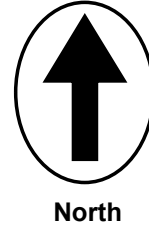


Date : 06/21/22

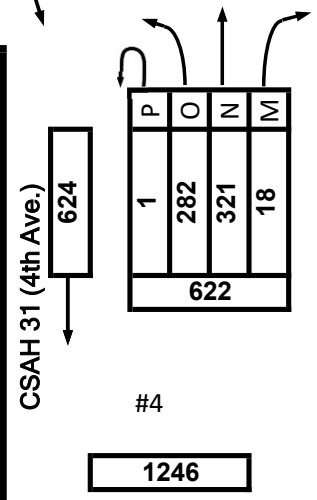
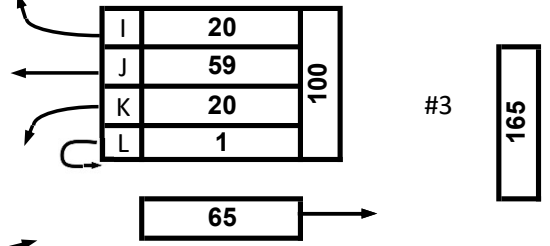
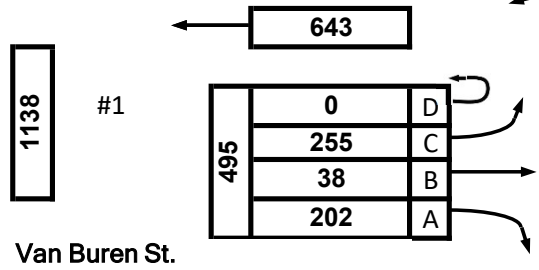
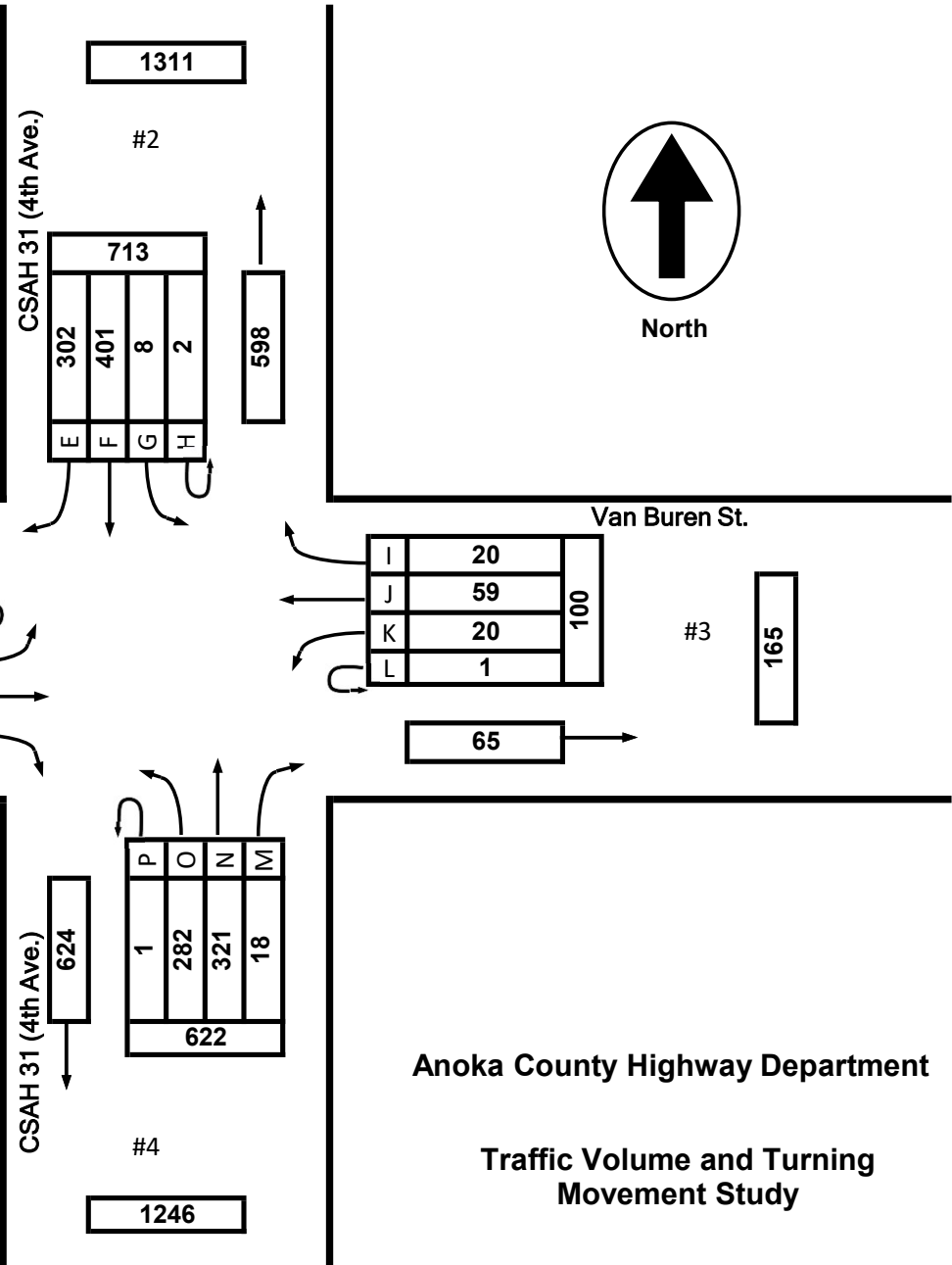
Count Number : TMC 2219

Location : Van Buren St.
@ CSAH 31 (4th Ave.)

