

Date : 04/25/23

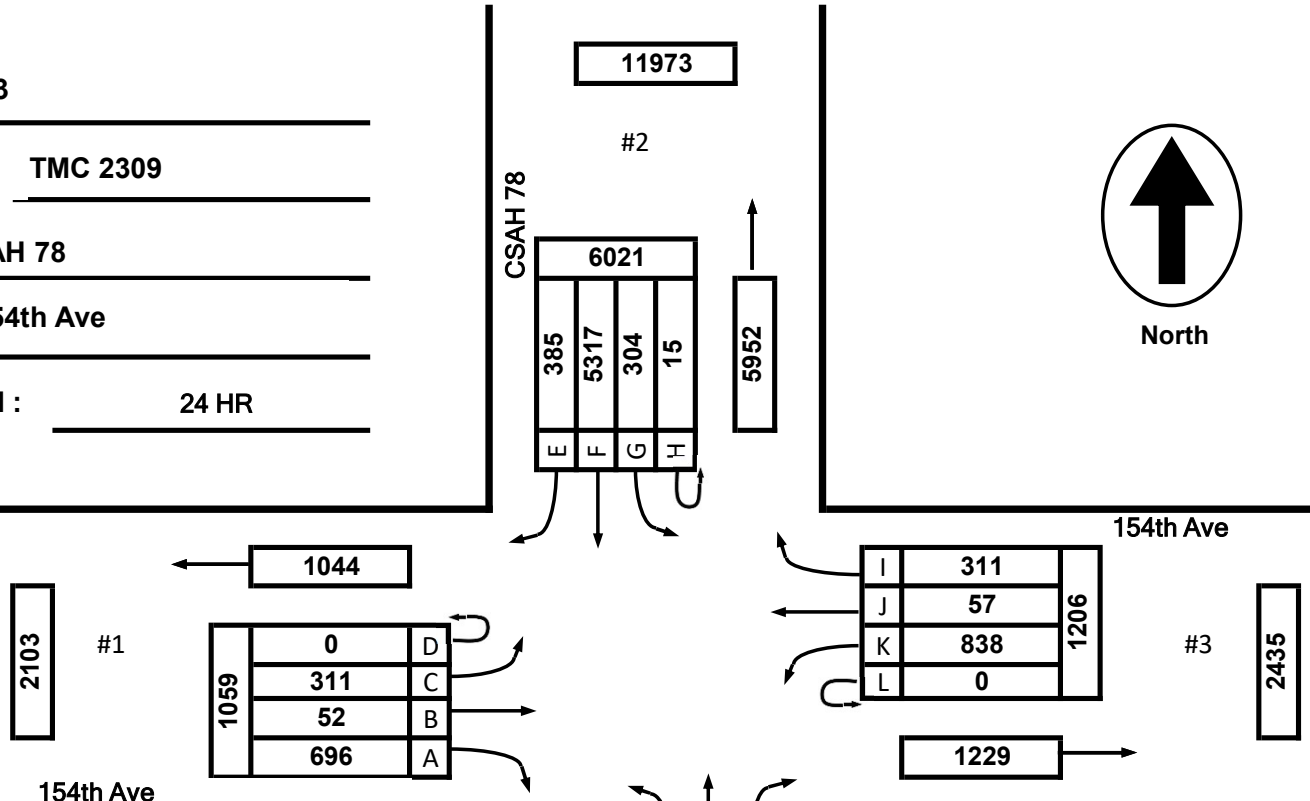
Count Number : TMC 2309

Location : CSAH 78
@ 154th Ave

Collection Period : 24 HR



North



0	D
311	C
52	B
696	A

311	I
57	J
838	K
0	L

32	P
602	O
5315	N
873	M

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

Anoka County Highway Department

Traffic Volume and Turning Movement Study

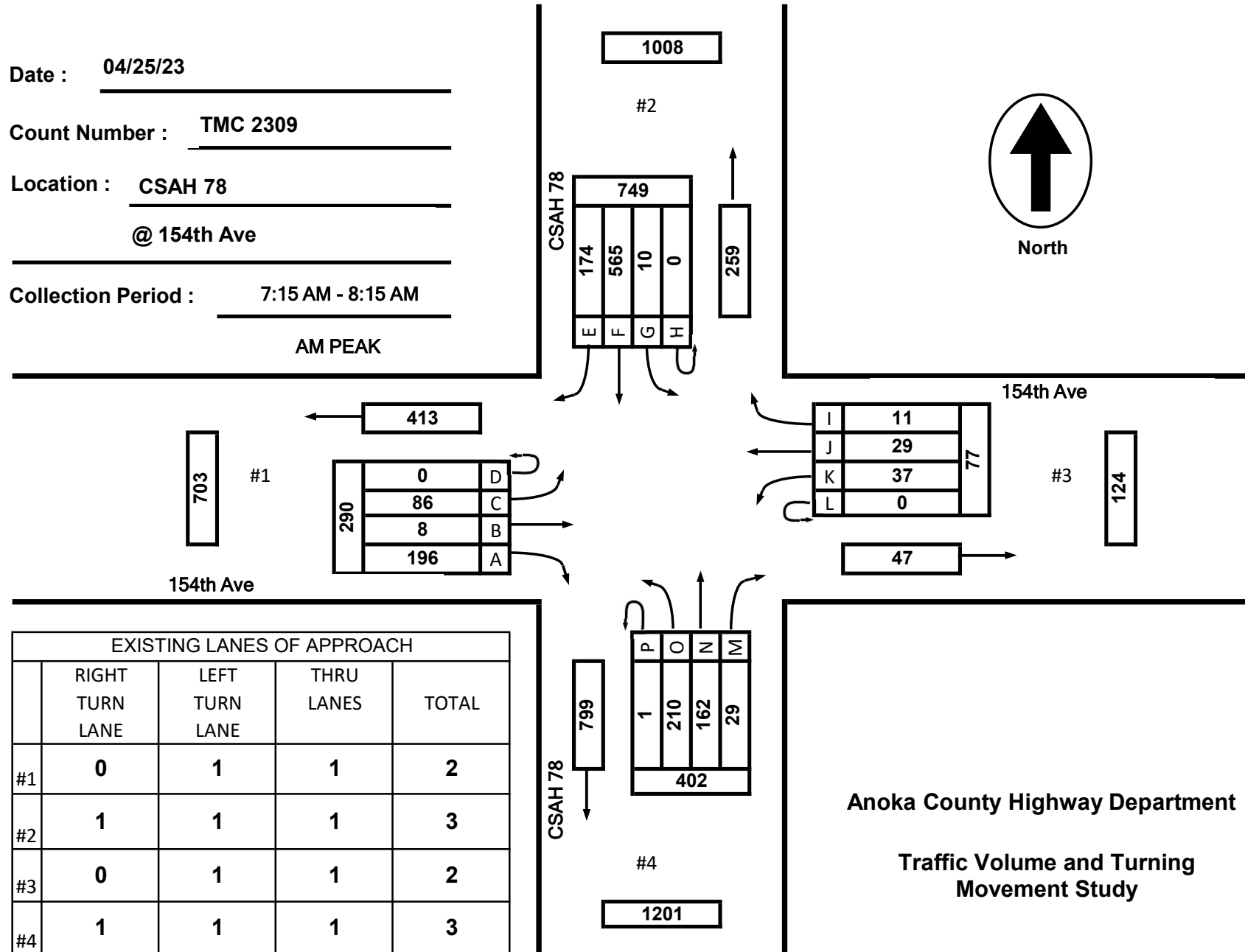
