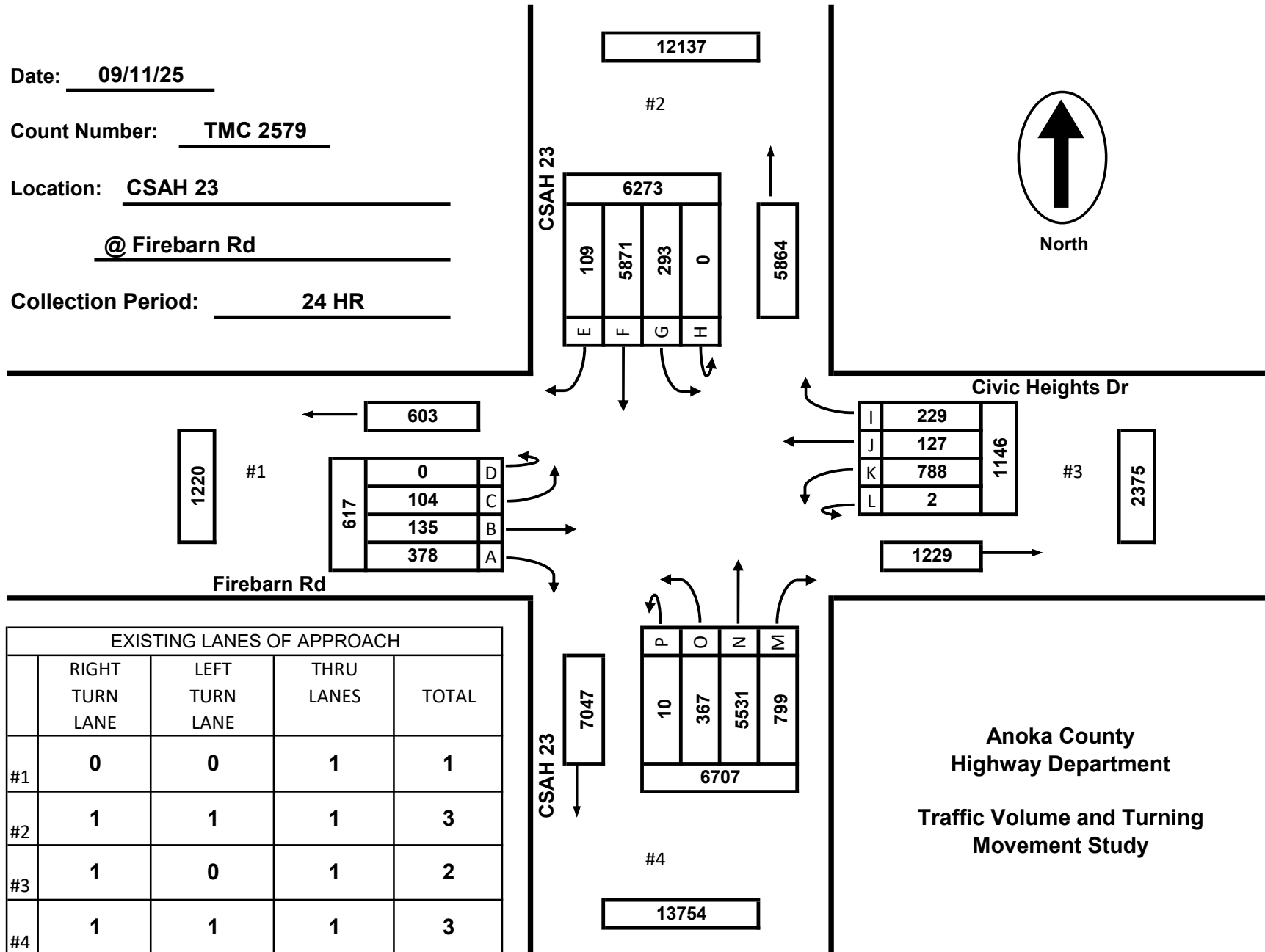


Date: 09/11/25

Count Number: TMC 2579

Location: CSAH 23
@ Firebarn Rd

Collection Period: 24 HR



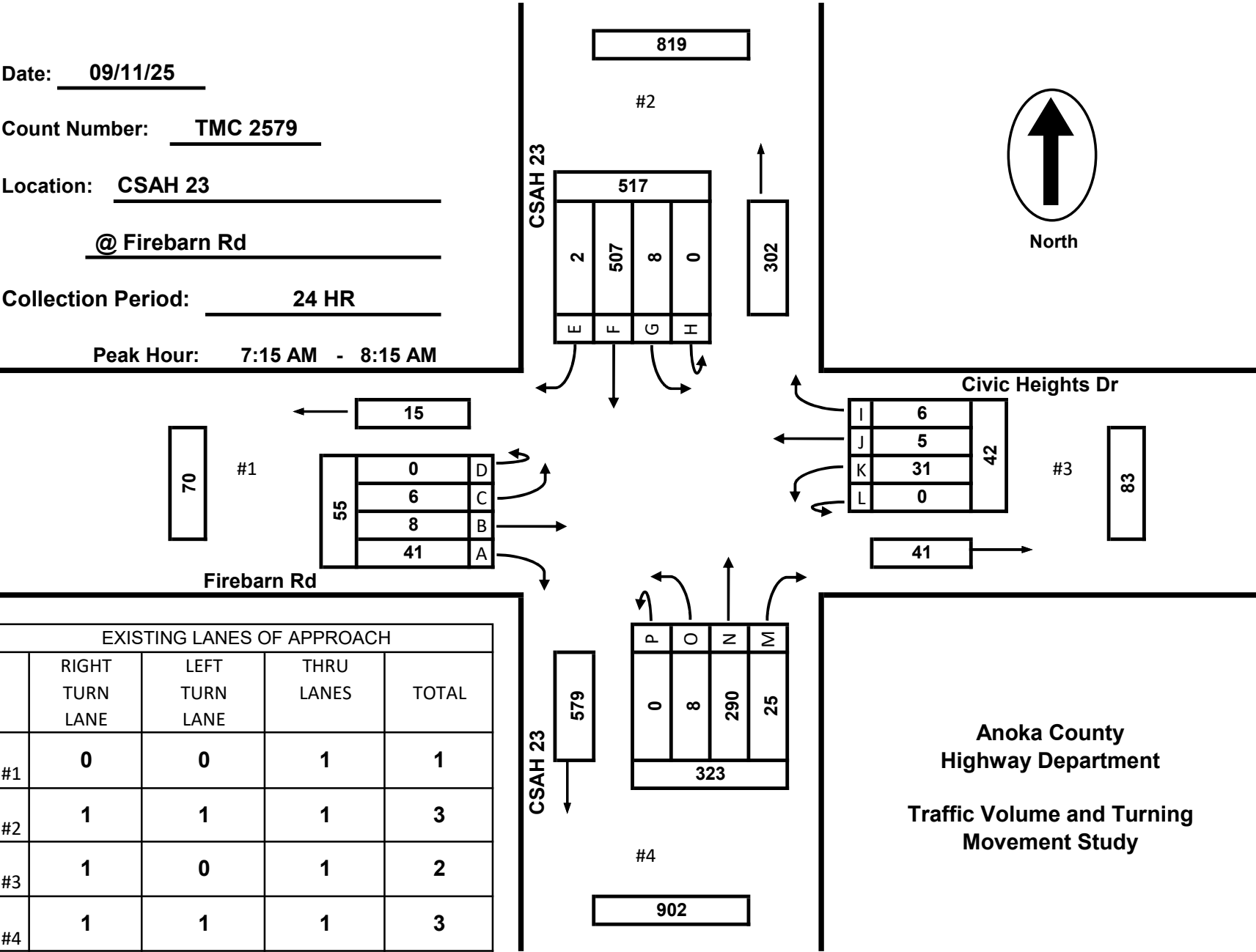
Date: 09/11/25

Count Number: TMC 2579

Location: CSAH 23
@ Firebarn Rd

Collection Period: 24 HR

Peak Hour: 7:15 AM - 8:15 AM



Anoka County
Highway Department
Traffic Volume and Turning
