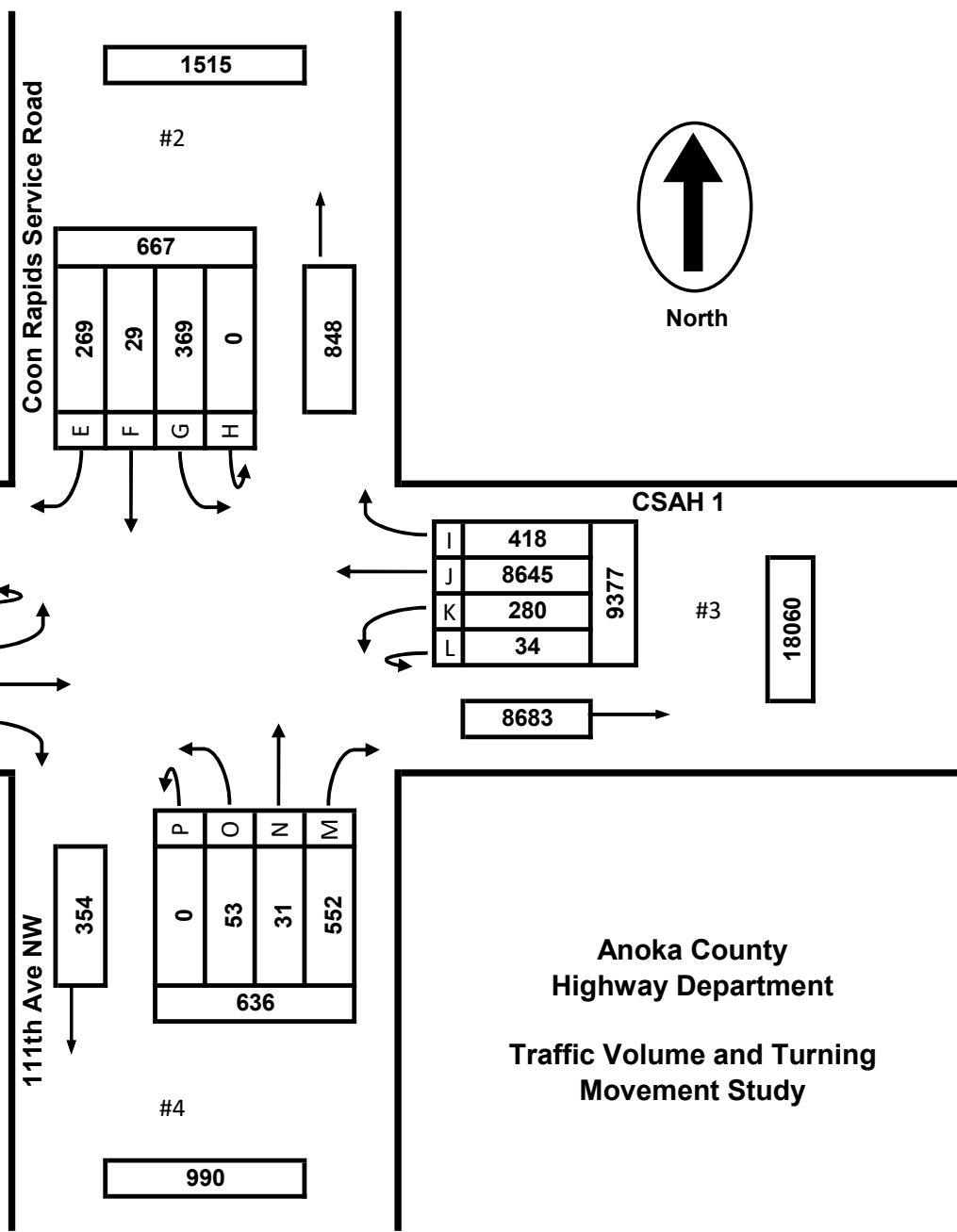
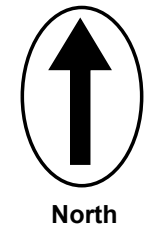


