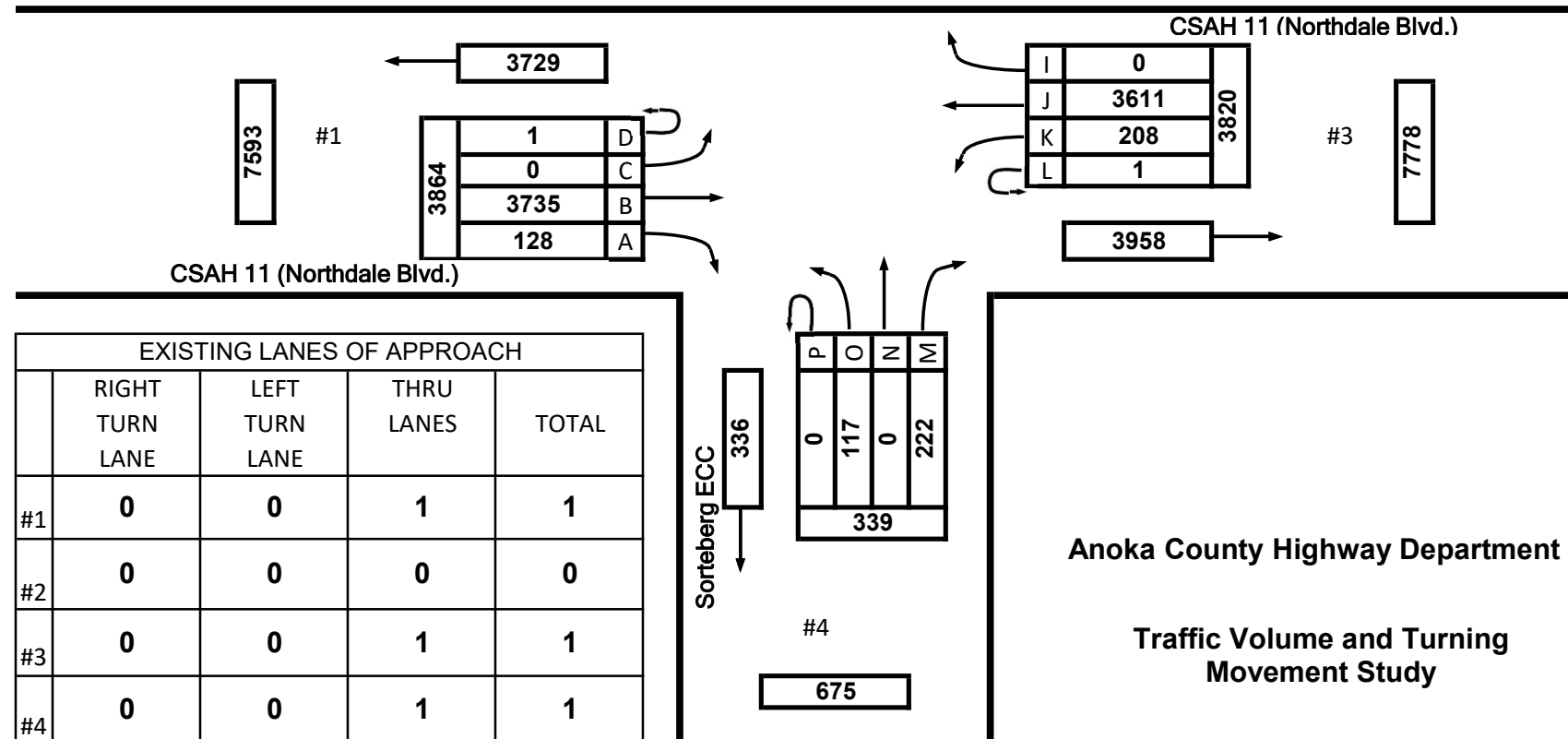
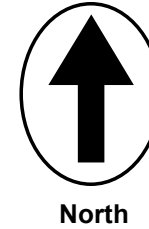