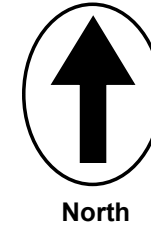
Date : 04/25/23

Count Number : TMC 2309

Location : CSAH 78
@ 154th Ave

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

AM PEAK



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

Anoka County Highway Department

Traffic Volume and Turning Movement Study

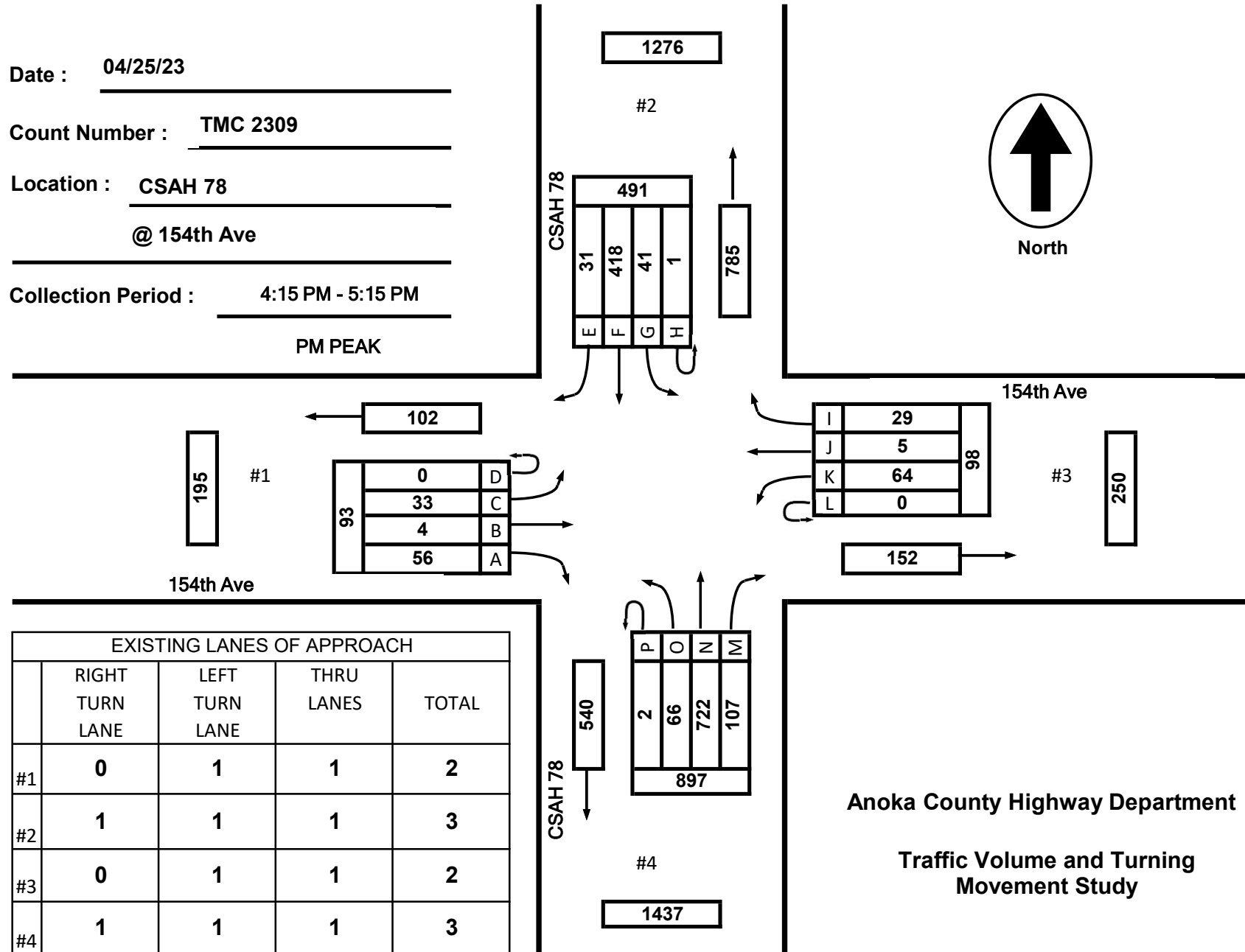
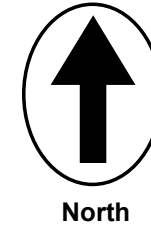
Date : 04/25/23

