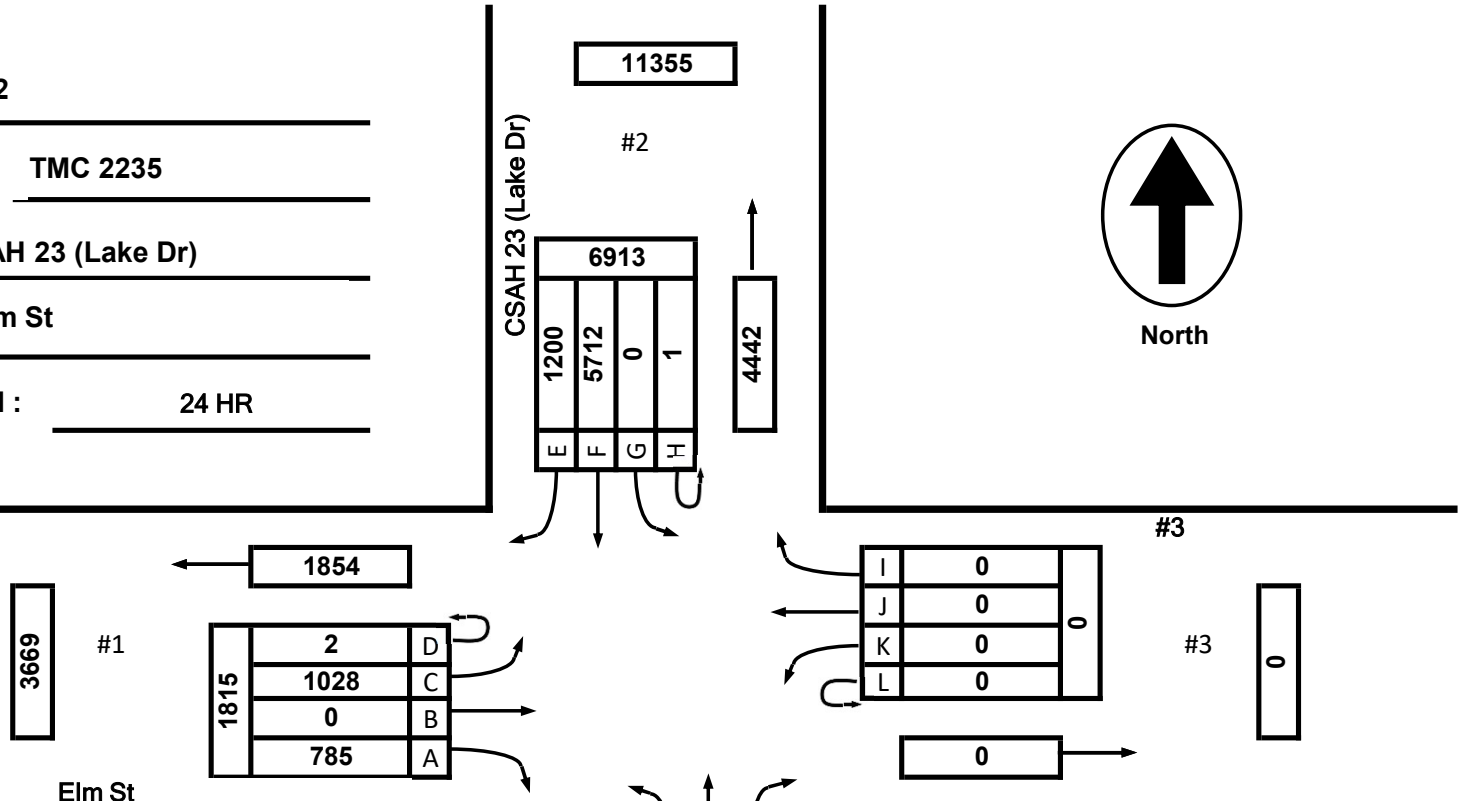
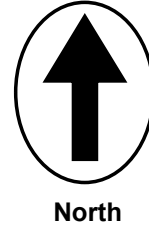


Date : 10/12/22

Count Number : TMC 2235

Location : CSAH 23 (Lake Dr)
@ Elm St

Collection Period : 24 HR



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

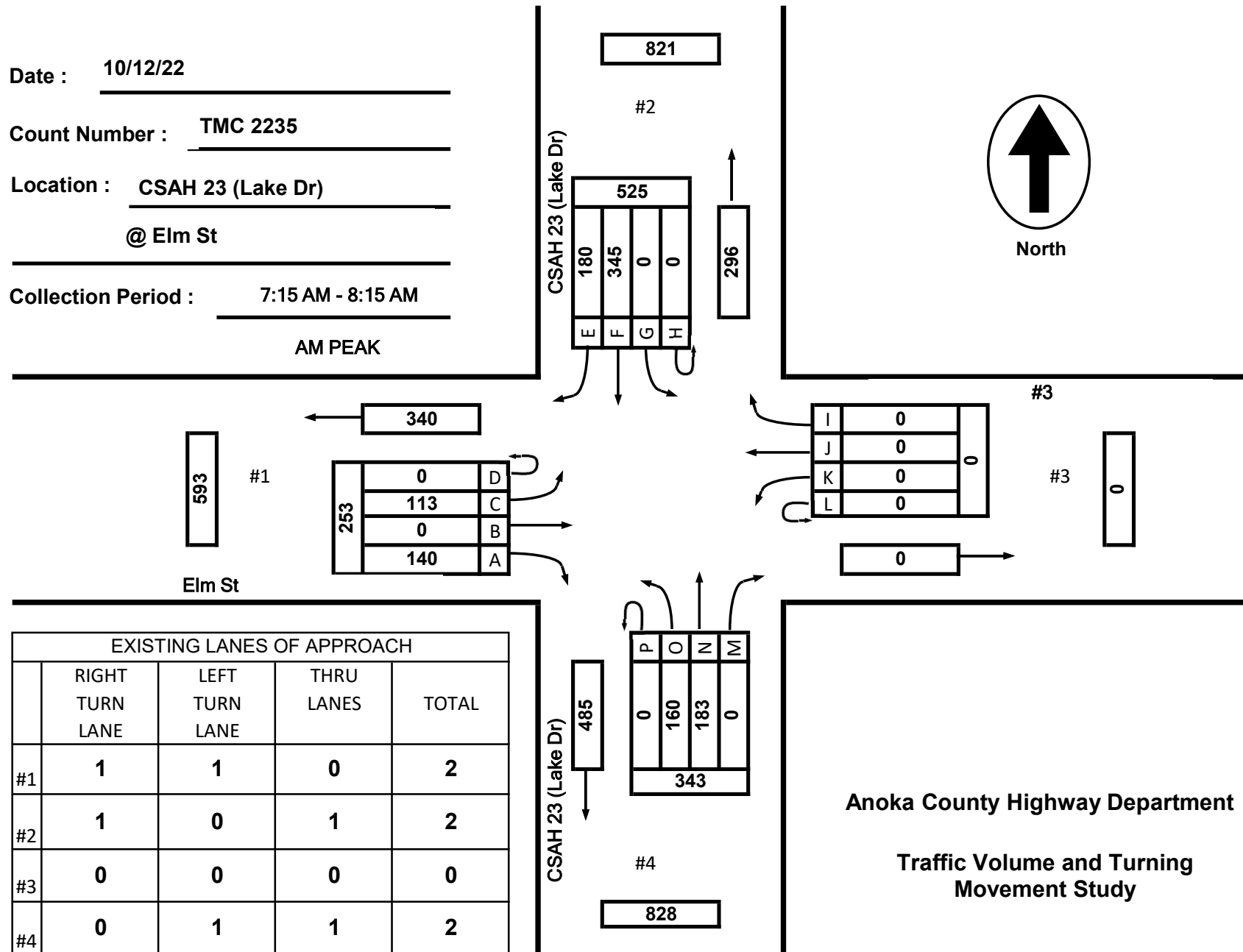
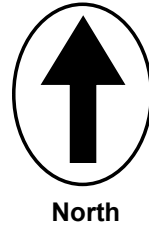
Anoka County Highway Department
 Traffic Volume and Turning Movement Study

