

Date : 04/20/23

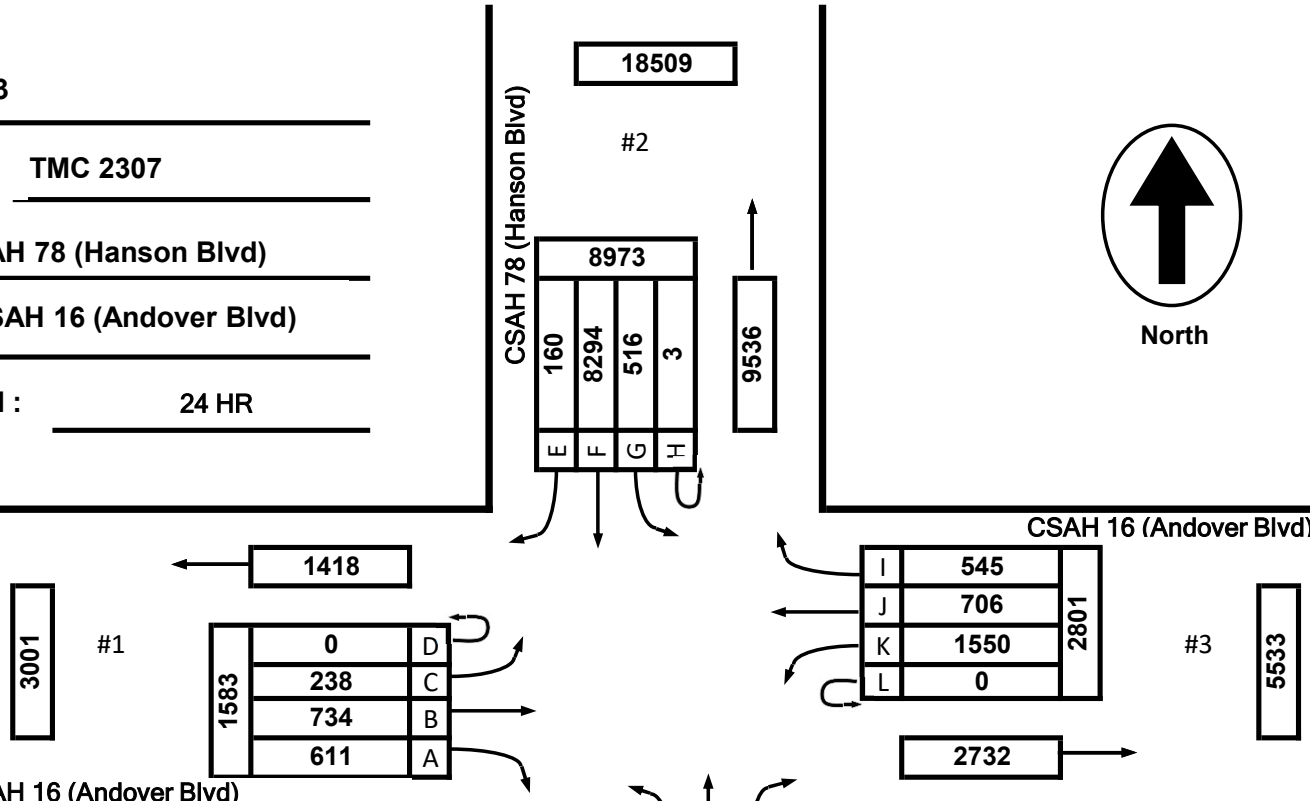
Count Number : TMC 2307

Location : CSAH 78 (Hanson Blvd)
@ CSAH 16 (Andover Blvd)

Collection Period : 24 HR



North



CSAH 16 (Andover Blvd)

CSAH 16 (Andover Blvd)

CSAH 78 (Hanson Blvd)

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

Anoka County Highway Department

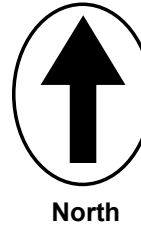
Traffic Volume and Turning Movement Study

