

Date : 04/18/23

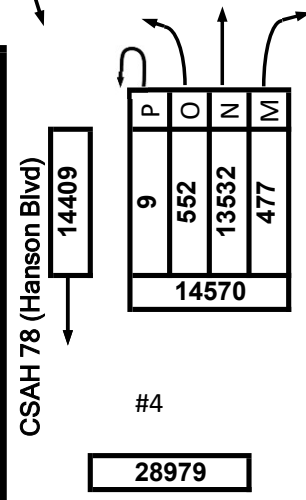
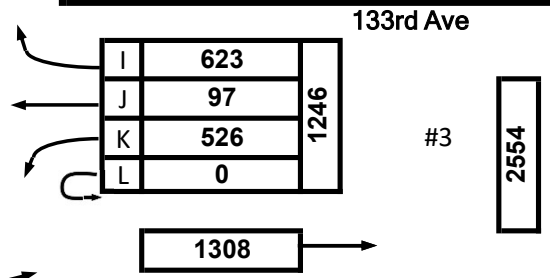
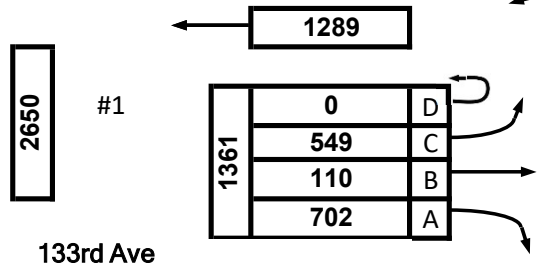
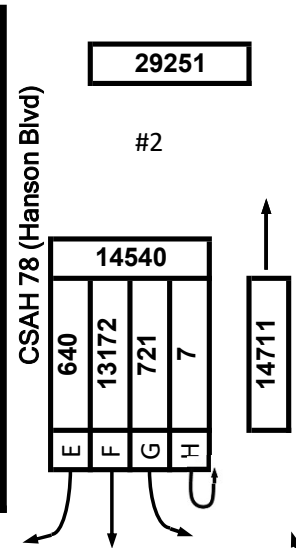
Count Number : TMC 2304

Location : CSAH 78 (Hanson Blvd)
@ 133rd Ave

Collection Period : 24 HR



North



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

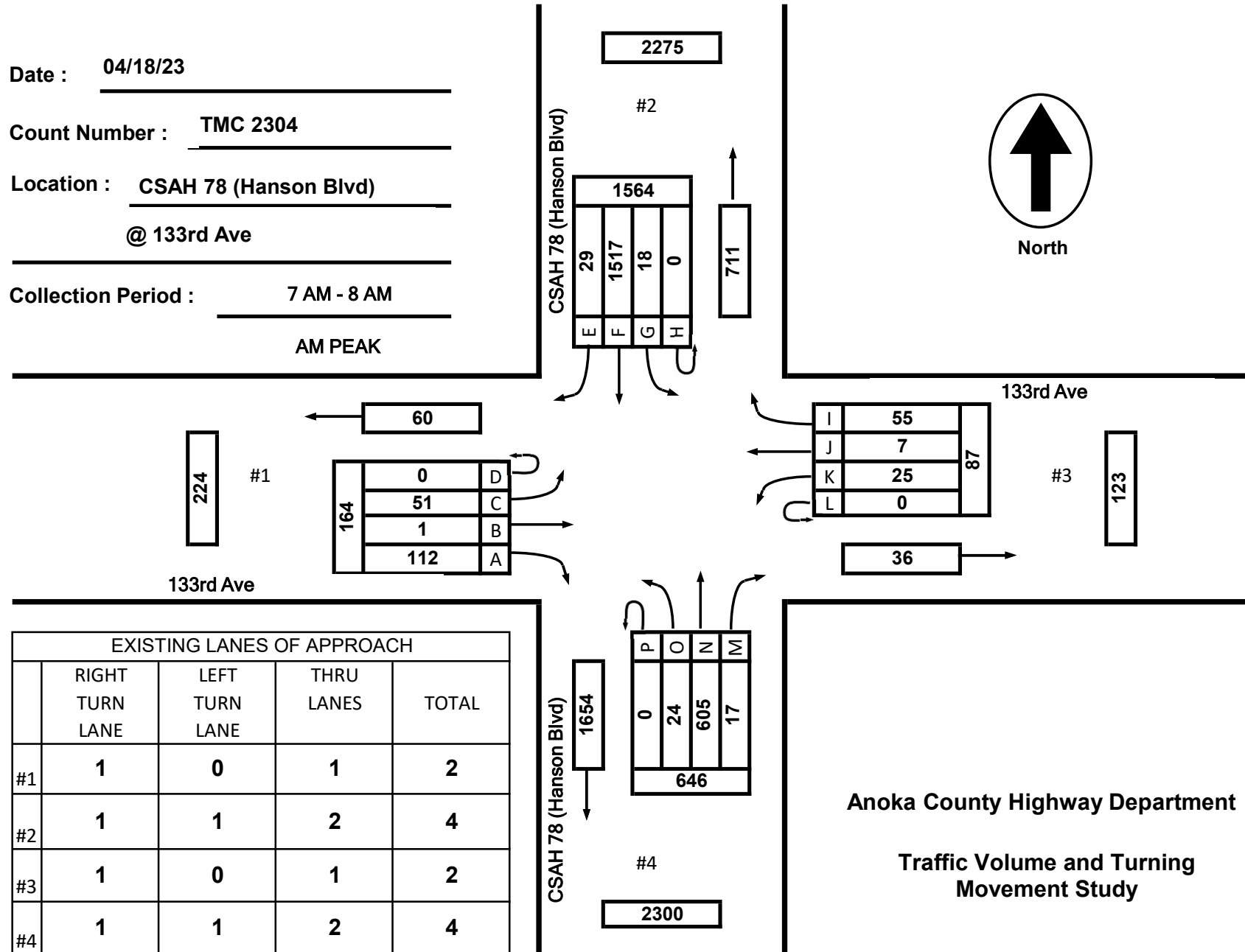
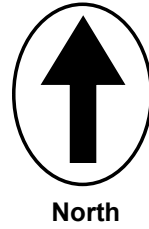
Anoka County Highway Department
 Traffic Volume and Turning Movement Study