Count Number : TMC 2309

Location : CSAH 78
@ 154th Ave

Collection Period : 4:15 PM - 5:15 PM

PM PEAK



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

Anoka County Highway Department

Traffic Volume and Turning Movement Study

TMC 2309 - CSAH 78 @ 154th Ave

0 0

Tuesday, April 25, 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	4	0	0	4	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	1	13
12:15 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	8	1	0	0	9	0	0	0	0	0	12
12:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	2	0	0	0	0	0	3
12:45 AM	0	0	1	0	0	1	0	0	0	1	0	1	0	0	2	0	0	0	2	0	0	0	0	0	4
Hourly Total	0	0	8	0	0	8	0	0	0	2	0	2	0	0	20	1	0	0	21	0	1	0	0	0	32
1:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	7
1:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	5
1:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	4
Hourly Total	0	0	5	0	0	5	0	0	0	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	17
2:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
2:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
2:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Hourly Total	0	1	2	0	0	3	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	7
3:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
3:15 AM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	10
3:30 AM	0	2	7	0	0	9	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	12
3:45 AM	0	1	7	0	0	8	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	9
Hourly Total	0	3	21	0	0	24	0	0	0	0	0	0	0	0	9	0	0	0	9	0	0	0	0	0	33
4:00 AM	0	1	13	0	0	14	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	16
4:15 AM	0	0	16	0	0	16	0	2	0	0	0	2	0	0	0	1	0	0	1	0	0	0	0	0	19
4:30 AM	0	0	24	0	0	24	0	0	0	1	0	1	0	0	2	3	0	0	5	0	0	0	0	0	30
4:45 AM	0	2	35	0	0	37	0	2	0	0	0	2	0	0	4	1	0	0	5	0	0	0	0	0	44
Hourly Total	0	3	88	0	0	91	0	5	0	1	0	6	0	0	7	5	0	0	12	0	0	0	0	0	109
5:00 AM	0	0	54	0	0	54	0	0	0	1	0	1	0	1	6	0	0	7	0	0	0	1	0	1	63
5:15 AM	0	1	45	0	0	46	0	4	0	0	0	4	0	1	6	2	0	9	0	0	0	0	0	0	59
5:30 AM	0	2	71	0	0	73	0	4	0	1	0	5	0	0	7	1	0	8	0	0	0	0	0	0	86
5:45 AM	0	1	57	0	0	58	0	5	0	1	1	6	0	1	19	3	2	23	0	0	0	0	0	0	87
Hourly Total	0	4	227	0	0	231	0	13	0	3	1	16	0	3	38	6	2	47	0	0	0	1	0	1	295
6:00 AM	0	2	90	0	0	92	0	8	0	1	1	9	1	1	12	1	0	15	0	0	0	0	0	0	116
6:15 AM	0	0	100	0	0	100	0	9	0	0	0	9	0	0	24	1	0	25	0	0	0	0	1	0	134
6:30 AM	0	2	137	1	0	140	0	11	0	2	0	13	0	1	23	3	0	27	0	0	1	0	0	1	181
6:45 AM	0	2	117	3	0	122	0	14	1	2	0	17	0	1	38	0	0	39	0	0	0	1	1	1	179
Hourly Total	0	6	444	4	0	454	0	42	1	5	1	48	1	3	97	5	0	106	0	0	1	1	2	2	610
7:00 AM	0	2	185	4	0	191	0	17	0	2	0	19	0	6	39	1	0	46	0	1	0	1	0	2	258
7:15 AM	0	2	222	20	0	244	0	16	1	4	0	21	0	27	32	4	2	63	0	8	1	17	1	26	354
7:30 AM	0	5	155	24	0	184	0	8	1	3	0	12	0	43	46	11	3	100	0	5	0	28	0	33	329
7:45 AM	0	1	94	65	0	160	0	5	7	2	3	14	1	91	43	9	16	144	0	23	1	71	0	95	413
Hourly Total	0	10	656	113	0	779	0	46	9	11	3	66	1	167	160	25	21	353	0	37	2	117	1	156	1354