Date : 03/21/23

Count Number : TMC 2323

Location : CSAH 11 (Northdale Blvd.)
@ Sorteberg ECC

Collection Period : 24 HR



Date : 03/21/23

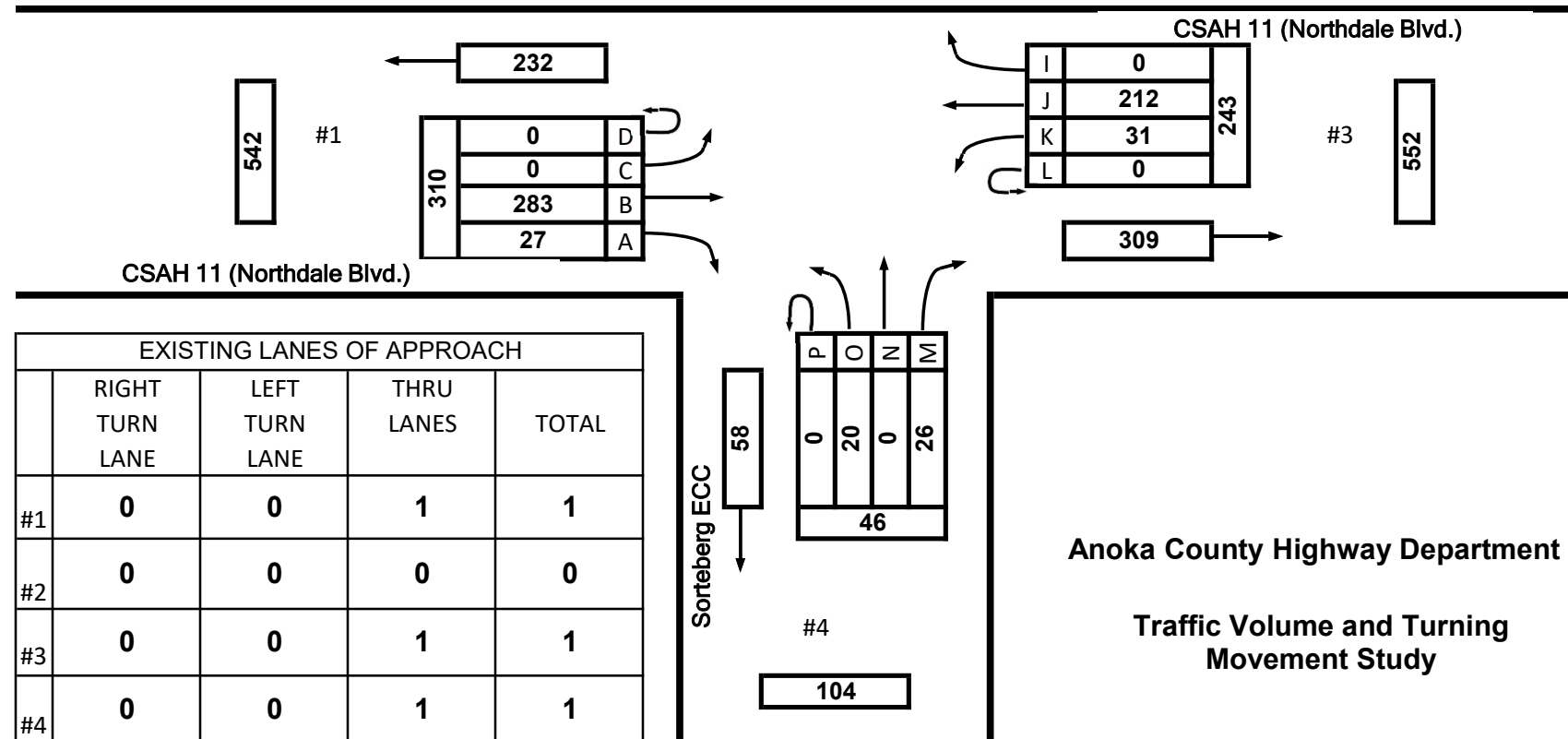
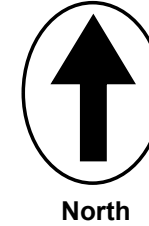
Count Number : TMC 2323

Location : CSAH 11 (Northdale Blvd.)