Date : 10/12/22

Count Number : TMC 2235

Location : CSAH 23 (Lake Dr)
@ Elm St

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

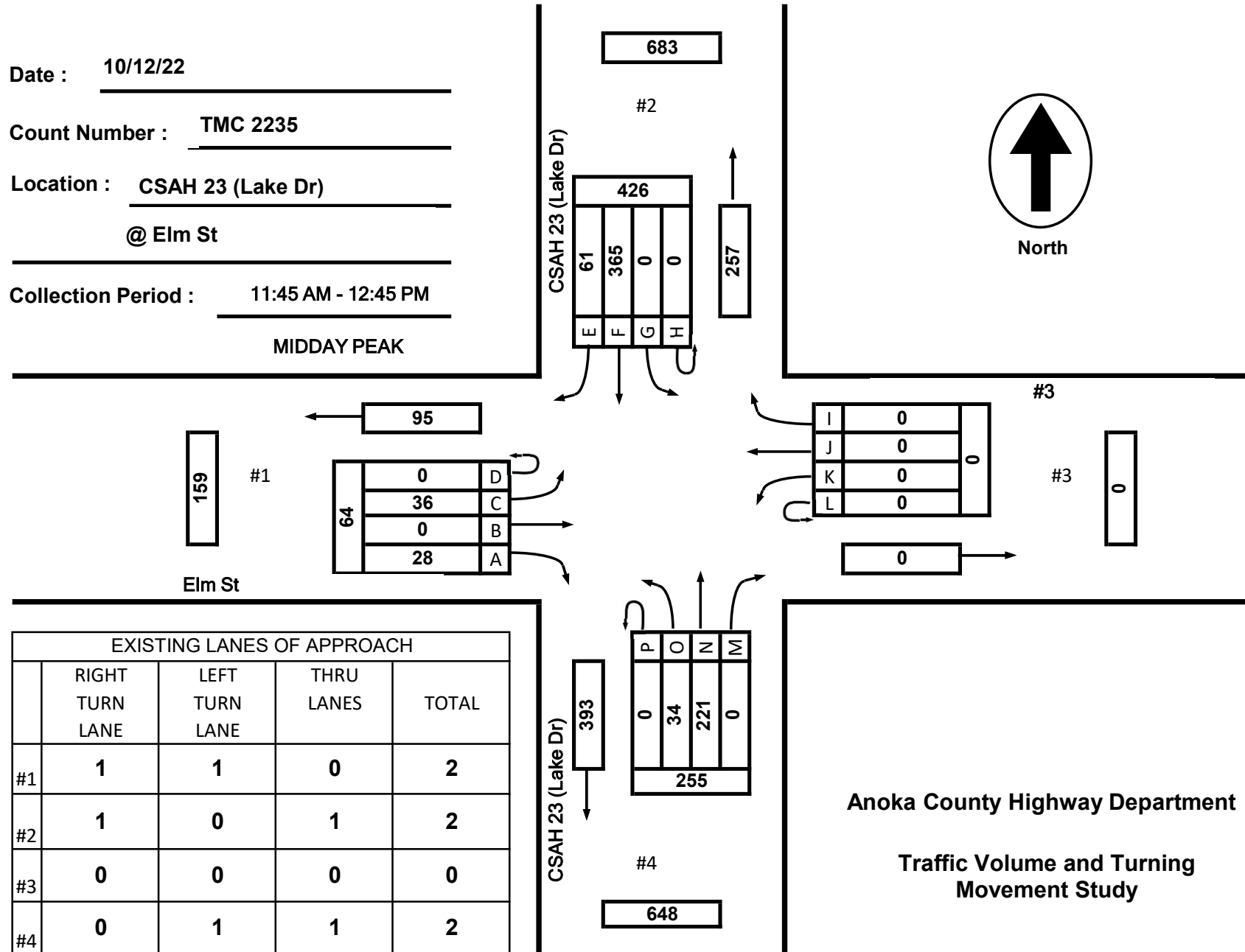
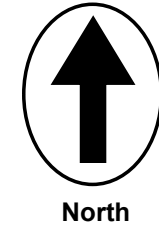
Date : 10/12/22

Count Number : TMC 2235

Location : CSAH 23 (Lake Dr)
@ Elm 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	0	2
#2	1	0	1	2
#3	0	0	0	0
#4	0	1	1	2