Movement Study

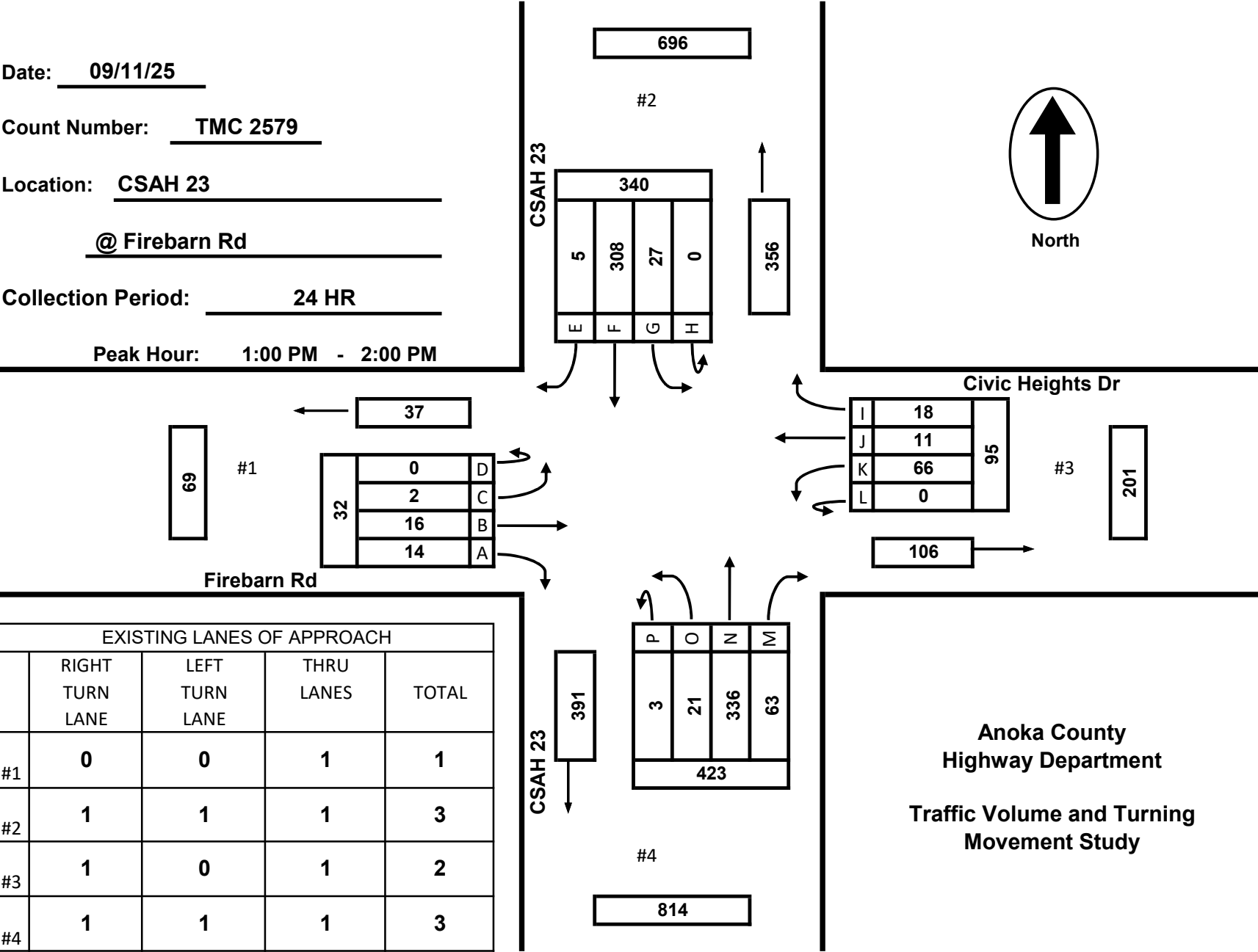
Date: 09/11/25

Count Number: TMC 2579

Location: CSAH 23
@ Firebarn Rd

Collection Period: 24 HR

Peak Hour: 1:00 PM - 2:00 PM



Anoka County
Highway Department

Traffic Volume and Turning
Movement Study

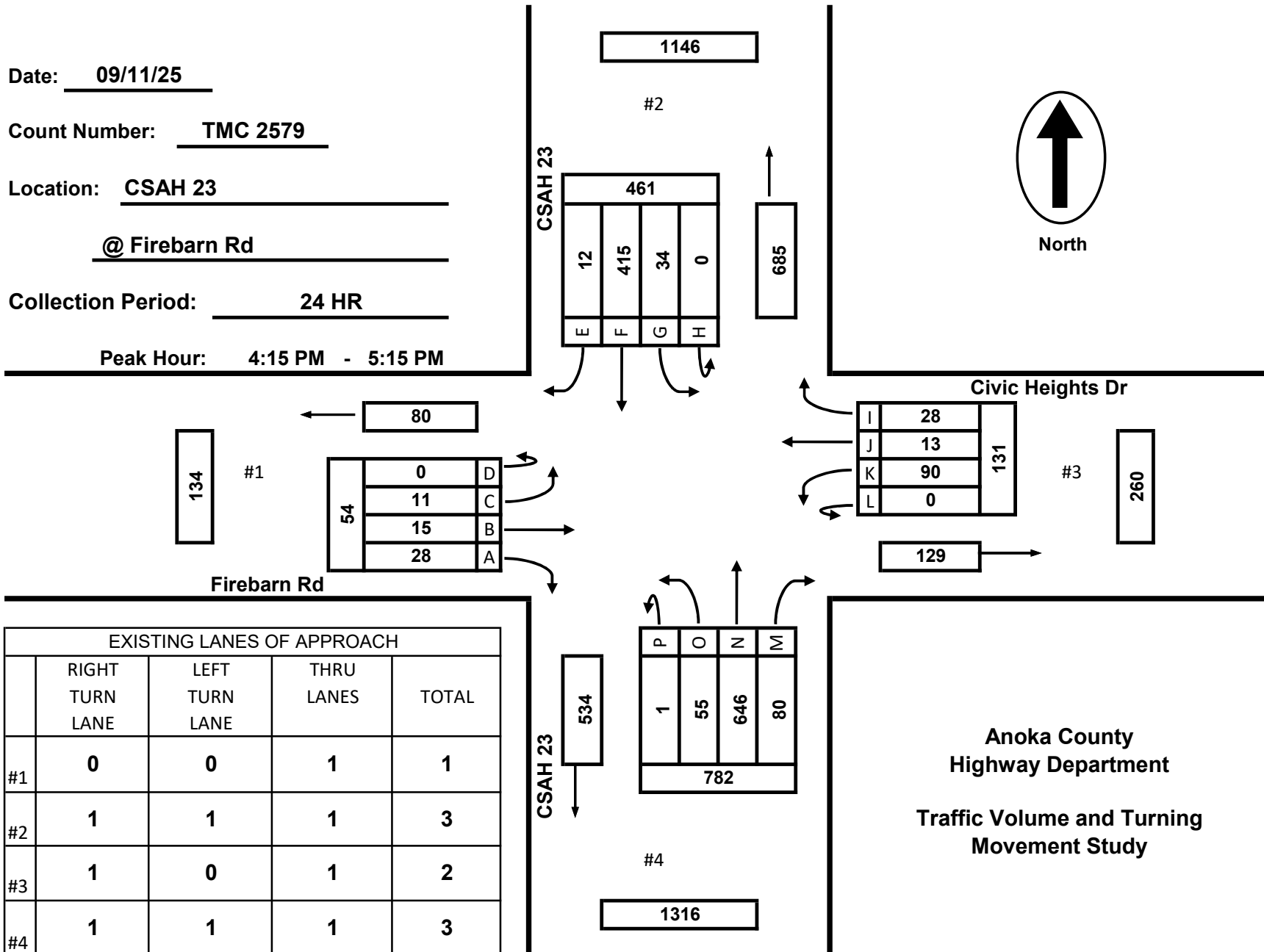
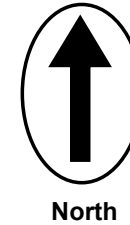
Date: 09/11/25

