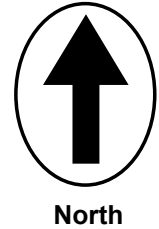


Date : 09/28/23

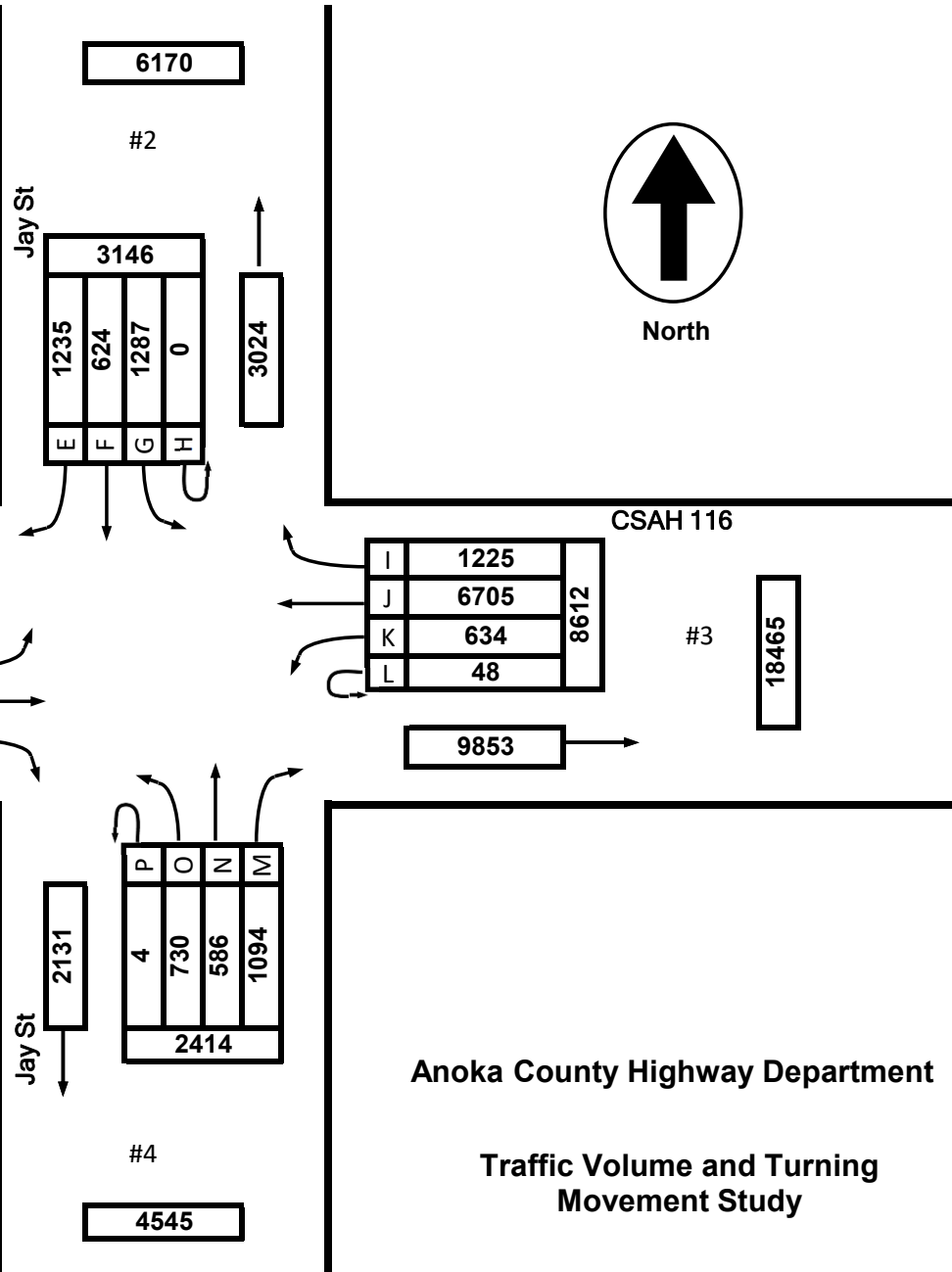
Count Number : TMC 2354

Location : CSAH 116
@ Jay St

Collection Period : 24 HR



North



#1

18314	8739	9575	69	D
			1213	C
			7424	B
			869	A

#3

1225	I	8612
6705	J	
634	K	
48	L	

#4

4	P	2414
730	O	
586	N	
1094	M	

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

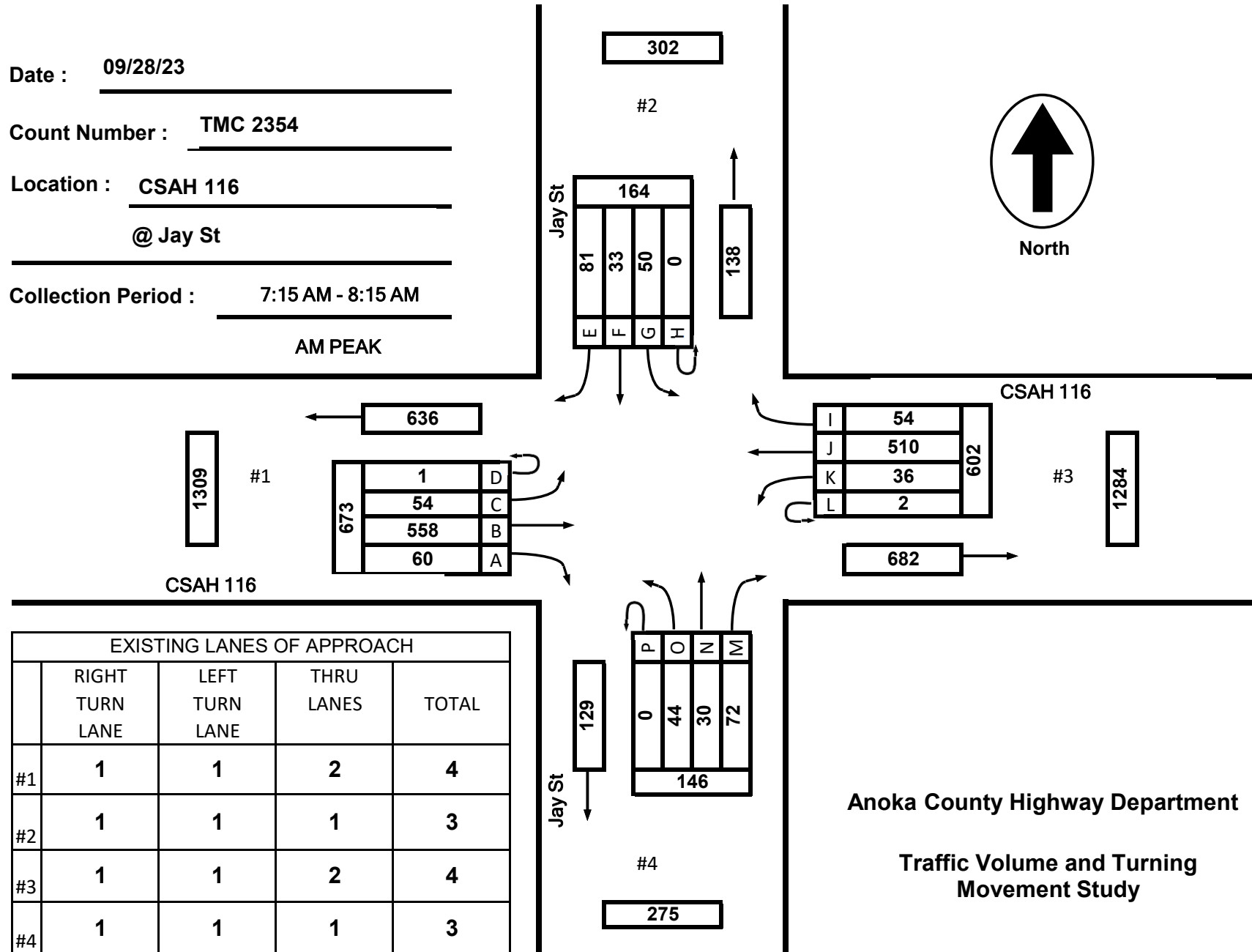