Date: 09/10/24

Count Number: TMC 2405

Location: CSAH 1
@ 111th Ave NW

Collection Period: 24 HR



8189	17	D
	399	C
	7728	B
	45	A

I	418	9377
J	8645	
K	280	
L	34	

P	O	N	M
0	53	31	552
636			

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

Anoka County
 Highway Department
 Traffic Volume and Turning
 Movement Study

Date: 09/10/24

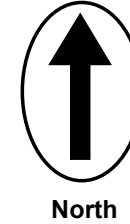
Count Number: TMC 2405

Location: CSAH 1

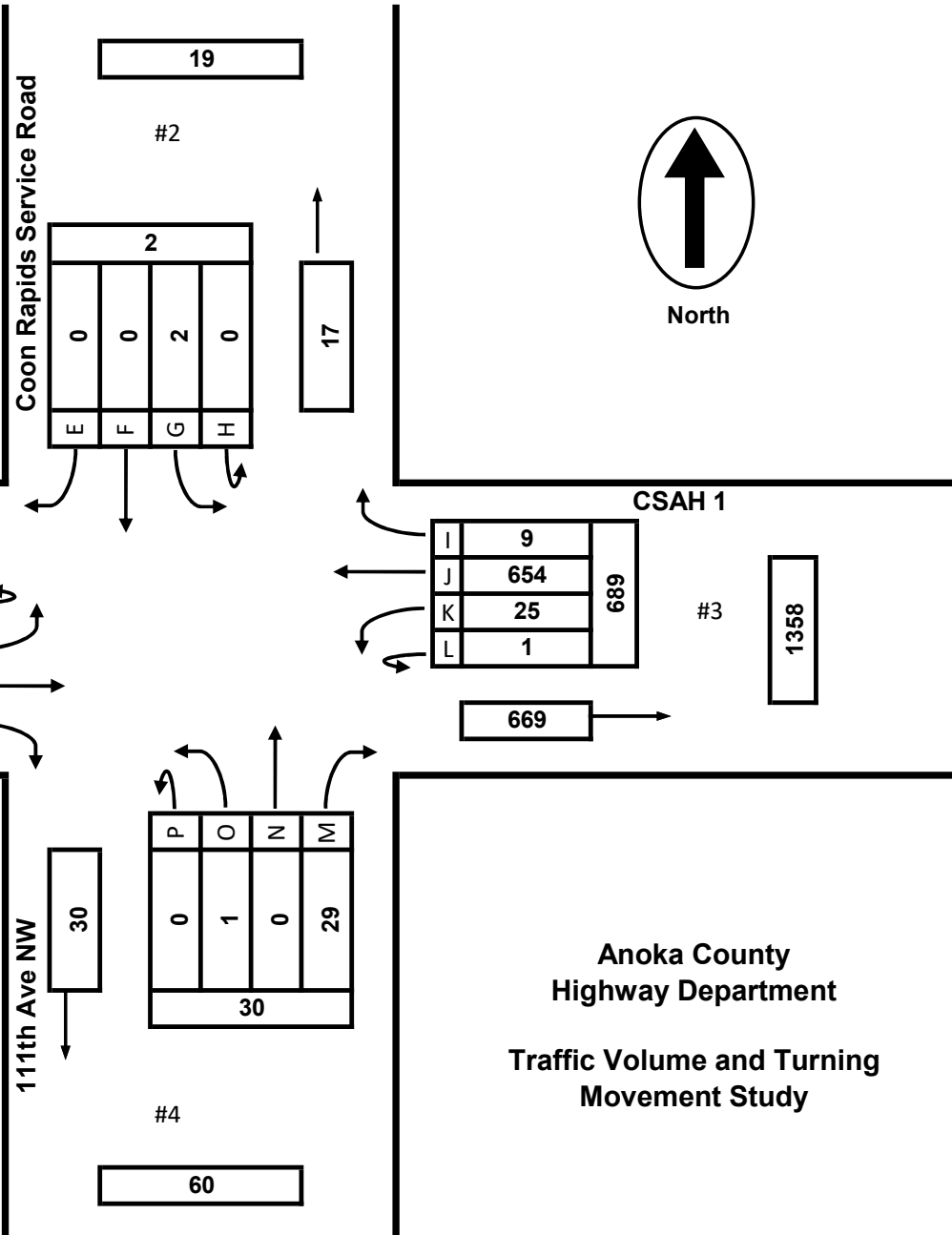
@ 111th Ave NW

Collection Period: 24 HR

Peak Hour: 7:30 - 8:30 AM



North



CSAH 1

CSAH 1

EXISTING LANES OF APPROACH

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

Anoka County Highway Department

Traffic Volume and Turning Movement Study

Date: 09/10/24

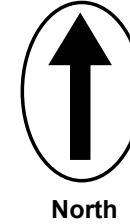
Count Number: TMC 2405

Location: CSAH 1

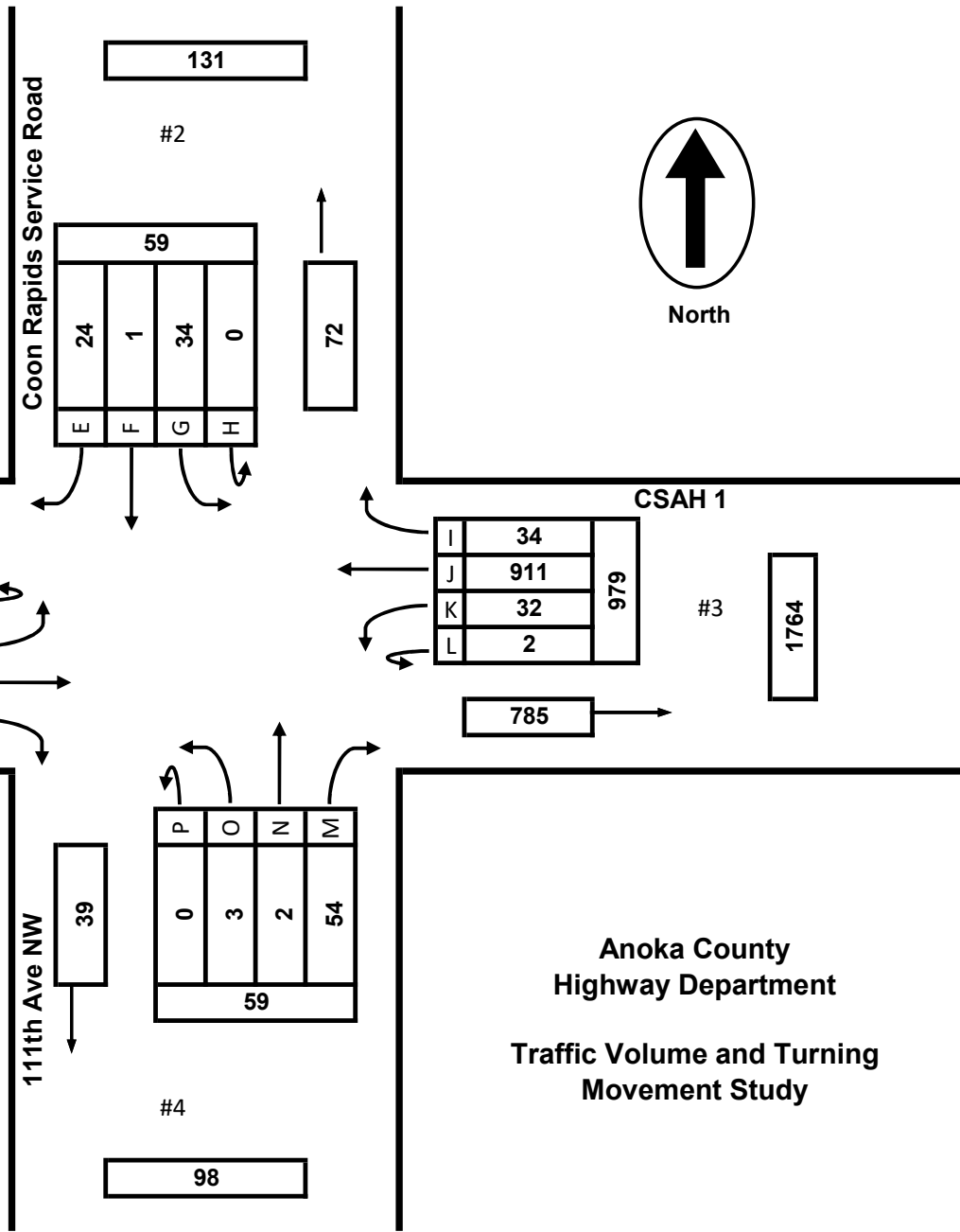
@ 111th Ave NW

Collection Period: 24 HR

Peak Hour: 3:45 - 4:45 PM



North



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

Anoka County
Highway Department
Traffic Volume and Turning
Movement Study

**TMC 2405 - CSAH 1 @ 111th Ave NW
Coon Rapids MN
Tuesday, September 10, 2024**

Time	Southbound Coon Rapids Service Road						Westbound CSAH 1						Northbound 111th Ave NW						Eastbound CSAH 1						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	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	1	8	0	0	9	
12:15 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	6	0	0	6	
12:30 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	5	0	0	5	
12:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	8	0	0	8	
Hourly Total	0	0	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	0	0	1	27	0	0	28	
1:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	11	0	0	11	
1:15 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	4	0	0	4	
1:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	13	0	0	13	
1:45 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	3	0	0	3	
Hourly Total	0	0	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	0	0	31	0	0	31	