Count Number: TMC 2579

Location: CSAH 23
@ Firebarn Rd

Collection Period: 24 HR

Peak Hour: 4:15 PM - 5:15 PM



Anoka County
Highway Department
Traffic Volume and Turning
Movement Study

**TMC 2579 - CSAH 23 @ Firebarn Rd
Circle Pines MN
Thursday, September 11, 2025**

Time	Southbound CSAH 23						Westbound Civic Heights Dr						Northbound CSAH 23						Eastbound Firebarn Rd						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	5	1	0	6	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	1	0	1	13
12:15 AM	0	0	4	2	0	6	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	12
12:30 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	7
12:45 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	9
Hourly Total	0	0	15	3	0	18	0	0	0	0	0	0	0	0	21	1	0	22	0	0	0	1	0	1	41
1:00 AM	0	0	4	1	0	5	0	0	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0	9
1:15 AM	0	1	1	0	0	2	0	1	0	0	0	1	0	0	6	0	0	6	0	0	0	1	0	1	10
1:30 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	5	0	0	5	0	0	1	0	0	1	9
1:45 AM	0	0	2	1	0	3	0	1	0	0	0	1	0	0	4	1	0	5	0	0	0	0	0	0	9
Hourly Total	0	1	10	2	0	13	0	2	0	0	0	2	0	0	17	3	0	20	0	0	1	1	0	2	37
2:00 AM	0	0	3	0	0	3	0	2	0	0	0	2	0	0	2	2	0	4	0	0	0	0	0	0	9
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	8
2:30 AM	0	0	4	0	0	4	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	6
2:45 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	9
Hourly Total	0	0	12	0	0	12	0	3	0	0	0	3	0	2	13	2	0	17	0	0	0	0	0	0	32
3:00 AM	0	0	3	0	0	3	0	1	0	0	0	1	0	2	0	0	0	2	0	0	0	0	0	0	6
3:15 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	2	0	2	6
3:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	2	0	2	6
3:45 AM	0	0	9	0	0	9	0	1	0	0	0	1	0	1	2	0	0	3	0	0	0	0	0	0	13
Hourly Total	0	0	15	0	0	15	0	2	0	0	0	2	0	3	7	0	0	10	0	0	0	4	0	4	31
4:00 AM	0	0	12	0	0	12	0	1	0	0	0	1	0	0	2	0	0	2	0	0	0	1	0	1	16
4:15 AM	0	1	13	0	0	14	0	2	0	0	0	2	0	2	2	1	0	5	0	0	0	2	0	2	23
4:30 AM	0	1	23	0	0	24	0	2	1	0	0	3	0	0	6	0	0	6	0	0	1	1	0	2	35
4:45 AM	0	0	26	0	0	26	0	0	0	0	0	0	0	0	3	1	0	4	0	1	0	0	0	1	31
Hourly Total	0	2	74	0	0	76	0	5	1	0	0	6	0	2	13	2	0	17	0	1	1	4	0	6	105
5:00 AM	0	1	33	0	0	34	0	1	0	0	0	1	0	0	3	2	0	5	0	0	0	0	0	0	40
5:15 AM	0	1	51	0	0	52	0	2	0	1	0	3	0	0	9	2	0	11	0	1	0	5	0	6	72
5:30 AM	0	0	68	0	0	68	0	1	0	1	0	2	0	1	9	4	0	14	0	0	0	9	0	9	93
5:45 AM	0	0	68	1	0	69	0	2	0	0	0	2	0	1	16	1	0	18	0	0	1	3	0	4	93
Hourly Total	0	2	220	1	0	223	0	6	0	2	0	8	0	2	37	9	0	48	0	1	1	17	0	19	298
6:00 AM	0	0	69	1	0	70	0	1	0	3	0	4	0	0	13	1	0	14	0	0	1	10	0	11	99
6:15 AM	0	1	72	0	0	73	1	3	0	2	0	6	0	1	28	2	0	31	0	1	1	5	0	7	117
6:30 AM	0	0	112	2	0	114	0	5	0	0	0	5	0	2	39	3	0	44	0	1	0	9	0	10	173
6:45 AM	0	0	130	2	0	132	0	3	1	1	0	5	0	2	49	12	0	63	0	1	3	13	0	17	217
Hourly Total	0	1	383	5	0	389	1	12	1	6	0	20	0	5	129	18	0	152	0	3	5	37	0	45	606
7:00 AM	0	4	123	2	0	129	0	12	1	1	0	14	0	2	49	5	0	56	0	1	1	11	0	13	212
7:15 AM	0	2	107	0	0	109	0	7	1	2	0	10	0	2	57	6	0	65	0	0	1	16	0	17	201
7:30 AM	0	1	122	0	0	123	0	9	1	0	0	10	0	2	82	6	0	90	0	3	1	8	0	12	235
7:45 AM	0	2	152	1	0	155	0	6	2	2	0	10	0	2	90	7	0	99	0	0	1	9	0	10	274
Hourly Total	0	9	504	3	0	516	0	34	5	5	0	44	0	8	278	24	0	310	0	4	4	44	0	52	922