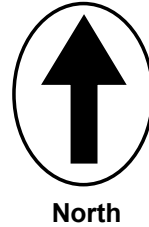
Anoka County Highway Department
 Traffic Volume and Turning Movement Study

Date : 09/28/23

Count Number : TMC 2354

Location : CSAH 116
@ Jay St

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



EXISTING LANES OF APPROACH

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

Anoka County Highway Department

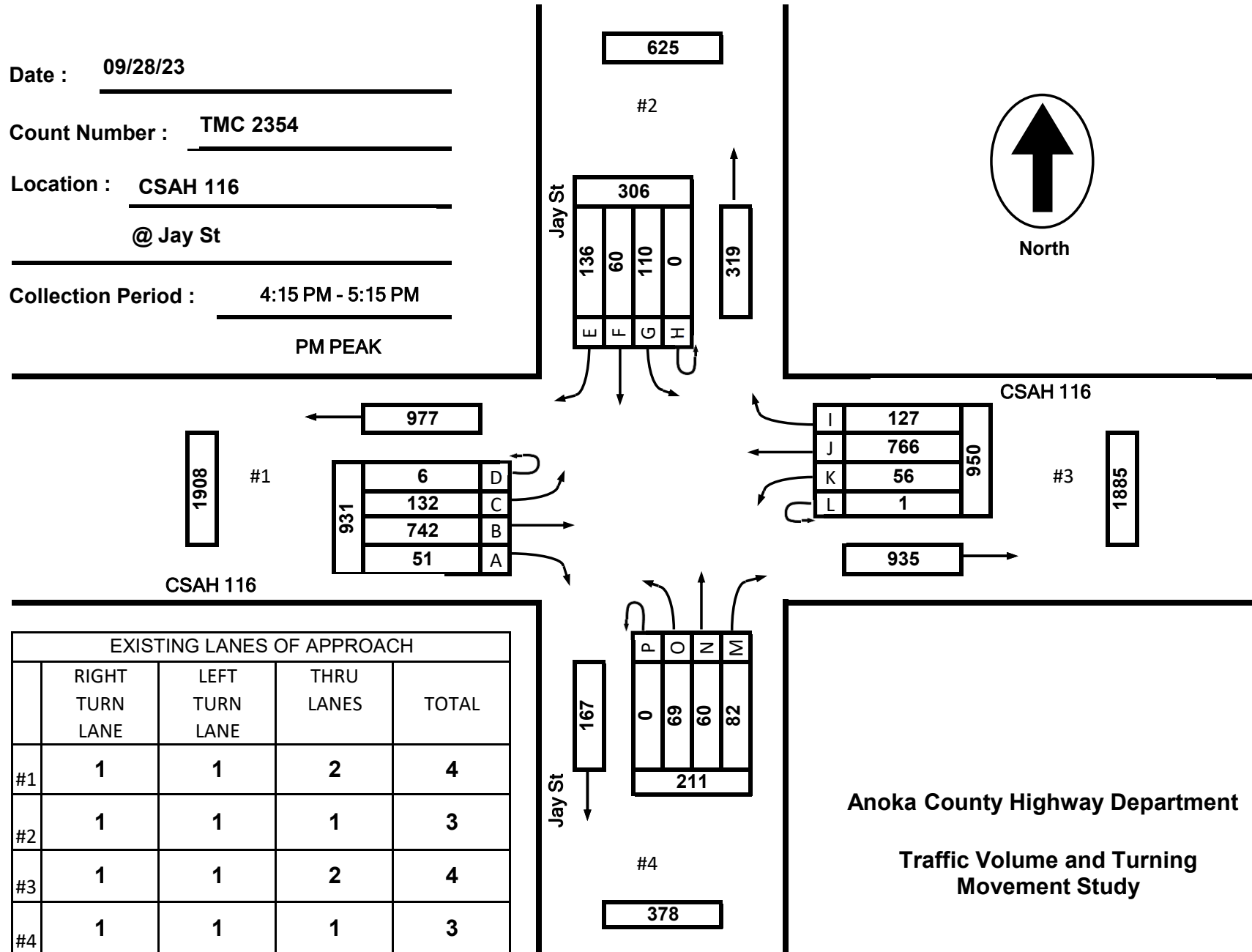
Traffic Volume and Turning Movement Study