2:00 AM	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	6	0	0	6	
2:15 AM	0	0	0	0	0	0	0	1	3	0	0	4	0	1	0	0	0	1	0	0	2	0	0	2	
2:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	
2:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	
Hourly Total	0	0	0	0	0	0	0	1	17	0	0	18	0	1	0	0	0	1	0	0	16	0	0	16	
3:00 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	6	0	0	6	
3:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	7	0	0	7	
3:30 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	7	0	0	7	
3:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	5	0	0	5	
Hourly Total	0	0	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	0	0	25	0	0	25	
4:00 AM	0	0	0	0	0	0	0	0	8	1	0	9	0	0	0	0	0	0	0	0	5	0	0	5	
4:15 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	13	0	0	13	
4:30 AM	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	0	0	21	0	0	21	
4:45 AM	0	0	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	0	0	0	17	0	0	17	
Hourly Total	0	0	0	0	0	0	0	0	50	1	0	51	0	0	0	0	0	0	0	0	56	0	0	56	
5:00 AM	0	0	0	0	0	0	0	0	22	0	0	22	0	0	0	1	0	1	0	0	22	0	0	22	
5:15 AM	0	0	0	0	0	0	0	0	22	0	0	22	0	0	0	2	0	2	0	0	36	0	0	36	
5:30 AM	0	0	0	0	0	0	0	0	29	0	0	29	0	0	0	0	0	0	0	0	59	0	0	59	
5:45 AM	0	0	0	0	0	0	0	1	29	0	0	30	0	0	0	1	0	1	0	0	31	0	0	31	
Hourly Total	0	0	0	0	0	0	0	1	102	0	0	103	0	0	0	4	0	4	0	0	148	0	0	148	
6:00 AM	0	0	0	0	0	0	0	3	41	0	0	44	0	0	0	2	0	2	0	0	49	0	0	49	
6:15 AM	0	0	0	1	0	1	0	0	58	1	0	59	0	0	0	4	0	4	0	1	77	0	0	78	
6:30 AM	0	0	0	0	0	0	0	3	90	0	0	93	0	0	0	0	0	0	0	0	80	0	0	80	
6:45 AM	0	0	0	1	0	1	0	4	113	0	0	117	0	0	0	7	0	7	0	0	81	0	0	81	
Hourly Total	0	0	0	2	0	2	0	10	302	1	0	313	0	0	0	13	0	13	0	1	287	0	0	288	
7:00 AM	0	1	0	0	0	1	0	2	84	1	0	87	0	1	0	12	0	13	0	1	117	0	0	118	
7:15 AM	0	0	2	0	0	2	0	4	132	4	0	140	0	0	0	14	0	14	0	1	119	0	0	120	
7:30 AM	0	0	0	0	0	0	0	6	186	1	0	193	0	0	0	4	0	4	0	0	192	1	0	193	
7:45 AM	0	0	0	0	0	0	0	12	206	3	0	221	0	1	0	8	0	9	0	1	163	2	0	166	
Hourly Total	0	1	2	0	0	3	0	24	608	9	0	641	0	2	0	38	0	40	0	3	591	3	0	597	