Date : 04/20/23

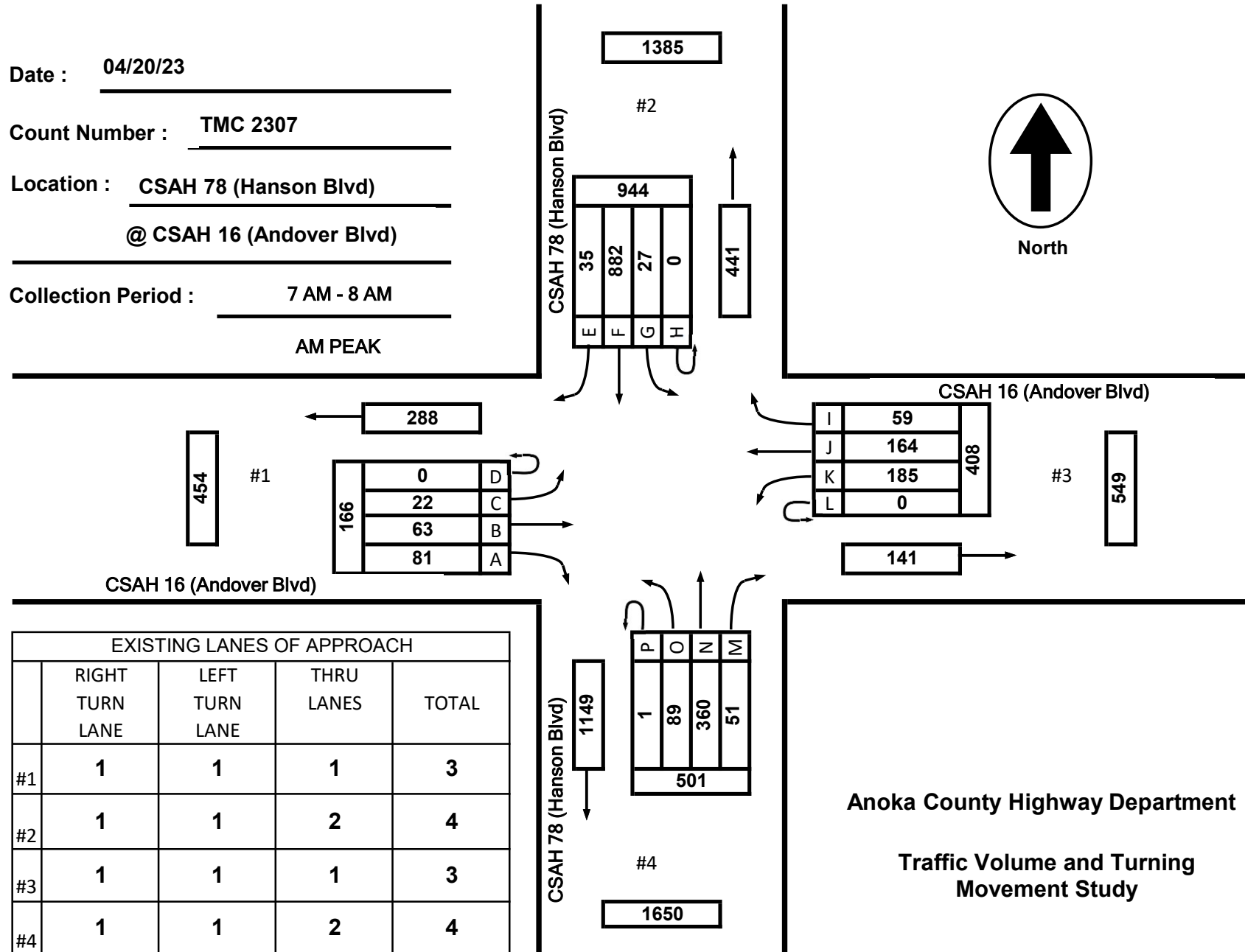
Count Number : TMC 2307

Location : CSAH 78 (Hanson Blvd)
@ CSAH 16 (Andover Blvd)

Collection Period : 7 AM - 8 AM
AM PEAK



North



CSAH 16 (Andover Blvd)

CSAH 78 (Hanson Blvd)

CSAH 16 (Andover Blvd)

CSAH 78 (Hanson Blvd)

Anoka County Highway Department

Traffic Volume and Turning Movement Study

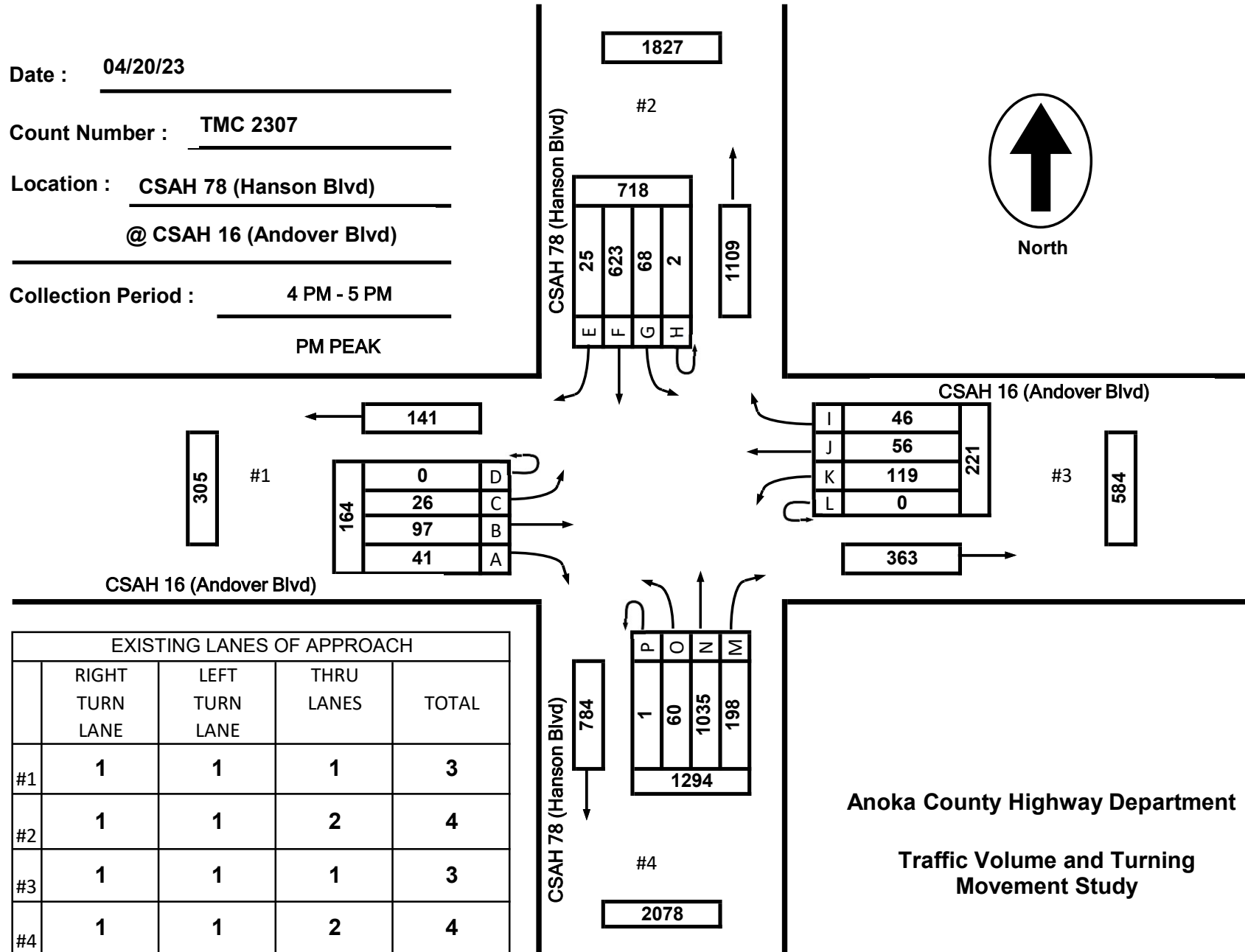
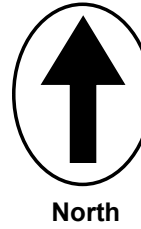
EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	1	1	1	3
#2	1	1	2	4
#3	1	1	1	3
#4	1	1	2	4