TMC 2309 - CSAH 78 @ 154th Ave

0 0

Tuesday, April 25, 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	2	94	65	0	161	0	8	20	2	0	30	0	49	41	5	21	95	0	50	6	80	2	136	422
8:15 AM	1	3	82	22	0	108	0	7	6	0	0	13	0	20	55	4	7	79	0	21	8	56	0	85	285
8:30 AM	0	0	110	1	0	111	0	6	0	3	1	9	0	1	47	6	2	54	0	0	0	6	2	6	180
8:45 AM	0	2	82	0	0	84	0	4	0	2	0	6	1	6	48	8	0	63	0	0	0	4	2	4	157
Hourly Total	1	7	368	88	0	464	0	25	26	7	1	58	1	76	191	23	30	291	0	71	14	146	6	231	1044
9:00 AM	0	3	108	0	0	111	0	6	2	2	0	10	0	2	48	5	2	55	0	1	2	2	0	5	181
9:15 AM	0	1	120	1	0	122	0	7	0	3	0	10	0	6	62	10	0	78	0	0	0	4	0	4	214
9:30 AM	0	6	65	1	0	72	0	5	0	1	2	6	1	4	43	12	0	60	0	1	0	6	2	7	145
9:45 AM	0	0	71	2	0	73	0	8	0	4	0	12	0	4	46	13	0	63	0	0	0	1	2	1	149
Hourly Total	0	10	364	4	0	378	0	26	2	10	2	38	1	16	199	40	2	256	0	2	2	13	4	17	689
10:00 AM	0	6	70	0	0	76	0	18	0	4	0	22	1	3	50	11	0	65	0	0	1	0	0	1	164
10:15 AM	0	5	77	1	0	83	0	8	0	0	0	8	0	3	47	6	0	56	0	1	0	3	0	4	151
10:30 AM	0	3	55	0	1	58	0	6	0	0	0	6	0	3	53	6	0	62	0	0	0	2	1	2	128
10:45 AM	0	4	50	0	0	54	0	4	1	3	0	8	1	2	60	15	1	78	0	0	1	1	2	2	142
Hourly Total	0	18	252	1	1	271	0	36	1	7	0	44	2	11	210	38	1	261	0	1	2	6	3	9	585
11:00 AM	0	0	52	3	0	55	0	7	1	4	1	12	1	3	52	13	0	69	0	2	0	1	1	3	139
11:15 AM	1	5	42	2	0	50	0	9	0	1	0	10	1	5	43	8	1	57	0	3	0	11	0	14	131
11:30 AM	0	7	56	4	0	67	0	10	0	6	1	16	1	5	72	17	0	95	0	0	0	5	1	5	183
11:45 AM	0	3	59	2	0	64	0	16	0	7	4	23	1	4	60	19	0	84	0	1	0	6	1	7	178
Hourly Total	1	15	209	11	0	236	0	42	1	18	6	61	4	17	227	57	1	305	0	6	0	23	3	29	631
12:00 PM	0	5	68	0	0	73	0	11	0	2	1	13	1	1	51	20	0	73	0	0	0	6	1	6	165
12:15 PM	0	4	66	2	0	72	0	13	1	5	0	19	0	7	66	14	2	87	0	0	1	2	3	3	181
12:30 PM	0	2	44	0	0	46	0	14	0	4	0	18	0	0	68	9	0	77	0	2	1	6	0	9	150
12:45 PM	0	2	59	1	0	62	0	19	0	1	2	20	0	4	56	16	1	76	0	0	0	2	0	2	160
Hourly Total	0	13	237	3	0	253	0	57	1	12	3	70	1	12	241	59	3	313	0	2	2	16	4	20	656
1:00 PM	0	2	54	0	0	56	0	20	0	7	2	27	0	5	66	11	0	82	0	1	0	1	1	2	167
1:15 PM	0	5	69	0	0	74	0	11	0	7	1	18	0	5	66	20	1	91	0	1	1	2	0	4	187
1:30 PM	0	5	76	0	0	81	0	11	1	4	0	16	1	2	69	14	0	86	0	1	0	3	0	4	187
1:45 PM	0	4	61	0	0	65	0	7	0	2	1	9	1	3	62	4	0	70	0	0	0	3	0	3	147
Hourly Total	0	16	260	0	0	276	0	49	1	20	4	70	2	15	263	49	1	329	0	3	1	9	1	13	688
2:00 PM	0	3	66	5	0	74	0	10	0	5	1	15	1	9	86	13	1	109	0	2	0	8	0	10	208
2:15 PM	0	4	76	6	0	86	0	15	0	2	1	17	1	3	92	9	0	105	0	2	0	3	0	5	213
2:30 PM	0	5	61	9	0	75	0	11	1	7	0	19	3	20	133	24	1	180	0	1	0	5	0	6	280
2:45 PM	0	6	89	12	0	107	0	20	2	3	0	25	0	17	137	31	1	185	0	1	0	3	0	4	321
Hourly Total	0	18	292	32	0	342	0	56	3	17	2	76	5	49	448	77	3	579	0	6	0	19	0	25	1022
3:00 PM	0	15	79	14	0	108	0	16	2	13	1	31	0	10	120	22	82	152	0	38	4	42	0	84	375
3:15 PM	1	3	75	8	0	87	0	19	0	6	1	25	1	9	113	18	4	141	0	22	3	40	0	65	318
3:30 PM	0	5	68	1	0	74	0	12	0	5	0	17	1	0	154	13	10	168	0	7	0	12	1	19	278
3:45 PM	0	11	72	2	0	85	0	10	0	3	1	13	1	7	127	23	5	158	0	3	2	10	1	15	271
Hourly Total	1	34	294	25	0	354	0	57	2	27	3	86	3	26	514	76	101	619	0	70	9	104	2	183	1242