Date : 09/28/23

Count Number : TMC 2354

Location : CSAH 116
@ Jay St

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



EXISTING LANES OF APPROACH

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

Anoka County Highway Department

Traffic Volume and Turning Movement Study

**TMC 2354 - CSAH 116 @ Jay St
Thursday, September 28, 2023**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	Jay St.						CSAH 116						Jay St.						CSAH 116						
	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	1	3	1	0	5	0	0	10	1	1	11	0	0	0	0	0	0	0	0	0	0	0	0	16
12:15 AM	0	1	0	0	0	1	0	0	4	1	1	5	0	0	2	2	0	4	0	0	5	1	0	6	16
12:30 AM	0	0	0	0	0	0	0	1	6	1	0	8	0	1	0	1	0	2	0	1	4	3	0	8	18
12:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	0	1	0	0	2	1	0	3	6
Hourly Total	0	2	3	1	0	6	0	1	22	3	2	26	0	2	2	3	0	7	0	1	11	5	1	17	56
1:00 AM	0	1	0	0	0	1	0	1	1	0	0	2	0	1	0	1	0	2	0	0	3	1	0	4	9
1:15 AM	0	0	0	1	0	1	0	0	1	0	0	1	0	2	0	0	0	2	0	0	6	2	0	8	12
1:30 AM	0	0	0	1	0	1	0	0	1	0	0	1	0	1	0	1	0	2	0	1	5	2	0	8	12
1:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	1	0	0	6	0	0	6	9
Hourly Total	0	1	0	2	0	3	0	1	5	0	0	6	0	4	0	3	0	7	0	1	20	5	0	26	42
2:00 AM	0	1	1	2	0	4	0	1	2	0	0	3	0	1	1	0	0	2	0	1	3	0	0	4	13
2:15 AM	0	1	1	0	0	2	0	1	2	0	0	3	0	1	1	2	0	4	0	0	6	2	0	8	17
2:30 AM	0	0	0	1	0	1	0	1	2	1	0	4	0	0	0	2	0	2	0	0	4	0	0	4	11
2:45 AM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	1	1	0	2	0	0	1	2	0	3	7
Hourly Total	0	2	2	3	0	7	0	4	6	2	0	12	0	2	3	5	0	10	0	1	14	4	0	19	48
3:00 AM	0	0	0	1	0	1	0	0	1	1	1	2	0	0	1	0	0	1	0	0	3	1	0	4	8
3:15 AM	0	0	1	2	0	3	0	2	1	0	0	3	0	2	1	1	0	4	0	0	4	0	0	4	14
3:30 AM	0	0	2	0	0	2	0	0	5	0	0	5	0	0	0	0	0	0	0	0	3	0	0	3	10
3:45 AM	0	0	2	0	0	2	0	0	3	1	0	4	0	0	1	1	0	2	0	0	3	1	0	4	12
Hourly Total	0	0	5	3	0	8	0	2	10	2	1	14	0	2	3	2	0	7	0	0	13	2	0	15	44
4:00 AM	0	1	1	2	0	4	0	3	5	1	0	9	0	0	1	2	0	3	0	1	6	3	0	10	26
4:15 AM	0	1	1	0	0	2	0	3	5	1	0	9	0	5	1	2	0	8	0	1	9	1	0	11	30
4:30 AM	0	2	1	1	0	4	1	6	9	2	0	18	0	2	0	2	0	4	0	1	10	3	0	14	40
4:45 AM	0	0	2	0	0	2	0	4	9	4	0	17	0	3	1	5	0	9	0	3	9	5	0	17	45
Hourly Total	0	4	5	3	0	12	1	16	28	8	0	53	0	10	3	11	0	24	0	6	34	12	0	52	141
5:00 AM	0	1	2	0	0	3	0	7	11	2	0	20	0	3	2	5	0	10	0	1	16	5	0	22	55
5:15 AM	0	2	2	1	0	5	0	5	12	0	0	17	0	1	3	4	0	8	0	2	13	7	0	22	52
5:30 AM	0	3	7	2	0	12	1	11	38	2	0	52	0	6	0	5	0	11	0	0	35	13	0	48	123
5:45 AM	0	2	9	3	0	14	1	11	22	4	0	38	0	6	2	13	0	21	0	2	34	19	0	55	128
Hourly Total	0	8	20	6	0	34	2	34	83	8	0	127	0	16	7	27	0	50	0	5	98	44	0	147	358
6:00 AM	0	4	6	7	0	17	0	13	30	9	0	52	0	5	3	28	0	36	0	2	52	22	0	76	181
6:15 AM	0	3	10	7	0	20	0	9	35	2	0	46	0	12	2	29	0	43	0	4	55	20	0	79	188
6:30 AM	0	4	6	5	0	15	1	7	72	3	0	83	0	9	7	38	0	54	0	4	85	13	0	102	254
6:45 AM	0	8	6	15	0	29	0	7	63	6	0	76	0	12	7	41	0	60	0	5	110	17	0	132	297
Hourly Total	0	19	28	34	0	81	1	36	200	20	0	257	0	38	19	136	0	193	0	15	302	72	0	389	920
7:00 AM	0	17	14	12	0	43	0	9	109	8	0	126	0	7	7	14	0	28	1	7	100	11	0	119	316
7:15 AM	0	12	8	27	0	47	1	10	167	8	0	186	0	12	10	20	0	42	0	7	131	14	0	152	427
7:30 AM	0	13	9	22	0	44	0	9	138	13	0	160	0	8	3	17	0	28	0	21	162	16	0	199	431
7:45 AM	0	14	9	17	0	40	0	13	126	17	0	156	0	12	7	19	0	38	0	11	140	15	0	166	400
Hourly Total	0	56	40	78	0	174	1	41	540	46	0	628	0	39	27	70	0	136	1	46	533	56	0	636	1574