Date : 04/18/23

Count Number : TMC 2304

Location : CSAH 78 (Hanson Blvd)
@ 133rd Ave

Collection Period : 7 AM - 8 AM
AM PEAK



Anoka County Highway Department

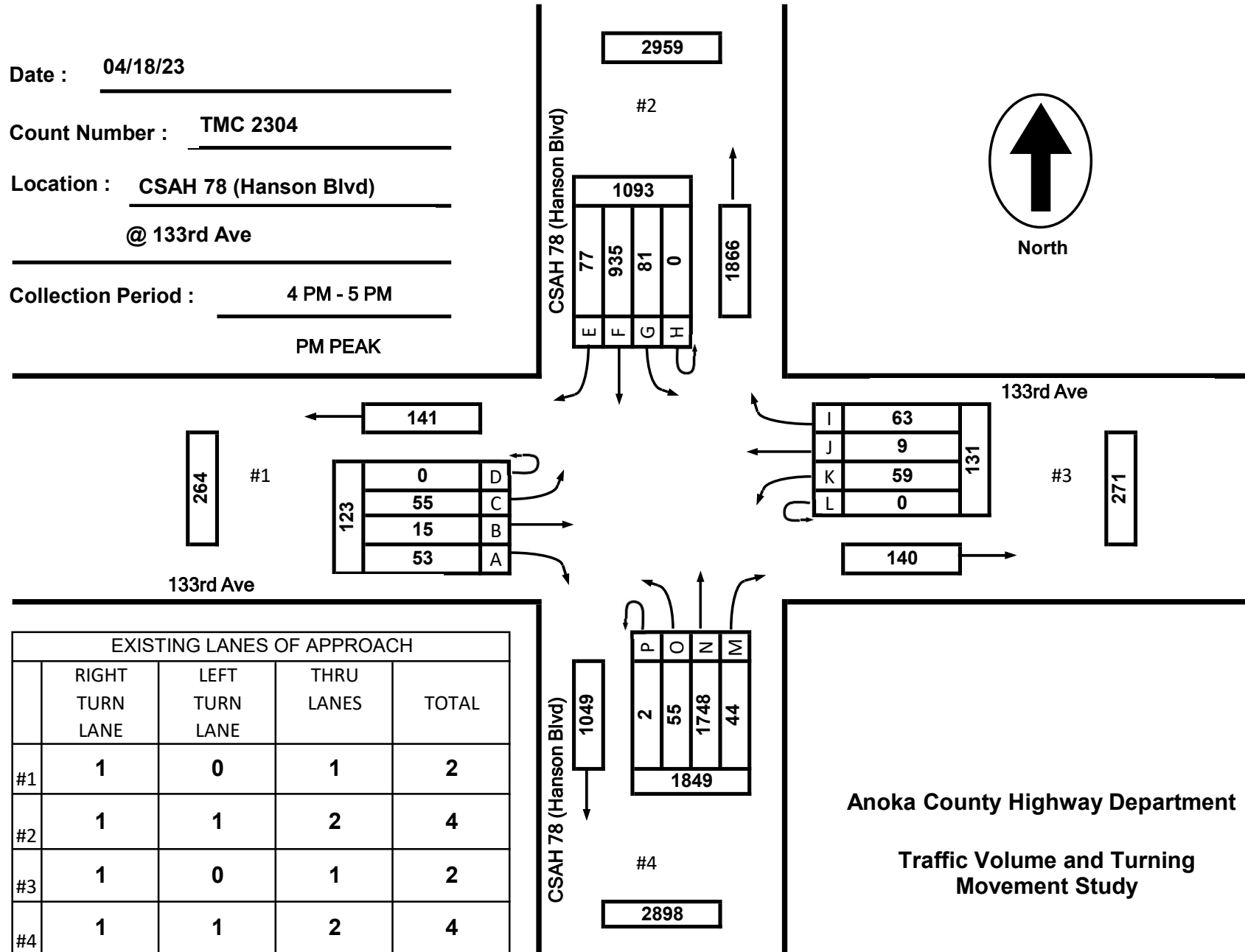
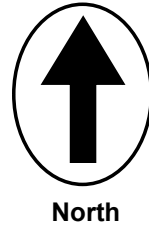
Traffic Volume and Turning Movement Study

Date : 04/18/23

Count Number : TMC 2304

Location : CSAH 78 (Hanson Blvd)
@ 133rd Ave

Collection Period : 4 PM - 5 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