TMC 2309 - CSAH 78 @ 154th Ave

0 0

Tuesday, April 25, 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	8	94	5	0	107	0	24	0	10	2	34	0	9	167	16	0	192	0	5	0	15	0	20	0	21	97	4	0	122
4:15 PM	0	21	97	4	0	122	0	13	0	9	1	22	1	10	192	20	4	223	0	4	0	9	0	13	0	6	99	6	0	111
4:30 PM	0	6	99	6	0	111	0	19	1	9	0	29	0	11	179	21	3	211	0	1	0	6	2	7	0	4	120	13	0	137
4:45 PM	0	4	120	13	0	137	0	17	3	4	0	24	1	20	170	28	3	219	0	6	0	6	2	12	0	4	99	6	0	111
Hourly Total	0	39	410	28	0	477	0	73	4	32	3	109	2	50	708	85	10	845	0	16	0	36	4	52	0	39	410	28	0	477
5:00 PM	1	10	102	8	0	121	0	15	1	7	0	23	0	25	181	38	10	244	0	22	4	35	0	61	0	5	116	0	0	123
5:15 PM	2	5	116	0	0	123	0	22	1	17	1	40	0	5	145	29	0	179	0	1	1	4	3	6	0	9	81	3	0	94
5:30 PM	1	9	81	3	0	94	0	18	0	9	0	27	3	10	149	32	0	194	0	2	0	7	0	9	0	8	97	18	0	123
5:45 PM	0	8	97	18	0	123	0	30	1	8	0	39	1	27	129	28	3	185	0	2	0	3	0	5	0	8	97	18	0	123
Hourly Total	4	32	396	29	0	461	0	85	3	41	1	129	4	67	604	127	13	802	0	27	5	49	3	81	0	32	396	29	0	461
6:00 PM	0	9	68	4	0	81	0	22	0	5	0	27	1	8	112	17	4	138	0	1	0	4	1	5	0	6	64	3	0	73
6:15 PM	0	6	64	3	0	73	0	23	1	7	0	31	0	2	117	15	0	134	0	3	0	5	1	8	0	10	62	6	0	78
6:30 PM	0	10	62	6	0	78	0	25	0	12	0	37	1	11	103	22	0	137	0	2	1	8	1	11	0	9	64	21	0	94
6:45 PM	0	9	64	21	0	94	0	27	1	9	0	37	0	32	78	13	3	123	0	17	4	21	2	42	0	9	64	21	0	94
Hourly Total	0	34	258	34	0	326	0	97	2	33	0	132	2	53	410	67	7	532	0	23	5	38	5	66	0	34	258	34	0	326
7:00 PM	2	7	79	5	0	93	0	24	0	10	2	34	1	8	83	21	1	113	0	17	3	51	0	71	0	7	59	3	0	69
7:15 PM	0	7	59	3	0	69	0	13	0	6	0	19	1	5	81	18	2	105	0	3	1	2	3	6	0	8	62	0	0	70
7:30 PM	0	8	62	0	0	70	0	11	0	12	2	23	1	3	99	13	0	116	0	2	0	12	1	14	2	3	47	2	0	54
7:45 PM	2	3	47	2	0	54	0	8	1	6	5	15	0	9	71	16	4	96	0	2	2	17	2	21	0	8	62	0	0	70
Hourly Total	4	25	247	10	0	286	0	56	1	34	9	91	3	25	334	68	7	430	0	24	6	82	6	112	2	3	47	2	0	54
8:00 PM	3	1	33	0	0	37	0	13	0	6	0	19	0	3	79	10	1	92	0	13	2	21	1	36	0	1	33	0	0	37
8:15 PM	1	2	53	2	0	58	0	15	0	3	0	18	0	0	91	12	1	103	0	1	0	3	0	4	0	2	53	2	0	58
8:30 PM	0	3	35	0	0	38	0	10	0	5	0	15	0	1	75	12	0	88	0	0	0	2	0	2	0	3	35	0	0	38
8:45 PM	0	2	29	1	0	32	0	10	0	4	1	14	0	1	68	6	3	75	0	6	0	1	1	7	0	2	29	1	0	32
Hourly Total	4	8	150	3	0	165	0	48	0	18	1	66	0	5	313	40	5	358	0	20	2	27	2	49	0	2	29	1	0	32
9:00 PM	0	3	21	0	0	24	0	6	0	1	0	7	0	2	47	9	0	58	0	0	0	0	0	0	0	3	21	0	0	24
9:15 PM	0	0	19	0	0	19	0	6	0	4	0	10	0	4	47	1	1	52	0	0	0	0	0	0	0	0	19	0	0	19
9:30 PM	0	2	18	0	0	20	0	4	0	1	0	5	0	0	57	2	2	59	0	1	1	7	0	9	0	2	18	0	0	20
9:45 PM	0	0	15	0	0	15	0	3	0	2	0	5	0	0	37	5	0	42	0	0	0	0	0	0	0	0	15	0	0	15
Hourly Total	0	5	73	0	0	78	0	19	0	8	0	27	0	6	188	17	3	211	0	1	1	7	0	9	0	0	15	0	0	15
10:00 PM	0	0	17	0	0	17	0	1	0	1	0	2	0	0	29	0	2	29	0	0	0	0	0	0	0	0	17	0	0	17
10:15 PM	0	0	6	0	0	6	0	2	0	2	0	4	0	0	26	1	0	27	0	0	0	0	0	0	0	0	6	0	0	6
10:30 PM	0	0	9	0	0	9	0	0	0	1	0	1	0	0	12	1	0	13	0	0	0	0	0	0	0	0	9	0	0	9
10:45 PM	0	1	5	0	0	6	0	1	0	0	0	1	0	0	18	2	0	20	0	0	0	0	0	0	0	1	5	0	0	6
Hourly Total	0	1	37	0	0	38	0	4	0	4	0	8	0	0	85	4	2	89	0	0	0	0	0	0	0	1	37	0	0	38
11:00 PM	0	1	6	0	0	7	0	0	0	0	0	0	0	1	3	1	0	5	0	0	0	1	0	1	0	1	6	0	0	7
11:15 PM	0	1	2	0	0	3	0	0	0	1	0	1	0	0	8	0	0	8	0	0	0	0	0	0	0	1	2	0	0	3
11:30 PM	0	0	6	0	0	6	0	1	0	0	0	1	0	0	13	1	0	14	0	0	0	0	0	0	0	0	6	0	0	6
11:45 PM	0	0	5	0	0	5	0	1	0	0	0	1	0	0	10	1	0	11	0	1	0	1	0	2	0	0	5	0	0	5
Hourly Total	0	2	19	0	0	21	0	2	0	1	0	3	0	1	34	3	0	38	0	1	0	2	0	3	0	0	5	0	0	5
DAILY TOTAL	15	304	5317	385	1	6021	0	838	57	311	40	1206	32	602	5315	873	212	6822	0	311	52	696	46	1059	15108					
Cars	15	295	5182	385	1	5877	0	835	57	309	31	1201	32	598	5214	859	149	6703	0	306	52	694	42	1052	14833					
Heavy Vehicles	0	9	135	0	0	144	0	3	0	2	9	5	0	4	101	14	63	119	0	5	0	2	4	7	275					
Heavy Vehicle %	0.00%	2.96%	2.54%	0.00%	0.00%	2.39%	0.00%	0.36%	0.00%	0.64%	22.50%	0.41%	0.00%	0.66%	1.90%	1.60%	29.72%	1.74%	0.00%	1.61%	0.00%	0.29%	8.70%	0.66%	1.82%					