@ Sorteberg ECC

Collection Period : 7:30 AM - 8:30 AM

AM PEAK



Date : 03/21/23

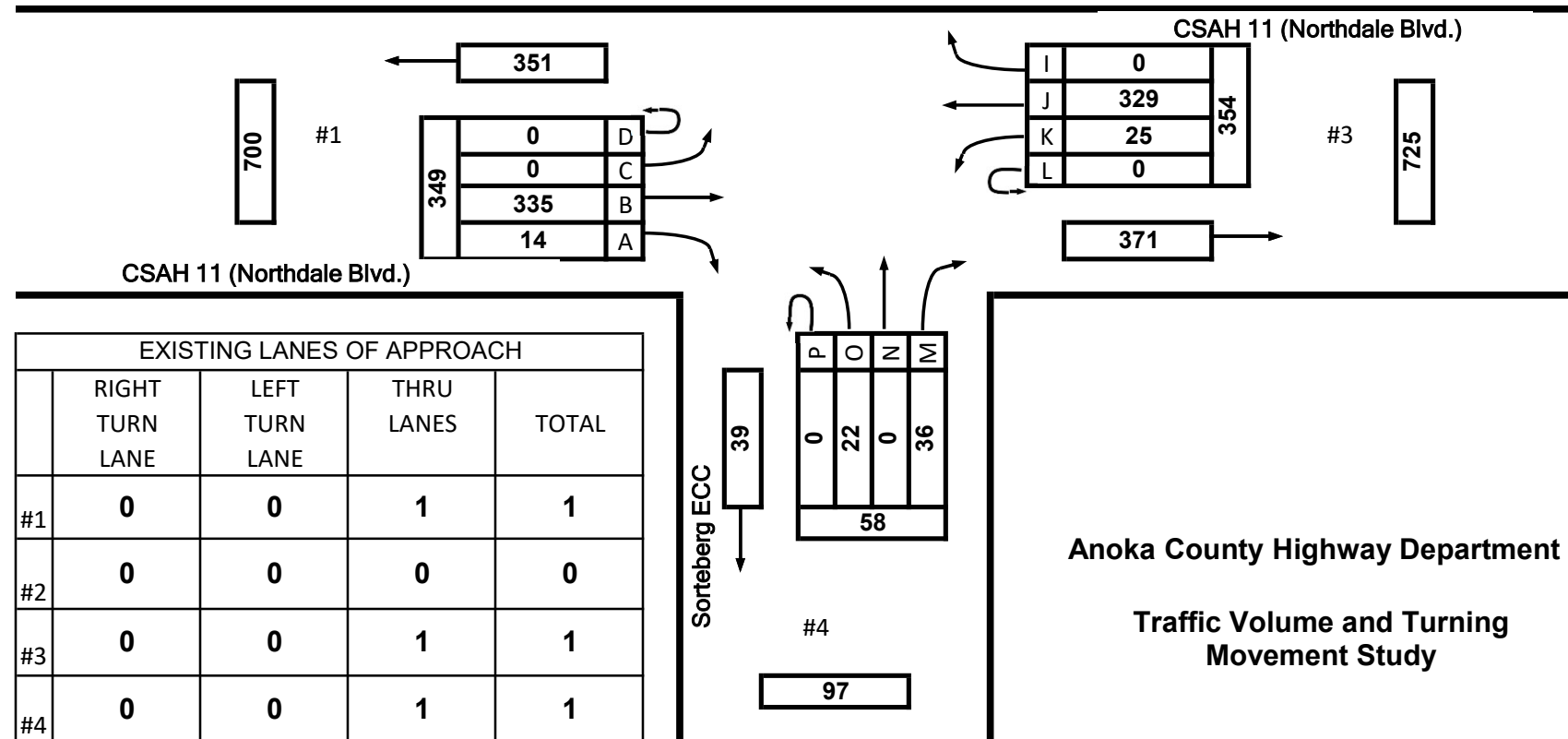
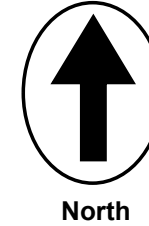
Count Number : TMC 2323

Location : CSAH 11 (Northdale Blvd.)

@ Sorteberg ECC

Collection Period : 2:45 PM - 3:45 PM

PM PEAK



Anoka County Highway Department

Traffic Volume and Turning Movement Study

TMC 2323 - CSAH 11 @ Sorteberg ECC
Tuesday, March 21, 2023

Time	Southbound None						Westbound CSAH 11						Northbound Sorteberg EEC						Eastbound CSAH 11						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	7	0	0	7	0	0	0	1	0	1	0	0	8	0	0	8	16
12:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
12:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	5
12:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Hourly Total	0	0	0	0	0	0	0	0	16	0	0	16	0	0	0	1	0	1	0	0	11	0	0	11	28
1:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	4
1:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	2	0	0	2	6
1:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
1:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	5
Hourly Total	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	8	0	0	8	18
2:00 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	5	0	0	5	9
2:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	5	0	0	5	9
2:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 AM	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
Hourly Total	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	10	0	0	10	19
3:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
3:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	5	0	0	5	6
3:45 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	8
Hourly Total	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	11	0	0	11	19
4:00 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	8
4:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	7	0	0	7	9
4:30 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	5	0	0	5	10
4:45 AM	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	8	0	0	8	19
Hourly Total	0	0	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	0	0	0	26	0	0	26	46
5:00 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	10	0	0	10	16
5:15 AM	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	16	0	0	16	27
5:30 AM	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	0	0	23	0	0	23	37
5:45 AM	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	0	27	0	0	27	42
Hourly Total	0	0	0	0	0	0	0	0	46	0	0	46	0	0	0	0	0	0	0	0	76	0	0	76	122
6:00 AM	0	0	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	0	0	19	0	0	19	36
6:15 AM	0	0	0	0	0	0	0	1	18	0	0	19	0	0	0	0	0	0	0	0	37	0	0	37	56
6:30 AM	0	0	0	0	0	0	0	0	42	0	0	42	0	0	0	1	0	1	0	0	46	1	0	47	90
6:45 AM	0	0	0	0	0	0	0	0	51	0	0	51	0	0	0	0	0	0	0	0	53	0	0	53	104
Hourly Total	0	0	0	0	0	0	0	1	128	0	0	129	0	0	0	1	0	1	0	0	155	1	0	156	286
7:00 AM	0	0	0	0	0	0	0	0	50	0	0	50	0	0	0	0	0	0	0	0	50	1	0	51	101
7:15 AM	0	0	0	0	0	0	0	3	53	0	0	56	0	0	0	1	0	1	0	0	74	0	0	74	131
7:30 AM	0	0	0	0	0	0	0	3	51	0	0	54	0	0	0	0	0	0	0	0	89	1	0	90	144
7:45 AM	0	0	0	0	0	0	0	4	59	0	0	63	0	0	0	2	0	2	0	0	69	8	0	77	142
Hourly Total	0	0	0	0	0	0	0	10	213	0	0	223	0	0	0	3	0	3	0	0	282	10	0	292	518