TMC 2304 - CSAH 78 @ 133rd Ave

0 0

Tuesday, April 18, 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	7	0	0	7	0	0	0	0	0	0	0	2	18	0	0	20	0	0	0	3	0	3	0	0	0	0	0	0	30
12:15 AM	0	0	7	0	0	7	0	0	0	0	0	0	0	2	14	0	0	16	0	1	0	1	0	2	0	0	0	0	0	0	25
12:30 AM	0	2	1	2	0	5	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	18
12:45 AM	0	0	7	0	0	7	0	1	0	0	0	1	0	1	15	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	24
Hourly Total	0	2	22	2	0	26	0	1	0	0	0	1	0	5	60	0	0	65	0	1	0	4	0	5	0	0	0	0	0	0	97
1:00 AM	0	0	13	0	0	13	0	0	0	0	0	0	0	1	8	0	0	9	0	1	1	0	0	2	0	0	0	0	0	0	24
1:15 AM	0	1	7	0	0	8	0	0	0	1	0	1	0	1	8	1	0	10	0	0	0	2	0	2	0	0	0	0	0	0	21
1:30 AM	0	0	2	1	0	3	0	0	0	1	0	1	1	2	6	0	0	9	0	0	0	1	0	1	0	0	0	0	0	0	14
1:45 AM	0	0	6	0	0	6	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	1	0	1	0	0	0	0	0	0	15
Hourly Total	0	1	28	1	0	30	0	0	0	2	0	2	1	5	29	1	0	36	0	1	1	4	0	6	0	0	0	0	0	0	74
2:00 AM	0	0	6	0	0	6	0	0	0	0	0	0	0	1	4	2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	13
2:15 AM	0	0	5	0	0	5	0	2	0	0	0	2	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	13
2:30 AM	0	0	10	0	0	10	0	0	0	0	0	0	1	0	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	14
2:45 AM	0	0	7	0	0	7	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	1	0	1	0	0	0	0	0	0	15
Hourly Total	0	0	28	0	0	28	0	2	0	0	0	2	1	1	20	2	0	24	0	0	0	1	0	1	0	0	0	0	0	0	55
3:00 AM	0	0	10	0	0	10	0	0	0	0	0	0	0	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	17
3:15 AM	0	0	16	0	0	16	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	24
3:30 AM	0	0	22	0	0	22	0	1	0	1	0	2	0	0	6	0	0	6	0	1	0	0	0	1	0	0	0	0	0	0	31
3:45 AM	0	0	26	0	0	26	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	1	0	1	0	0	0	0	0	0	35
Hourly Total	0	0	74	0	0	74	0	1	0	1	0	2	0	1	28	0	0	29	0	1	0	1	0	2	0	0	0	0	0	0	107
4:00 AM	0	0	28	0	0	28	0	0	0	0	0	0	0	1	8	0	0	9	0	1	0	5	0	6	0	0	0	0	0	0	43
4:15 AM	0	0	42	1	0	43	0	1	0	0	0	1	0	0	11	0	0	11	0	0	0	3	0	3	0	0	0	0	0	0	58
4:30 AM	0	0	54	0	0	54	0	1	0	0	0	1	0	0	22	0	0	22	0	0	0	8	0	8	0	0	0	0	0	0	85
4:45 AM	0	1	53	1	0	55	0	1	0	1	0	2	0	0	21	0	0	21	0	1	1	3	0	5	0	0	0	0	0	0	83
Hourly Total	0	1	177	2	0	180	0	3	0	1	0	4	0	1	62	0	0	63	0	2	1	19	0	22	0	0	0	0	0	0	269
5:00 AM	0	0	99	0	0	99	0	0	0	3	0	3	0	1	28	0	0	29	0	2	1	7	0	10	0	0	0	0	0	0	141
5:15 AM	0	0	116	0	0	116	0	2	1	0	0	3	0	0	30	0	0	30	0	3	0	8	0	11	0	0	0	0	0	0	160
5:30 AM	0	0	177	0	0	177	0	1	0	3	0	4	0	1	43	0	0	44	0	0	0	14	0	14	0	0	0	0	0	0	239
5:45 AM	0	3	168	2	0	173	0	1	1	0	0	2	0	1	50	1	0	52	0	6	1	10	0	17	0	0	0	0	0	0	244
Hourly Total	0	3	560	2	0	565	0	4	2	6	0	12	0	3	151	1	0	155	0	11	2	39	0	52	0	0	0	0	0	0	784
6:00 AM	1	0	193	0	0	194	0	0	0	1	0	1	0	0	59	0	0	59	0	1	0	8	0	9	0	0	0	0	0	0	263
6:15 AM	0	1	282	2	0	285	0	0	1	2	0	3	0	1	67	1	0	69	0	4	0	15	0	19	0	0	0	0	0	0	376
6:30 AM	1	4	305	2	0	312	0	2	1	3	0	6	0	1	109	0	0	110	0	5	0	14	0	19	0	0	0	0	0	0	447
6:45 AM	0	2	338	7	0	347	0	2	1	4	0	7	0	1	127	2	0	130	0	10	1	21	0	32	0	0	0	0	0	0	516
Hourly Total	2	7	1118	11	0	1138	0	4	3	10	0	17	0	3	362	3	0	368	0	20	1	58	0	79	0	0	0	0	0	0	1602
7:00 AM	0	3	381	7	0	391	0	4	5	12	0	21	0	5	119	2	0	126	0	15	1	43	0	59	0	0	0	0	0	0	597
7:15 AM	0	1	390	8	0	399	0	4	1	10	0	15	0	9	153	6	0	168	0	11	0	28	0	39	0	0	0	0	0	0	621
7:30 AM	0	8	382	7	0	397	0	6	1	19	0	26	0	5	151	4	0	160	0	9	0	20	0	29	0	0	0	0	0	0	612
7:45 AM	0	6	364	7	0	377	0	11	0	14	0	25	0	5	182	5	0	192	0	16	0	21	0	37	0	0	0	0	0	0	631
Hourly Total	0	18	1517	29	0	1564	0	25	7	55	0	87	0	24	605	17	0	646	0	51	1	112	0	164	0	0	0	0	0	0	2461