TMC 2309 - CSAH 78 @ 154th Ave

0 0

Tuesday, April 25, 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							
7:15 AM	0	2	222	20	0	244	0	16	1	4	0	21	0	27	32	4	2	63	0	8	1	17	1	26	0	5	0	28	0	33	354
7:30 AM	0	5	155	24	0	184	0	8	1	3	0	12	0	43	46	11	3	100	0	5	0	28	0	33	329						
7:45 AM	0	1	94	65	0	160	0	5	7	2	3	14	1	91	43	9	16	144	0	23	1	71	0	95	413						
8:00 AM	0	2	94	65	0	161	0	8	20	2	0	30	0	49	41	5	21	95	0	50	6	80	2	136	422						
Peak Hour Total	0	10	565	174	0	749	0	37	29	11	3	77	1	210	162	29	42	402	0	86	8	196	3	290	1518						
PHF	0.000	0.500	0.636	0.669	0.000	0.767	0.000	0.578	0.363	0.688	0.250	0.642	0.250	0.577	0.880	0.659	0.500	0.698	0.000	0.430	0.333	0.613	0.375	0.533	0.899						

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	
4:15 PM	0	21	97	4	0	122	0	13	0	9	1	22	1	10	192	20	4	223	0	4	0	9	0	13	380
4:30 PM	0	6	99	6	0	111	0	19	1	9	0	29	0	11	179	21	3	211	0	1	0	6	2	7	358
4:45 PM	0	4	120	13	0	137	0	17	3	4	0	24	1	20	170	28	3	219	0	6	0	6	2	12	392
5:00 PM	1	10	102	8	0	121	0	15	1	7	0	23	0	25	181	38	10	244	0	22	4	35	0	61	449
Peak Hour Total	1	41	418	31	0	491	0	64	5	29	1	98	2	66	722	107	20	897	0	33	4	56	4	93	1579
PHF	0.250	0.488	0.871	0.596	0.000	0.896	0.000	0.842	0.417	0.806	0.250	0.845	0.500	0.660	0.940	0.704	0.500	0.919	0.000	0.375	0.250	0.400	0.500	0.381	0.879

Total Vehicles On Leg				11973			
Vehicles Entering Intersection		6021		Vehicles Exiting Intersection		5952	
Southbound							
Cars	385	5182	295	15	1		
Heavy	0	135	9	0	0		
Total	385	5317	304	15	1		



Total Vehicles on Leg 2103	Vehicles Entering Intersection 1059	Eastbound	Cars	42	4	46
			Heavy	0	0	0
			Total	306	5	311
	Vehicles Exiting Intersection 1044		Cars	52	0	52
			Heavy	694	2	696



Daily Volumes

Cars	309	2	311
Heavy	57	0	57
Total	835	3	838
Cars	0	0	0
Heavy	31	9	40



Total Vehicles on Leg 2435

Cars	149	32	598	5214	859
Heavy	63	0	4	101	14
Total	212	32	602	5315	873
Northbound					
Vehicles Entering Intersection			6822		
Vehicles Exiting Intersection			6883		
Total Vehicles On Leg			13705		



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
04/25/2023	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	0	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	0	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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	0	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	0	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	0	0	0	0	0	0	0	0	0	0
	5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	6:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
	6:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
	6:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
	7:00	0	0	3	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	7:15	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	1	1	0	0	0	0	0	0	0
	7:30	0	0	2	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0
	7:45	0	0	4	0	0	0	0	0	0	1	0	0	0	0	2	0	8	0	0	0	0	0	0	0
	8:00	0	1	16	0	0	0	0	0	0	0	0	0	0	0	2	2	10	0	0	0	0	0	0	0
	8:15	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
	8:30	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
	8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
	9:00	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	9:15	0	0	10	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
	9:30	0	0	3	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	1	0	0
	9:45	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
	10:00	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	10:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
	10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
	10:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
	11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	0	0	0
	11:15	0	1	0	0	0	0	0	1	0	0	0	0	0	1	3	0	1	0	0	0	0	1	0	0
	11:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45	0	0	6	0	0	0	0	0	0	1	0	0	0	0	1	4	0	0	0	0	1	0	0	0