TMC 2579 - CSAH 23 @ Firebarn Rd
Circle Pines MN
Thursday, September 11, 2025

Time	Southbound CSAH 23						Westbound Civic Heights Dr						Northbound CSAH 23						Eastbound Firebarn Rd						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	3	126	1	0	130	0	9	1	2	0	12	0	2	61	6	1	69	0	3	5	8	0	16	227
8:15 AM	0	0	101	2	0	103	0	16	0	0	0	16	0	2	47	10	0	59	0	3	1	4	0	8	186
8:30 AM	0	2	102	1	0	105	1	10	0	0	0	11	0	4	42	11	0	57	0	2	2	7	0	11	184
8:45 AM	0	1	100	1	0	102	0	10	3	1	0	14	0	3	77	14	0	94	0	1	1	9	0	11	221
Hourly Total	0	6	429	5	0	440	1	45	4	3	0	53	0	11	227	41	1	279	0	9	9	28	0	46	818
9:00 AM	0	3	125	1	0	129	0	14	1	1	0	16	0	2	57	8	0	67	0	1	2	6	0	9	221
9:15 AM	0	3	95	1	0	99	0	14	4	4	0	22	0	2	83	13	0	98	0	1	0	7	0	8	227
9:30 AM	0	9	92	0	0	101	0	15	2	4	0	21	0	2	55	12	0	69	0	1	5	5	0	11	202
9:45 AM	0	8	76	0	0	84	0	7	2	5	0	14	0	1	52	18	0	71	0	2	2	8	0	12	181
Hourly Total	0	23	388	2	0	413	0	50	9	14	0	73	0	7	247	51	0	305	0	5	9	26	0	40	831
10:00 AM	0	3	68	2	0	73	0	11	1	5	0	17	1	2	62	9	0	74	0	1	2	5	0	8	172
10:15 AM	0	10	72	2	0	84	0	12	4	2	0	18	0	4	72	10	0	86	0	0	1	7	0	8	196
10:30 AM	0	4	71	1	0	76	0	14	2	7	0	23	0	3	51	15	0	69	0	2	3	4	0	9	177
10:45 AM	0	5	55	0	0	60	0	15	4	5	0	24	0	2	68	13	0	83	0	3	6	3	0	12	179
Hourly Total	0	22	266	5	0	293	0	52	11	19	0	82	1	11	253	47	0	312	0	6	12	19	0	37	724
11:00 AM	0	5	96	2	0	103	0	16	3	2	0	21	0	3	67	25	0	95	0	2	6	0	0	8	227
11:15 AM	0	10	71	2	0	83	0	23	4	6	0	33	0	6	63	16	2	85	0	3	3	6	0	12	213
11:30 AM	0	10	78	0	0	88	0	12	2	7	0	21	0	4	71	13	1	88	0	1	2	8	0	11	208
11:45 AM	0	6	93	1	0	100	0	21	4	4	0	29	0	6	72	9	0	87	0	3	2	2	0	7	223
Hourly Total	0	31	338	5	0	374	0	72	13	19	0	104	0	19	273	63	3	355	0	9	13	16	0	38	871
12:00 PM	0	8	75	4	2	87	0	19	1	6	2	26	0	7	65	15	0	87	0	1	1	3	0	5	205
12:15 PM	0	7	101	1	0	109	0	24	3	3	0	30	0	2	66	18	0	86	0	1	3	7	0	11	236
12:30 PM	0	8	79	1	0	88	0	11	1	5	0	17	0	8	82	14	2	104	0	1	3	6	0	10	219
12:45 PM	0	7	73	3	1	83	0	11	4	6	2	21	0	7	87	14	0	108	0	0	1	1	0	2	214
Hourly Total	0	30	328	9	3	367	0	65	9	20	4	94	0	24	300	61	2	385	0	3	8	17	0	28	874
1:00 PM	0	4	81	1	0	86	0	14	1	6	0	21	2	4	78	15	0	99	0	0	3	3	0	6	212
1:15 PM	0	7	75	2	0	84	0	11	5	2	1	18	1	7	99	17	1	124	0	0	6	3	0	9	235
1:30 PM	0	7	68	1	0	76	0	20	3	4	0	27	0	7	83	15	0	105	0	0	5	4	0	9	217
1:45 PM	0	9	84	1	0	94	0	21	2	6	0	29	0	3	76	16	0	95	0	2	2	4	0	8	226
Hourly Total	0	27	308	5	0	340	0	66	11	18	1	95	3	21	336	63	1	423	0	2	16	14	0	32	890
2:00 PM	0	12	83	1	0	96	0	25	5	6	0	36	0	6	72	15	0	93	0	0	5	2	0	7	232
2:15 PM	0	6	94	0	0	100	0	13	6	8	0	27	1	6	113	22	1	142	0	0	3	3	0	6	275
2:30 PM	0	6	81	3	0	90	0	24	2	5	0	31	0	3	101	12	0	116	0	2	1	3	0	6	243
2:45 PM	0	4	101	1	0	106	0	14	3	8	0	25	0	8	116	15	0	139	0	1	3	4	0	8	278
Hourly Total	0	28	359	5	0	392	0	76	16	27	0	119	1	23	402	64	1	490	0	3	12	12	0	27	1028
3:00 PM	0	13	111	2	0	126	0	13	5	6	0	24	0	6	116	18	0	140	0	2	4	8	0	14	304
3:15 PM	0	8	95	4	0	107	0	18	4	4	0	26	1	15	122	29	5	167	0	3	4	5	0	12	312
3:30 PM	0	5	93	0	0	98	0	25	2	8	0	35	1	9	137	27	2	174	0	7	4	6	0	17	324
3:45 PM	0	8	127	1	0	136	0	21	2	4	0	27	0	11	143	30	1	184	0	2	3	7	0	12	359
Hourly Total	0	34	426	7	0	467	0	77	13	22	0	112	2	41	518	104	8	665	0	14	15	26	0	55	1299