TMC 2304 - CSAH 78 @ 133rd Ave

0 0

Tuesday, April 18, 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	284	12	0	308	0	3	2	12	0	17	0	6	144	8	0	158	0	9	1	10	0	20	503
8:15 AM	0	9	259	6	0	274	0	7	0	5	0	12	0	5	104	8	0	117	0	7	0	8	0	15	418
8:30 AM	0	10	219	8	0	237	0	6	2	6	0	14	0	6	139	7	0	152	0	7	0	9	0	16	419
8:45 AM	1	1	184	8	0	194	0	7	1	8	0	16	1	5	129	6	0	141	0	6	4	13	0	23	374
Hourly Total	1	32	946	34	0	1013	0	23	5	31	0	59	1	22	516	29	0	568	0	29	5	40	0	74	1714
9:00 AM	0	14	187	6	0	207	0	3	0	9	0	12	0	7	159	4	0	170	0	5	0	14	0	19	408
9:15 AM	0	11	254	7	0	272	0	6	1	4	0	11	0	4	161	1	0	166	0	5	1	9	0	15	464
9:30 AM	0	7	205	8	0	220	0	8	2	4	0	14	0	5	153	4	0	162	0	6	1	6	2	13	409
9:45 AM	0	13	188	6	0	207	0	4	1	5	0	10	0	3	127	7	0	137	0	7	3	8	0	18	372
Hourly Total	0	45	834	27	0	906	0	21	4	22	0	47	0	19	600	16	0	635	0	23	5	37	2	65	1653
10:00 AM	0	9	143	7	0	159	0	5	2	4	0	11	1	3	118	4	0	126	0	4	1	6	0	11	307
10:15 AM	0	10	162	5	0	177	0	6	0	12	0	18	0	4	132	7	0	143	0	4	0	7	0	11	349
10:30 AM	0	11	176	5	0	192	0	15	0	15	0	30	0	5	125	10	0	140	0	9	2	9	1	20	382
10:45 AM	1	9	160	3	0	173	0	3	3	13	0	19	0	4	139	5	0	148	0	4	3	5	0	12	352
Hourly Total	1	39	641	20	0	701	0	29	5	44	0	78	1	16	514	26	0	557	0	21	6	27	1	54	1390
11:00 AM	0	8	152	9	0	169	0	16	3	11	0	30	0	5	159	4	0	168	0	9	3	11	0	23	390
11:15 AM	0	7	190	12	0	209	0	8	2	12	0	22	0	8	157	4	0	169	0	9	2	8	0	19	419
11:30 AM	0	14	190	7	0	211	0	10	3	5	0	18	0	6	147	9	0	162	0	7	3	9	0	19	410
11:45 AM	0	12	166	5	0	183	0	11	3	13	0	27	0	3	148	15	0	166	0	7	3	6	1	16	392
Hourly Total	0	41	698	33	0	772	0	45	11	41	0	97	0	22	611	32	0	665	0	32	11	34	1	77	1611
12:00 PM	0	14	137	7	0	158	0	12	3	7	0	22	0	2	137	8	0	147	0	7	7	6	0	20	347
12:15 PM	0	17	141	9	0	167	0	14	3	11	0	28	0	3	160	11	0	174	0	7	2	9	0	18	387
12:30 PM	0	15	150	5	0	170	0	9	1	9	0	19	0	8	187	12	0	207	0	7	1	8	0	16	412
12:45 PM	0	9	131	10	0	150	0	9	2	9	0	20	0	4	167	18	0	189	0	7	3	9	0	19	378
Hourly Total	0	55	559	31	0	645	0	44	9	36	0	89	0	17	651	49	0	717	0	28	13	32	0	73	1524
1:00 PM	0	18	147	13	0	178	0	24	1	10	0	35	0	5	174	12	0	191	0	8	1	7	0	16	420
1:15 PM	0	12	165	6	0	183	0	10	2	13	0	25	0	7	155	15	0	177	0	8	2	4	0	14	399
1:30 PM	0	5	168	12	0	185	0	11	0	12	0	23	0	4	176	6	0	186	0	8	1	5	0	14	408
1:45 PM	0	11	160	14	0	185	0	12	0	10	0	22	1	6	178	8	0	193	0	11	5	9	1	25	425
Hourly Total	0	46	640	45	0	731	0	57	3	45	0	105	1	22	683	41	0	747	0	35	9	25	1	69	1652
2:00 PM	0	16	217	11	1	244	0	9	4	12	0	25	0	6	204	13	0	223	0	9	0	6	0	15	507
2:15 PM	1	17	177	14	0	209	0	10	3	16	0	29	0	14	208	16	0	238	0	8	2	8	0	18	494
2:30 PM	0	19	192	7	0	218	0	12	2	17	0	31	0	17	232	14	0	263	0	12	4	5	0	21	533
2:45 PM	0	19	168	12	2	199	0	13	3	16	0	32	0	9	317	12	0	338	0	11	1	11	1	23	592
Hourly Total	1	71	754	44	3	870	0	44	12	61	0	117	0	46	961	55	0	1062	0	40	7	30	1	77	2126
3:00 PM	0	19	193	19	0	231	0	7	2	15	0	24	0	11	330	14	0	355	0	9	2	5	0	16	626
3:15 PM	0	13	200	14	0	227	0	8	3	8	1	19	0	12	380	9	2	401	0	10	0	4	0	14	661
3:30 PM	0	14	207	14	0	235	0	14	1	15	0	30	0	14	335	10	0	359	0	12	3	6	0	21	645
3:45 PM	0	15	185	16	0	216	0	13	4	16	0	33	0	16	452	6	0	474	0	15	5	16	0	36	759
Hourly Total	0	61	785	63	0	909	0	42	10	54	1	106	0	53	1497	39	2	1589	0	46	10	31	0	87	2691