**TMC 2354 - CSAH 116 @ Jay St
Thursday, September 28, 2023**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	Jay St.						CSAH 116						Jay St.						CSAH 116						
	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	11	7	15	0	33	1	4	79	16	0	100	0	12	10	16	1	38	1	15	125	15	0	156	327
8:15 AM	0	10	6	16	0	32	0	12	73	10	0	95	0	11	4	13	1	28	0	17	89	13	0	119	274
8:30 AM	0	8	8	17	0	33	1	5	81	12	0	99	0	9	5	18	0	32	0	12	89	14	0	115	279
8:45 AM	0	13	7	16	0	36	1	8	86	15	0	110	0	10	7	10	0	27	0	16	85	15	0	116	289
Hourly Total	0	42	28	64	0	134	3	29	319	53	0	404	0	42	26	57	2	125	1	60	388	57	0	506	1169
9:00 AM	0	12	7	12	0	31	0	9	88	19	0	116	0	8	9	10	0	27	0	13	70	8	0	91	265
9:15 AM	0	13	6	24	0	43	1	7	83	20	0	111	0	13	4	13	0	30	0	10	91	15	0	116	300
9:30 AM	0	14	8	20	0	42	0	2	83	14	0	99	0	16	9	24	0	49	2	19	78	15	0	114	304
9:45 AM	0	17	6	14	0	37	1	7	86	14	0	108	0	20	12	13	0	45	2	13	95	10	0	120	310
Hourly Total	0	56	27	70	0	153	2	25	340	67	0	434	0	57	34	60	0	151	4	55	334	48	0	441	1179
10:00 AM	0	21	12	13	0	46	2	11	84	16	0	113	0	12	5	10	0	27	0	7	81	11	0	99	285
10:15 AM	0	12	9	5	0	26	1	7	87	18	0	113	0	11	10	8	0	29	1	11	103	11	0	126	294
10:30 AM	0	20	6	17	0	43	0	13	107	14	0	134	0	10	12	12	2	34	2	14	94	14	0	124	335
10:45 AM	0	14	8	22	0	44	3	7	88	21	0	119	0	22	6	13	0	41	0	13	106	12	0	131	335
Hourly Total	0	67	35	57	0	159	6	38	366	69	0	479	0	55	33	43	2	131	3	45	384	48	0	480	1249
11:00 AM	0	19	9	17	1	45	0	9	92	21	0	122	0	8	7	18	0	33	1	13	93	9	0	116	316
11:15 AM	0	15	13	23	0	51	2	7	106	14	0	129	0	9	8	19	0	36	0	9	104	16	0	129	345
11:30 AM	0	24	9	23	0	56	1	7	104	12	0	124	0	5	7	10	0	22	2	15	105	20	0	142	344
11:45 AM	0	21	9	27	0	57	1	7	92	26	0	126	0	14	11	12	0	37	0	18	77	14	1	109	329
Hourly Total	0	79	40	90	1	209	4	30	394	73	0	501	0	36	33	59	0	128	3	55	379	59	1	496	1334
12:00 PM	0	16	13	23	0	52	1	10	100	25	0	136	0	8	11	13	0	32	2	18	99	14	0	133	353
12:15 PM	0	14	8	21	0	43	0	7	82	20	0	109	0	13	7	15	0	35	0	21	103	12	0	136	323
12:30 PM	0	22	11	21	0	54	0	10	88	17	1	115	0	6	10	22	0	38	2	23	113	19	0	157	364
12:45 PM	0	26	8	20	0	54	0	14	79	20	0	113	1	6	8	16	0	31	2	14	129	8	0	153	351
Hourly Total	0	78	40	85	0	203	1	41	349	82	1	473	1	33	36	66	0	136	6	76	444	53	0	579	1391
1:00 PM	0	23	12	20	1	55	1	10	76	11	0	98	0	13	7	10	0	30	0	24	90	16	0	130	313
1:15 PM	0	22	9	6	1	37	4	10	99	17	0	130	0	13	9	19	0	41	2	18	100	20	2	140	348
1:30 PM	0	22	15	15	0	52	1	16	110	14	0	141	0	6	8	23	0	37	1	20	101	18	0	140	370
1:45 PM	0	22	11	25	0	58	0	11	99	28	0	138	0	18	11	27	0	56	1	26	142	14	0	183	435
Hourly Total	0	89	47	66	2	202	6	47	384	70	0	507	0	50	35	79	0	164	4	88	433	68	2	593	1466
2:00 PM	0	24	12	18	0	54	1	12	115	20	0	148	0	23	9	34	0	66	4	23	109	12	0	148	416
2:15 PM	0	18	13	19	2	50	4	4	121	23	0	152	0	11	8	23	1	42	1	25	188	15	0	229	473
2:30 PM	0	21	12	20	0	53	0	4	110	27	0	141	0	12	12	14	0	38	2	21	161	14	0	198	430
2:45 PM	0	21	10	14	0	45	0	9	114	26	0	149	0	7	11	13	0	31	1	22	153	14	2	190	415
Hourly Total	0	84	47	71	2	202	5	29	460	96	0	590	0	53	40	84	1	177	8	91	611	55	2	765	1734
3:00 PM	0	20	10	20	0	50	0	5	138	22	0	165	0	15	11	18	0	44	1	26	137	13	0	177	436
3:15 PM	0	28	7	22	0	57	1	10	167	22	0	200	1	10	13	18	0	42	1	18	134	12	0	165	464
3:30 PM	0	24	10	28	0	62	0	15	171	35	0	221	0	13	8	18	0	39	0	23	150	7	2	180	502
3:45 PM	0	28	11	36	0	75	0	9	148	29	0	186	0	4	10	21	0	35	1	37	187	13	2	238	534
Hourly Total	0	100	38	106	0	244	1	39	624	108	0	772	1	42	42	75	0	160	3	104	608	45	4	760	1936