**TMC 2405 - CSAH 1 @ 111th Ave NW
Coon Rapids MN
Tuesday, September 10, 2024**

Time	Southbound Coon Rapids Service Road						Westbound CSAH 1						Northbound 111th Ave NW						Eastbound CSAH 1						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	0	0	0	0	0	1	2	132	2	0	137	0	0	0	7	0	7	0	3	151	1	0	155	299
8:15 AM	0	2	0	0	0	2	0	5	130	3	0	138	0	0	0	10	0	10	0	4	131	1	1	136	286
8:30 AM	0	1	0	0	0	1	1	7	105	2	0	115	0	0	0	11	0	11	0	5	124	1	0	130	257
8:45 AM	0	2	2	1	1	5	0	6	111	5	0	122	0	0	1	8	0	9	0	5	87	0	0	92	228
Hourly Total	0	5	2	1	1	8	2	20	478	12	0	512	0	0	1	36	0	37	0	17	493	3	1	513	1070
9:00 AM	0	3	0	5	0	8	0	6	148	5	0	159	0	0	1	14	1	15	0	2	97	0	0	99	281
9:15 AM	0	3	0	3	0	6	1	4	167	1	0	173	0	0	1	9	0	10	2	6	98	2	0	108	297
9:30 AM	0	1	2	6	0	9	0	1	129	5	0	135	0	2	2	3	0	7	0	9	97	1	0	107	258
9:45 AM	0	3	0	4	0	7	0	4	146	10	0	160	0	0	2	12	0	14	1	11	102	0	0	114	295
Hourly Total	0	10	2	18	0	30	1	15	590	21	0	627	0	2	6	38	1	46	3	28	394	3	0	428	1131
10:00 AM	0	4	2	6	1	12	0	3	106	8	0	117	0	1	0	6	0	7	0	5	106	1	3	112	248
10:15 AM	0	8	0	3	0	11	1	4	112	11	0	128	0	1	1	7	0	9	0	6	101	0	0	107	255
10:30 AM	0	4	0	4	0	8	2	4	105	9	0	120	0	0	0	7	0	7	1	7	121	0	0	129	264
10:45 AM	0	13	0	7	2	20	0	2	124	9	0	135	0	0	0	13	0	13	0	10	126	0	0	136	304
Hourly Total	0	29	2	20	3	51	3	13	447	37	0	500	0	2	1	33	0	36	1	28	454	1	3	484	1071
11:00 AM	0	5	0	3	0	8	0	6	100	9	1	115	0	0	0	7	0	7	0	13	106	2	1	121	251
11:15 AM	0	7	0	6	0	13	3	4	120	9	0	136	0	1	1	8	0	10	0	14	126	1	1	141	300
11:30 AM	0	10	1	10	0	21	0	4	130	14	0	148	0	1	0	7	0	8	0	10	114	1	0	125	302
11:45 AM	0	6	0	12	0	18	0	7	137	9	0	153	0	2	2	10	0	14	0	10	116	3	0	129	314
Hourly Total	0	28	1	31	0	60	3	21	487	41	1	552	0	4	3	32	0	39	0	47	462	7	2	516	1167
12:00 PM	0	10	1	5	0	16	2	9	127	18	0	156	0	1	1	13	0	15	0	11	120	2	2	133	320
12:15 PM	0	11	0	6	0	17	0	0	125	8	1	133	0	3	3	17	0	23	1	7	143	2	0	153	326
12:30 PM	0	8	2	11	0	21	2	3	118	18	0	141	0	0	0	11	0	11	0	9	118	2	0	129	302
12:45 PM	0	12	1	7	0	20	2	3	126	6	0	137	0	1	0	9	0	10	0	16	109	1	2	126	293
Hourly Total	0	41	4	29	0	74	6	15	496	50	1	567	0	5	4	50	0	59	1	43	490	7	4	541	1241
1:00 PM	0	7	0	5	0	12	0	9	115	9	0	133	0	0	1	10	0	11	0	12	122	0	1	134	290
1:15 PM	0	9	0	6	0	15	1	4	152	8	0	165	0	1	0	20	0	21	0	15	111	0	0	126	327
1:30 PM	0	13	2	2	0	17	1	3	129	21	0	154	0	2	0	6	0	8	0	14	137	2	0	153	332
1:45 PM	0	9	3	11	0	23	0	8	184	10	0	202	0	3	2	14	0	19	2	16	170	2	0	190	434
Hourly Total	0	38	5	24	0	67	2	24	580	48	0	654	0	6	3	50	0	59	2	57	540	4	1	603	1383
2:00 PM	0	14	0	11	0	25	0	4	140	13	0	157	0	2	1	13	1	16	1	13	160	1	0	175	373
2:15 PM	0	12	3	9	0	24	1	5	164	11	0	181	0	1	0	7	0	8	0	13	141	1	0	155	368
2:30 PM	0	9	1	5	0	15	0	8	142	12	0	162	0	2	3	9	1	14	1	9	124	0	0	134	325
2:45 PM	0	9	1	9	0	19	0	2	176	8	0	186	0	1	0	6	0	7	0	8	115	0	0	123	335
Hourly Total	0	44	5	34	0	83	1	19	622	44	0	686	0	6	4	35	2	45	2	43	540	2	0	587	1401
3:00 PM	0	9	0	6	0	15	1	6	169	7	0	183	0	2	0	6	0	8	2	10	176	0	0	188	394
3:15 PM	0	14	0	8	0	22	1	8	164	7	0	180	0	0	0	9	0	9	0	6	190	3	0	199	410
3:30 PM	0	5	0	5	0	10	0	9	200	5	1	214	0	1	1	10	1	12	0	7	219	0	1	226	462
3:45 PM	0	7	1	7	0	15	0	11	228	14	0	253	0	1	1	8	1	10	0	12	167	4	1	183	461
Hourly Total	0	35	1	26	0	62	2	34	761	33	1	830	0	4	2	33	2	39	2	35	752	7	2	796	1727