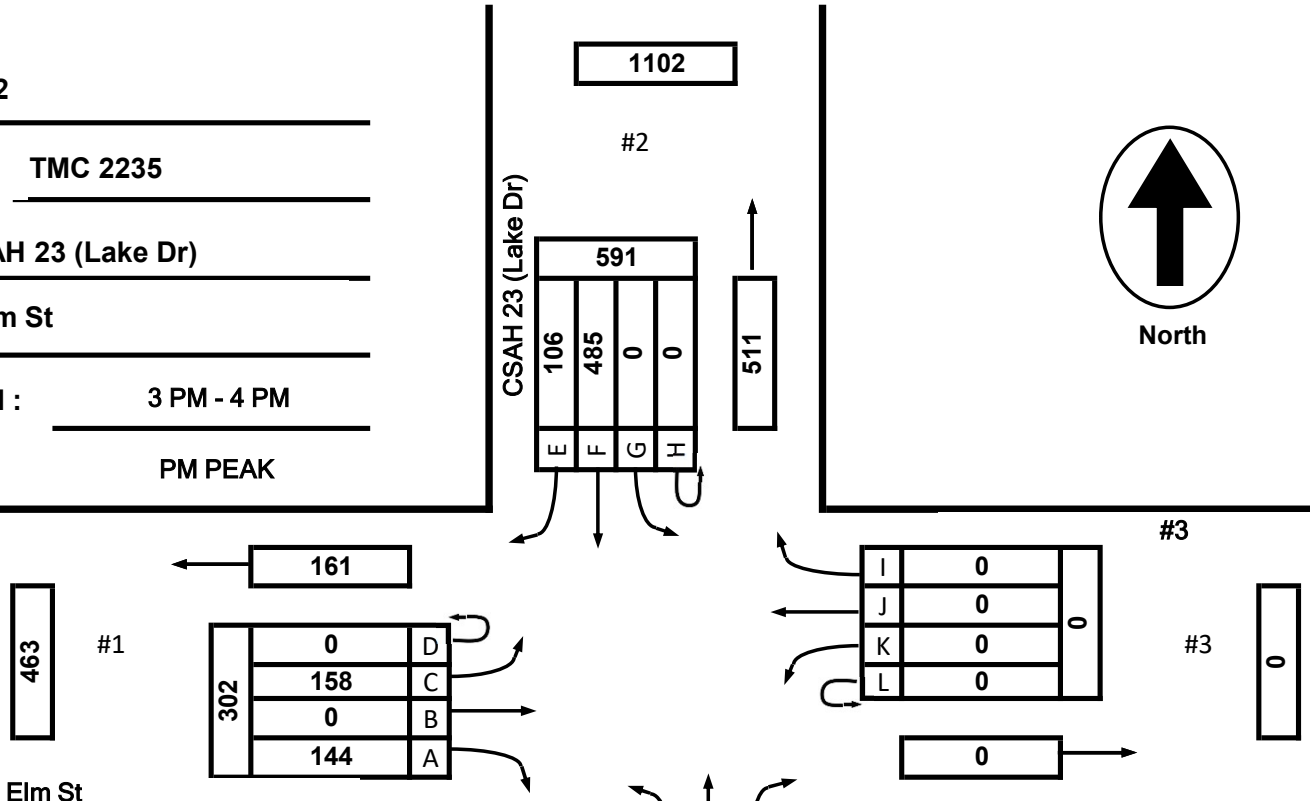
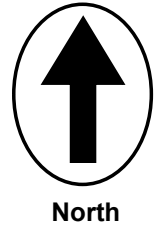
Anoka County Highway Department
 Traffic Volume and Turning Movement Study

Date : 10/12/22

Count Number : TMC 2235

Location : CSAH 23 (Lake Dr)
@ Elm St

Collection Period : 3 PM - 4 PM
PM 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



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2235-t
 Site Code :
 Start Date : 10/12/2022
 Page No : 1

Weather: Cool & Rainy
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	CSAH 23 (Lake Dr) Southbound						Westbound						CSAH 23 (Lake Dr) Northbound						Elm St 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	1	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
00:15	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	3
00:30	0	3	0	0	0	3	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	7	7
00:45	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	2	8	0	0	0	10	0	0	0	0	0	0	0	5	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	16	16
01:00	0	0	0	0	0	0	0	0	0	0	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	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
01:30	0	3	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	4
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	5	0	0	0	5	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6	6
02:00	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	3
02:15	0	1	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4	4
02:30	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2
02:45	0	3	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	5	5
Total	0	6	0	0	0	6	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	14	14
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
03:15	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2
03:30	1	1	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	1	0	0	0	0	1	0	0	0	0	1	0	6	6
03:45	0	1	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	1	0	0	0	0	1	0	0	0	0	1	0	5	5
Total	1	3	0	0	0	4	0	0	0	0	0	0	0	8	0	0	0	8	2	0	0	0	0	2	0	0	0	0	2	0	14	14
04:00	1	4	0	0	0	5	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	1	0	1	0	0	0	1	1	9	10
04:15	0	3	0	0	0	3	0	0	0	0	0	0	0	3	1	0	0	4	0	0	1	0	0	1	0	0	0	0	1	0	8	8
04:30	1	7	0	0	0	8	0	0	0	0	0	0	0	4	0	0	0	4	1	0	1	0	0	2	0	0	0	0	2	0	14	14
04:45	0	10	0	0	0	10	0	0	0	0	0	0	0	5	0	0	0	5	1	0	3	0	0	4	0	0	0	0	4	0	19	19
Total	2	24	0	0	0	26	0	0	0	0	0	0	0	16	1	0	0	17	2	0	5	0	1	7	1	0	0	0	7	1	50	51
05:00	0	11	0	0	0	11	0	0	0	0	0	0	0	2	0	0	0	2	0	0	3	0	0	3	0	0	0	0	3	0	16	16
05:15	2	14	0	0	0	16	0	0	0	0	0	0	0	9	0	0	0	9	2	0	4	0	0	6	0	0	0	0	6	0	31	31
05:30	1	21	0	0	0	22	0	0	0	0	0	0	0	13	0	0	0	13	1	0	0	0	0	1	0	0	0	0	1	0	36	36
05:45	4	37	0	0	0	41	0	0	0	0	0	0	0	12	1	0	0	13	0	0	4	0	0	4	0	0	0	0	4	0	58	58
Total	7	83	0	0	0	90	0	0	0	0	0	0	0	36	1	0	0	37	3	0	11	0	0	14	0	0	0	0	14	0	141	141



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2235-t
 Site Code :
 Start Date : 10/12/2022
 Page No : 2