TMC 2579 - CSAH 23 @ Firebarn Rd
Circle Pines MN
Thursday, September 11, 2025

Time	Southbound CSAH 23						Westbound Civic Heights Dr						Northbound CSAH 23						Eastbound Firebarn Rd						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	9	100	6	0	115	0	20	2	6	0	28	0	15	169	22	0	206	0	1	4	7	0	12	361
4:15 PM	0	11	78	3	0	92	0	24	2	13	0	39	0	17	142	23	0	182	0	5	5	5	0	15	328
4:30 PM	0	13	99	5	0	117	0	17	5	4	0	26	0	14	174	19	0	207	0	1	6	6	0	13	363
4:45 PM	0	5	110	2	0	117	0	21	4	4	1	29	1	15	154	18	1	188	0	1	4	8	0	13	347
Hourly Total	0	38	387	16	0	441	0	82	13	27	1	122	1	61	639	82	1	783	0	8	19	26	0	53	1399
5:00 PM	0	5	128	2	0	135	0	28	2	7	2	37	0	9	176	20	2	205	0	4	0	9	0	13	390
5:15 PM	0	6	98	2	0	106	0	18	5	5	2	28	0	16	142	19	1	177	0	3	1	5	0	9	320
5:30 PM	0	4	104	0	2	108	0	11	3	4	2	18	0	9	143	19	0	171	0	4	4	8	0	16	313
5:45 PM	0	3	107	0	0	110	0	12	1	3	0	16	1	10	132	18	3	161	0	1	2	6	0	9	296
Hourly Total	0	18	437	4	2	459	0	69	11	19	6	99	1	44	593	76	6	714	0	12	7	28	0	47	1319
6:00 PM	0	8	98	7	0	113	0	14	1	14	0	29	0	5	122	11	1	138	0	1	0	9	0	10	290
6:15 PM	0	1	81	2	0	84	0	11	1	5	0	17	0	5	95	9	1	109	0	2	0	3	0	5	215
6:30 PM	0	4	89	2	0	95	0	4	2	4	0	10	0	5	91	10	3	106	0	2	1	3	0	6	217
6:45 PM	0	2	80	0	1	82	0	8	2	1	0	11	0	6	106	9	0	121	0	3	0	2	0	5	219
Hourly Total	0	15	348	11	1	374	0	37	6	24	0	67	0	21	414	39	5	474	0	8	1	17	0	26	941
7:00 PM	0	0	72	2	1	74	0	8	2	3	1	13	0	6	87	7	0	100	0	1	0	2	0	3	190
7:15 PM	0	1	75	1	0	77	0	5	0	0	0	5	0	8	77	6	1	91	0	8	0	4	0	12	185
7:30 PM	0	0	48	4	0	52	0	3	0	0	2	3	0	4	68	3	1	75	0	1	0	3	0	4	134
7:45 PM	0	3	78	2	0	83	0	1	0	0	0	1	0	6	62	3	1	71	0	0	0	6	0	6	161
Hourly Total	0	4	273	9	1	286	0	17	2	3	3	22	0	24	294	19	3	337	0	10	0	15	0	25	670
8:00 PM	0	0	45	2	0	47	0	2	0	1	0	3	0	3	64	4	0	71	0	0	0	4	0	4	125
8:15 PM	0	0	48	2	0	50	0	3	0	0	0	3	0	3	61	3	0	67	0	1	0	7	0	8	128
8:30 PM	0	0	42	1	0	43	0	2	0	0	0	2	0	9	52	4	0	65	0	1	0	2	0	3	113
8:45 PM	0	0	32	2	0	34	0	1	1	0	0	2	0	3	52	2	0	57	0	0	0	2	0	2	95
Hourly Total	0	0	167	7	0	174	0	8	1	1	0	10	0	18	229	13	0	260	0	2	0	15	0	17	461
9:00 PM	0	0	34	1	0	35	0	2	0	0	0	2	0	2	46	0	0	48	0	1	1	1	0	3	88
9:15 PM	0	0	25	0	0	25	0	0	0	0	0	0	0	7	41	4	0	52	0	0	0	5	0	5	82
9:30 PM	0	0	27	2	0	29	0	2	0	0	0	2	1	2	29	5	0	37	0	0	0	1	0	1	69
9:45 PM	0	0	14	0	0	14	0	0	0	0	0	0	0	3	34	1	0	38	0	1	0	1	0	2	54
Hourly Total	0	0	100	3	0	103	0	4	0	0	0	4	1	14	150	10	0	175	0	2	1	8	0	11	293
10:00 PM	0	0	15	1	0	16	0	0	0	0	0	0	0	0	32	1	0	33	0	1	0	0	0	1	50
10:15 PM	0	0	21	0	0	21	0	1	0	0	0	1	0	2	36	0	0	38	0	1	0	1	0	2	62
10:30 PM	0	1	13	0	0	14	0	0	1	0	0	1	0	1	22	1	0	24	0	0	1	1	0	2	41
10:45 PM	0	1	3	0	0	4	0	1	0	0	0	1	0	1	11	1	0	13	0	0	0	0	0	0	18
Hourly Total	0	2	52	1	0	55	0	2	1	0	0	3	0	4	101	3	0	108	0	2	1	2	0	5	171
11:00 PM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	13	1	0	14	0	0	0	0	0	0	19
11:15 PM	0	0	9	0	0	9	0	0	0	0	0	0	0	1	10	1	0	12	0	0	0	0	0	0	21
11:30 PM	0	0	13	1	0	14	0	2	0	0	0	2	0	0	10	1	0	11	0	0	0	1	0	1	28
11:45 PM	0	0	5	0	0	5	0	0	0	0	0	0	0	1	7	1	0	9	0	0	0	0	0	0	14
Hourly Total	0	0	32	1	0	33	0	2	0	0	0	2	0	2	40	4	0	46	0	0	0	1	0	1	82
DAILY TOTAL	0	293	5871	109	7	6273	2	788	127	229	15	1146	10	367	5531	799	31	6707	0	104	135	378	0	617	14743
Cars	0	292	5722	104	6	6118	2	762	126	227	10	1117	10	364	5371	778	19	6523	0	99	132	372	0	603	14361
Heavy Vehicles	0	1	149	5	1	155	0	26	1	2	5	29	0	3	160	21	12	184	0	5	3	6	0	14	382
Heavy Vehicle %	0.00%	0.34%	2.54%	4.59%	14.29%	2.47%	0.00%	3.30%	0.79%	0.87%	33.33%	2.53%	0.00%	0.82%	2.89%	2.63%	38.71%	2.74%	0.00%	4.81%	2.22%	1.59%	0.00%	2.27%	2.59%