**TMC 2405 - CSAH 1 @ 111th Ave NW
Coon Rapids MN
Tuesday, September 10, 2024**

Time	Southbound Coon Rapids Service Road						Westbound CSAH 1						Northbound 111th Ave NW						Eastbound CSAH 1						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	13	0	5	2	18	1	7	217	7	0	232	0	0	1	11	1	12	0	5	207	1	1	213	475
4:15 PM	0	9	0	7	0	16	1	7	218	8	0	234	0	2	0	14	0	16	0	7	141	1	0	149	415
4:30 PM	0	5	0	5	1	10	0	7	248	5	0	260	0	0	0	21	0	21	1	12	180	0	0	193	484
4:45 PM	0	4	1	6	1	11	0	5	189	17	0	211	0	1	0	12	0	13	1	8	145	0	0	154	389
Hourly Total	0	31	1	23	4	55	2	26	872	37	0	937	0	3	1	58	1	62	2	32	673	2	1	709	1763
5:00 PM	0	13	1	2	0	16	1	5	242	12	1	260	0	2	0	10	0	12	0	8	127	1	0	136	424
5:15 PM	0	8	0	7	0	15	0	6	188	9	0	203	0	1	1	17	0	19	0	8	115	0	1	123	360
5:30 PM	0	8	0	3	0	11	1	4	202	9	2	216	0	0	0	9	0	9	1	6	115	1	1	123	359
5:45 PM	0	10	0	5	0	15	1	4	197	9	0	211	0	0	1	15	0	16	0	4	101	0	2	105	347
Hourly Total	0	39	1	17	0	57	3	19	829	39	3	890	0	3	2	51	0	56	1	26	458	2	4	487	1490
6:00 PM	0	13	1	6	0	20	2	3	150	7	0	162	0	2	1	7	2	10	0	5	90	0	0	95	287
6:15 PM	0	4	0	11	0	15	0	2	132	6	0	140	0	0	1	4	0	5	0	5	87	0	0	92	252
6:30 PM	0	7	1	3	0	11	1	9	111	2	0	123	0	0	1	3	0	4	0	7	88	0	0	95	233
6:45 PM	0	6	0	6	1	12	1	1	107	6	0	115	0	0	0	12	0	12	1	7	81	0	0	89	228
Hourly Total	0	30	2	26	1	58	4	15	500	21	0	540	0	2	3	26	2	31	1	24	346	0	0	371	1000
7:00 PM	0	6	0	3	0	9	0	2	72	6	0	80	0	2	0	5	2	7	0	4	95	1	0	100	196
7:15 PM	0	1	1	2	0	4	0	3	63	6	0	72	0	1	0	6	0	7	2	1	78	1	0	82	165
7:30 PM	0	4	0	0	0	4	1	2	66	2	0	71	0	0	0	5	0	5	0	3	90	0	0	93	173
7:45 PM	0	3	0	5	0	8	1	1	70	2	0	74	0	1	1	4	0	6	0	0	85	1	0	86	174
Hourly Total	0	14	1	10	0	25	2	8	271	16	0	297	0	4	1	20	2	25	2	8	348	3	0	361	708
8:00 PM	0	4	0	1	0	5	1	0	61	2	0	64	0	1	0	8	0	9	0	4	83	1	0	88	166
8:15 PM	0	6	0	2	0	8	0	0	59	4	0	63	0	1	0	5	0	6	0	0	66	0	0	66	143
8:30 PM	0	2	0	0	0	2	0	3	56	1	0	60	0	2	0	0	0	2	0	0	60	0	0	60	124
8:45 PM	0	0	0	0	0	0	0	1	47	0	0	48	0	1	0	2	0	3	0	0	57	0	0	57	108
Hourly Total	0	12	0	3	0	15	1	4	223	7	0	235	0	5	0	15	0	20	0	4	266	1	0	271	541
9:00 PM	0	5	0	0	0	5	1	3	45	0	0	49	0	1	0	3	0	4	0	2	39	0	0	41	99
9:15 PM	0	2	0	5	0	7	0	1	43	1	0	45	0	0	0	4	0	4	0	0	49	0	0	49	105
9:30 PM	0	5	0	0	0	5	0	2	34	0	0	36	0	0	0	7	0	7	0	0	40	0	0	40	88
9:45 PM	0	0	0	0	0	0	0	0	40	0	0	40	0	0	0	1	0	1	0	0	30	0	0	30	71
Hourly Total	0	12	0	5	0	17	1	6	162	1	0	170	0	1	0	15	0	16	0	2	158	0	0	160	363
10:00 PM	0	0	0	0	0	0	0	0	41	0	0	41	0	1	0	1	0	2	0	0	28	0	0	28	71
10:15 PM	0	0	0	0	0	0	0	2	36	0	0	38	0	0	0	1	0	1	0	0	28	0	0	28	67
10:30 PM	0	0	0	0	0	0	0	1	32	0	0	33	0	0	0	1	0	1	0	0	17	0	0	17	51
10:45 PM	0	0	0	0	0	0	0	0	27	0	0	27	0	1	0	0	0	1	0	0	16	0	0	16	44
Hourly Total	0	0	0	0	0	0	0	3	136	0	0	139	0	2	0	3	0	5	0	0	89	0	0	89	233
11:00 PM	0	0	0	0	0	0	1	1	14	0	0	16	0	1	0	0	0	1	0	0	38	0	0	38	55
11:15 PM	0	0	0	0	0	0	0	0	23	0	0	23	0	0	0	1	0	1	0	0	8	0	0	8	32
11:30 PM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	1	0	1	0	0	25	0	0	25	36
11:45 PM	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	0	0	13	0	0	13	21
Hourly Total	0	0	0	0	0	0	1	2	54	0	0	57	0	1	0	2	0	3	0	0	84	0	0	84	144
DAILY TOTAL	0	369	29	269	9	667	34	280	8645	418	6	9377	0	53	31	552	10	636	17	399	7728	45	18	8189	18869
Cars	0	363	29	267	5	659	32	265	8411	412	4	9120	0	51	30	532	5	613	17	395	7513	43	12	7968	18360
Heavy Vehicles	0	6	0	2	4	8	2	15	234	6	2	257	0	2	1	20	5	23	0	4	215	2	6	221	509
Heavy Vehicle %	0.00%	1.63%	0.00%	0.74%	44.44%	1.20%	5.88%	5.36%	2.71%	1.44%	33.33%	2.74%	0.00%	3.77%	3.23%	3.62%	50.00%	3.62%	0.00%	1.00%	2.78%	4.44%	33.33%	2.70%	2.70%

TMC 2405 - CSAH 1 @ 111th Ave NW
Coon Rapids MN
Tuesday, September 10, 2024
AM Peak Hour

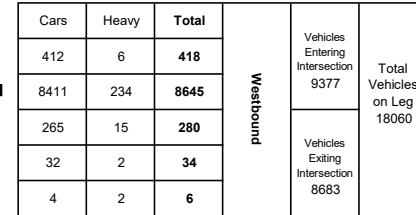
Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
7:30 AM	0	0	0	0	0	0	0	6	186	1	0	193	0	0	0	4	0	4	0	0	192	1	0	193	390
7:45 AM	0	0	0	0	0	0	0	12	206	3	0	221	0	1	0	8	0	9	0	1	163	2	0	166	396
8:00 AM	0	0	0	0	0	0	1	2	132	2	0	137	0	0	0	7	0	7	0	3	151	1	0	155	299
8:15 AM	0	2	0	0	0	2	0	5	130	3	0	138	0	0	0	10	0	10	0	4	131	1	1	136	286
Peak Hour Total	0	2	0	0	0	2	1	25	654	9	0	689	0	1	0	29	0	30	0	8	637	5	1	650	1371
PHF	0.000	0.250	0.000	0.000	0.000	0.250	0.250	0.521	0.794	0.750	0.000	0.779	0.000	0.250	0.000	0.725	0.000	0.750	0.000	0.500	0.829	0.625	0.250	0.842	0.866