Date : 04/20/23

Count Number : TMC 2307

Location : CSAH 78 (Hanson Blvd)
@ CSAH 16 (Andover Blvd)

Collection Period : 4 PM - 5 PM
PM PEAK



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

Anoka County Highway Department
Traffic Volume and Turning Movement Study

TMC 2307 - CSAH 78 @ CSAH 16

0 0

Thursday, April 20, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL						
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total							
12:00 AM	0	0	8	0	0	8	0	1	0	0	0	1	1	0	12	5	0	18	0	0	0	0	0	0	0	0	0	0	0	0	27
12:15 AM	0	0	6	0	0	6	0	0	1	0	0	1	0	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	19
12:30 AM	0	0	1	0	0	1	0	1	1	0	0	2	0	0	3	7	0	10	0	0	0	0	0	0	0	0	0	0	0	0	13
12:45 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	1	3	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	7
Hourly Total	0	0	17	0	0	17	0	2	2	0	0	4	1	1	30	13	0	45	0	0	0	0	0	0	0	0	0	0	0	0	66
1:00 AM	0	0	3	0	0	3	0	1	0	0	0	1	0	1	5	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	10
1:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	2	0	4	0	1	0	0	0	0	0	1	0	0	0	1	6
1:30 AM	0	0	4	0	0	4	0	2	0	0	0	2	1	0	5	3	0	9	0	0	0	0	0	0	0	0	0	0	0	0	15
1:45 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	10
Hourly Total	0	0	12	0	0	12	0	3	0	0	0	3	1	1	16	7	0	25	0	1	0	0	0	0	0	1	0	0	0	1	41
2:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	5
2:15 AM	0	0	6	0	0	6	0	1	1	0	0	2	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	10
2:30 AM	0	0	6	0	0	6	0	0	0	1	0	1	0	0	4	1	0	5	0	0	1	0	0	0	0	0	1	0	0	1	13
2:45 AM	0	0	6	0	0	6	0	1	1	0	0	2	0	1	6	1	0	8	0	0	0	0	0	0	0	0	0	0	0	0	16
Hourly Total	0	0	19	0	0	19	0	2	2	1	0	5	0	1	16	2	0	19	0	0	1	0	0	0	0	0	1	0	0	1	44
3:00 AM	0	0	6	0	0	6	0	3	0	0	0	3	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	13
3:15 AM	0	0	8	0	0	8	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	1	0	0	0	0	0	1	0	1	12
3:30 AM	0	0	14	0	0	14	0	4	1	0	0	5	0	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	23
3:45 AM	0	0	18	0	0	18	0	5	0	0	0	5	0	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	26
Hourly Total	0	0	46	0	0	46	0	12	1	0	0	13	0	0	11	3	0	14	0	0	0	1	0	0	0	0	0	1	0	1	74
4:00 AM	0	0	16	0	0	16	0	4	0	0	0	4	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	26
4:15 AM	0	0	25	0	0	25	0	7	1	0	0	8	0	0	5	1	0	6	0	0	1	2	0	3	0	0	0	1	0	3	42
4:30 AM	0	0	49	0	0	49	0	14	1	0	0	15	0	1	9	0	0	10	0	0	0	6	0	6	0	0	0	6	0	6	80
4:45 AM	0	0	40	0	0	40	0	10	2	1	0	13	0	0	10	2	0	12	0	0	2	4	0	6	0	0	2	4	0	6	71
Hourly Total	0	0	130	0	0	130	0	35	4	1	0	40	0	1	30	3	0	34	0	0	3	12	0	15	0	0	3	12	0	15	219
5:00 AM	0	0	65	0	0	65	0	13	0	1	0	14	0	1	9	1	0	11	0	1	0	3	0	4	0	1	0	3	0	4	94
5:15 AM	0	0	76	0	0	76	0	18	3	4	1	25	0	0	13	4	0	17	0	1	0	5	0	6	0	1	0	5	0	6	124
5:30 AM	0	1	96	0	0	97	0	29	2	2	0	33	0	0	16	2	0	18	0	0	0	7	0	7	0	0	0	7	0	7	155
5:45 AM	0	1	110	0	0	111	0	20	1	2	0	23	0	0	24	2	0	26	0	0	0	4	0	4	0	0	0	4	0	4	164
Hourly Total	0	2	347	0	0	349	0	80	6	9	1	95	0	1	62	9	0	72	0	2	0	19	0	21	0	2	0	19	0	21	537
6:00 AM	0	2	144	0	0	146	0	23	11	1	0	35	0	3	21	3	0	27	0	0	1	4	0	5	0	0	1	4	0	5	213
6:15 AM	0	4	176	0	0	180	0	34	8	2	0	44	0	4	42	10	1	56	0	1	1	7	1	9	0	1	1	7	1	9	289
6:30 AM	0	3	183	0	0	186	0	36	15	4	0	55	0	4	36	7	0	47	0	3	6	14	0	23	0	3	6	14	0	23	311
6:45 AM	0	3	194	3	0	200	0	36	28	9	0	73	1	8	70	8	0	87	0	1	3	9	0	13	0	1	3	9	0	13	373
Hourly Total	0	12	697	3	0	712	0	129	62	16	0	207	1	19	169	28	1	217	0	5	11	34	1	50	0	5	11	34	1	50	1186
7:00 AM	0	6	203	4	1	213	0	51	41	11	1	103	0	32	62	8	1	102	0	3	10	20	0	33	0	3	10	20	0	33	451
7:15 AM	0	6	222	25	0	253	0	67	67	17	0	151	0	32	84	9	0	125	0	9	13	29	1	51	0	9	13	29	1	51	580
7:30 AM	0	7	244	3	0	254	0	35	43	13	0	91	0	21	108	12	0	141	0	6	25	22	0	53	0	6	25	22	0	53	539
7:45 AM	0	8	213	3	0	224	0	32	13	18	0	63	1	4	106	22	0	133	0	4	15	10	0	29	0	4	15	10	0	29	449
Hourly Total	0	27	882	35	1	944	0	185	164	59	1	408	1	89	360	51	1	501	0	22	63	81	1	166	0	22	63	81	1	166	2019