TMC 2304 - CSAH 78 @ 133rd Ave

0 0

Tuesday, April 18, 2023

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	26	220	21	0	267	0	11	2	16	1	29	0	16	386	6	0	408	0	14	6	13	0	33	737
4:15 PM	0	19	235	17	0	271	0	14	4	16	0	34	2	18	405	16	0	441	0	12	2	17	0	31	777
4:30 PM	0	19	260	15	0	294	0	19	2	23	0	44	0	6	426	11	0	443	0	13	5	11	0	29	810
4:45 PM	0	17	220	24	0	261	0	15	1	8	0	24	0	15	531	11	0	557	0	16	2	12	0	30	872
Hourly Total	0	81	935	77	0	1093	0	59	9	63	1	131	2	55	1748	44	0	1849	0	55	15	53	0	123	3196
5:00 PM	0	14	223	12	0	249	0	13	3	13	0	29	0	20	392	15	0	427	0	10	3	10	0	23	728
5:15 PM	2	16	199	19	0	236	0	5	4	12	0	21	0	7	440	12	0	459	0	15	0	6	1	21	737
5:30 PM	0	18	191	17	0	226	0	15	1	7	0	23	0	10	355	12	0	377	0	9	3	20	0	32	658
5:45 PM	0	13	191	15	0	219	0	11	1	14	0	26	0	20	329	6	0	355	0	9	3	13	0	25	625
Hourly Total	2	61	804	63	0	930	0	44	9	46	0	99	0	57	1516	45	0	1618	0	43	9	49	1	101	2748
6:00 PM	0	12	190	8	0	210	0	6	0	9	0	15	0	11	303	13	0	327	0	9	2	5	0	16	568
6:15 PM	0	14	206	16	1	236	0	9	1	12	0	22	0	13	285	14	3	312	0	12	3	13	0	28	598
6:30 PM	0	12	162	12	0	186	0	13	2	14	1	29	0	11	259	8	0	278	0	7	0	5	0	12	505
6:45 PM	0	17	155	10	0	182	0	9	1	8	0	18	0	16	205	5	0	226	0	13	0	7	0	20	446
Hourly Total	0	55	713	46	1	814	0	37	4	43	1	84	0	51	1052	40	3	1143	0	41	5	30	0	76	2117
7:00 PM	0	7	134	11	2	152	0	10	0	11	1	21	0	5	191	2	1	198	0	14	1	6	1	21	392
7:15 PM	0	6	124	12	0	142	0	4	0	12	1	16	1	11	179	9	0	200	0	9	0	7	0	16	374
7:30 PM	0	15	122	7	0	144	0	1	1	5	0	7	0	11	170	1	0	182	0	7	2	9	1	18	351
7:45 PM	0	21	114	8	0	143	0	7	1	9	0	17	0	10	143	5	0	158	0	7	1	11	0	19	337
Hourly Total	0	49	494	38	2	581	0	22	2	37	2	61	1	37	683	17	1	738	0	37	4	33	2	74	1454
8:00 PM	0	9	146	7	0	162	0	5	2	8	0	15	0	13	134	5	0	152	0	6	1	3	0	10	339
8:15 PM	0	8	130	12	0	150	0	3	0	1	0	4	1	9	118	0	0	128	0	5	0	5	0	10	292
8:30 PM	0	5	83	13	0	101	0	4	0	3	0	7	0	5	139	5	0	149	0	3	2	2	0	7	264
8:45 PM	0	6	87	14	0	107	0	0	0	6	0	6	0	9	124	0	0	133	0	4	1	5	0	10	256
Hourly Total	0	28	446	46	0	520	0	12	2	18	0	32	1	36	515	10	0	562	0	18	4	15	0	37	1151
9:00 PM	0	6	76	6	0	88	0	1	0	2	0	3	0	9	107	1	0	117	0	2	0	5	0	7	215
9:15 PM	0	6	60	6	0	72	0	3	0	2	0	5	0	8	119	0	0	127	0	3	0	3	0	6	210
9:30 PM	0	0	44	1	0	45	0	1	0	1	0	2	0	5	84	0	0	89	0	3	0	3	0	6	142
9:45 PM	0	5	32	4	0	41	0	0	0	0	0	0	0	4	58	2	0	64	0	2	0	5	0	7	112
Hourly Total	0	17	212	17	0	246	0	5	0	5	0	10	0	26	368	3	0	397	0	10	0	16	0	26	679
10:00 PM	0	1	33	1	0	35	0	0	0	0	0	0	0	4	55	1	0	60	0	0	0	5	0	5	100
10:15 PM	0	0	30	4	0	34	0	0	0	0	0	0	0	5	54	1	0	60	0	0	1	3	0	4	98
10:30 PM	0	2	29	0	0	31	0	0	0	0	0	0	0	8	45	4	0	57	0	2	0	3	0	5	93
10:45 PM	0	2	23	2	0	27	0	0	0	0	0	0	0	3	38	0	0	41	0	0	0	0	0	0	68
Hourly Total	0	5	115	7	0	127	0	0	0	0	0	0	0	20	192	6	0	218	0	2	1	11	0	14	359
11:00 PM	0	0	27	0	0	27	0	0	0	0	0	0	0	4	32	0	0	36	0	1	0	0	0	1	64
11:15 PM	0	0	15	0	0	15	0	0	0	1	0	1	0	3	27	0	0	30	0	0	0	1	0	1	47
11:30 PM	0	3	17	2	0	22	0	2	0	0	0	2	0	2	23	1	0	26	0	0	0	0	0	0	50
11:45 PM	0	0	13	0	0	13	0	0	0	1	0	1	0	1	26	0	0	27	0	1	0	0	0	1	42
Hourly Total	0	3	72	2	0	77	0	2	0	2	0	4	0	10	108	1	0	119	0	2	0	1	0	3	203
DAILY TOTAL	7	721	13172	640	6	14540	0	526	97	623	5	1246	9	552	13532	477	6	14570	0	549	110	702	9	1361	31717
Cars	7	700	12771	629	2	14107	0	513	91	601	3	1205	9	543	13160	467	4	14179	0	543	102	690	7	1335	30826
Heavy Vehicles	0	21	401	11	4	433	0	13	6	22	2	41	0	9	372	10	2	391	0	6	8	12	2	26	891
Heavy Vehicle %	0.00%	2.91%	3.04%	1.72%	66.67%	2.98%	0.00%	2.47%	6.19%	3.53%	40.00%	3.29%	0.00%	1.63%	2.75%	2.10%	33.33%	2.68%	0.00%	1.09%	7.27%	1.71%	22.22%	1.91%	2.81%