Weather: Cool & Rainy
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	CSAH 23 (Lake Dr) Southbound						Westbound						CSAH 23 (Lake Dr) Northbound						Elm St 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	2	40	0	0	0	42	0	0	0	0	0	0	0	19	1	0	0	20	3	0	4	0	0	7	0	69	69
06:15	4	48	0	0	0	52	0	0	0	0	0	0	0	17	2	0	0	19	4	0	3	0	0	7	0	78	78
06:30	8	69	0	0	1	77	0	0	0	0	0	0	0	28	0	0	0	28	2	0	7	0	0	9	1	114	115
06:45	11	77	0	0	0	88	0	0	0	0	0	0	0	30	4	0	0	34	8	0	8	0	0	16	0	138	138
Total	25	234	0	0	1	259	0	0	0	0	0	0	0	94	7	0	0	101	17	0	22	0	0	39	1	399	400
07:00	11	66	0	0	1	77	0	0	0	0	0	0	0	37	14	0	0	51	10	0	10	0	0	20	1	148	149
07:15	39	75	0	0	0	114	0	0	0	0	0	0	0	32	14	0	0	46	10	0	15	0	0	25	0	185	185
07:30	46	95	0	0	2	141	0	0	0	0	0	0	0	33	28	0	0	61	17	0	20	0	0	37	2	239	241
07:45	68	91	0	0	1	159	0	0	0	0	0	0	0	66	77	0	0	143	42	0	32	0	0	74	1	376	377
Total	164	327	0	0	4	491	0	0	0	0	0	0	0	168	133	0	0	301	79	0	77	0	0	156	4	948	952
08:00	27	84	0	0	0	111	0	0	0	0	0	0	0	52	41	0	0	93	71	0	46	0	0	117	0	321	321
08:15	14	70	0	0	0	84	0	0	0	0	0	0	0	30	8	0	0	38	16	0	16	0	0	32	0	154	154
08:30	15	63	0	0	0	78	0	0	0	0	0	0	0	46	3	0	0	49	10	0	14	0	0	24	0	151	151
08:45	19	78	0	0	0	97	0	0	0	0	0	0	0	53	15	0	0	68	7	0	17	0	0	24	0	189	189
Total	75	295	0	0	0	370	0	0	0	0	0	0	0	181	67	0	0	248	104	0	93	0	0	197	0	815	815
09:00	31	140	0	0	0	171	0	0	0	0	0	0	0	52	20	0	0	72	44	0	33	0	0	77	0	320	320
09:15	6	129	0	0	0	135	0	0	0	0	0	0	0	68	6	0	0	74	12	0	9	0	0	21	0	230	230
09:30	7	108	0	0	0	115	0	0	0	0	0	0	0	57	2	0	0	59	4	0	11	0	0	15	0	189	189
09:45	13	107	0	0	1	120	0	0	0	0	0	0	0	47	4	0	0	51	5	0	7	0	0	12	1	183	184
Total	57	484	0	0	1	541	0	0	0	0	0	0	0	224	32	0	0	256	65	0	60	0	0	125	1	922	923
10:00	10	86	0	0	1	96	0	0	0	0	0	0	0	36	3	0	0	39	8	0	13	0	0	21	1	156	157
10:15	13	100	0	0	0	113	0	0	0	0	0	0	0	57	9	0	0	66	7	0	9	1	0	17	0	196	196
10:30	13	86	0	0	0	99	0	0	0	0	0	0	0	43	2	0	0	45	10	0	20	0	0	30	0	174	174
10:45	11	83	0	0	0	94	0	0	0	0	0	0	0	52	8	0	0	60	7	0	9	0	0	16	0	170	170
Total	47	355	0	0	1	402	0	0	0	0	0	0	0	188	22	0	0	210	32	0	51	1	0	84	1	696	697
11:00	9	86	0	0	0	95	0	0	0	0	0	0	0	42	3	0	0	45	7	0	9	0	0	16	0	156	156
11:15	15	88	0	0	0	103	0	0	0	0	0	0	0	49	3	0	0	52	7	0	7	0	0	14	0	169	169
11:30	5	72	0	0	0	77	0	0	0	0	0	0	0	59	3	0	0	62	11	0	8	0	0	19	0	158	158
11:45	12	81	0	0	0	93	0	0	0	0	0	0	0	64	6	0	0	70	5	0	10	0	0	15	0	178	178
Total	41	327	0	0	0	368	0	0	0	0	0	0	0	214	15	0	0	229	30	0	34	0	0	64	0	661	661
12:00	17	101	0	0	0	118	0	0	0	0	0	0	0	46	10	0	0	56	7	0	5	0	0	12	0	186	186
12:15	16	87	0	0	0	103	0	0	0	0	0	0	0	65	9	0	0	74	7	0	14	0	0	21	0	198	198
12:30	16	96	0	0	0	112	0	0	0	0	0	0	0	46	9	0	0	55	9	0	7	0	0	16	0	183	183



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2235-t
 Site Code :
 Start Date : 10/12/2022
 Page No : 3