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	
3:45 PM	0	7	1	7	0	15	0	11	228	14	0	253	0	1	1	8	1	10	0	12	167	4	1	183	461
4:00 PM	0	13	0	5	2	18	1	7	217	7	0	232	0	0	1	11	1	12	0	5	207	1	1	213	475
4:15 PM	0	9	0	7	0	16	1	7	218	8	0	234	0	2	0	14	0	16	0	7	141	1	0	149	415
4:30 PM	0	5	0	5	1	10	0	7	248	5	0	260	0	0	0	21	0	21	1	12	180	0	0	193	484
Peak Hour Total	0	34	1	24	3	59	2	32	911	34	0	979	0	3	2	54	2	59	1	36	695	6	2	738	1835
PHF	0.000	0.654	0.250	0.857	0.375	0.819	0.500	0.727	0.918	0.607	0.000	0.941	0.000	0.375	0.500	0.643	0.500	0.702	0.250	0.750	0.839	0.375	0.500	0.866	0.948

Total Vehicles On Leg				1515	
Vehicles Entering Intersection			667	Vehicles Exiting Intersection	
				848	
Southbound					
Cars	267	29	363	0	5
Heavy	2	0	6	0	4
Total	269	29	369	0	9

Total Vehicles on Leg 17173	Vehicles Entering Intersection 8189	Eastbound	Cars	Heavy	Total	
			12	6	18	
			17	0	17	
			395	4	399	
			7513	215	7728	
Vehicles Exiting Intersection 8984			43	2	45	

Total Vehicles on Leg 18060	Vehicles Entering Intersection 9377	Westbound	Cars	Heavy	Total	
			412	6	418	
			8411	234	8645	
			265	15	280	
			32	2	34	
Vehicles Exiting Intersection 8683			4	2	6	

Daily Volumes

Cars	5	0	51	30	532
Heavy	5	0	2	1	20
Total	10	0	53	31	552
Northbound					
Vehicles Entering Intersection			636	Vehicles Exiting Intersection	
				354	
Total Vehicles On Leg			990		

ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2405

Study Date : 09/19/2024

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 1

Number of Lanes : 2+

Total Approach Volume: 8,189

Westbound: CSAH 1

Number of Lanes :2+

Total Approach Volume: 9,377

Minor Street Approaches

Northbound: 111th Ave NW

Number of Lanes :2+

Total Approach Volume: 636

Southbound: Coon Rapids Service Road

Number of Lanes :1

Total Approach Volume: 667

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 0 hours, 8 are needed

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

Required volumes reached for 8 hours, 8 are needed

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

Required 1A volumes reached for 1 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.....Not Satisfied

Approach volumes on minor street don't exceed minimums for any one hour period. 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 2405

Study Date : 09/19/2024

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 0 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 = **Mixed**

Volume Requirements

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

Veh/Hr Minor = **140 105**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
15:45 - 16:45	738	+	979	=	1717	59	59	No
15:30 - 16:30	771	+	933	=	1704	50	59	No
15:15 - 16:15	821	+	879	=	1700	43	65	No
16:00 - 17:00	709	+	937	=	1646	62	55	No
15:00 - 16:00	796	+	830	=	1626	39	62	No
16:15 - 17:15	632	+	965	=	1597	62	53	No
16:30 - 17:30	606	+	934	=	1540	65	52	No
14:45 - 15:45	736	+	763	=	1499	36	66	No
16:45 - 17:45	536	+	890	=	1426	53	53	No
17:00 - 18:00	487	+	890	=	1377	56	57	No
13:30 - 14:30	673	+	694	=	1367	51	89	No
13:45 - 14:45	654	+	702	=	1356	57	87	No
14:30 - 15:30	644	+	711	=	1355	38	71	No
07:30 - 08:30	650	+	689	=	1339	30	2	No
07:15 - 08:15	634	+	691	=	1325	34	2	No
13:15 - 14:15	644	+	678	=	1322	64	80	No
14:15 - 15:15	600	+	712	=	1312	37	73	No
14:00 - 15:00	587	+	686	=	1273	45	83	No
13:00 - 14:00	603	+	654	=	1257	59	67	No
07:00 - 08:00	597	+	641	=	1238	40	3	No
17:15 - 18:15	446	+	792	=	1238	54	61	No
07:45 - 08:45	587	+	611	=	1198	37	3	No
17:30 - 18:30	415	+	729	=	1144	40	61	No
11:30 - 12:30	540	+	590	=	1130	60	72	No
12:45 - 13:45	539		589		1128	50	64	No

ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2405

Study Date : 09/19/2024

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

8 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 = **Mixed**

Volume Requirements

Rural Factor of 70 % applied
 Veh/Hr Major = **630**
 Veh/Hr Minor = **70 52**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
15:45 - 16:45	738	+	979	=	1717	59	59	Yes
14:45 - 15:45	736	+	763	=	1499	36	66	Yes
16:45 - 17:45	536	+	890	=	1426	53	53	Yes
13:45 - 14:45	654	+	702	=	1356	57	87	Yes
12:45 - 13:45	539	+	589	=	1128	50	64	Yes
11:45 - 12:45	544	+	583	=	1127	63	72	Yes
10:45 - 11:45	523	+	534	=	1057	38	62	Yes
17:45 - 18:45	387	+	636	=	1023	35	61	Yes
07:30 - 08:30	650	+	689	=	1339	30	2	No
07:15 - 08:15	634	+	691	=	1325	34	2	No
07:00 - 08:00	597	+	641	=	1238	40	3	No
07:45 - 08:45	587	+	611	=	1198	37	3	No
09:00 - 10:00	428	+	627	=	1055	46	30	No
06:45 - 07:45	512	+	537	=	1049	38	4	No
10:30 - 11:30	527	+	506	=	1033	37	49	No
09:15 - 10:15	441	+	585	=	1026	38	34	No
08:00 - 09:00	513	+	512	=	1025	37	8	No
08:30 - 09:30	429	+	569	=	998	45	20	No
08:45 - 09:45	406	+	589	=	995	41	28	No
10:15 - 11:15	493	+	498	=	991	36	47	No
08:15 - 09:15	457	+	534	=	991	45	16	No
09:45 - 10:45	462	+	525	=	987	37	38	No
10:00 - 11:00	484	+	500	=	984	36	51	No
09:30 - 10:30	440	+	540	=	980	37	39	No
06:30 - 07:30	399		437		836	34	4	No

ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2405

Study Date : 09/19/2024

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

Site Data Required

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

Volume Requirements

Rural Factor of 70% applied
Warrant 1A 1B
Veh/Hr Major = **336 504**
Veh/Hr Minor NB = **112 56**
Veh/Hr Minor SB = **84 42**

Major Road CSAH 1

Minor Road 111th Ave NW

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
13:30 - 14:30	673	+	694	=	1367	51	89	Yes
15:45 - 16:45	738	+	979	=	1717	59	59	No
15:30 - 16:30	771	+	933	=	1704	50	59	No
15:15 - 16:15	821	+	879	=	1700	43	65	No
16:00 - 17:00	709	+	937	=	1646	62	55	No
15:00 - 16:00	796	+	830	=	1626	39	62	No
16:15 - 17:15	632	+	965	=	1597	62	53	No
16:30 - 17:30	606	+	934	=	1540	65	52	No
14:45 - 15:45	736	+	763	=	1499	36	66	No
16:45 - 17:45	536	+	890	=	1426	53	53	No
17:00 - 18:00	487	+	890	=	1377	56	57	No
14:30 - 15:30	644	+	711	=	1355	38	71	No

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:00 - 17:00	709	+	937	=	1646	62	55	Yes
15:00 - 16:00	796	+	830	=	1626	39	62	Yes
17:00 - 18:00	487	+	890	=	1377	56	57	Yes
14:00 - 15:00	587	+	686	=	1273	45	83	Yes
13:00 - 14:00	603	+	654	=	1257	59	67	Yes
12:00 - 13:00	541	+	567	=	1108	59	74	Yes
11:00 - 12:00	516	+	552	=	1068	39	60	Yes
10:00 - 11:00	484	+	500	=	984	36	51	Yes
18:00 - 19:00	371	+	540	=	911	31	58	Yes
07:30 - 08:30	650	+	689	=	1339	30	2	No
07:15 - 08:15	634	+	691	=	1325	34	2	No
07:00 - 08:00	597	+	641	=	1238	40	3	No

ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2405

Study Date : 09/19/2024

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.

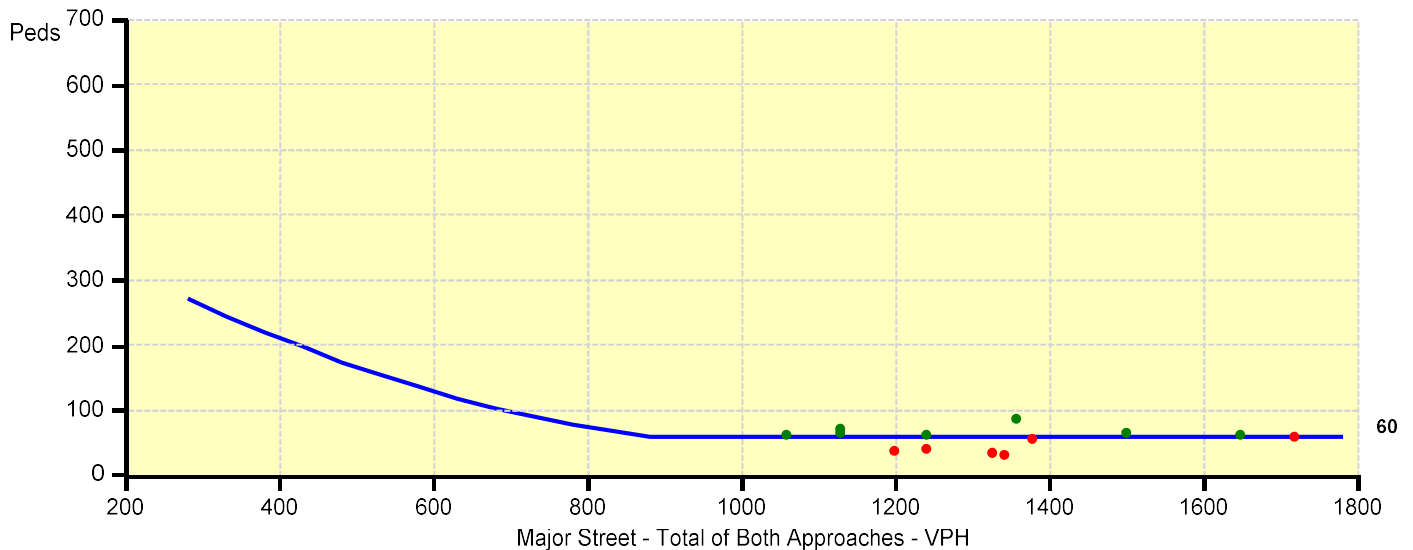
Summary

7 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 1				Total	Minor Road 111th Ave NW		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:00 - 17:00	709	+	937	=	1646	62	55	Yes
14:45 - 15:45	736	+	763	=	1499	36	66	Yes
13:45 - 14:45	654	+	702	=	1356	57	87	Yes
17:15 - 18:15	446	+	792	=	1238	54	61	Yes
12:45 - 13:45	539	+	589	=	1128	50	64	Yes
11:45 - 12:45	544	+	583	=	1127	63	72	Yes
10:45 - 11:45	523	+	534	=	1057	38	62	Yes
15:45 - 16:45	738	+	979	=	1717	59	59	No
17:00 - 18:00	487	+	890	=	1377	56	57	No
07:30 - 08:30	650	+	689	=	1339	30	2	No
07:15 - 08:15	634	+	691	=	1325	34	2	No
07:00 - 08:00	597	+	641	=	1238	40	3	No



ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2405

Study Date : 09/19/2024

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.