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 05/26/2023

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 78

Number of Lanes : 1

Total Approach Volume: 6,822

Southbound: CSAH 78

Number of Lanes : 1

Total Approach Volume: 6,021

Minor Street Approaches

Eastbound: Oak View Middle School

Number of Lanes : 1

Total Approach Volume: 1,059

Westbound: 154th Ave NW

Number of Lanes : 1

Total Approach Volume: 1,206

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 7 hours, 8 are needed

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

Required volumes reached for 12 hours, 8 are needed

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

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

Required 1B volumes reached for 14 hours, 8 are needed

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

Number of hours (8) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (22) volumes exceed minimum >= required (1). Delay data not evaluated.

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

Volumes exceed minimums for at least one hour period.

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

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

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

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

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

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

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 05/26/2023

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

Site Data Required

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

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **350**

Veh/Hr Minor = **105**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 78					Oak View Middle School		
16:00 - 17:00	845	+	477	=	1322	52	109	Yes
17:00 - 18:00	802	+	461	=	1263	81	129	Yes
07:00 - 08:00	353	+	779	=	1132	156	66	Yes
14:30 - 15:30	658	+	377	=	1035	159	100	Yes
18:00 - 19:00	532	+	326	=	858	66	132	Yes
08:00 - 09:00	291	+	464	=	755	231	58	Yes
19:00 - 20:00	430	+	286	=	716	112	91	Yes
15:45 - 16:45	784	+	425	=	1209	55	98	No
15:30 - 16:30	741	+	388	=	1129	67	86	No
14:15 - 15:15	622	+	376	=	998	99	92	No
06:45 - 07:45	248	+	741	=	989	62	69	No
14:00 - 15:00	579	+	342	=	921	25	76	No
06:30 - 07:30	175	+	697	=	872	30	70	No
13:45 - 14:45	464	+	300	=	764	24	60	No
06:15 - 07:15	137	+	553	=	690	4	58	No
13:30 - 14:30	370	+	306	=	676	22	57	No
13:15 - 14:15	356	+	294	=	650	21	58	No
09:00 - 10:00	256	+	378	=	634	17	38	No
11:30 - 12:30	339	+	276	=	615	21	71	No
09:15 - 10:15	266	+	343	=	609	13	50	No
12:45 - 13:45	335	+	273	=	608	12	81	No
13:00 - 14:00	329	+	276	=	605	13	70	No
11:45 - 12:45	321	+	255	=	576	25	73	No
12:00 - 13:00	313	+	253	=	566	20	70	No
12:30 - 13:30	326		238		564	17	83	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 05/26/2023

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

12 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **525**

Veh/Hr Minor = **52**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 78					Oak View Middle School		
16:00 - 17:00	845	+	477	=	1322	52	109	Yes
17:00 - 18:00	802	+	461	=	1263	81	129	Yes
07:15 - 08:15	402	+	749	=	1151	290	77	Yes
15:00 - 16:00	619	+	354	=	973	183	86	Yes
14:00 - 15:00	579	+	342	=	921	25	76	Yes
18:00 - 19:00	532	+	326	=	858	66	132	Yes
19:00 - 20:00	430	+	286	=	716	112	91	Yes
06:15 - 07:15	137	+	553	=	690	4	58	Yes
08:15 - 09:15	251	+	414	=	665	100	38	Yes
13:00 - 14:00	329	+	276	=	605	13	70	Yes
12:00 - 13:00	313	+	253	=	566	20	70	Yes
11:00 - 12:00	305	+	236	=	541	29	61	Yes
09:15 - 10:15	266	+	343	=	609	13	50	No
06:00 - 07:00	106	+	454	=	560	2	48	No
09:30 - 10:30	244	+	304	=	548	13	48	No
09:45 - 10:45	246	+	290	=	536	8	48	No
10:00 - 11:00	261	+	271	=	532	9	44	No
10:45 - 11:45	299	+	226	=	525	24	46	No
20:00 - 21:00	358	+	165	=	523	49	66	No
10:15 - 11:15	265	+	250	=	515	11	34	No
10:30 - 11:30	266	+	217	=	483	21	36	No
05:45 - 06:45	90	+	390	=	480	1	37	No
20:15 - 21:15	324	+	152	=	476	13	54	No
05:30 - 06:30	71	+	323	=	394	0	29	No
20:30 - 21:30	273		113		386	9	46	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 05/26/2023

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

8 hours meet 1A minimums.
14 hours meet 1B minimums.
Warrant IS met.