TMC 2304 - CSAH 78 @ 133rd Ave

0 0

Tuesday, April 18, 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	3	381	7	0	391	0	4	5	12	0	21	0	5	119	2	0	126	0	15	1	43	0	59	
7:15 AM	0	1	390	8	0	399	0	4	1	10	0	15	0	9	153	6	0	168	0	11	0	28	0	39	
7:30 AM	0	8	382	7	0	397	0	6	1	19	0	26	0	5	151	4	0	160	0	9	0	20	0	29	
7:45 AM	0	6	364	7	0	377	0	11	0	14	0	25	0	5	182	5	0	192	0	16	0	21	0	37	
Peak Hour Total	0	18	1517	29	0	1564	0	25	7	55	0	87	0	24	605	17	0	646	0	51	1	112	0	164	
PHF	0.000	0.563	0.972	0.906	0.000	0.980	0.000	0.568	0.350	0.724	0.000	0.837	0.000	0.667	0.831	0.708	0.000	0.841	0.000	0.797	0.250	0.651	0.000	0.695	

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	26	220	21	0	267	0	11	2	16	1	29	0	16	386	6	0	408	0	14	6	13	0	33	
4:15 PM	0	19	235	17	0	271	0	14	4	16	0	34	2	18	405	16	0	441	0	12	2	17	0	31	
4:30 PM	0	19	260	15	0	294	0	19	2	23	0	44	0	6	426	11	0	443	0	13	5	11	0	29	
4:45 PM	0	17	220	24	0	261	0	15	1	8	0	24	0	15	531	11	0	557	0	16	2	12	0	30	
Peak Hour Total	0	81	935	77	0	1093	0	59	9	63	1	131	2	55	1748	44	0	1849	0	55	15	53	0	123	
PHF	0.000	0.779	0.899	0.802	0.000	0.929	0.000	0.776	0.563	0.685	0.250	0.744	0.250	0.764	0.823	0.688	0.000	0.830	0.000	0.859	0.625	0.779	0.000	0.932	

Total Vehicles On Leg				29251			
Vehicles Entering Intersection		14540		Vehicles Exiting Intersection		14711	
Southbound							
Cars	629	12771	700	7	2		
Heavy	11	401	21	0	4		
Total	640	13172	721	7	6		



Total Vehicles on Leg 2650	Vehicles Entering Intersection 1361	Eastbound	Cars	Heavy	Total	
			7	2	9	
			0	0	0	
	543		6	549		
	102		8	110		
Vehicles Exiting Intersection 1289			690	12	702	

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 1246	Total Vehicles on Leg 2554
601	22	623			
91	6	97			
513	13	526			
0	0	0			
3	2	5	Vehicles Exiting Intersection 1308		



Cars	4	9	543	13160	467
Heavy	2	0	9	372	10
Total	6	9	552	13532	477
Northbound					
Vehicles Entering Intersection			14570		
Vehicles Exiting Intersection			14409		
Total Vehicles On Leg			28979		

Heavy Vehicles

Date	Time	Southbound						Westbound						Northbound						Eastbound					
		U Turns	Left Turns	Straight Through	Right Turns	EB Bicycles in Crosswalk	WB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	NB Bicycles in Crosswalk	SB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	EB Bicycles in Crosswalk	WB Bicycles in Crosswalk	U Turns	Left Turns	Straight Through	Right Turns	NB Bicycles in Crosswalk	SB Bicycles in Crosswalk
04/18/2023	0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	2:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	3:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	4:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	5:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	5:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
	6:15	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30	0	2	25	0	0	0	0	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	0	0
	6:45	0	1	33	2	0	0	0	0	0	1	0	0	0	0	4	0	0	0	0	0	1	0	0	0
	7:00	0	1	7	0	0	0	0	1	1	0	0	0	0	0	1	5	0	0	0	0	0	0	3	0
	7:15	0	0	7	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	0	0	0
	7:30	0	1	14	1	0	0	0	0	0	3	0	0	0	0	1	4	0	0	0	0	1	0	0	0
	7:45	0	0	4	0	0	0	0	2	0	2	0	0	0	0	1	3	0	0	0	0	0	1	0	0
	8:00	0	0	11	0	0	0	0	0	0	0	0	0	0	0	1	9	2	0	0	0	0	0	0	0
	8:15	0	1	6	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0	0	0	0
	8:30	0	2	5	3	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0
	8:45	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	2	0
	9:00	0	1	2	0	0	0	0	0	0	1	0	0	0	0	0	17	0	0	0	0	0	0	0	0
	9:15	0	0	5	0	0	0	0	1	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0
	9:30	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	36	0	0	0	0	0	0	0	0
	9:45	0	0	5	0	0	0	0	0	0	1	0	0	0	0	0	11	1	0	0	0	0	1	0	0
	10:00	0	0	9	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
	10:15	0	0	8	0	0	0	0	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0
	10:30	0	0	7	0	0	0	0	0	0	1	0	0	0	0	0	6	1	0	0	0	0	0	1	0
	10:45	0	1	10	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
	11:00	0	1	7	0	0	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
	11:15	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
	11:30	0	0	8	1	0	0	0	0	1	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0
	11:45	0	1	4	0	0	0	0	0	0	1	0	0	0	0	0	6	1	0	0	0	0	0	0	0