TMC 2579 - CSAH 23 @ Firebarn Rd
Circle Pines MN
Thursday, September 11, 2025
AM Peak Hour (00:00 to 10:00)

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	107	0	0	109	0	7	1	2	0	10	0	2	57	6	0	65	0	0	1	16	0	17	201
7:30 AM	0	1	122	0	0	123	0	9	1	0	0	10	0	2	82	6	0	90	0	3	1	8	0	12	235
7:45 AM	0	2	152	1	0	155	0	6	2	2	0	10	0	2	90	7	0	99	0	0	1	9	0	10	274
8:00 AM	0	3	126	1	0	130	0	9	1	2	0	12	0	2	61	6	1	69	0	3	5	8	0	16	227
Peak Hour Total	0	8	507	2	0	517	0	31	5	6	0	42	0	8	290	25	1	323	0	6	8	41	0	55	937
Peak Hour Heavy Vehicles	0	0	17	0	0	17	0	3	0	0	0	3	0	0	17	4	0	21	0	1	0	1	0	2	43
Peak Hour Heavy Vehicles % PHF	0.00%	0.00%	3.35%	0.00%	0.00%	3.29%	0.00%	9.68%	0.00%	0.00%	0.00%	7.14%	0.00%	0.00%	5.86%	16.00%	0.00%	6.50%	0.00%	16.67%	0.00%	2.44%	0.00%	3.64%	4.59%
	0.000	0.667	0.834	0.500	0.000	0.834	0.000	0.861	0.625	0.750	0.000	0.875	0.000	1.000	0.806	0.893	0.250	0.816	0.000	0.500	0.400	0.641	0.000	0.809	0.855

Mid Peak Hour (10:00 - 14:00)

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	
1:00 PM	0	4	81	1	0	86	0	14	1	6	0	21	2	4	78	15	0	99	0	0	3	3	0	6	212
1:15 PM	0	7	75	2	0	84	0	11	5	2	1	18	1	7	99	17	1	124	0	0	6	3	0	9	235
1:30 PM	0	7	68	1	0	76	0	20	3	4	0	27	0	7	83	15	0	105	0	0	5	4	0	9	217
1:45 PM	0	9	84	1	0	94	0	21	2	6	0	29	0	3	76	16	0	95	0	2	2	4	0	8	226
Peak Hour Total	0	27	308	5	0	340	0	66	11	18	1	95	3	21	336	63	1	423	0	2	16	14	0	32	890
Peak Hour Heavy Vehicles	0	0	14	0	0	14	0	0	0	0	1	0	0	1	10	0	0	11	0	0	1	2	0	3	28
Peak Hour Heavy Vehicles % PHF	0.00%	0.00%	4.55%	0.00%	0.00%	4.12%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	4.76%	2.98%	0.00%	0.00%	2.60%	0.00%	0.00%	6.25%	14.29%	0.00%	9.38%	3.15%
	0.000	0.750	0.917	0.625	0.000	0.904	0.000	0.786	0.550	0.750	0.250	0.819	0.375	0.750	0.848	0.926	0.250	0.853	0.000	0.250	0.667	0.875	0.000	0.889	0.947

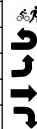
PM Peak Hour (14:00 - 24:00)