**TMC 2354 - CSAH 116 @ Jay St
Thursday, September 28, 2023**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	Jay St.						CSAH 116						Jay St.						CSAH 116						
	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	23	12	32	0	67	4	18	169	36	1	227	0	13	17	8	1	38	0	38	139	12	0	189	521
4:15 PM	0	18	14	35	0	67	0	13	216	31	0	260	0	18	13	15	2	46	0	33	191	10	0	234	607
4:30 PM	0	31	15	32	0	78	0	8	185	33	0	226	0	17	12	24	1	53	0	29	163	12	0	204	561
4:45 PM	0	28	15	35	0	78	1	19	214	29	2	263	0	17	16	15	0	48	2	28	210	19	0	259	648
Hourly Total	0	100	56	134	0	290	5	58	784	129	3	976	0	65	58	62	4	185	2	128	703	53	0	886	2337
5:00 PM	0	33	16	34	1	83	0	16	151	34	0	201	0	17	19	28	1	64	4	42	178	10	0	234	582
5:15 PM	0	27	11	30	0	68	2	11	198	22	0	233	0	10	10	16	0	36	1	31	166	15	0	213	550
5:30 PM	0	35	9	29	0	73	3	12	127	34	0	176	0	16	10	18	2	44	2	36	162	12	0	212	505
5:45 PM	0	41	13	33	0	87	0	8	140	27	0	175	0	10	8	11	0	29	1	32	161	9	0	203	494
Hourly Total	0	136	49	126	1	311	5	47	616	117	0	785	0	53	47	73	3	173	8	141	667	46	0	862	2131
6:00 PM	0	22	4	22	0	48	0	12	116	28	0	156	0	13	13	17	0	43	1	29	121	10	0	161	408
6:15 PM	0	32	11	31	0	74	0	3	105	27	0	135	0	4	10	11	0	25	0	38	129	8	0	175	409
6:30 PM	0	19	15	20	0	54	0	15	114	28	0	157	0	11	12	12	0	35	1	31	121	10	1	163	409
6:45 PM	0	33	9	28	0	70	0	12	91	17	0	120	0	4	12	11	0	27	3	28	155	11	1	197	414
Hourly Total	0	106	39	101	0	246	0	42	426	100	0	568	0	32	47	51	0	130	5	126	526	39	2	696	1640
7:00 PM	0	25	7	17	0	49	1	6	117	28	0	152	0	8	8	10	0	26	2	26	92	7	0	127	354
7:15 PM	0	30	6	21	0	57	1	8	84	11	0	104	0	6	6	14	0	26	2	23	99	10	0	134	321
7:30 PM	0	24	7	18	0	49	1	8	83	26	0	118	1	6	5	9	0	21	0	25	95	10	0	130	318
7:45 PM	0	21	2	14	0	37	2	1	58	11	0	72	0	1	8	14	0	23	3	14	68	11	0	96	228
Hourly Total	0	100	22	70	0	192	5	23	342	76	0	446	1	21	27	47	0	96	7	88	354	38	0	487	1221
8:00 PM	0	19	9	12	0	40	0	3	58	14	0	75	0	2	8	6	0	16	4	15	79	3	0	101	232
8:15 PM	0	28	9	8	0	45	0	4	46	15	0	65	0	9	8	7	0	24	1	12	69	6	0	88	222
8:30 PM	0	15	5	2	0	22	0	3	47	8	0	58	0	8	6	9	0	23	0	11	79	5	0	95	198
8:45 PM	0	9	4	8	0	21	0	6	41	13	0	60	0	5	3	7	0	15	1	11	50	4	0	66	162
Hourly Total	0	71	27	30	0	128	0	16	192	50	0	258	0	24	25	29	0	78	6	49	277	18	0	350	814
9:00 PM	0	20	4	11	0	35	0	4	50	7	0	61	0	5	8	10	0	23	0	9	54	6	0	69	188
9:15 PM	0	15	3	9	0	27	0	5	32	10	0	47	0	6	5	8	0	19	2	4	53	5	0	64	157
9:30 PM	0	12	5	5	0	22	0	1	34	6	0	41	0	7	4	10	0	21	0	2	45	8	0	55	139
9:45 PM	0	12	5	1	0	18	0	6	20	13	0	39	0	9	8	4	0	21	1	6	31	5	0	43	121
Hourly Total	0	59	17	26	0	102	0	16	136	36	0	188	0	27	25	32	0	84	3	21	183	24	0	231	605
10:00 PM	0	8	3	1	0	12	0	4	19	3	0	26	0	4	4	3	0	11	2	6	22	4	0	34	83
10:15 PM	0	8	4	4	0	16	0	2	13	1	0	16	0	7	1	5	0	13	0	3	22	7	0	32	77
10:30 PM	0	3	0	3	0	6	0	4	9	1	0	14	0	4	5	2	1	11	1	0	18	1	0	20	51
10:45 PM	0	3	1	0	0	4	0	3	15	0	0	18	0	6	2	4	0	12	1	1	13	1	0	16	50
Hourly Total	0	22	8	8	0	38	0	13	56	5	0	74	0	21	12	14	1	47	4	10	75	13	0	102	261
11:00 PM	0	5	1	1	0	7	0	2	4	1	0	7	0	2	0	1	0	3	0	1	10	1	0	12	29
11:15 PM	0	1	0	0	0	1	0	2	5	1	0	8	1	3	1	0	0	5	1	0	10	1	0	12	26
11:30 PM	0	0	0	0	0	0	0	1	6	1	0	8	0	1	0	2	0	3	0	0	8	3	0	11	22
11:45 PM	0	0	0	0	0	0	0	1	8	2	0	11	0	0	1	3	0	4	0	0	5	0	0	5	20
Hourly Total	0	6	1	1	0	8	0	6	23	5	0	34	1	6	2	6	0	15	1	1	33	5	0	40	97
DAILY TOTAL	0	1287	624	1235	6	3146	48	634	6705	1225	7	8612	4	730	586	1094	13	2414	69	1213	7424	869	12	9575	23747
Cars	0	1273	606	1199	1	3078	48	617	6576	1209	7	8450	4	652	551	933	8	2140	69	1195	7267	817	7	9348	23016
Heavy Vehicles	0	14	18	36	5	68	0	17	129	16	0	162	0	78	35	161	5	274	0	18	157	52	5	227	731
Heavy Vehicle %	0.00%	1.09%	2.88%	2.91%	83.33%	2.16%	0.00%	2.68%	1.92%	1.31%	0.00%	1.88%	0.00%	10.68%	5.97%	14.72%	38.46%	11.35%	0.00%	1.48%	2.11%	5.98%	41.67%	2.37%	3.08%