TMC 2307 - CSAH 78 @ CSAH 16

0 0

Thursday, April 20, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL						
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total							
8:00 AM	0	12	190	4	0	206	0	38	9	20	0	67	0	2	121	12	0	135	0	0	2	8	0	10	0	0	4	10	0	14	418
8:15 AM	0	12	163	2	0	177	0	29	7	11	0	47	0	3	97	9	0	109	0	0	4	7	0	11	0	0	3	7	0	10	347
8:30 AM	0	3	142	4	0	149	0	30	6	12	0	48	0	5	84	11	0	100	0	0	3	7	0	10	0	0	3	7	0	10	307
8:45 AM	0	6	96	1	0	103	0	27	6	14	0	47	0	4	101	9	0	114	0	4	7	13	0	24	0	0	7	13	0	24	288
Hourly Total	0	33	591	11	0	635	0	124	28	57	0	209	0	14	403	41	0	458	0	4	16	38	0	58	0	4	16	38	0	58	1360
9:00 AM	0	8	120	1	0	129	0	30	5	22	0	57	0	2	101	11	0	114	0	1	8	9	0	18	0	1	8	9	0	18	318
9:15 AM	0	18	211	11	0	240	0	37	1	9	0	47	0	9	81	7	0	97	0	2	6	7	0	15	0	2	6	7	0	15	399
9:30 AM	0	5	142	1	0	148	0	20	4	9	0	33	0	4	88	13	0	105	0	1	1	3	0	5	0	1	1	3	0	5	291
9:45 AM	0	4	111	2	0	117	0	12	11	5	0	28	0	2	87	14	0	103	0	1	4	5	0	10	0	1	4	5	0	10	258
Hourly Total	0	35	584	15	0	634	0	99	21	45	0	165	0	17	357	45	0	419	0	5	19	24	0	48	0	5	19	24	0	48	1266
10:00 AM	0	7	118	1	0	126	0	17	9	6	0	32	0	3	70	14	0	87	0	2	7	3	0	12	0	2	7	3	0	12	257
10:15 AM	0	7	80	2	0	89	0	13	4	2	0	19	0	5	82	11	0	98	0	0	5	9	0	14	0	0	5	9	0	14	220
10:30 AM	0	4	107	1	0	112	0	16	7	8	0	31	0	3	72	9	0	84	0	2	4	7	0	13	0	2	4	7	0	13	240
10:45 AM	0	2	93	0	0	95	0	15	9	6	0	30	2	6	88	13	0	109	0	2	3	2	0	7	0	2	3	2	0	7	241
Hourly Total	0	20	398	4	0	422	0	61	29	22	0	112	2	17	312	47	0	378	0	6	19	21	0	46	0	6	19	21	0	46	958
11:00 AM	0	6	115	1	0	122	0	22	4	1	0	27	0	4	112	15	0	131	0	1	4	6	0	11	0	1	4	6	0	11	291
11:15 AM	0	7	100	0	0	107	0	11	7	6	0	24	0	7	88	13	0	108	0	2	12	14	0	28	0	2	12	14	0	28	267
11:30 AM	0	7	103	0	0	110	0	14	7	4	0	25	0	5	110	13	0	128	0	3	9	9	0	21	0	3	9	9	0	21	284
11:45 AM	0	5	119	4	0	128	0	18	4	5	0	27	0	4	109	16	0	129	0	3	10	7	0	20	0	3	10	7	0	20	304
Hourly Total	0	25	437	5	0	467	0	65	22	16	0	103	0	20	419	57	0	496	0	9	35	36	0	80	0	9	35	36	0	80	1146
12:00 PM	0	9	119	2	0	130	0	16	2	9	0	27	0	9	111	20	0	140	0	1	5	5	0	11	0	1	5	5	0	11	308
12:15 PM	0	6	98	1	0	105	0	23	4	6	0	33	0	5	101	11	0	117	0	1	5	8	0	14	0	1	5	8	0	14	269
12:30 PM	0	5	102	1	0	108	0	15	10	6	0	31	0	7	133	15	0	155	0	1	6	9	0	16	0	1	6	9	0	16	310
12:45 PM	0	6	111	1	0	118	0	19	13	8	0	40	0	8	119	20	0	147	0	1	8	9	0	18	0	1	8	9	0	18	323
Hourly Total	0	26	430	5	0	461	0	73	29	29	0	131	0	29	464	66	0	559	0	4	24	31	0	59	0	4	24	31	0	59	1210
1:00 PM	0	5	89	0	0	94	0	17	3	2	0	22	0	3	99	13	0	115	0	1	9	1	0	11	0	1	9	1	0	11	242
1:15 PM	0	4	82	0	0	86	0	21	4	4	0	29	0	4	110	12	0	126	0	1	9	2	0	12	0	1	9	2	0	12	253
1:30 PM	0	5	100	1	0	106	0	10	5	5	0	20	0	6	113	18	0	137	0	2	6	6	0	14	0	2	6	6	0	14	277
1:45 PM	0	2	95	0	0	97	0	12	8	4	0	24	0	8	123	16	0	147	0	6	6	9	0	21	0	6	6	9	0	21	289
Hourly Total	0	16	366	1	0	383	0	60	20	15	0	95	0	21	445	59	0	525	0	10	30	18	0	58	0	10	30	18	0	58	1061
2:00 PM	0	5	91	1	0	97	0	18	10	7	0	35	0	13	138	11	0	162	0	2	11	10	0	23	0	2	11	10	0	23	317
2:15 PM	0	7	104	2	0	113	0	14	16	6	0	36	1	13	140	19	0	173	0	36	49	28	0	113	0	36	49	28	0	113	435
2:30 PM	0	5	108	3	1	116	0	23	13	4	2	40	0	14	176	41	0	231	0	28	38	34	0	100	0	28	38	34	0	100	487
2:45 PM	0	9	121	1	0	131	0	27	15	13	0	55	0	8	168	30	0	206	0	1	15	7	0	23	0	1	15	7	0	23	415
Hourly Total	0	26	424	7	1	457	0	82	54	30	2	166	1	48	622	101	0	772	0	67	113	79	0	259	0	67	113	79	0	259	1654
3:00 PM	0	8	94	3	0	105	0	22	9	9	0	40	0	6	219	23	0	248	0	2	10	6	0	18	0	2	10	6	0	18	411
3:15 PM	0	13	159	5	0	177	0	15	12	8	1	35	0	15	191	34	0	240	0	1	16	13	0	30	0	1	16	13	0	30	482
3:30 PM	0	12	121	2	0	135	0	24	14	12	0	50	0	13	247	39	0	299	0	4	12	10	0	26	0	4	12	10	0	26	510
3:45 PM	1	12	125	2	0	140	0	24	11	20	0	55	0	7	249	36	0	292	0	2	11	7	0	20	0	2	11	7	0	20	507
Hourly Total	1	45	499	12	0	557	0	85	46	49	1	180	0	41	906	132	0	1079	0	9	49	36	0	94	0	9	49	36	0	94	1910