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	11	78	3	0	92	0	24	2	13	0	39	0	17	142	23	0	182	0	5	5	5	0	15	328
4:30 PM	0	13	99	5	0	117	0	17	5	4	0	26	0	14	174	19	0	207	0	1	6	6	0	13	363
4:45 PM	0	5	110	2	0	117	0	21	4	4	1	29	1	15	154	18	1	188	0	1	4	8	0	13	347
5:00 PM	0	5	128	2	0	135	0	28	2	7	2	37	0	9	176	20	2	205	0	4	0	9	0	13	390
Peak Hour Total	0	34	415	12	0	461	0	90	13	28	3	131	1	55	646	80	3	782	0	11	15	28	0	54	1428
Peak Hour Heavy Vehicles	0	0	8	0	0	8	0	0	0	0	3	0	0	0	15	0	0	15	0	0	0	0	0	0	23
Peak Hour Heavy Vehicles % PHF	0.00%	0.00%	1.93%	0.00%	0.00%	1.74%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	2.32%	0.00%	0.00%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.61%
	0.000	0.654	0.811	0.600	0.000	0.854	0.000	0.804	0.650	0.538	0.375	0.840	0.250	0.809	0.918	0.870	0.375	0.944	0.000	0.550	0.625	0.778	0.000	0.900	0.915

Total Vehicles On Leg			12137		
Vehicles Entering Intersection 6273			Vehicles Exiting Intersection 5864		
Southbound					
Cars	104	5722	292	0	6
Heavy	5	149	1	0	1
Total	109	5871	293	0	7

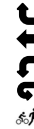


Total Vehicles on Leg 1220	Vehicles Entering Intersection 617	Eastbound	Cars	Heavy	Total
			0	0	0
			0	0	0
	Vehicles Exiting Intersection 603		99	5	104
			132	3	135
			372	6	378



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 1146	Total Vehicles on Leg 2375
227	2	229			
126	1	127			
762	26	788			
2	0	2			
10	5	15		Vehicles Exiting Intersection 1229	



Vehicles Entering Intersection 6707			Vehicles Exiting Intersection 7047		
Total Vehicles On Leg			13754		



Cars	19	10	364	5371	778
Heavy	12	0	3	160	21
Total	31	10	367	5531	799

TMC 2579 - CSAH 23 @ Firebarn Rd
Circle Pines MN
Thursday, September 11, 2025

Time	Southbound Heavy CSAH 23						Westbound Heavy Civic Heights Dr						Northbound Heavy CSAH 23						Eastbound Heavy Firebarn Rd						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	
12:00 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
12:15 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
12:30 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
12:45 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
Hourly 'Heavy Vehicles'	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
1:00 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
1:15 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
1:30 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
1:45 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 'Heavy Vehicles'	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
2:00 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
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
2:30 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
2:45 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
Hourly 'Heavy Vehicles'	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
3:00 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
3:15 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
3:30 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
3:45 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 'Heavy Vehicles'	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
4:00 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
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	0	3
5:00 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
5:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	2
5:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	2
5:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	3
Hourly 'Heavy Vehicles'	0	0	0	0	0	0	0	1	0	2	0	3	0	0	2	2	0	4	0	0	0	0	0	0	7
6:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3
6:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	6
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4
6:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	1	0	1	5
Hourly 'Heavy Vehicles'	0	0	3	0	0	3	0	0	0	0	0	0	0	0	13	1	0	14	0	0	0	1	0	1	18
7:00 AM	0	0	3	1	0	4	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	6
7:15 AM	0	0	7	0	0	7	0	0	0	0	0	0	0	0	4	1	0	5	0	0	0	1	0	1	13
7:30 AM	0	0	5	0	0	5	0	1	0	0	0	1	0	0	3	2	0	5	0	0	0	0	0	0	11
7:45 AM	0	0	2	0	0	2	0	1	0	0	0	1	0	0	7	0	0	7	0	0	0	0	0	0	10
Hourly 'Heavy Vehicles'	0	0	17	1	0	18	0	2	0	0	0	2	0	0	15	4	0	19	0	0	0	1	0	1	40