TMC 2323 - CSAH 11 @ Sorteberg ECC
Tuesday, March 21, 2023

Time	Southbound None						Westbound CSAH 11						Northbound Sorteberg EEC						Eastbound CSAH 11						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	0	15	65	0	0	80	0	8	0	7	0	15	0	0	69	12	0	81	176
8:15 AM	0	0	0	0	0	0	0	9	37	0	0	46	0	12	0	17	0	29	0	0	56	6	0	62	137
8:30 AM	0	0	0	0	0	0	0	1	44	0	0	45	0	1	0	0	0	1	0	0	62	3	0	65	111
8:45 AM	0	0	0	0	0	0	0	10	38	0	0	48	0	0	0	2	2	2	0	0	52	6	0	58	108
Hourly Total	0	0	0	0	0	0	0	35	184	0	0	219	0	21	0	26	2	47	0	0	239	27	0	266	532
9:00 AM	0	0	0	0	0	0	0	13	45	0	0	58	0	7	0	21	0	28	0	0	54	9	0	63	149
9:15 AM	0	0	0	0	0	0	0	1	61	0	0	62	0	3	0	5	0	8	0	0	51	0	0	51	121
9:30 AM	0	0	0	0	0	0	0	0	40	0	0	40	0	2	0	0	0	2	0	0	53	1	0	54	96
9:45 AM	0	0	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	0	0	0	48	0	0	48	80
Hourly Total	0	0	0	0	0	0	0	14	178	0	0	192	0	12	0	26	0	38	0	0	206	10	0	216	446
10:00 AM	0	0	0	0	0	0	0	1	34	0	0	35	0	1	0	0	0	1	0	0	42	1	0	43	79
10:15 AM	0	0	0	0	0	0	0	5	43	0	0	48	0	6	0	3	0	9	0	0	32	3	0	35	92
10:30 AM	0	0	0	0	0	0	0	9	43	0	0	52	0	2	0	1	0	3	0	0	48	7	0	55	110
10:45 AM	0	0	0	0	0	0	0	16	40	0	0	56	0	5	0	3	0	8	0	0	53	11	0	64	128
Hourly Total	0	0	0	0	0	0	0	31	160	0	0	191	0	14	0	7	0	21	0	0	175	22	0	197	409
11:00 AM	0	0	0	0	0	0	0	2	42	0	0	44	0	13	0	23	0	36	0	0	47	2	0	49	129
11:15 AM	0	0	0	0	0	0	0	4	73	0	0	77	0	0	0	0	0	0	0	0	39	2	0	41	118
11:30 AM	0	0	0	0	0	0	0	18	52	0	0	70	0	2	0	0	0	2	0	0	55	7	0	62	134
11:45 AM	0	0	0	0	0	0	0	15	61	0	0	76	0	9	0	27	0	36	0	0	60	13	0	73	185
Hourly Total	0	0	0	0	0	0	0	39	228	0	0	267	0	24	0	50	0	74	0	0	201	24	0	225	566
12:00 PM	0	0	0	0	0	0	0	8	54	0	0	62	0	11	0	22	0	33	0	0	64	7	0	71	166
12:15 PM	0	0	0	0	0	0	0	5	47	0	0	52	0	2	0	10	0	12	0	0	56	1	0	57	121
12:30 PM	0	0	0	0	0	0	0	6	44	0	0	50	0	3	0	1	1	4	0	0	48	2	0	50	104
12:45 PM	0	0	0	0	0	0	0	9	45	0	0	54	0	0	0	2	0	2	0	0	45	2	0	47	103
Hourly Total	0	0	0	0	0	0	0	28	190	0	0	218	0	16	0	35	1	51	0	0	213	12	0	225	494
1:00 PM	0	0	0	0	0	0	0	1	48	0	0	49	0	0	0	10	0	10	0	0	53	0	0	53	112
1:15 PM	0	0	0	0	0	0	1	1	46	0	0	48	0	0	0	1	0	1	0	0	33	1	0	34	83
1:30 PM	0	0	0	0	0	0	0	2	41	0	0	43	0	1	0	3	0	4	0	0	52	0	0	52	99
1:45 PM	0	0	0	0	0	0	0	2	50	0	0	52	0	0	0	0	0	0	0	0	52	1	0	53	105
Hourly Total	0	0	0	0	0	0	1	6	185	0	0	192	0	1	0	14	0	15	0	0	190	2	0	192	399
2:00 PM	0	0	0	0	0	0	0	6	54	0	0	60	0	0	0	2	0	2	0	0	58	1	0	59	121
2:15 PM	0	0	0	0	0	0	0	4	58	0	0	62	0	2	0	6	0	8	0	0	69	2	0	71	141
2:30 PM	0	0	0	0	0	0	0	7	72	0	0	79	0	0	0	0	0	0	0	0	76	2	0	78	157
2:45 PM	0	0	0	0	0	0	0	9	83	0	0	92	0	16	0	24	0	40	0	0	90	12	0	102	234
Hourly Total	0	0	0	0	0	0	0	26	267	0	0	293	0	18	0	32	0	50	0	0	293	17	0	310	653
3:00 PM	0	0	0	0	0	0	0	0	66	0	0	66	0	1	0	1	0	2	0	0	81	1	0	82	150
3:15 PM	0	0	0	0	0	0	0	8	88	0	0	96	0	3	0	1	1	4	0	0	73	1	0	74	174
3:30 PM	0	0	0	0	0	0	0	8	92	0	0	100	0	2	0	10	0	12	0	0	91	0	0	91	203
3:45 PM	0	0	0	0	0	0	0	0	81	0	0	81	0	2	0	9	0	11	0	0	87	0	0	87	179
Hourly Total	0	0	0	0	0	0	0	16	327	0	0	343	0	8	0	21	1	29	0	0	332	2	0	334	706