TMC 2307 - CSAH 78 @ CSAH 16

0 0

Thursday, April 20, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
4:00 PM	0	28	176	14	0	218	0	31	19	14	0	64	1	13	217	54	1	285	0	7	26	9	0	42	609
4:15 PM	0	14	137	5	0	156	0	32	10	10	1	52	0	18	270	47	3	335	0	8	28	17	0	53	596
4:30 PM	1	11	161	3	2	176	0	28	13	11	2	52	0	10	239	40	0	289	0	6	22	8	0	36	553
4:45 PM	1	15	149	3	0	168	0	28	14	11	0	53	0	19	309	57	0	385	0	5	21	7	0	33	639
Hourly Total	2	68	623	25	2	718	0	119	56	46	3	221	1	60	1035	198	4	1294	0	26	97	41	0	164	2397
5:00 PM	0	15	143	2	0	160	0	29	12	8	0	49	0	6	261	58	0	325	0	4	30	12	0	46	580
5:15 PM	0	9	130	2	0	141	0	33	15	27	0	75	0	14	260	52	0	326	0	7	20	9	0	36	578
5:30 PM	0	22	149	1	0	172	0	19	18	7	0	44	0	10	247	48	0	305	0	4	12	7	0	23	544
5:45 PM	0	5	130	10	0	145	0	30	13	13	0	56	0	10	233	37	0	280	0	7	12	7	0	26	507
Hourly Total	0	51	552	15	0	618	0	111	58	55	0	224	0	40	1001	195	0	1236	0	22	74	35	0	131	2209
6:00 PM	0	9	108	4	0	121	0	21	17	10	0	48	4	19	170	38	0	231	0	0	15	9	0	24	424
6:15 PM	0	9	109	2	0	120	0	24	12	13	0	49	0	8	186	32	0	226	0	5	17	5	0	27	422
6:30 PM	0	8	105	0	0	113	0	22	5	5	0	32	0	13	158	25	1	196	0	5	20	10	0	35	376
6:45 PM	0	10	93	3	0	106	0	22	14	6	0	42	0	8	134	32	0	174	0	3	4	6	0	13	335
Hourly Total	0	36	415	9	0	460	0	89	48	34	0	171	4	48	648	127	1	827	0	13	56	30	0	99	1557
7:00 PM	0	5	73	3	0	81	0	18	4	7	2	29	0	12	143	28	0	183	0	2	12	10	0	24	317
7:15 PM	0	13	91	0	0	104	0	17	7	10	0	34	0	5	137	31	0	173	0	1	13	7	0	21	332
7:30 PM	0	9	88	2	0	99	0	9	3	8	0	20	0	13	115	23	0	151	0	5	10	13	0	28	298
7:45 PM	0	6	75	0	0	81	0	10	6	9	0	25	0	6	114	23	0	143	0	1	7	3	0	11	260
Hourly Total	0	33	327	5	0	365	0	54	20	34	2	108	0	36	509	105	0	650	0	9	42	33	0	84	1207
8:00 PM	0	13	75	2	0	90	0	10	5	3	0	18	0	9	100	22	0	131	0	3	10	4	0	17	256
8:15 PM	0	7	78	1	0	86	0	7	9	2	1	18	0	3	93	21	0	117	0	3	6	4	0	13	234
8:30 PM	0	11	60	1	0	72	0	11	3	3	0	17	0	6	84	11	0	101	0	4	10	8	0	22	212
8:45 PM	0	1	43	1	0	45	0	6	3	3	0	12	0	4	95	14	0	113	0	1	10	2	0	13	183
Hourly Total	0	32	256	5	0	293	0	34	20	11	1	65	0	22	372	68	0	462	0	11	36	18	0	65	885
9:00 PM	0	9	45	2	0	56	0	9	2	1	0	12	0	3	86	15	0	104	0	2	3	1	0	6	178
9:15 PM	0	2	28	1	0	31	0	6	0	6	0	12	0	3	86	16	0	105	0	4	11	7	0	22	170
9:30 PM	0	1	43	0	0	44	0	3	1	1	0	5	0	3	66	15	0	84	0	0	5	7	0	12	145
9:45 PM	0	1	24	0	0	25	0	6	1	0	0	7	0	2	61	18	0	81	0	3	8	0	0	11	124
Hourly Total	0	13	140	3	0	156	0	24	4	8	0	36	0	11	299	64	0	374	0	9	27	15	0	51	617