Site Data Required

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

Volume Requirements

Rural Factor of 70% applied
Warrant 1A 1B
Veh/Hr Major = **280 420**

Veh/Hr Minor = **84 42**

Major Road CSAH 78

Minor Road Oak View Middle School

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
16:15 - 17:15	897	+	491	=	1388	93	98	Yes
07:00 - 08:00	353	+	779	=	1132	156	66	Yes
17:15 - 18:15	696	+	421	=	1117	25	133	Yes
15:15 - 16:15	659	+	353	=	1012	119	89	Yes
14:15 - 15:15	622	+	376	=	998	99	92	Yes
18:15 - 19:15	507	+	338	=	845	132	139	Yes
08:00 - 09:00	291	+	464	=	755	231	58	Yes
12:15 - 13:15	322	+	236	=	558	16	84	Yes
06:45 - 07:45	248	+	741	=	989	62	69	No
14:00 - 15:00	579	+	342	=	921	25	76	No
06:30 - 07:30	175	+	697	=	872	30	70	No
13:45 - 14:45	464	+	300	=	764	24	60	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:45 - 17:45	836	+	475	=	1311	88	114	Yes
15:45 - 16:45	784	+	425	=	1209	55	98	Yes
07:00 - 08:00	353	+	779	=	1132	156	66	Yes
14:45 - 15:45	646	+	376	=	1022	172	98	Yes
17:45 - 18:45	594	+	355	=	949	29	134	Yes
18:45 - 19:45	457	+	326	=	783	133	113	Yes
13:45 - 14:45	464	+	300	=	764	24	60	Yes
08:00 - 09:00	291	+	464	=	755	231	58	Yes
09:15 - 10:15	266	+	343	=	609	13	50	Yes
12:45 - 13:45	335	+	273	=	608	12	81	Yes
11:45 - 12:45	321	+	255	=	576	25	73	Yes
19:45 - 20:45	379	+	187	=	566	63	67	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 05/26/2023

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.

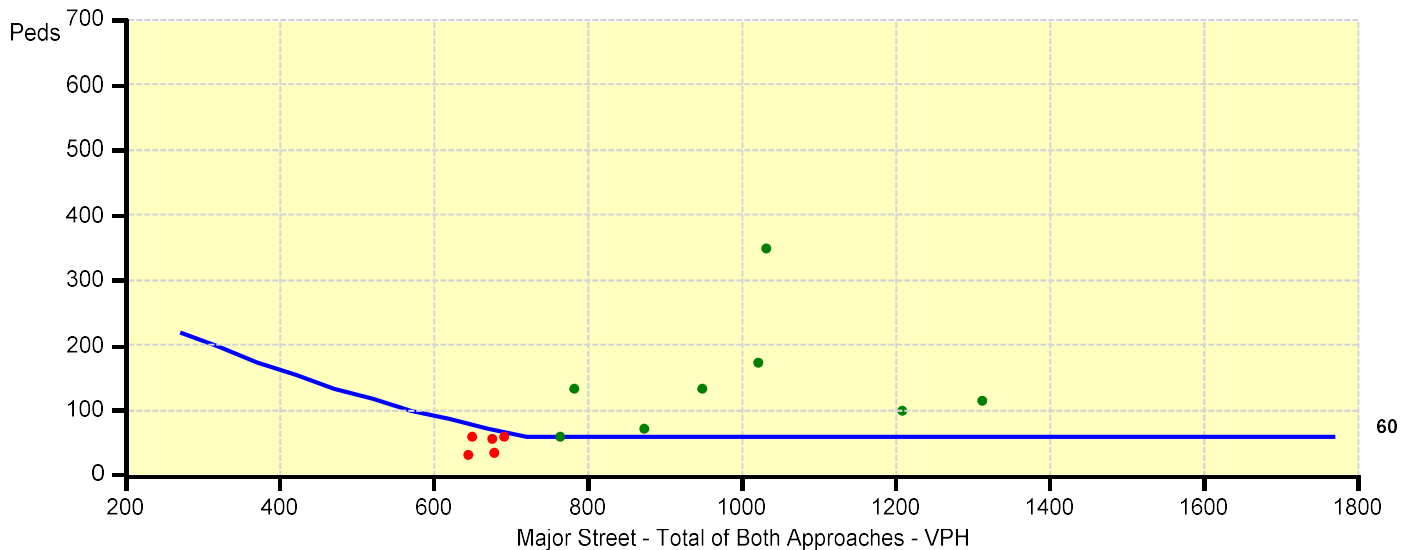
Summary

8 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 78				Total	Minor Road Oak View Middle School		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:45 - 17:45	836	+	475	=	1311	88	114	Yes
15:45 - 16:45	784	+	425	=	1209	55	98	Yes
07:30 - 08:30	418	+	613	=	1031	349	69	Yes
14:45 - 15:45	646	+	376	=	1022	172	98	Yes
17:45 - 18:45	594	+	355	=	949	29	134	Yes
06:30 - 07:30	175	+	697	=	872	30	70	Yes
18:45 - 19:45	457	+	326	=	783	133	113	Yes
13:45 - 14:45	464	+	300	=	764	24	60	Yes
06:15 - 07:15	137	+	553	=	690	4	58	No
08:30 - 09:30	250	+	428	=	678	19	35	No
13:30 - 14:30	370	+	306	=	676	22	57	No
13:15 - 14:15	356	+	294	=	650	21	58	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 05/26/2023

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

24 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 78					Oak View Middle School		
16:15 - 17:15	897	+	491	=	1388	93	98	Yes
16:30 - 17:30	853	+	492	=	1345	86	116	Yes
16:00 - 17:00	845	+	477	=	1322	52	109	Yes
16:45 - 17:45	836	+	475	=	1311	88	114	Yes
17:00 - 18:00	802	+	461	=	1263	81	129	Yes
15:45 - 16:45	784	+	425	=	1209	55	98	Yes
07:15 - 08:15	402	+	749	=	1151	290	77	Yes
07:00 - 08:00	353	+	779	=	1132	156	66	Yes
15:30 - 16:30	741	+	388	=	1129	67	86	Yes
17:15 - 18:15	696	+	421	=	1117	25	133	Yes
14:30 - 15:30	658	+	377	=	1035	159	100	Yes
07:30 - 08:30	418		613		1031	349	69	Yes