Weather: Cool & Rainy
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	CSAH 23 (Lake Dr) Southbound						Westbound						CSAH 23 (Lake Dr) Northbound						Elm St 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			
12:45	14	77	0	0	0	91	0	0	0	0	0	0	0	47	5	0	0	52	4	0	7	0	0	11	0	154	154
Total	63	361	0	0	0	424	0	0	0	0	0	0	0	204	33	0	0	237	27	0	33	0	0	60	0	721	721
13:00	11	89	0	0	0	100	0	0	0	0	0	0	0	58	3	0	0	61	5	0	8	0	0	13	0	174	174
13:15	17	86	0	0	0	103	0	0	0	0	0	0	0	55	1	0	0	56	3	0	10	0	0	13	0	172	172
13:30	10	88	0	0	0	98	0	0	0	0	0	0	0	50	8	0	0	58	11	0	12	0	0	23	0	179	179
13:45	14	81	0	0	0	95	0	0	0	0	0	0	0	66	8	0	0	74	5	0	10	0	0	15	0	184	184
Total	52	344	0	0	0	396	0	0	0	0	0	0	0	229	20	0	0	249	24	0	40	0	0	64	0	709	709
14:00	14	93	0	0	0	107	0	0	0	0	0	0	0	55	10	0	0	65	11	0	9	0	0	20	0	192	192
14:15	20	71	0	0	0	91	0	0	0	0	0	0	0	50	5	0	0	55	7	0	9	0	0	16	0	162	162
14:30	20	94	0	0	0	114	0	0	0	0	0	0	0	58	22	0	0	80	1	0	14	0	0	15	0	209	209
14:45	32	92	0	0	0	124	0	0	0	0	0	0	0	63	32	0	0	95	21	0	7	0	0	28	0	247	247
Total	86	350	0	0	0	436	0	0	0	0	0	0	0	226	69	0	0	295	40	0	39	0	0	79	0	810	810
15:00	22	125	0	0	6	147	0	0	0	0	0	0	0	76	15	0	0	91	55	0	64	0	0	119	6	357	363
15:15	29	103	0	0	1	132	0	0	0	0	0	0	0	81	8	0	0	89	33	0	26	0	0	59	1	280	281
15:30	34	122	0	0	1	156	0	0	0	0	0	0	0	81	21	0	0	102	20	0	21	0	0	41	1	299	300
15:45	21	135	0	0	0	156	0	0	0	0	0	0	0	115	11	0	0	126	36	0	47	0	0	83	0	365	365
Total	106	485	0	0	8	591	0	0	0	0	0	0	0	353	55	0	0	408	144	0	158	0	0	302	8	1301	1309
16:00	23	143	0	0	0	166	0	0	0	0	0	0	0	101	11	0	0	112	20	0	30	0	0	50	0	328	328
16:15	24	112	0	0	0	136	0	0	0	0	0	0	0	100	17	0	0	117	15	0	23	0	0	38	0	291	291
16:30	19	145	0	0	0	164	0	0	0	0	0	0	0	99	10	0	0	109	17	0	25	0	0	42	0	315	315
16:45	20	109	0	0	1	129	0	0	0	0	0	0	0	102	11	0	0	113	11	0	28	0	0	39	1	281	282
Total	86	509	0	0	1	595	0	0	0	0	0	0	0	402	49	0	0	451	63	0	106	0	0	169	1	1215	1216
17:00	44	113	0	0	0	157	0	0	0	0	0	0	0	97	14	0	0	111	11	0	14	0	0	25	0	293	293
17:15	56	119	0	0	0	175	0	0	0	0	0	0	0	74	28	0	0	102	11	0	19	0	0	30	0	307	307
17:30	27	106	0	0	0	133	0	0	0	0	0	0	0	74	14	0	0	88	27	0	50	0	0	77	0	298	298
17:45	31	95	0	0	0	126	0	0	0	0	0	0	0	72	22	0	0	94	11	0	25	0	0	36	0	256	256
Total	158	433	0	0	0	591	0	0	0	0	0	0	0	317	78	0	0	395	60	0	108	0	0	168	0	1154	1154
18:00	20	123	0	0	0	143	0	0	0	0	0	0	0	64	6	0	0	70	8	0	17	1	0	26	0	239	239
18:15	27	87	0	0	0	114	0	0	0	0	0	0	0	50	5	0	0	55	3	0	16	0	0	19	0	188	188
18:30	15	84	0	0	0	99	0	0	0	0	0	0	0	54	1	0	0	55	1	0	21	0	0	22	0	176	176
18:45	14	94	0	0	0	108	0	0	0	0	0	0	0	55	5	0	0	60	13	0	16	0	0	29	0	197	197
Total	76	388	0	0	0	464	0	0	0	0	0	0	0	223	17	0	0	240	25	0	70	1	0	96	0	800	800



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2235-t
 Site Code :
 Start Date : 10/12/2022
 Page No : 4

Weather: Cool & Rainy
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Cars + - Trucks

Start Time	CSAH 23 (Lake Dr) Southbound						Westbound						CSAH 23 (Lake Dr) Northbound						Elm St 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			
19:00	22	84	0	0	0	106	0	0	0	0	0	0	0	36	1	0	0	37	7	0	17	0	0	24	0	167	167
19:15	34	58	0	0	0	92	0	0	0	0	0	0	0	34	17	0	0	51	13	0	16	0	0	29	0	172	172
19:30	12	57	0	0	0	69	0	0	0	0	0	0	0	45	9	0	0	54	8	0	20	0	0	28	0	151	151
19:45	8	67	0	0	1	75	0	0	0	0	0	0	0	33	4	0	0	37	8	0	5	0	0	13	1	125	126
Total	76	266	0	0	1	342	0	0	0	0	0	0	0	148	31	0	0	179	36	0	58	0	0	94	1	615	616
20:00	10	63	0	0	0	73	0	0	0	0	0	0	0	24	1	0	0	25	0	0	10	0	0	10	0	108	108
20:15	10	55	0	0	0	65	0	0	0	0	0	0	0	22	1	0	0	23	1	0	3	0	0	4	0	92	92
20:30	9	45	0	0	0	54	0	0	0	0	0	0	0	27	2	0	0	29	1	0	4	0	0	5	0	88	88
20:45	15	44	0	0	0	59	0	0	0	0	0	0	0	16	9	0	0	25	1	0	5	0	0	6	0	90	90
Total	44	207	0	0	0	251	0	0	0	0	0	0	0	89	13	0	0	102	3	0	22	0	0	25	0	378	378
21:00	8	54	0	0	0	62	0	0	0	0	0	0	0	17	2	0	0	19	20	0	22	0	0	42	0	123	123
21:15	9	31	0	0	0	40	0	0	0	0	0	0	0	11	2	0	0	13	3	0	3	0	0	6	0	59	59
21:30	4	24	0	0	0	28	0	0	0	0	0	0	0	6	1	0	0	7	0	0	2	0	0	2	0	37	37
21:45	2	22	0	0	0	24	0	0	0	0	0	0	0	5	0	0	0	5	0	0	2	0	0	2	0	31	31
Total	23	131	0	0	0	154	0	0	0	0	0	0	0	39	5	0	0	44	23	0	29	0	0	52	0	250	250
22:00	5	19	0	0	0	24	0	0	0	0	0	0	0	10	0	0	0	10	0	0	4	0	0	4	0	38	38
22:15	3	15	0	0	0	18	0	0	0	0	0	0	0	7	1	0	0	8	0	0	3	0	0	3	0	29	29
22:30	0	18	0	0	0	18	0	0	0	0	0	0	0	6	0	0	0	6	1	0	1	0	0	2	0	26	26
22:45	0	4	0	1	0	5	0	0	0	0	0	0	0	5	0	0	0	5	1	0	0	0	0	1	0	11	11
Total	8	56	0	1	0	65	0	0	0	0	0	0	0	28	1	0	0	29	2	0	8	0	0	10	0	104	104
23:00	1	19	0	0	0	20	0	0	0	0	0	0	0	4	1	0	0	5	0	0	2	0	0	2	0	27	27
23:15	0	6	0	0	0	6	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	10	10
23:30	0	3	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	3	4	0	1	0	0	5	0	11	11
23:45	0	3	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	2	0	0	1	0	0	1	0	6	6
Total	1	31	0	0	0	32	0	0	0	0	0	0	0	12	2	0	0	14	4	0	4	0	0	8	0	54	54
Grand Total	1200	5712	0	1	17	6913	0	0	0	0	0	0	0	3413	652	0	0	4065	785	0	1028	2	1	1815	18	12793	12811
Apprch %	17.4	82.6	0	0	0	0	0	0	0	0	0	0	0	84	16	0	0	43.3	0	56.6	0.1	0	0	0	0.1	99.9	0
Total %	9.4	44.6	0	0	0	54	0	0	0	0	0	0	0	26.7	5.1	0	31.8	6.1	0	8	0	0	14.2	0.1	99.9	0	
Cars +	1174	5401	0	1	0	6593	0	0	0	0	0	0	0	3332	600	0	3932	690	0	998	2	0	1691	0	0	12216	
% Cars +	97.8	94.6	0	100	100	95.1	0	0	0	0	0	0	0	97.6	92	0	96.7	87.9	0	97.1	100	100	93.1	0	0	95.4	
Trucks	26	311	0	0	0	337	0	0	0	0	0	0	0	81	52	0	133	95	0	30	0	0	125	0	0	595	
% Trucks	2.2	5.4	0	0	0	4.9	0	0	0	0	0	0	0	2.4	8	0	3.3	12.1	0	2.9	0	0	6.9	0	0	4.6	