10:00 PM	0	5	20	0	0	25	0	7	0	1	0	8	0	3	51	15	0	69	0	1	7	2	0	10	112
10:15 PM	0	4	22	0	0	26	0	2	1	1	0	4	0	0	34	12	0	46	0	1	3	1	0	5	81
10:30 PM	0	2	13	0	0	15	0	1	2	1	0	4	0	4	31	7	0	42	0	2	2	1	0	5	66
10:45 PM	0	2	12	0	0	14	0	5	2	2	0	9	0	2	33	8	0	43	0	0	1	2	0	3	69
Hourly Total	0	13	67	0	0	80	0	15	5	5	0	25	0	9	149	42	0	200	0	4	13	6	0	23	328
11:00 PM	0	0	14	0	0	14	0	3	0	2	0	5	0	2	38	2	0	42	0	0	1	1	0	2	63
11:15 PM	0	0	11	0	0	11	0	2	0	0	0	2	0	1	35	8	0	44	0	0	2	0	0	2	59
11:30 PM	0	1	5	0	0	6	0	2	1	1	0	4	0	1	30	6	0	37	0	0	1	1	0	2	49
11:45 PM	0	2	5	0	0	7	0	0	4	0	0	4	0	2	12	3	0	17	0	0	2	1	0	3	31
Hourly Total	0	3	35	0	0	38	0	7	5	3	0	15	0	6	115	19	0	140	0	0	6	3	0	9	202
DAILY TOTAL	3	516	8294	160	4	8973	0	1550	706	545	11	2801	12	552	8750	1482	7	10796	0	238	734	611	2	1583	24153
Cars	3	503	8164	155	4	8825	0	1531	694	536	6	2761	12	546	8595	1458	4	10611	0	229	721	594	2	1544	23741
Heavy Vehicles	0	13	130	5	0	148	0	19	12	9	5	40	0	6	155	24	3	185	0	9	13	17	0	39	412
Heavy Vehicle %	0.00%	2.52%	1.57%	3.13%	0.00%	1.65%	0.00%	1.23%	1.70%	1.65%	45.45%	1.43%	0.00%	1.09%	1.77%	1.62%	42.86%	1.71%	0.00%	3.78%	1.77%	2.78%	0.00%	2.46%	1.71%

TMC 2307 - CSAH 78 @ CSAH 16

0 0

Thursday, April 20, 2023

AM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
7:00 AM	0	6	203	4	1	213	0	51	41	11	1	103	0	32	62	8	1	102	0	3	10	20	0	33	451
7:15 AM	0	6	222	25	0	253	0	67	67	17	0	151	0	32	84	9	0	125	0	9	13	29	1	51	580
7:30 AM	0	7	244	3	0	254	0	35	43	13	0	91	0	21	108	12	0	141	0	6	25	22	0	53	539
7:45 AM	0	8	213	3	0	224	0	32	13	18	0	63	1	4	106	22	0	133	0	4	15	10	0	29	449
Peak Hour Total PHF	0	27	882	35	1	944	0	185	164	59	1	408	1	89	360	51	1	501	0	22	63	81	1	166	2019
	0.000	0.844	0.904	0.350	0.250	0.929	0.000	0.690	0.612	0.819	0.250	0.675	0.250	0.695	0.833	0.580	0.250	0.888	0.000	0.611	0.630	0.698	0.250	0.783	0.870

PM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
4:00 PM	0	28	176	14	0	218	0	31	19	14	0	64	1	13	217	54	1	285	0	7	26	9	0	42	609
4:15 PM	0	14	137	5	0	156	0	32	10	10	1	52	0	18	270	47	3	335	0	8	28	17	0	53	596
4:30 PM	1	11	161	3	2	176	0	28	13	11	2	52	0	10	239	40	0	289	0	6	22	8	0	36	553
4:45 PM	1	15	149	3	0	168	0	28	14	11	0	53	0	19	309	57	0	385	0	5	21	7	0	33	639
Peak Hour Total PHF	2	68	623	25	2	718	0	119	56	46	3	221	1	60	1035	198	4	1294	0	26	97	41	0	164	2397
	0.500	0.607	0.885	0.446	0.250	0.823	0.000	0.930	0.737	0.821	0.375	0.863	0.250	0.789	0.837	0.868	0.333	0.840	0.000	0.813	0.866	0.603	0.000	0.774	0.938