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2304

Study Date : 05/02/2023

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 78

Number of Lanes : 2+

Total Approach Volume: 14,570

Southbound: CSAH 78

Number of Lanes :2+

Total Approach Volume: 14,540

Minor Street Approaches

Eastbound: 133rd Ave

Number of Lanes :1

Total Approach Volume: 1,361

Westbound: 133rd Ave

Number of Lanes :1

Total Approach Volume: 1,246

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 6 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 11 hours, 8 are needed

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

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

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

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (25) 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 2304

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

Only 6 one hour periods meet minimums.
Warrant is NOT 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	
16:00 - 17:00	1849	+	1093	=	2942	123	131	Yes
15:00 - 16:00	1589	+	909	=	2498	87	106	Yes
07:15 - 08:15	678	+	1481	=	2159	125	83	Yes
14:00 - 15:00	1062	+	870	=	1932	77	117	Yes
06:15 - 07:15	435	+	1335	=	1770	129	37	Yes
13:00 - 14:00	747	+	731	=	1478	69	105	Yes
17:00 - 18:00	1618	+	930	=	2548	101	99	No
17:15 - 18:15	1518	+	891	=	2409	94	85	No
17:30 - 18:30	1371	+	891	=	2262	101	86	No
17:45 - 18:45	1272	+	851	=	2123	81	92	No
18:00 - 19:00	1143	+	814	=	1957	76	84	No
18:15 - 19:15	1014	+	756	=	1770	81	90	No
18:30 - 19:30	902	+	662	=	1564	69	84	No
09:00 - 10:00	635	+	906	=	1541	65	47	No
08:30 - 09:30	629	+	910	=	1539	73	53	No
08:45 - 09:45	639	+	893	=	1532	70	53	No
06:00 - 07:00	368	+	1138	=	1506	79	17	No
08:15 - 09:15	580	+	912	=	1492	73	54	No
09:15 - 10:15	591	+	858	=	1449	57	46	No
12:30 - 13:30	764	+	681	=	1445	65	99	No
12:45 - 13:45	743	+	696	=	1439	63	103	No
11:00 - 12:00	665	+	772	=	1437	77	97	No
18:45 - 19:45	806	+	620	=	1426	75	62	No
12:15 - 13:15	761	+	665	=	1426	69	102	No
10:45 - 11:45	647		762		1409	73	89	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2304

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	1886	+	1040	=	2926	103	118	Yes
15:30 - 16:30	1682	+	989	=	2671	121	126	Yes
17:30 - 18:30	1371	+	891	=	2262	101	86	Yes
14:30 - 15:30	1357	+	875	=	2232	74	106	Yes
07:30 - 08:30	627	+	1356	=	1983	101	80	Yes
06:30 - 07:30	534	+	1449	=	1983	149	49	Yes
13:30 - 14:30	840	+	823	=	1663	72	99	Yes
18:30 - 19:30	902	+	662	=	1564	69	84	Yes
08:30 - 09:30	629	+	910	=	1539	73	53	Yes
12:30 - 13:30	764	+	681	=	1445	65	99	Yes
11:30 - 12:30	649	+	719	=	1368	73	95	Yes
10:30 - 11:30	625	+	743	=	1368	74	101	Yes
09:30 - 10:30	568	+	763	=	1331	53	53	Yes
19:30 - 20:30	620	+	599	=	1219	57	43	Yes
05:30 - 06:30	224	+	829	=	1053	59	10	Yes
20:30 - 21:30	526	+	368	=	894	30	21	No
05:15 - 06:15	185	+	660	=	845	51	10	No
20:45 - 21:45	466	+	312	=	778	29	16	No
05:00 - 06:00	155	+	565	=	720	52	12	No
21:00 - 22:00	397	+	246	=	643	26	10	No
04:45 - 05:45	124	+	447	=	571	40	12	No
21:15 - 22:15	340	+	193	=	533	24	7	No
21:30 - 22:30	273	+	155	=	428	22	2	No
04:30 - 05:30	102	+	324	=	426	34	9	No
21:45 - 22:45	241		141		382	21	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2304

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

11 hours meet 1A minimums.
15 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 133rd Ave