**TMC 2354 - CSAH 116 @ Jay St
Thursday, September 28, 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	12	8	27	0	47	1	10	167	8	0	186	0	12	10	20	0	42	0	7	131	14	0	152	427
7:30 AM	0	13	9	22	0	44	0	9	138	13	0	160	0	8	3	17	0	28	0	21	162	16	0	199	431
7:45 AM	0	14	9	17	0	40	0	13	126	17	0	156	0	12	7	19	0	38	0	11	140	15	0	166	400
8:00 AM	0	11	7	15	0	33	1	4	79	16	0	100	0	12	10	16	1	38	1	15	125	15	0	156	327
Peak Hour Total	0	50	33	81	0	164	2	36	510	54	0	602	0	44	30	72	1	146	1	54	558	60	0	673	1585
PHF	0.000	0.893	0.917	0.750	0.000	0.872	0.500	0.692	0.763	0.794	0.000	0.809	0.000	0.917	0.750	0.900	0.250	0.869	0.250	0.643	0.861	0.938	0.000	0.845	0.919

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	18	14	35	0	67	0	13	216	31	0	260	0	18	13	15	2	46	0	33	191	10	0	234	607
4:30 PM	0	31	15	32	0	78	0	8	185	33	0	226	0	17	12	24	1	53	0	29	163	12	0	204	561
4:45 PM	0	28	15	35	0	78	1	19	214	29	2	263	0	17	16	15	0	48	2	28	210	19	0	259	648
5:00 PM	0	33	16	34	1	83	0	16	151	34	0	201	0	17	19	28	1	64	4	42	178	10	0	234	582
Peak Hour Total	0	110	60	136	1	306	1	56	766	127	2	950	0	69	60	82	4	211	6	132	742	51	0	931	2398
PHF	0.000	0.833	0.938	0.971	0.250	0.922	0.250	0.737	0.887	0.934	0.250	0.903	0.000	0.958	0.789	0.732	0.500	0.824	0.375	0.786	0.883	0.671	0.000	0.899	0.925

Total Vehicles On Leg		6170	
Vehicles Entering Intersection	3146	Vehicles Exiting Intersection	3024
Southbound			
Cars	1199	606	1273
Heavy	36	18	14
Total	1235	624	1287



Total Vehicles on Leg 18314	Vehicles Entering Intersection 9575	Eastbound	Cars	Heavy	Total
			7	5	12
			69	0	69
	1195		18	1213	
	Vehicles Exiting Intersection 8739		7267	157	7424
		817	52	869	



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 8612	Total Vehicles on Leg 18465
1209	16	1225			
6576	129	6705			
617	17	634			
48	0	48			
7	0	7	Vehicles Exiting Intersection 9853		



Cars	8	4	652	551	933
Heavy	5	0	78	35	161
Total	13	4	730	586	1094
Northbound					
Vehicles Entering Intersection	2414		Vehicles Exiting Intersection	2131	
Total Vehicles On Leg			4545		

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	
09/28/2023	0:00	0	1	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	1	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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	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	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	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	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	0
	2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	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	0
	3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	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	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	0
	4:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	4:15	0	1	0	0	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	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	0
	5:00	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	5:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0
	5:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	2	0	0	0	0	0	0	0	0
	6:00	0	0	0	0	2	0	0	0	0	1	0	0	0	0	1	1	8	0	0	0	0	2	0	0	0
	6:15	0	0	0	1	0	0	0	0	0	1	0	0	0	0	5	1	6	0	0	0	0	2	0	0	0
	6:30	0	0	0	1	0	0	0	0	0	1	0	0	0	0	8	4	30	0	0	0	2	1	0	0	0
	6:45	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5	2	11	0	0	0	0	2	0	0	0
	7:00	0	0	2	0	0	0	0	0	0	5	1	0	0	0	3	3	5	0	0	0	0	1	0	0	0
	7:15	0	0	0	2	0	0	0	0	0	4	0	0	0	0	1	2	1	0	0	0	0	5	3	0	0
7:30	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3	2	0	0	
7:45	0	0	0	0	0	0	0	0	4	4	0	0	0	0	1	2	3	0	0	0	0	6	2	0	0	
8:00	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	1	1	0	1	0	0	8	1	0	0	
8:15	0	0	1	2	0	0	0	0	0	2	0	0	0	0	2	1	2	0	1	0	0	1	1	0	0	
8:30	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	4	0	0	0	1	0	0	0	0	
8:45	0	0	1	2	0	0	0	0	0	5	0	0	0	0	1	1	1	0	0	0	3	3	4	0	0	
9:00	0	0	0	1	0	0	0	0	0	3	0	0	0	0	2	4	0	0	0	0	0	2	0	0	0	
9:15	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1	6	3	0	0	
9:30	0	0	0	3	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	5	3	0	0	
9:45	0	0	1	1	0	0	0	0	0	5	1	0	0	0	2	0	0	0	0	0	0	3	4	0	0	
10:00	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	
10:15	0	1	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	3	0	0	0	
10:30	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	7	0	0	0	0	2	0	0	0	
10:45	0	0	0	2	0	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0	1	3	0	0	0	
11:00	0	1	0	0	0	0	1	0	0	2	0	0	0	0	1	0	7	0	0	0	0	4	0	0	0	
11:15	0	0	1	2	0	0	0	0	0	4	1	0	0	0	1	1	3	0	0	0	1	1	0	0	0	
11:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	1	0	0	0	0	4	3	0	0	
11:45	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	2	1	0	0	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2354

Study Date : 10/03/2023

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 116

Number of Lanes : 2+

Total Approach Volume: 9,575

Westbound: CSAH 116

Number of Lanes :2+

Total Approach Volume: 8,612

Minor Street Approaches

Northbound: Jay St.