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2235-t
 Site Code :
 Start Date : 10/12/2022
 Page No : 5

Weather: Cool & Rainy
 CountCAM 2
 Study Conducted by: Kevin

Start Time	CSAH 23 (Lake Dr) Southbound					Westbound					CSAH 23 (Lake Dr) Northbound					Elm St 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 07:15																					
07:15	39	75	0	0	114	0	0	0	0	0	0	32	14	0	46	10	0	15	0	25	185
07:30	46	95	0	0	141	0	0	0	0	0	0	33	28	0	61	17	0	20	0	37	239
07:45	68	91	0	0	159	0	0	0	0	0	0	66	77	0	143	42	0	32	0	74	376
08:00	27	84	0	0	111	0	0	0	0	0	0	52	41	0	93	71	0	46	0	117	321
Total Volume	180	345	0	0	525	0	0	0	0	0	0	183	160	0	343	140	0	113	0	253	1121
% App. Total	34.3	65.7	0	0		0	0	0	0	0	0	53.4	46.6	0		55.3	0	44.7	0		
PHF	.662	.908	.000	.000	.825	.000	.000	.000	.000	.000	.000	.693	.519	.000	.600	.493	.000	.614	.000	.541	.745

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45																					
11:45	12	81	0	0	93	0	0	0	0	0	0	64	6	0	70	5	0	10	0	15	178
12:00	17	101	0	0	118	0	0	0	0	0	0	46	10	0	56	7	0	5	0	12	186
12:15	16	87	0	0	103	0	0	0	0	0	0	65	9	0	74	7	0	14	0	21	198
12:30	16	96	0	0	112	0	0	0	0	0	0	46	9	0	55	9	0	7	0	16	183
Total Volume	61	365	0	0	426	0	0	0	0	0	0	221	34	0	255	28	0	36	0	64	745
% App. Total	14.3	85.7	0	0		0	0	0	0	0	0	86.7	13.3	0		43.8	0	56.2	0		
PHF	.897	.903	.000	.000	.903	.000	.000	.000	.000	.000	.000	.850	.850	.000	.861	.778	.000	.643	.000	.762	.941

Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:00																					
15:00	22	125	0	0	147	0	0	0	0	0	0	76	15	0	91	55	0	64	0	119	357
15:15	29	103	0	0	132	0	0	0	0	0	0	81	8	0	89	33	0	26	0	59	280
15:30	34	122	0	0	156	0	0	0	0	0	0	81	21	0	102	20	0	21	0	41	299
15:45	21	135	0	0	156	0	0	0	0	0	0	115	11	0	126	36	0	47	0	83	365
Total Volume	106	485	0	0	591	0	0	0	0	0	0	353	55	0	408	144	0	158	0	302	1301
% App. Total	17.9	82.1	0	0		0	0	0	0	0	0	86.5	13.5	0		47.7	0	52.3	0		
PHF	.779	.898	.000	.000	.947	.000	.000	.000	.000	.000	.000	.767	.655	.000	.810	.655	.000	.617	.000	.634	.891



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2235-t
 Site Code :
 Start Date : 10/12/2022
 Page No : 1

Weather: Cool & Rainy
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Trucks

Start Time	CSAH 23 (Lake Dr) Southbound					Westbound					CSAH 23 (Lake Dr) Northbound					Elm St 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	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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
06:00	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
06:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
06:30	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	8
06:45	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
Total	0	12	0	0	12	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	16
07:00	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5
07:15	1	4	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8
07:30	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	7
07:45	0	6	0	0	6	0	0	0	0	0	0	0	8	0	8	0	0	0	0	0	0	14
Total	1	18	0	0	19	0	0	0	0	0	0	7	8	0	15	0	0	0	0	0	0	34
08:00	0	9	0	0	9	0	0	0	0	0	0	0	2	0	2	30	0	9	0	39	0	50
08:15	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	1	0	2	0	3	0	8
08:30	2	4	0	0	6	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	0	10
08:45	1	5	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	7
Total	3	21	0	0	24	0	0	0	0	0	0	5	2	0	7	32	0	12	0	44	0	75
09:00	2	16	0	0	18	0	0	0	0	0	0	1	3	0	4	15	0	1	0	16	0	38



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2235-t
 Site Code :
 Start Date : 10/12/2022
 Page No : 2

Weather: Cool & Rainy
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Trucks