TMC 2579 - CSAH 23 @ Firebarn Rd
 Circle Pines MN
 Thursday, September 11, 2025

Time	Southbound Heavy CSAH 23						Westbound Heavy Civic Heights Dr						Northbound Heavy CSAH 23						Eastbound Heavy Firebarn Rd						VEHICLE 'Heavy Vehicles'
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach 'Heavy Vehicles'</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach 'Heavy Vehicles'</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach 'Heavy Vehicles'</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach 'Heavy Vehicles'</i>	
8:00 AM	0	0	3	0	0	3	0	1	0	0	0	1	0	0	3	1	1	4	0	1	0	0	0	1	9
8:15 AM	0	0	4	1	0	5	0	4	0	0	0	4	0	0	2	1	0	3	0	0	0	0	0	0	12
8:30 AM	0	1	3	0	0	4	0	0	0	0	0	0	0	1	2	1	0	4	0	1	0	0	0	1	9
8:45 AM	0	0	9	1	0	10	0	3	1	0	0	4	0	0	4	2	0	6	0	0	0	0	0	0	20
Hourly 'Heavy Vehicles'	0	1	19	2	0	22	0	8	1	0	0	9	0	1	11	5	1	17	0	2	0	0	0	2	50
9:00 AM	0	0	3	1	0	4	0	1	0	0	0	1	0	0	4	0	0	4	0	0	0	0	0	0	9
9:15 AM	0	0	2	0	0	2	0	1	0	0	0	1	0	0	10	1	0	11	0	0	0	0	0	0	14
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	5
9:45 AM	0	0	3	0	0	3	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	5
Hourly 'Heavy Vehicles'	0	0	8	1	0	9	0	3	0	0	0	3	0	0	19	2	0	21	0	0	0	0	0	0	33
10:00 AM	0	0	5	0	0	5	0	1	0	0	0	1	0	0	3	0	0	3	0	1	0	1	0	2	11
10:15 AM	0	0	2	0	0	2	0	1	0	0	0	1	0	0	3	1	0	4	0	0	0	0	0	0	7
10:30 AM	0	0	2	0	0	2	0	1	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	5
10:45 AM	0	0	3	0	0	3	0	1	0	0	0	1	0	0	2	1	0	3	0	0	0	0	0	0	7
Hourly 'Heavy Vehicles'	0	0	12	0	0	12	0	4	0	0	0	4	0	0	10	2	0	12	0	1	0	1	0	2	30
11:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6
11:15 AM	0	0	3	0	0	3	0	1	0	0	0	1	0	1	1	0	1	2	0	0	0	0	0	0	6
11:30 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	4	0	0	4	0	0	1	0	0	1	8
11:45 AM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	5	0	0	5	0	0	1	0	0	1	8
Hourly 'Heavy Vehicles'	0	0	8	0	0	8	0	3	0	0	0	3	0	1	14	0	1	15	0	0	2	0	0	2	28
12:00 PM	0	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	3
12:15 PM	0	0	3	0	0	3	0	1	0	0	0	1	0	0	3	1	0	4	0	0	0	0	0	0	8
12:30 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	8	0	1	8	0	0	0	0	0	0	11
12:45 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	7
Hourly 'Heavy Vehicles'	0	0	11	0	0	11	0	2	0	0	0	2	0	0	15	1	1	16	0	0	0	0	0	0	29
1:00 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	7
1:15 PM	0	0	3	0	0	3	0	0	0	0	1	0	0	0	5	0	1	5	0	0	0	1	0	1	9
1:30 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	1	1	0	0	2	0	0	1	0	0	1	7
1:45 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	5
Hourly 'Heavy Vehicles'	0	0	14	0	0	14	0	0	0	0	1	0	0	1	10	0	1	11	0	0	1	2	0	3	28
2:00 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5
2:15 PM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6
2:30 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	7
2:45 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
Hourly 'Heavy Vehicles'	0	0	15	0	0	15	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	23
3:00 PM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	7
3:15 PM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	8
3:30 PM	0	0	4	0	0	4	0	1	0	0	0	1	0	0	5	0	0	5	0	1	0	0	0	1	11
3:45 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	3	0	1	3	0	0	0	0	0	0	7
Hourly 'Heavy Vehicles'	0	0	19	0	0	19	0	1	0	0	0	1	0	0	11	1	1	12	0	1	0	0	0	1	33

TMC 2579 - CSAH 23 @ Firebarn Rd
Circle Pines MN
Thursday, September 11, 2025

	Southbound Heavy CSAH 23						Westbound Heavy Civic Heights Dr						Northbound Heavy CSAH 23						Eastbound Heavy Firebarn Rd						VEHICLE 'Heavy Vehicles'
Time	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach 'Heavy Vehicles'	
4:00 PM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	9	0	0	9	0	1	0	1	0	2	17
4:15 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	10
4:30 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	7
4:45 PM	0	0	1	0	0	1	0	0	0	0	1	0	0	0	2	0	1	2	0	0	0	0	0	0	3
Hourly 'Heavy Vehicles'	0	0	13	0	0	13	0	0	0	0	1	0	0	0	22	0	1	22	0	1	0	1	0	2	37
5:00 PM	0	0	1	0	0	1	0	0	0	0	2	0	0	0	2	0	2	2	0	0	0	0	0	0	3
5:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
5:30 PM	0	0	2	0	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	3
Hourly 'Heavy Vehicles'	0	0	5	0	1	5	0	1	0	0	3	1	0	0	3	1	3	4	0	0	0	0	0	0	10
6:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	2
6:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 PM	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
6:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
Hourly 'Heavy Vehicles'	0	0	2	0	0	2	0	1	0	0	0	1	0	0	2	0	1	2	0	0	0	0	0	0	5
7:00 PM	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
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	1
Hourly 'Heavy Vehicles'	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	2	1	0	0	0	0	0	0	2
8:00 PM	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
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
8:45 PM	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
Hourly 'Heavy Vehicles'	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3
9:00 PM	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
9:15 PM	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
9:30 PM	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
9:45 PM	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 'Heavy Vehicles'	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
10:00 PM	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
10:15 PM	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
10:30 PM	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
10:45 PM	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 'Heavy Vehicles'	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
11:00 PM	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
11:15 PM	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
11:30 PM	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
11:45 PM	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 'Heavy Vehicles'	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
DAILY 'Heavy Vehicles'	0	1	149	5	1	155	0	26	1	2	5	29	0	3	160	21	12	184	0	5	3	6	0	14	382

Traffic Signal Warrant Analysis

Warrants 1 - 3 (Volume Warrants)

TMC	2579
Date	09/11/2025
Intersection Geometrics	Signal

Intersection Information			
Major Street (N/S Road)	CSAH 23	Minor Street (E/W Road)	Firebarn Rd.
Analyzed with	2 or more approach lanes	Analyzed with	1 Approach Lane
Total Approach Volume	12980 vehicles	Total Approach Volume	1534 vehicles
Total Ped/Bike Volume	38 crossings	Total Ped/Bike Volume	15 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	100% applied for WB

No high speed or isolated community reduction applied to the Volume Warrant thresholds.

Warrant 1, Eight Hour Vehicular Volume			
	Condition A	Condition B	Condition A+B*
Condition Satisfied?	Not Satisfied	Satisfied	Not Satisfied
Required values reached for	0 hours	8 hours	4 (Cond. A) & 13 (Cond. B)
Criteria - Major Street (veh/hr)	420	630	336 (Cond. A) & 504 (Cond. B)
Criteria - Minor Street (veh/hr)	105	53	84 (Cond. A) & 42 (Cond. B)

* Should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Warrant 2, Four Hour Vehicular Volume	
Condition Satisfied?	Satisfied
Required values reached for	4 hours
Criteria	See Figure Below

Warrant 3, Peak Hour Vehicular Volume		
	Condition A	Condition B
Condition Satisfied?	Not Examined	Satisfied
Required values reached for		3 hours
Criteria - Total Approach Volume (veh in one hour)		See Figure Below
Criteria - Minor Street High Side Volume (veh in one hour)		
Criteria - Minor Street High Side Delay (veh-hrs)		

Figure 4C-2 (Warrant 2 - 70% Factor) & Figure 4C-4 (Warrant 3 - 70% Factor)