Number of Lanes :1

Total Approach Volume: 2,414

Southbound: Jay St.

Number of Lanes :1

Total Approach Volume: 3,146

Warrant Summary (Rural Values Apply)

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

Warrant 1A - Minimum Vehicular Volume.....Satisfied

Required volumes reached for 16 hours, 8 are needed

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

Required volumes reached for 14 hours, 8 are needed

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

Required 1A volumes reached for 16 hours, 8 are needed

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

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

Number of hours (15) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

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

Number of one hour periods (57) volumes exceed minimum >= required (1). Delay data not evaluated.

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

Volumes exceed minimums for at least one hour period.

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

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

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

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

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

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

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2354

Study Date : 10/03/2023

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

16 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **2 or more**
Number of Minor Lanes = **1**

Volume Requirements

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

Veh/Hr Minor = **105**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	CSAH 116					Jay St.		
16:30 - 17:30	910	+	923	=	1833	201	307	Yes
15:30 - 16:30	841	+	894	=	1735	158	271	Yes
17:30 - 18:30	751	+	642	=	1393	141	282	Yes
14:30 - 15:30	730	+	655	=	1385	155	205	Yes
13:30 - 14:30	700	+	579	=	1279	201	214	Yes
18:30 - 19:30	621	+	533	=	1154	114	230	Yes
07:30 - 08:30	640	+	511	=	1151	132	149	Yes
12:30 - 13:30	580	+	456	=	1036	140	200	Yes
11:30 - 12:30	520	+	495	=	1015	126	208	Yes
10:30 - 11:30	500	+	504	=	1004	144	183	Yes
06:30 - 07:30	505	+	471	=	976	184	134	Yes
09:30 - 10:30	459	+	433	=	892	150	151	Yes
08:30 - 09:30	438	+	436	=	874	116	143	Yes
19:30 - 20:30	415	+	330	=	745	84	171	Yes
20:30 - 21:30	294	+	226	=	520	80	105	Yes
05:30 - 06:30	258	+	188	=	446	111	63	Yes
05:15 - 06:15	201	+	159	=	360	76	48	No
21:30 - 22:30	164	+	122	=	286	66	68	No
05:00 - 06:00	147	+	127	=	274	50	34	No
21:45 - 22:45	129	+	95	=	224	56	52	No
04:45 - 05:45	109	+	106	=	215	38	22	No
22:00 - 23:00	102	+	74	=	176	47	38	No
04:30 - 05:30	75	+	72	=	147	31	14	No
22:15 - 23:15	80	+	55	=	135	39	33	No
04:15 - 05:15	64		64		128	31	11	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2354

Study Date : 10/03/2023

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

14 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **2 or more**
Number of Minor Lanes = **1**

Volume Requirements

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

Veh/Hr Minor = **53**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
	CSAH 116					Jay St.		
16:00 - 17:00	886	+	976	=	1862	185	290	Yes
17:00 - 18:00	862	+	785	=	1647	173	311	Yes
15:00 - 16:00	760	+	772	=	1532	160	244	Yes
14:00 - 15:00	765	+	590	=	1355	177	202	Yes
18:00 - 19:00	696	+	568	=	1264	130	246	Yes
07:00 - 08:00	636	+	628	=	1264	136	174	Yes
13:00 - 14:00	593	+	507	=	1100	164	202	Yes
12:00 - 13:00	579	+	473	=	1052	136	203	Yes
11:00 - 12:00	496	+	501	=	997	128	209	Yes
10:00 - 11:00	480	+	479	=	959	131	159	Yes
19:00 - 20:00	487	+	446	=	933	96	192	Yes
08:00 - 09:00	506	+	404	=	910	125	134	Yes
09:00 - 10:00	441	+	434	=	875	151	153	Yes
06:00 - 07:00	389	+	257	=	646	193	81	Yes
20:00 - 21:00	350	+	258	=	608	78	128	No
20:15 - 21:15	318	+	244	=	562	85	123	No
05:45 - 06:45	312	+	219	=	531	154	66	No
20:30 - 21:30	294	+	226	=	520	80	105	No
20:45 - 21:45	254	+	209	=	463	78	105	No
05:30 - 06:30	258	+	188	=	446	111	63	No
21:00 - 22:00	231	+	188	=	419	84	102	No
05:15 - 06:15	201	+	159	=	360	76	48	No
21:15 - 22:15	196	+	153	=	349	72	79	No
21:30 - 22:30	164	+	122	=	286	66	68	No
05:00 - 06:00	147		127		274	50	34	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2354

Study Date : 10/03/2023

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

16 hours meet 1A minimums.
15 hours meet 1B minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **2 or more**
Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70% applied
Warrant 1A 1B
Veh/Hr Major = **336 504**

Veh/Hr Minor = **84 42**

Major Road CSAH 116

Minor Road Jay St.