TMC 2323 - CSAH 11 @ Sorteberg ECC Tuesday, March 21, 2023

Time	Southbound None						Westbound CSAH 11						Northbound Sorteberg EEC						Eastbound CSAH 11						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	0	0	0	0	0	0	0	84	0	0	84	0	2	0	2	0	4	0	0	78	0	0	78	166
4:15 PM	0	0	0	0	0	0	0	0	89	0	0	89	0	0	0	0	1	0	0	0	76	0	0	76	165
4:30 PM	0	0	0	0	0	0	0	0	88	0	0	88	0	0	0	0	0	0	0	0	89	0	0	89	177
4:45 PM	0	0	0	0	0	0	0	2	86	0	0	88	0	0	0	1	0	1	0	0	91	0	0	91	180
Hourly Total	0	0	0	0	0	0	0	2	347	0	0	349	0	2	0	3	1	5	0	0	334	0	0	334	688
5:00 PM	0	0	0	0	0	0	0	0	79	0	0	79	0	0	0	0	0	0	0	0	71	0	0	71	150
5:15 PM	0	0	0	0	0	0	0	0	85	0	0	85	0	0	0	1	0	1	0	0	80	0	0	80	166
5:30 PM	0	0	0	0	0	0	0	0	75	0	0	75	0	0	0	2	1	2	0	0	59	0	0	59	136
5:45 PM	0	0	0	0	0	0	0	0	82	0	0	82	0	0	0	0	0	0	0	0	62	0	0	62	144
Hourly Total	0	0	0	0	0	0	0	0	321	0	0	321	0	0	0	3	1	3	0	0	272	0	0	272	596
6:00 PM	0	0	0	0	0	0	0	0	51	0	0	51	0	0	0	0	0	0	0	0	68	0	0	68	119
6:15 PM	0	0	0	0	0	0	0	0	78	0	0	78	0	0	0	0	0	0	0	0	56	0	0	56	134
6:30 PM	0	0	0	0	0	0	0	0	57	0	0	57	0	0	0	0	0	0	0	0	50	0	0	50	107
6:45 PM	0	0	0	0	0	0	0	0	54	0	0	54	0	0	0	0	0	0	1	0	60	0	0	61	115
Hourly Total	0	0	0	0	0	0	0	0	240	0	0	240	0	0	0	0	0	0	1	0	234	0	0	235	475
7:00 PM	0	0	0	0	0	0	0	0	39	0	0	39	0	0	0	0	0	0	0	0	57	0	0	57	96
7:15 PM	0	0	0	0	0	0	0	0	48	0	0	48	0	0	0	0	0	0	0	0	37	0	0	37	85
7:30 PM	0	0	0	0	0	0	0	0	41	0	0	41	0	0	0	0	0	0	0	0	42	0	0	42	83
7:45 PM	0	0	0	0	0	0	0	0	36	0	0	36	0	0	0	0	0	0	0	0	33	0	0	33	69
Hourly Total	0	0	0	0	0	0	0	0	164	0	0	164	0	0	0	0	0	0	0	0	169	0	0	169	333
8:00 PM	0	0	0	0	0	0	0	0	55	0	0	55	0	0	0	0	0	0	0	0	38	0	0	38	93
8:15 PM	0	0	0	0	0	0	0	0	42	0	0	42	0	0	0	0	0	0	0	0	33	0	0	33	75
8:30 PM	0	0	0	0	0	0	0	0	38	0	0	38	0	1	0	0	0	1	0	0	41	1	0	42	81
8:45 PM	0	0	0	0	0	0	0	0	33	0	0	33	0	0	0	0	0	0	0	0	30	0	0	30	63
Hourly Total	0	0	0	0	0	0	0	0	168	0	0	168	0	1	0	0	0	1	0	0	142	1	0	143	312
9:00 PM	0	0	0	0	0	0	0	0	30	0	0	30	0	0	0	0	0	0	0	0	27	0	0	27	57
9:15 PM	0	0	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	0	0	0	17	0	0	17	42
9:30 PM	0	0	0	0	0	0	0	0	31	0	0	31	0	0	0	0	0	0	0	0	13	0	0	13	44
9:45 PM	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	0	0	26	0	0	26	40
Hourly Total	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0	0	0	83	0	0	83	183
10:00 PM	0	0	0	0	0	0	0	0	21	0	0	21	0	0	0	0	0	0	0	0	19	0	0	19	40
10:15 PM	0	0	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	0	0	9	0	0	9	26
10:30 PM	0	0	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	0	0	0	9	0	0	9	28
10:45 PM	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	0	0	9	0	0	9	22
Hourly Total	0	0	0	0	0	0	0	0	70	0	0	70	0	0	0	0	0	0	0	0	46	0	0	46	116
11:00 PM	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	10	0	0	10	19
11:15 PM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	8	0	0	8	18
11:30 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	3	0	0	3	10
11:45 PM	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
Hourly Total	0	0	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	0	0	0	27	0	0	27	59
DAILY TOTAL	0	0	0	0	0	0	1	208	3611	0	0	3820	0	117	0	222	6	339	1	0	3735	128	0	3864	8023
Cars	0	0	0	0	0	0	1	207	3518	0	0	3726	0	116	0	221	6	337	1	0	3619	127	0	3747	7810
Heavy Vehicles	0	0	0	0	0	0	0	1	93	0	0	94	0	1	0	1	0	2	0	0	116	1	0	117	213
Heavy Vehicle %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.48%	2.58%	0.00%	0.00%	2.46%	0.00%	0.85%	0.00%	0.45%	0.00%	0.59%	0.00%	0.00%	3.11%	0.78%	0.00%	3.03%	2.65%

