:30 - 19:30	277	+	319	=	596	134	129	No
09:45 - 10:45	221	+	369	=	590	85	98	No
18:45 - 19:45	276	+	303	=	579	137	127	No
09:30 - 10:30	216	+	347	=	563	73	100	No
19:00 - 20:00	255	+	275	=	530	119	134	No
09:15 - 10:15	200	+	316	=	516	54	84	No
19:15 - 20:15	247	+	245	=	492	112	121	No
09:00 - 10:00	195	+	285	=	480	52	75	No
19:30 - 20:30	237	+	216	=	453	95	120	No
08:45 - 09:45	179	+	264	=	443	45	64	No
19:45 - 20:45	211	+	192	=	403	81	109	No
08:30 - 09:30	146		246		392	43	48	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 12/02/2022

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

10 hours meet 1A minimums.
9 hours meet 1B minimums.
Warrant IS met.

Site Data Required

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

Volume Requirements

Warrant 1A 1B
Veh/Hr Major = **400 600**

Veh/Hr Minor = **120 60**

Major Road CSAH 3 (University Ave)

Minor Road 86th Lane

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
15:15 - 16:15	536	+	425	=	961	140	213	Yes
16:15 - 17:15	497	+	459	=	956	184	187	Yes
14:15 - 15:15	394	+	461	=	855	144	166	Yes
11:15 - 12:15	338	+	452	=	790	191	175	Yes
17:15 - 18:15	353	+	434	=	787	183	164	Yes
12:15 - 13:15	311	+	457	=	768	203	186	Yes
13:15 - 14:15	325	+	442	=	767	172	172	Yes
10:15 - 11:15	255	+	397	=	652	140	100	Yes
18:15 - 19:15	294	+	343	=	637	126	143	Yes
19:15 - 20:15	247	+	245	=	492	112	121	Yes
10:00 - 11:00	245	+	376	=	621	108	99	No
09:45 - 10:45	221	+	369	=	590	85	98	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:00 - 17:00	522	+	460	=	982	194	201	Yes
15:00 - 16:00	510	+	433	=	943	137	204	Yes
14:00 - 15:00	360	+	469	=	829	140	167	Yes
17:00 - 18:00	380	+	425	=	805	178	178	Yes
12:00 - 13:00	320	+	484	=	804	211	189	Yes
13:00 - 14:00	332	+	439	=	771	178	164	Yes
11:00 - 12:00	313	+	424	=	737	180	154	Yes
18:00 - 19:00	313	+	366	=	679	135	132	Yes
10:00 - 11:00	245	+	376	=	621	108	99	Yes
09:45 - 10:45	221	+	369	=	590	85	98	No
09:30 - 10:30	216	+	347	=	563	73	100	No
19:00 - 20:00	255	+	275	=	530	119	134	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 12/02/2022

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.

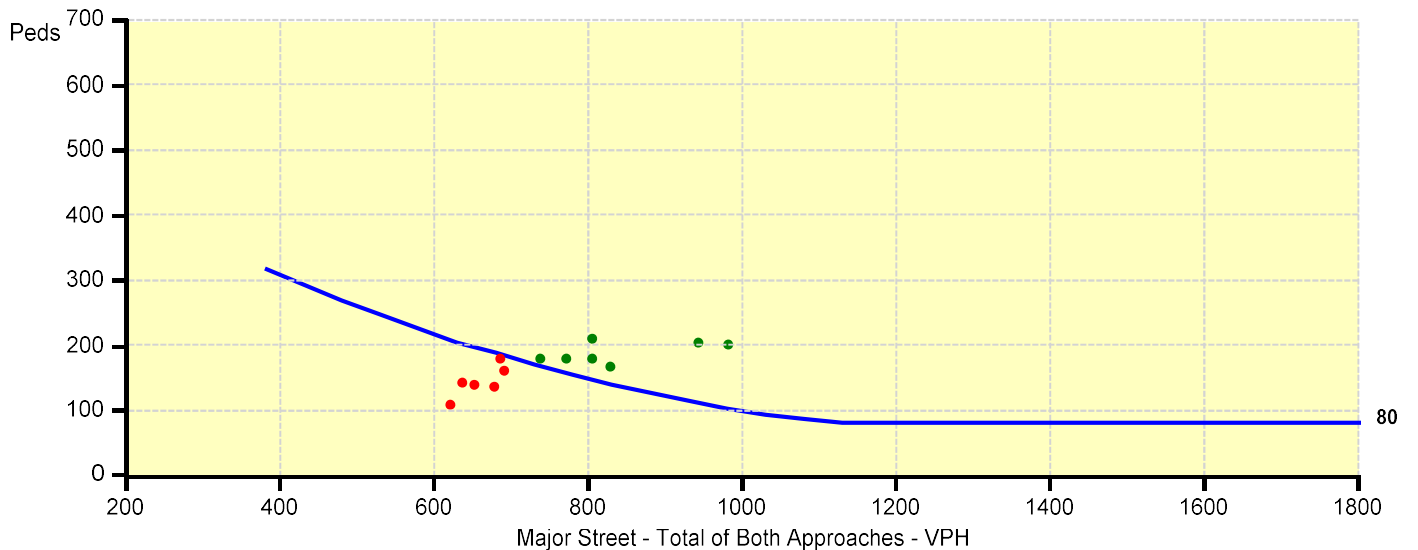
Summary

7 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 3 (University Ave)					Minor Road 86th Lane		Met?
	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	
16:00 - 17:00	522	+	460	=	982	194	201	Yes
15:00 - 16:00	510	+	433	=	943	137	204	Yes
14:00 - 15:00	360	+	469	=	829	140	167	Yes
17:00 - 18:00	380	+	425	=	805	178	178	Yes
12:00 - 13:00	320	+	484	=	804	211	189	Yes
13:00 - 14:00	332	+	439	=	771	178	164	Yes
11:00 - 12:00	313	+	424	=	737	180	154	Yes
10:30 - 11:30	280	+	412	=	692	159	100	No
10:45 - 11:45	289	+	396	=	685	179	132	No
18:00 - 19:00	313	+	366	=	679	135	132	No
10:15 - 11:15	255	+	397	=	652	140	100	No
18:15 - 19:15	294	+	343	=	637	126	143	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 12/02/2022

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

1 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 3 (University Ave)				Total	Minor Road 86th Lane		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
15:45 - 16:45	544	+	453	=	997	183	207	Yes
16:00 - 17:00	522	+	460	=	982	194	201	No
15:30 - 16:30	542	+	426	=	968	171	205	No
15:15 - 16:15	536	+	425	=	961	140	213	No
16:15 - 17:15	497	+	459	=	956	184	187	No
15:00 - 16:00	510	+	433	=	943	137	204	No
16:30 - 17:30	466	+	442	=	908	174	210	No
14:45 - 15:45	457	+	443	=	900	133	188	No
14:30 - 15:30	433	+	464	=	897	136	178	No
16:45 - 17:45	416	+	442	=	858	190	192	No
14:15 - 15:15	394	+	461	=	855	144	166	No
11:45 - 12:45	342		490		832	206	182	No