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
16:30 - 17:30	910	+	923	=	1833	201	307	Yes
15:30 - 16:30	841	+	894	=	1735	158	271	Yes
17:30 - 18:30	751	+	642	=	1393	141	282	Yes
14:30 - 15:30	730	+	655	=	1385	155	205	Yes
13:30 - 14:30	700	+	579	=	1279	201	214	Yes
18:30 - 19:30	621	+	533	=	1154	114	230	Yes
07:30 - 08:30	640	+	511	=	1151	132	149	Yes
12:30 - 13:30	580	+	456	=	1036	140	200	Yes
11:30 - 12:30	520	+	495	=	1015	126	208	Yes
10:30 - 11:30	500	+	504	=	1004	144	183	Yes
06:30 - 07:30	505	+	471	=	976	184	134	Yes
09:30 - 10:30	459		433		892	150	151	Yes

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:45 - 17:45	918	+	873	=	1791	192	302	Yes
15:45 - 16:45	865	+	899	=	1764	172	287	Yes
14:45 - 15:45	712	+	735	=	1447	156	214	Yes
13:45 - 14:45	758	+	579	=	1337	202	215	Yes
17:45 - 18:45	702	+	623	=	1325	132	263	Yes
06:45 - 07:45	602	+	548	=	1150	158	163	Yes
18:45 - 19:45	588	+	494	=	1082	100	225	Yes
12:45 - 13:45	563	+	482	=	1045	139	198	Yes
11:45 - 12:45	535	+	486	=	1021	142	206	Yes
10:45 - 11:45	518	+	494	=	1012	132	196	Yes
07:45 - 08:45	556	+	450	=	1006	136	138	Yes
09:45 - 10:45	469		468		937	135	152	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2354

Study Date : 10/03/2023

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.

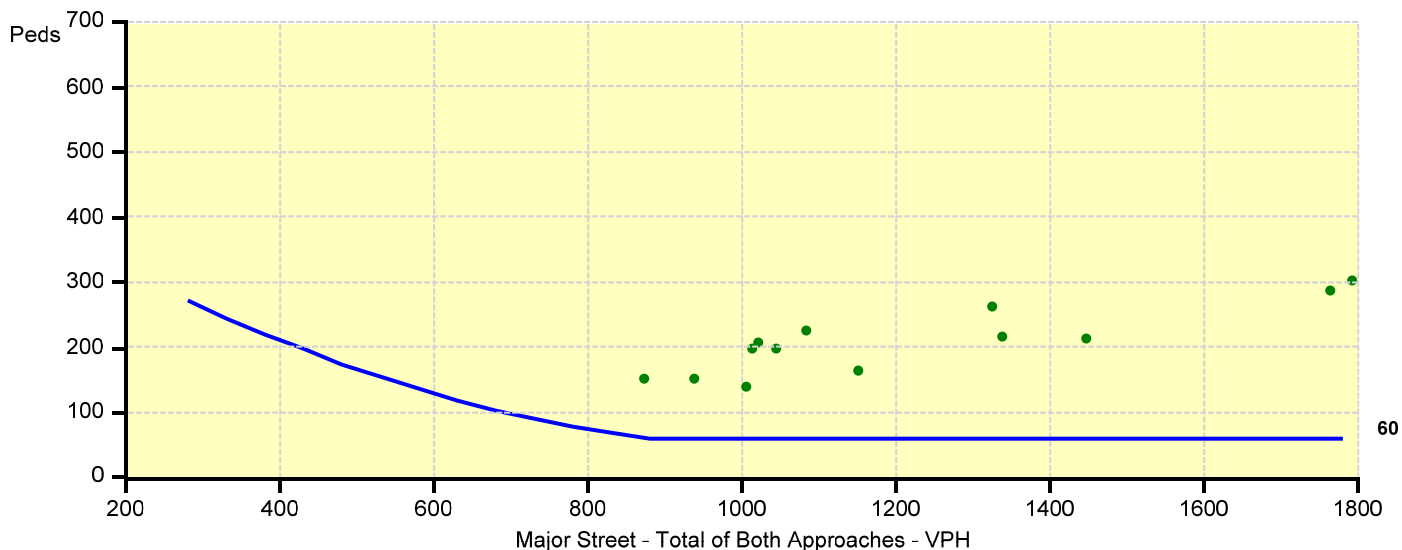
Summary

15 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
 Number of Major Lanes = **2 or more**
 Number of Minor Lanes = **1**

Time	Major Road				Total	Minor Road		Met?
	Major EB	+	Major WB	=		Minor NB	Minor SB	
16:45 - 17:45	918	+	873	=	1791	192	302	Yes
15:45 - 16:45	865	+	899	=	1764	172	287	Yes
14:45 - 15:45	712	+	735	=	1447	156	214	Yes
13:45 - 14:45	758	+	579	=	1337	202	215	Yes
17:45 - 18:45	702	+	623	=	1325	132	263	Yes
06:45 - 07:45	602	+	548	=	1150	158	163	Yes
18:45 - 19:45	588	+	494	=	1082	100	225	Yes
12:45 - 13:45	563	+	482	=	1045	139	198	Yes
11:45 - 12:45	535	+	486	=	1021	142	206	Yes
10:45 - 11:45	518	+	494	=	1012	132	196	Yes
07:45 - 08:45	556	+	450	=	1006	136	138	Yes
09:45 - 10:45	469	+	468	=	937	135	152	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2354

Study Date : 10/03/2023

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

52 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
 Number of Major Lanes = **2 or more**
 Number of Minor Lanes = **1**

Time	Major Road CSAH 116					Minor Road Jay St.		Met?
	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	
16:15 - 17:15	931	+	950	=	1881	211	306	Yes
16:00 - 17:00	886	+	976	=	1862	185	290	Yes
16:30 - 17:30	910	+	923	=	1833	201	307	Yes
16:45 - 17:45	918	+	873	=	1791	192	302	Yes
15:45 - 16:45	865	+	899	=	1764	172	287	Yes
15:30 - 16:30	841	+	894	=	1735	158	271	Yes
17:00 - 18:00	862	+	785	=	1647	173	311	Yes
15:15 - 16:15	772	+	834	=	1606	154	261	Yes
15:00 - 16:00	760	+	772	=	1532	160	244	Yes
17:15 - 18:15	789	+	740	=	1529	152	276	Yes
14:45 - 15:45	712	+	735	=	1447	156	214	Yes
14:15 - 15:15	794	+	607	=	1401	155	198	Yes