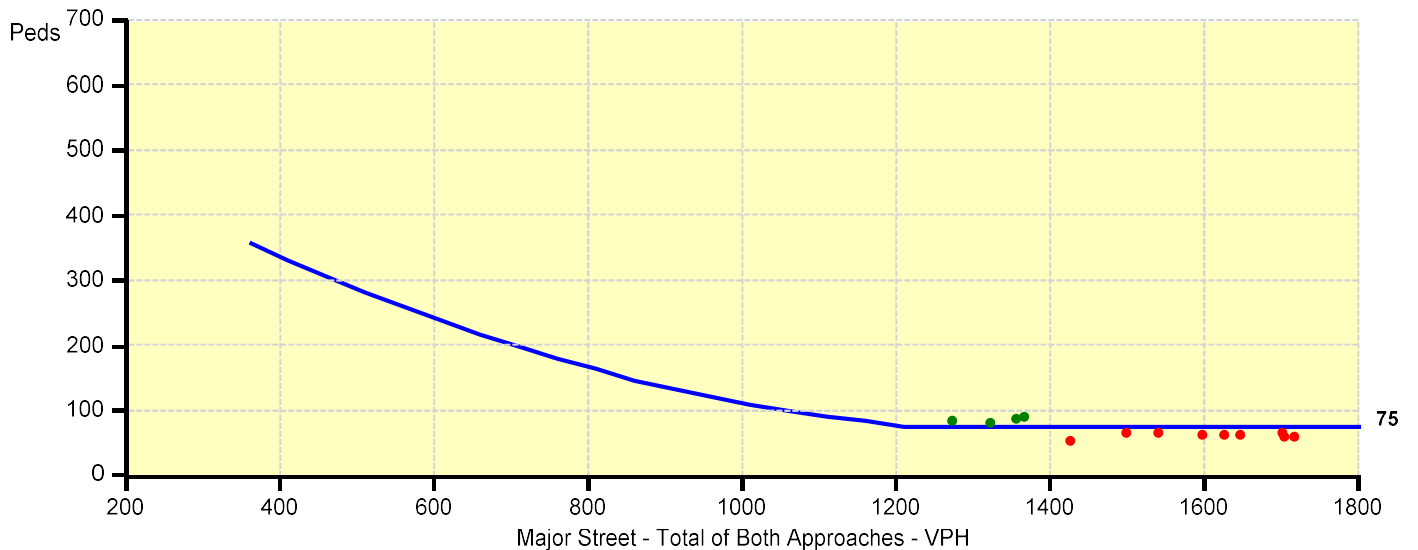
Summary

4 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 = **Mixed**

Time	Major Road CSAH 1				Total	Minor Road 111th Ave NW		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
13:30 - 14:30	673	+	694	=	1367	51	89	Yes
13:45 - 14:45	654	+	702	=	1356	57	87	Yes
13:15 - 14:15	644	+	678	=	1322	64	80	Yes
14:00 - 15:00	587	+	686	=	1273	45	83	Yes
15:45 - 16:45	738	+	979	=	1717	59	59	No
15:30 - 16:30	771	+	933	=	1704	50	59	No
15:15 - 16:15	821	+	879	=	1700	43	65	No
16:00 - 17:00	709	+	937	=	1646	62	55	No
15:00 - 16:00	796	+	830	=	1626	39	62	No
16:15 - 17:15	632	+	965	=	1597	62	53	No
16:30 - 17:30	606	+	934	=	1540	65	52	No
14:45 - 15:45	736	+	763	=	1499	36	66	No



ANOKA COUNTY HIGHWAY

PC - WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2405

Study Date : 09/19/2024

Multiway Stop Warrants - Summary

Major Street Approaches

Eastbound: CSAH 1
 Number of Lanes : 2+
 Total Approach Volume: 8,189

Westbound: CSAH 1
 Number of Lanes :2+
 Total Approach Volume: 9,377

Minor Street Approaches

Northbound: 111th Ave NW
 Number of Lanes :2+
 Total Approach Volume: 636

Southbound: Coon Rapids Serviv Road
 Number of Lanes :1
 Total Approach Volume: 667

Warrant Summary (Rural Values Apply)

Criteria A - Interim Measure	Not Evaluated
If traffic signals are justified, stop signs can be installed as an interim measure.	
Criteria B - Crash Experience	Not Satisfied
Number of crashes (-1) is less than minimum required (5).	
Criteria C - Minimum Volumes and Delays	Not Satisfied
Average of 8 highest hours is less than volume criteria.	
Criteria D - 80% of Volumes, Delays, and Crashes	Not Satisfied
Number of crashes (-1) is less than minimum required (4). Average of 8 highest hours is less than volume criteria.	

Criteria C Volume Summary

Time	Major Total	Major Avg	Minor Total	Minor Avg	Major Crit	Minor Crit	Meets?
15:45 - 16:45	1717	1328.0	125	110.8	210	140	No
14:45 - 15:45	1499		120				
16:45 - 17:45	1426		113				
13:30 - 14:30	1367		143				
07:30 - 08:30	1339		37				
11:30 - 12:30	1130		142				
12:30 - 13:30	1091		126				
09:00 - 10:00	1055		80				
10:30 - 11:30	1033		91				
17:45 - 18:45	1023		96				
06:30 - 07:30	836		38				
18:45 - 19:45	702		60				

Criteria D Volume Summary

Time	Major Total	Major Avg	Minor Total	Minor Avg	Major Crit	Minor Crit	Meets?
15:45 - 16:45	1717	1328.0	125	110.8	240	160	No
14:45 - 15:45	1499		120				
16:45 - 17:45	1426		113				
13:30 - 14:30	1367		143				
07:30 - 08:30	1339		37				
11:30 - 12:30	1130		142				
12:30 - 13:30	1091		126				
09:00 - 10:00	1055		80				
10:30 - 11:30	1033		91				
17:45 - 18:45	1023		96				
06:30 - 07:30	836		38				
18:45 - 19:45	702		60				