Total Vehicles On Leg				18509	
Vehicles Entering Intersection		8973	Vehicles Exiting Intersection		9536
Southbound					
Cars	155	8164	503	3	4
Heavy	5	130	13	0	0
Total	160	8294	516	3	4

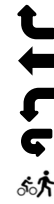


Total Vehicles on Leg 3001	Vehicles Entering Intersection	Eastbound	Cars	Heavy	Total
	Vehicles Exiting Intersection 1418		2	0	2
			0	0	0
			229	9	238
			721	13	734
	594	17	611		



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection	Total Vehicles on Leg 5533
536	9	545		2801	
694	12	706			
1531	19	1550		Vehicles Exiting Intersection	
0	0	0		2732	
6	5	11			



Cars	4	12	546	8595	1458
Heavy	3	0	6	155	24
Total	7	12	552	8750	1482
Northbound					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
10796			10467		
Total Vehicles On Leg			21263		



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2307

Study Date : 05/02/2023

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 78

Number of Lanes : 2+

Total Approach Volume: 10,796

Southbound: CSAH 78

Number of Lanes :2+

Total Approach Volume: 8,973

Minor Street Approaches

Eastbound: CSAH 16

Number of Lanes :1

Total Approach Volume: 1,583

Westbound: CSAH 16

Number of Lanes :1

Total Approach Volume: 2,801

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 14 hours, 8 are needed

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

Required volumes reached for 15 hours, 8 are needed

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

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

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

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

Number of hours (15) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (54) volumes exceed minimum >= required (1). Delay data not evaluated.

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

Volumes exceed minimums for at least one hour period.

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

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

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

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

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

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

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2307

Study Date : 05/02/2023

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

14 one hour periods 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				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	1325	+	645	=	1970	151	229	Yes
15:30 - 16:30	1211	+	649	=	1860	141	221	Yes
17:30 - 18:30	1042	+	558	=	1600	100	197	Yes
07:15 - 08:15	534	+	937	=	1471	143	372	Yes
14:30 - 15:30	925	+	529	=	1454	171	170	Yes
18:30 - 19:30	726	+	404	=	1130	93	137	Yes
06:15 - 07:15	292	+	779	=	1071	78	275	Yes
13:30 - 14:30	619	+	413	=	1032	171	115	Yes
09:15 - 10:15	392	+	631	=	1023	42	140	Yes
08:15 - 09:15	437	+	558	=	995	66	199	Yes
11:30 - 12:30	514	+	473	=	987	66	112	Yes
12:30 - 13:30	543	+	406	=	949	57	122	Yes
10:15 - 11:15	422	+	418	=	840	45	107	Yes
05:15 - 06:15	88	+	430	=	518	22	116	Yes
11:15 - 12:15	505	+	475	=	980	80	103	No
19:30 - 20:30	542	+	356	=	898	69	81	No
19:45 - 20:45	492	+	329	=	821	63	78	No
20:00 - 21:00	462	+	293	=	755	65	65	No
20:15 - 21:15	435	+	259	=	694	54	59	No
20:30 - 21:30	423	+	204	=	627	63	53	No
20:45 - 21:45	406	+	176	=	582	53	41	No
21:00 - 22:00	374	+	156	=	530	51	36	No
21:15 - 22:15	339	+	125	=	464	55	32	No
05:00 - 06:00	72	+	349	=	421	21	95	No
21:30 - 22:30	280		120		400	38	24	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2307

Study Date : 05/02/2023

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

15 one hour periods 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				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	1325	+	645	=	1970	151	229	Yes
15:30 - 16:30	1211	+	649	=	1860	141	221	Yes
17:30 - 18:30	1042	+	558	=	1600	100	197	Yes
14:30 - 15:30	925	+	529	=	1454	171	170	Yes
07:30 - 08:30	518	+	861	=	1379	106	268	Yes
06:30 - 07:30	361	+	852	=	1213	120	382	Yes
18:30 - 19:30	726	+	404	=	1130	93	137	Yes
08:30 - 09:30	425	+	621	=	1046	67	199	Yes
13:30 - 14:30	619	+	413	=	1032	171	115	Yes
11:30 - 12:30	514	+	473	=	987	66	112	Yes
12:30 - 13:30	543	+	406	=	949	57	122	Yes
19:30 - 20:30	542	+	356	=	898	69	81	Yes
09:30 - 10:30	393	+	480	=	873	41	112	Yes
10:30 - 11:30	432	+	436	=	868	59	112	Yes
05:30 - 06:30	127	+	534	=	661	25	135	Yes
20:30 - 21:30	423	+	204	=	627	63	53	No
20:45 - 21:45	406	+	176	=	582	53	41	No
21:00 - 22:00	374	+	156	=	530	51	36	No
05:15 - 06:15	88	+	430	=	518	22	116	No
21:15 - 22:15	339	+	125	=	464	55	32	No
05:00 - 06:00	72	+	349	=	421	21	95	No
21:30 - 22:30	280	+	120	=	400	38	24	No
04:45 - 05:45	58	+	278	=	336	23	85	No
21:45 - 22:45	238	+	91	=	329	31	23	No
22:00 - 23:00	200		80		280	23	25	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2307

Study Date : 05/02/2023

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

15 hours meet 1A minimums.
16 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**

Major Road CSAH 78

Minor Road CSAH 16

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
16:45 - 17:45	1341	+	641	=	1982	138	221	Yes
15:45 - 16:45	1201	+	690	=	1891	151	223	Yes
14:45 - 15:45	993	+	548	=	1541	97	180	Yes
17:45 - 18:45	933	+	499	=	1432	112	185	Yes
06:45 - 07:45	455	+	920	=	1375	150	418	Yes
07:45 - 08:45	477	+	756	=	1233	63	225	Yes
13:45 - 14:45	713	+	423	=	1136	257	135	Yes
18:45 - 19:45	681	+	390	=	1071	86	125	Yes
08:45 - 09:45	430	+	620	=	1050	62	184	Yes
11:45 - 12:45	541	+	471	=	1012	61	118	Yes
12:45 - 13:45	525	+	404	=	929	55	111	Yes
10:45 - 11:45	476	+	434	=	910	67	106	Yes