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
16:15 - 17:15	1868	+	1075	=	2943	113	131	Yes
15:15 - 16:15	1642	+	945	=	2587	104	111	Yes
17:15 - 18:15	1518	+	891	=	2409	94	85	Yes
07:15 - 08:15	678	+	1481	=	2159	125	83	Yes
14:15 - 15:15	1194	+	857	=	2051	78	116	Yes
06:15 - 07:15	435	+	1335	=	1770	129	37	Yes
18:15 - 19:15	1014	+	756	=	1770	81	90	Yes
13:15 - 14:15	779	+	797	=	1576	68	95	Yes
12:15 - 13:15	761	+	665	=	1426	69	102	Yes
11:15 - 12:15	644	+	761	=	1405	74	89	Yes
10:15 - 11:15	599	+	711	=	1310	66	97	Yes
09:00 - 10:00	635		906		1541	65	47	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:00 - 17:00	1849	+	1093	=	2942	123	131	Yes
17:00 - 18:00	1618	+	930	=	2548	101	99	Yes
15:00 - 16:00	1589	+	909	=	2498	87	106	Yes
07:00 - 08:00	646	+	1564	=	2210	164	87	Yes
18:00 - 19:00	1143	+	814	=	1957	76	84	Yes
14:00 - 15:00	1062	+	870	=	1932	77	117	Yes
08:00 - 09:00	568	+	1013	=	1581	74	59	Yes
09:00 - 10:00	635	+	906	=	1541	65	47	Yes
06:00 - 07:00	368	+	1138	=	1506	79	17	Yes
13:00 - 14:00	747	+	731	=	1478	69	105	Yes
11:00 - 12:00	665	+	772	=	1437	77	97	Yes
12:00 - 13:00	717		645		1362	73	89	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2304

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.

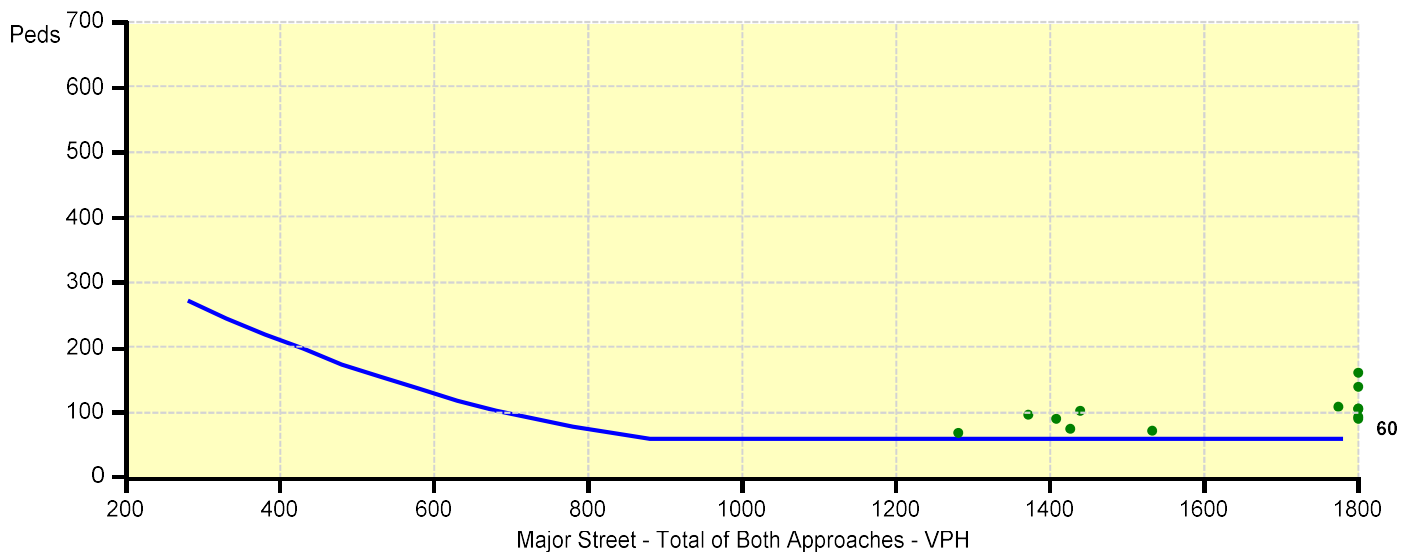
Summary

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**

Time	Major Road CSAH 78				Total	Minor Road 133rd Ave		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
15:45 - 16:45	1766	+	1048	=	2814	129	140	Yes
16:45 - 17:45	1820	+	972	=	2792	106	97	Yes
14:45 - 15:45	1453	+	892	=	2345	74	105	Yes
17:45 - 18:45	1272	+	851	=	2123	81	92	Yes
06:45 - 07:45	584	+	1534	=	2118	159	69	Yes
07:45 - 08:45	619	+	1196	=	1815	88	68	Yes
13:45 - 14:45	917	+	856	=	1773	79	107	Yes
08:45 - 09:45	639	+	893	=	1532	70	53	Yes
12:45 - 13:45	743	+	696	=	1439	63	103	Yes
18:45 - 19:45	806	+	620	=	1426	75	62	Yes
10:45 - 11:45	647	+	762	=	1409	73	89	Yes
11:45 - 12:45	694	+	678	=	1372	70	96	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2304

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

44 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 133rd Ave		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:15 - 17:15	1868	+	1075	=	2943	113	131	Yes
16:00 - 17:00	1849	+	1093	=	2942	123	131	Yes
16:30 - 17:30	1886	+	1040	=	2926	103	118	Yes
15:45 - 16:45	1766	+	1048	=	2814	129	140	Yes
16:45 - 17:45	1820	+	972	=	2792	106	97	Yes
15:30 - 16:30	1682	+	989	=	2671	121	126	Yes
15:15 - 16:15	1642	+	945	=	2587	104	111	Yes
17:00 - 18:00	1618	+	930	=	2548	101	99	Yes
15:00 - 16:00	1589	+	909	=	2498	87	106	Yes
17:15 - 18:15	1518	+	891	=	2409	94	85	Yes
14:45 - 15:45	1453	+	892	=	2345	74	105	Yes
17:30 - 18:30	1371		891		2262	101	86	Yes