TMC 2323 - CSAH 11 @ Sorteberg ECC Tuesday, March 21, 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	
7:30 AM	0	0	0	0	0	0	0	3	51	0	0	0	0	0	0	0	0	0	0	0	89	1	0	90	144
7:45 AM	0	0	0	0	0	0	0	4	59	0	0	0	0	0	2	0	2	0	0	0	69	8	0	77	142
8:00 AM	0	0	0	0	0	0	0	15	65	0	0	0	8	0	7	0	15	0	0	0	69	12	0	81	176
8:15 AM	0	0	0	0	0	0	0	9	37	0	0	0	12	0	17	0	29	0	0	0	56	6	0	62	137
Peak Hour Total PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.517	0.815	0.000	0.000	0.000	0.417	0.000	0.382	0.000	0.397	0.000	0.000	0.795	0.563	0.000	0.861	0.599	

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	
2:45 PM	0	0	0	0	0	0	0	9	83	0	0	0	16	0	24	0	40	0	0	0	90	12	0	102	234
3:00 PM	0	0	0	0	0	0	0	0	66	0	0	0	1	0	1	0	2	0	0	0	81	1	0	82	150
3:15 PM	0	0	0	0	0	0	0	8	88	0	0	0	3	0	1	1	4	0	0	0	73	1	0	74	174
3:30 PM	0	0	0	0	0	0	0	8	92	0	0	0	2	0	10	0	12	0	0	0	91	0	0	91	203
Peak Hour Total PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.694	0.894	0.000	0.000	0.000	0.344	0.000	0.375	0.250	0.363	0.000	0.000	0.920	0.292	0.000	0.855	0.813	

Total Vehicles On Leg						0					
Vehicles Entering Intersection			0			Vehicles Exiting Intersection			0		
Southbound											
Cars	0	0	0	0	0						
Heavy	0	0	0	0	0						
Total	0	0	0	0	0						



Total Vehicles on Leg 7593	Vehicles Entering Intersection 3864	Eastbound	Cars	Heavy	Total
			0	0	0
			1	0	1
	Vehicles Exiting Intersection 3729		0	0	0
			3619	116	3735
			127	1	128



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 3820	Total Vehicles on Leg 7778
0	0	0			
3518	93	3611			
207	1	208			
1	0	1			
0	0	0		Vehicles Exiting Intersection 3958	



Cars	6	0	116	0	221
Heavy	0	0	1	0	1
Total	6	0	117	0	222
Northbound					
Vehicles Entering Intersection 339			Vehicles Exiting Intersection 336		
Total Vehicles On Leg			675		



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 03/27/2023

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 11

Number of Lanes : 1

Total Approach Volume: 3,864

Westbound: CSAH 11

Number of Lanes : 1

Total Approach Volume: 3,820

Minor Street Approaches

Northbound: Sorteberg ECC

Number of Lanes : 1

Total Approach Volume: 339

Warrant Summary (Urban Values Apply)

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

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

Required volumes reached for 0 hours, 8 are needed

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

Required volumes reached for 0 hours, 8 are needed

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

Required 1A volumes reached for 0 hours, 8 are needed

Required 1B volumes reached for 0 hours, 8 are needed

Warrant 2 - Four Hour Volumes.....Not Satisfied

Number of hours (0) volumes exceed minimum < minimum required (4).