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:15 - 17:15	1334	+	660	=	1994	168	206	Yes
15:15 - 16:15	1116	+	670	=	1786	118	204	Yes
17:15 - 18:15	1142	+	579	=	1721	109	223	Yes
07:15 - 08:15	534	+	937	=	1471	143	372	Yes
14:15 - 15:15	858	+	465	=	1323	254	171	Yes
18:15 - 19:15	779	+	420	=	1199	99	152	Yes
06:15 - 07:15	292	+	779	=	1071	78	275	Yes
09:15 - 10:15	392	+	631	=	1023	42	140	Yes
08:15 - 09:15	437	+	558	=	995	66	199	Yes
11:15 - 12:15	505	+	475	=	980	80	103	Yes
19:15 - 20:15	598	+	374	=	972	77	97	Yes
12:15 - 13:15	534	+	425	=	959	59	126	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2307

Study Date : 05/02/2023

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.

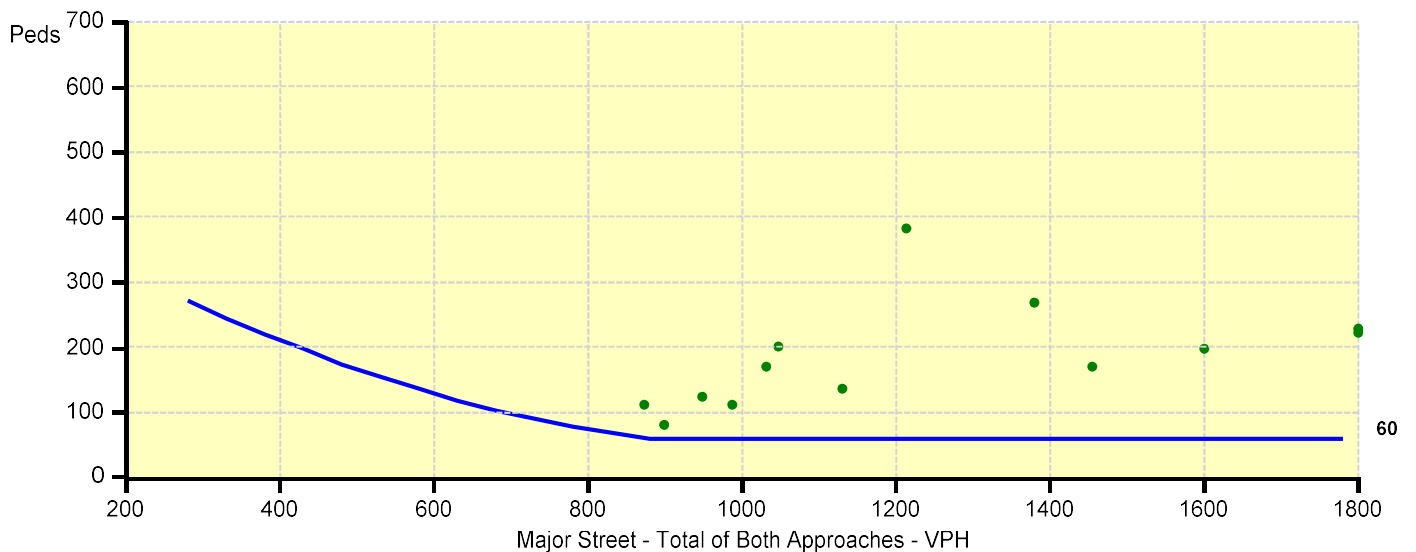
Summary

15 one hour periods 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 78				Total	Minor Road CSAH 16		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	1325	+	645	=	1970	151	229	Yes
15:30 - 16:30	1211	+	649	=	1860	141	221	Yes
17:30 - 18:30	1042	+	558	=	1600	100	197	Yes
14:30 - 15:30	925	+	529	=	1454	171	170	Yes
07:30 - 08:30	518	+	861	=	1379	106	268	Yes
06:30 - 07:30	361	+	852	=	1213	120	382	Yes
18:30 - 19:30	726	+	404	=	1130	93	137	Yes
08:30 - 09:30	425	+	621	=	1046	67	199	Yes
13:30 - 14:30	619	+	413	=	1032	171	115	Yes
11:30 - 12:30	514	+	473	=	987	66	112	Yes
12:30 - 13:30	543	+	406	=	949	57	122	Yes
19:30 - 20:30	542		356		898	69	81	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2307

Study Date : 05/02/2023

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

41 one hour periods 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 78				Total	Minor Road CSAH 16		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:00 - 17:00	1294	+	718	=	2012	164	221	Yes
16:15 - 17:15	1334	+	660	=	1994	168	206	Yes
16:45 - 17:45	1341	+	641	=	1982	138	221	Yes
16:30 - 17:30	1325	+	645	=	1970	151	229	Yes
15:45 - 16:45	1201	+	690	=	1891	151	223	Yes
15:30 - 16:30	1211	+	649	=	1860	141	221	Yes
17:00 - 18:00	1236	+	618	=	1854	131	224	Yes
15:15 - 16:15	1116	+	670	=	1786	118	204	Yes
17:15 - 18:15	1142	+	579	=	1721	109	223	Yes
15:00 - 16:00	1079	+	557	=	1636	94	180	Yes
17:30 - 18:30	1042	+	558	=	1600	100	197	Yes
14:45 - 15:45	993		548		1541	97	180	Yes