Start Time	CSAH 23 (Lake Dr) Southbound					Westbound					CSAH 23 (Lake Dr) Northbound					Elm St 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	
09:15	0	20	0	0	20	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	22
09:30	0	10	0	0	10	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	12
09:45	0	13	0	0	13	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	17
Total	2	59	0	0	61	0	0	0	0	0	0	8	3	0	11	16	0	1	0	17	89
10:00	0	11	0	0	11	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	13
10:15	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
10:30	0	8	0	0	8	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	10
10:45	1	11	0	0	12	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	14
Total	1	36	0	0	37	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	43
11:00	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9
11:15	0	9	0	0	9	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	13
11:30	0	7	0	0	7	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	11
11:45	0	4	0	0	4	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	7
Total	0	28	0	0	28	0	0	0	0	0	0	8	2	0	10	1	0	1	0	2	40
12:00	0	9	0	0	9	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	13
12:15	2	8	0	0	10	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	11
12:30	0	12	0	0	12	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	14
12:45	1	5	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
Total	3	34	0	0	37	0	0	0	0	0	0	6	1	0	7	1	0	0	0	1	45
13:00	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
13:15	1	5	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
13:30	0	10	0	0	10	0	0	0	0	0	0	1	1	0	2	0	0	1	0	1	13
13:45	0	8	0	0	8	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	14
Total	1	27	0	0	28	0	0	0	0	0	0	9	1	0	10	1	0	1	0	2	40
14:00	1	5	0	0	6	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	9
14:15	0	10	0	0	10	0	0	0	0	0	0	1	2	0	3	0	0	1	0	1	14
14:30	0	4	0	0	4	0	0	0	0	0	0	0	11	0	11	0	0	1	0	1	16
14:45	2	11	0	0	13	0	0	0	0	0	0	2	13	0	15	5	0	0	0	5	33
Total	3	30	0	0	33	0	0	0	0	0	0	5	27	0	32	5	0	2	0	7	72
15:00	0	6	0	0	6	0	0	0	0	0	0	1	2	0	3	16	0	4	0	20	29
15:15	0	4	0	0	4	0	0	0	0	0	0	2	1	0	3	13	0	1	0	14	21
15:30	5	1	0	0	6	0	0	0	0	0	0	1	2	0	3	2	0	1	0	3	12
15:45	0	9	0	0	9	0	0	0	0	0	0	1	0	0	1	5	0	2	0	7	17
Total	5	20	0	0	25	0	0	0	0	0	0	5	5	0	10	36	0	8	0	44	79
16:00	1	3	0	0	4	0	0	0	0	0	0	5	1	0	6	1	0	1	0	2	12
16:15	3	0	0	0	3	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	4
16:30	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
16:45	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	7
Total	5	9	0	0	14	0	0	0	0	0	0	6	2	0	8	2	0	2	0	4	26
17:00	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
17:15	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:30	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	4
17:45	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	4
Total	0	5	0	0	5	0	0	0	0	0	0	8	0	0	8	0	0	2	0	2	15
18:00	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
18:15	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
18:30	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
18:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	1	6	0	0	7	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	9



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2235-t
 Site Code :
 Start Date : 10/12/2022
 Page No : 3

Weather: Cool & Rainy
 CountCAM 2
 Study Conducted by: Kevin

Groups Printed- Trucks

Start Time	CSAH 23 (Lake Dr) Southbound					Westbound					CSAH 23 (Lake Dr) Northbound					Elm St 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	
19:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
19:15	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
19:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	5
20:00	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
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	1	0	0	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
Total	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
21:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21:15	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
21:45	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	1
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	1	0	0	1	0	0	0	0	0	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
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	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	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	26	311	0	0	337	0	0	0	0	0	0	81	52	0	133	95	0	30	0	125	595
Apprch %	7.7	92.3	0	0		0	0	0	0		0	60.9	39.1	0		76	0	24	0		
Total %	4.4	52.3	0	0	56.6	0	0	0	0	0	0	13.6	8.7	0	22.4	16	0	5	0	21	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 12/02/2022

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 23 (Lake Dr)

Number of Lanes : 1

Total Approach Volume: 4,065

Southbound: CSAH 23 (Lake Dr)

Number of Lanes : 1

Total Approach Volume: 6,913

Minor Street Approaches

Eastbound: Elm St

Number of Lanes : 2+

Total Approach Volume: 1,815

Warrant Summary (Urban Values Apply)

Warrant 1 - Eight Hour Vehicular Volumes.....Not Satisfied

Warrant 1A - Minimum Vehicular Volume.....Not Satisfied

Required volumes reached for 3 hours, 8 are needed

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

Required volumes reached for 6 hours, 8 are needed

Warrant 1C - Combination of Warrants.....Not Satisfied

Required 1A volumes reached for 4 hours, 8 are needed

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

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

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

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (18) 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

Only 3 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 = **2 or more**

Volume Requirements

Veh/Hr Major = **500**

Veh/Hr Minor = **200**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 23 (Lake Dr)					Elm St		
15:30 - 16:30	457	+	614	=	1071	212	0	Yes
14:30 - 15:30	355	+	517	=	872	221	0	Yes
07:15 - 08:15	343	+	525	=	868	253	0	Yes
16:30 - 17:30	435	+	625	=	1060	136	0	No
16:45 - 17:45	414	+	594	=	1008	171	0	No
17:00 - 18:00	395	+	591	=	986	168	0	No
17:15 - 18:15	354	+	577	=	931	169	0	No
17:30 - 18:30	307	+	516	=	823	158	0	No
14:15 - 15:15	321	+	476	=	797	178	0	No
09:00 - 10:00	256	+	541	=	797	125	0	No
07:00 - 08:00	301	+	491	=	792	156	0	No
08:45 - 09:45	273	+	518	=	791	137	0	No
17:45 - 18:45	274	+	482	=	756	103	0	No
08:30 - 09:30	263	+	481	=	744	146	0	No
14:00 - 15:00	295	+	436	=	731	79	0	No
18:00 - 19:00	240	+	464	=	704	96	0	No
09:15 - 10:15	223	+	466	=	689	69	0	No
13:45 - 14:45	274	+	407	=	681	66	0	No
11:45 - 12:45	255	+	426	=	681	64	0	No
12:00 - 13:00	237	+	424	=	661	60	0	No
09:30 - 10:30	215	+	444	=	659	65	0	No
08:15 - 09:15	227	+	430	=	657	157	0	No
13:15 - 14:15	253	+	403	=	656	71	0	No
11:30 - 12:30	262	+	391	=	653	67	0	No
12:15 - 13:15	242		406		648	61	0	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 6 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 = **2 or more**

Volume Requirements

Veh/Hr Major = **750**

Veh/Hr Minor = **100**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 23 (Lake Dr)					Elm St		
15:15 - 16:15	429	+	610	=	1039	233	0	Yes
16:15 - 17:15	450	+	586	=	1036	144	0	Yes
17:15 - 18:15	354	+	577	=	931	169	0	Yes
14:15 - 15:15	321	+	476	=	797	178	0	Yes
07:00 - 08:00	301	+	491	=	792	156	0	Yes
08:45 - 09:45	273	+	518	=	791	137	0	Yes
08:30 - 09:30	263	+	481	=	744	146	0	No
14:00 - 15:00	295	+	436	=	731	79	0	No
13:45 - 14:45	274	+	407	=	681	66	0	No
11:45 - 12:45	255	+	426	=	681	64	0	No
12:00 - 13:00	237	+	424	=	661	60	0	No
08:15 - 09:15	227	+	430	=	657	157	0	No
13:15 - 14:15	253	+	403	=	656	71	0	No
11:30 - 12:30	262	+	391	=	653	67	0	No
12:15 - 13:15	242	+	406	=	648	61	0	No
13:00 - 14:00	249	+	396	=	645	64	0	No
13:30 - 14:30	252	+	391	=	643	74	0	No
18:15 - 19:15	207	+	427	=	634	94	0	No
11:15 - 12:15	240	+	391	=	631	60	0	No
12:30 - 13:30	224	+	406	=	630	53	0	No
09:45 - 10:45	201	+	428	=	629	80	0	No
12:45 - 13:45	227	+	392	=	619	60	0	No
08:00 - 09:00	248	+	370	=	618	197	0	No
10:15 - 11:15	216	+	401	=	617	79	0	No
10:00 - 11:00	210		402		612	84	0	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