Warrant 3 - Peak Hour.....Not 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.....Not Satisfied

Volumes do not exceed minimums for any 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 : 03/27/2023

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 0 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Veh/Hr Major = **500**

Veh/Hr Minor = **150**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	CSAH 11					Sorteberg ECC		
14:45 - 15:45	349	+	354	=	703	58	0	No
15:15 - 16:15	330	+	361	=	691	31	0	No
15:30 - 16:30	332	+	354	=	686	27	0	No
16:00 - 17:00	334	+	349	=	683	5	0	No
15:00 - 16:00	334	+	343	=	677	29	0	No
15:45 - 16:45	330	+	342	=	672	15	0	No
16:30 - 17:30	331	+	340	=	671	2	0	No
16:15 - 17:15	327	+	344	=	671	1	0	No
14:30 - 15:30	336	+	333	=	669	46	0	No
14:15 - 15:15	333	+	299	=	632	50	0	No
16:45 - 17:45	301	+	327	=	628	4	0	No
14:00 - 15:00	310	+	293	=	603	50	0	No
17:00 - 18:00	272	+	321	=	593	3	0	No
07:15 - 08:15	322	+	253	=	575	18	0	No
17:15 - 18:15	269	+	293	=	562	3	0	No
07:30 - 08:30	310	+	243	=	553	46	0	No
11:15 - 12:15	247	+	285	=	532	71	0	No
17:30 - 18:30	245	+	286	=	531	2	0	No
11:30 - 12:30	263	+	260	=	523	83	0	No
07:45 - 08:45	285	+	234	=	519	47	0	No
07:00 - 08:00	292	+	223	=	515	3	0	No
13:45 - 14:45	261	+	253	=	514	10	0	No
17:45 - 18:45	236	+	268	=	504	0	0	No
11:00 - 12:00	225	+	267	=	492	74	0	No
11:45 - 12:45	251		240		491	85	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 03/27/2023

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

Only 0 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

Veh/Hr Major = **750**

Veh/Hr Minor = **75**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
14:45 - 15:45	349	+	354	=	703	58	0	No
15:15 - 16:15	330	+	361	=	691	31	0	No
15:30 - 16:30	332	+	354	=	686	27	0	No
16:00 - 17:00	334	+	349	=	683	5	0	No
15:00 - 16:00	334	+	343	=	677	29	0	No
15:45 - 16:45	330	+	342	=	672	15	0	No
16:30 - 17:30	331	+	340	=	671	2	0	No
16:15 - 17:15	327	+	344	=	671	1	0	No
14:30 - 15:30	336	+	333	=	669	46	0	No
14:15 - 15:15	333	+	299	=	632	50	0	No
16:45 - 17:45	301	+	327	=	628	4	0	No
14:00 - 15:00	310	+	293	=	603	50	0	No
17:00 - 18:00	272	+	321	=	593	3	0	No
07:15 - 08:15	322	+	253	=	575	18	0	No
17:15 - 18:15	269	+	293	=	562	3	0	No
07:30 - 08:30	310	+	243	=	553	46	0	No
11:15 - 12:15	247	+	285	=	532	71	0	No
17:30 - 18:30	245	+	286	=	531	2	0	No
11:30 - 12:30	263	+	260	=	523	83	0	No
07:45 - 08:45	285	+	234	=	519	47	0	No
07:00 - 08:00	292	+	223	=	515	3	0	No
13:45 - 14:45	261	+	253	=	514	10	0	No
17:45 - 18:45	236	+	268	=	504	0	0	No
11:00 - 12:00	225	+	267	=	492	74	0	No
11:45 - 12:45	251		240		491	85	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 03/27/2023

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

Only 0 hours meet 1A minimums.
Only 0 hours meet 1B minimums.
Warrant is NOT met.

Site Data Required

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

Volume Requirements

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

Veh/Hr Minor = **120 60**

Major Road CSAH 11

Minor Road Sorteberg ECC

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
14:45 - 15:45	349	+	354	=	703	58	0	No
15:15 - 16:15	330	+	361	=	691	31	0	No
15:30 - 16:30	332	+	354	=	686	27	0	No
16:00 - 17:00	334	+	349	=	683	5	0	No
15:00 - 16:00	334	+	343	=	677	29	0	No
15:45 - 16:45	330	+	342	=	672	15	0	No
16:30 - 17:30	331	+	340	=	671	2	0	No
16:15 - 17:15	327	+	344	=	671	1	0	No
14:30 - 15:30	336	+	333	=	669	46	0	No
14:15 - 15:15	333	+	299	=	632	50	0	No
16:45 - 17:45	301	+	327	=	628	4	0	No
14:00 - 15:00	310		293		603	50	0	No

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
14:45 - 15:45	349	+	354	=	703	58	0	No
15:15 - 16:15	330	+	361	=	691	31	0	No
15:30 - 16:30	332	+	354	=	686	27	0	No
16:00 - 17:00	334	+	349	=	683	5	0	No
15:00 - 16:00	334	+	343	=	677	29	0	No
15:45 - 16:45	330	+	342	=	672	15	0	No
16:30 - 17:30	331	+	340	=	671	2	0	No
16:15 - 17:15	327	+	344	=	671	1	0	No
14:30 - 15:30	336	+	333	=	669	46	0	No
14:15 - 15:15	333	+	299	=	632	50	0	No
16:45 - 17:45	301	+	327	=	628	4	0	No
14:00 - 15:00	310		293		603	50	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 03/27/2023

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.

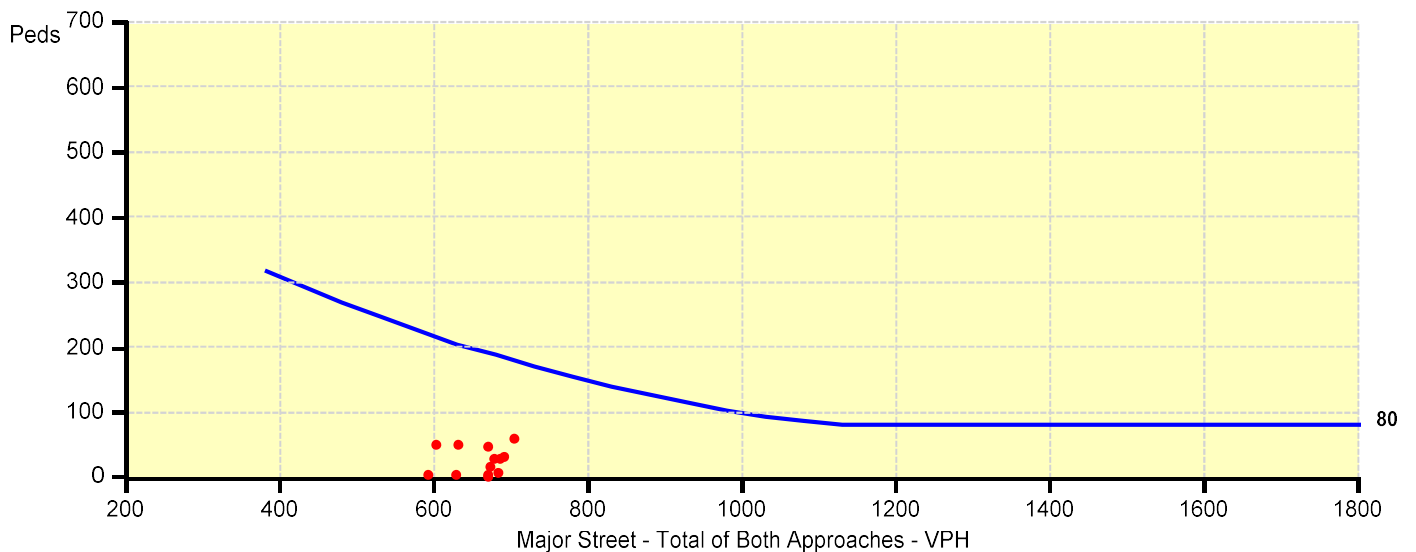
Summary

Only 0 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Time	Major Road CSAH 11				Total	Minor Road Sorteberg ECC		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
14:45 - 15:45	349	+	354	=	703	58	0	No
15:15 - 16:15	330	+	361	=	691	31	0	No
15:30 - 16:30	332	+	354	=	686	27	0	No
16:00 - 17:00	334	+	349	=	683	5	0	No
15:00 - 16:00	334	+	343	=	677	29	0	No
15:45 - 16:45	330	+	342	=	672	15	0	No
16:30 - 17:30	331	+	340	=	671	2	0	No
16:15 - 17:15	327	+	344	=	671	1	0	No
14:30 - 15:30	336	+	333	=	669	46	0	No
14:15 - 15:15	333	+	299	=	632	50	0	No
16:45 - 17:45	301	+	327	=	628	4	0	No
14:00 - 15:00	310		293		603	50	0	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 03/27/2023

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

Only 0 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

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

Time	Major Road CSAH 11				Total	Minor Road Sorteberg ECC		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
14:45 - 15:45	349	+	354	=	703	58	0	No
15:15 - 16:15	330	+	361	=	691	31	0	No
15:30 - 16:30	332	+	354	=	686	27	0	No
16:00 - 17:00	334	+	349	=	683	5	0	No
15:00 - 16:00	334	+	343	=	677	29	0	No
15:45 - 16:45	330	+	342	=	672	15	0	No
16:30 - 17:30	331	+	340	=	671	2	0	No
16:15 - 17:15	327	+	344	=	671	1	0	No
14:30 - 15:30	336	+	333	=	669	46	0	No
14:15 - 15:15	333	+	299	=	632	50	0	No
16:45 - 17:45	301	+	327	=	628	4	0	No
14:00 - 15:00	310		293		603	50	0	No