Only 4 hours meet 1A minimums.
9 hours meet 1B minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

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

Veh/Hr Minor = **160 80**

Major Road CSAH 23 (Lake Dr)

Minor Road Elm St

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
15:15 - 16:15	429	+	610	=	1039	233	0	Yes
16:45 - 17:45	414	+	594	=	1008	171	0	Yes
07:15 - 08:15	343	+	525	=	868	253	0	Yes
14:15 - 15:15	321	+	476	=	797	178	0	Yes
16:30 - 17:30	435	+	625	=	1060	136	0	No
16:15 - 17:15	450	+	586	=	1036	144	0	No
09:00 - 10:00	256	+	541	=	797	125	0	No
07:00 - 08:00	301	+	491	=	792	156	0	No
08:45 - 09:45	273	+	518	=	791	137	0	No
17:45 - 18:45	274	+	482	=	756	103	0	No
08:30 - 09:30	263	+	481	=	744	146	0	No
14:00 - 15:00	295	+	436	=	731	79	0	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
15:15 - 16:15	429	+	610	=	1039	233	0	Yes
16:15 - 17:15	450	+	586	=	1036	144	0	Yes
17:15 - 18:15	354	+	577	=	931	169	0	Yes
14:15 - 15:15	321	+	476	=	797	178	0	Yes
08:45 - 09:45	273	+	518	=	791	137	0	Yes
07:45 - 08:45	323	+	432	=	755	247	0	Yes
18:15 - 19:15	207	+	427	=	634	94	0	Yes
09:45 - 10:45	201	+	428	=	629	80	0	Yes
06:45 - 07:45	192	+	420	=	612	98	0	Yes
14:00 - 15:00	295	+	436	=	731	79	0	No
13:45 - 14:45	274	+	407	=	681	66	0	No
11:45 - 12:45	255	+	426	=	681	64	0	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.

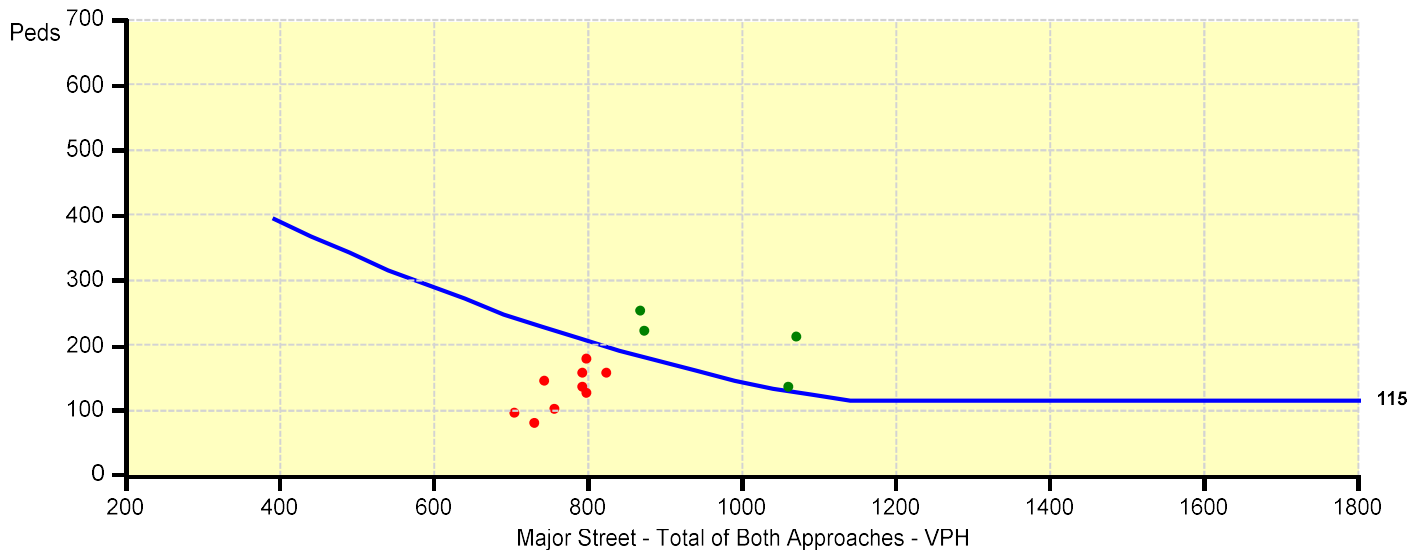
Summary

4 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 23 (Lake Dr)					Minor Road Elm St		Met?
	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	
15:30 - 16:30	457	+	614	=	1071	212	0	Yes
16:30 - 17:30	435	+	625	=	1060	136	0	Yes
14:30 - 15:30	355	+	517	=	872	221	0	Yes
07:15 - 08:15	343	+	525	=	868	253	0	Yes
17:30 - 18:30	307	+	516	=	823	158	0	No
14:15 - 15:15	321	+	476	=	797	178	0	No
09:00 - 10:00	256	+	541	=	797	125	0	No
07:00 - 08:00	301	+	491	=	792	156	0	No
08:45 - 09:45	273	+	518	=	791	137	0	No
17:45 - 18:45	274	+	482	=	756	103	0	No
08:30 - 09:30	263	+	481	=	744	146	0	No
14:00 - 15:00	295	+	436	=	731	79	0	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 = **2 or more**

Time	Major Road CSAH 23 (Lake Dr)				Total	Minor Road Elm St		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
15:00 - 16:00	408	+	591	=	999	302	0	Yes
15:45 - 16:45	464	+	622	=	1086	213	0	No
15:30 - 16:30	457	+	614	=	1071	212	0	No
16:30 - 17:30	435	+	625	=	1060	136	0	No
16:00 - 17:00	451	+	595	=	1046	169	0	No
15:15 - 16:15	429	+	610	=	1039	233	0	No
16:15 - 17:15	450	+	586	=	1036	144	0	No
16:45 - 17:45	414	+	594	=	1008	171	0	No
17:00 - 18:00	395	+	591	=	986	168	0	No
14:45 - 15:45	377	+	559	=	936	247	0	No
17:15 - 18:15	354	+	577	=	931	169	0	No
14:30 - 15:30	355		517		872	221	0	No