Collection Period : 24 HR



North



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

Anoka County Highway Department
 Traffic Volume and Turning Movement Study

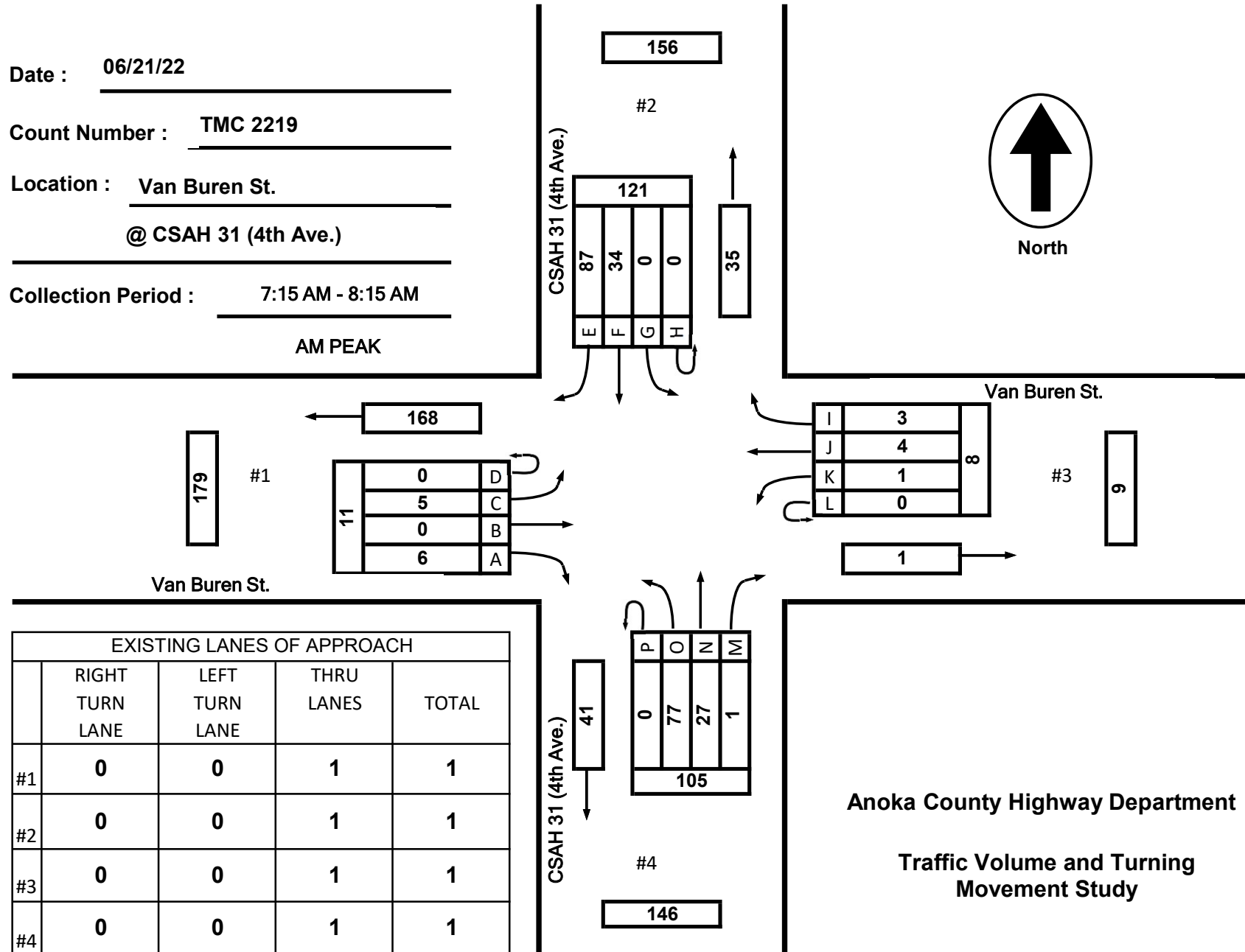
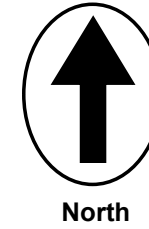
Date : 06/21/22

Count Number : TMC 2219

Location : Van Buren St.
@ CSAH 31 (4th 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	0	1	1
#2	0	0	1	1
#3	0	0	1	1
#4	0	0	1	1

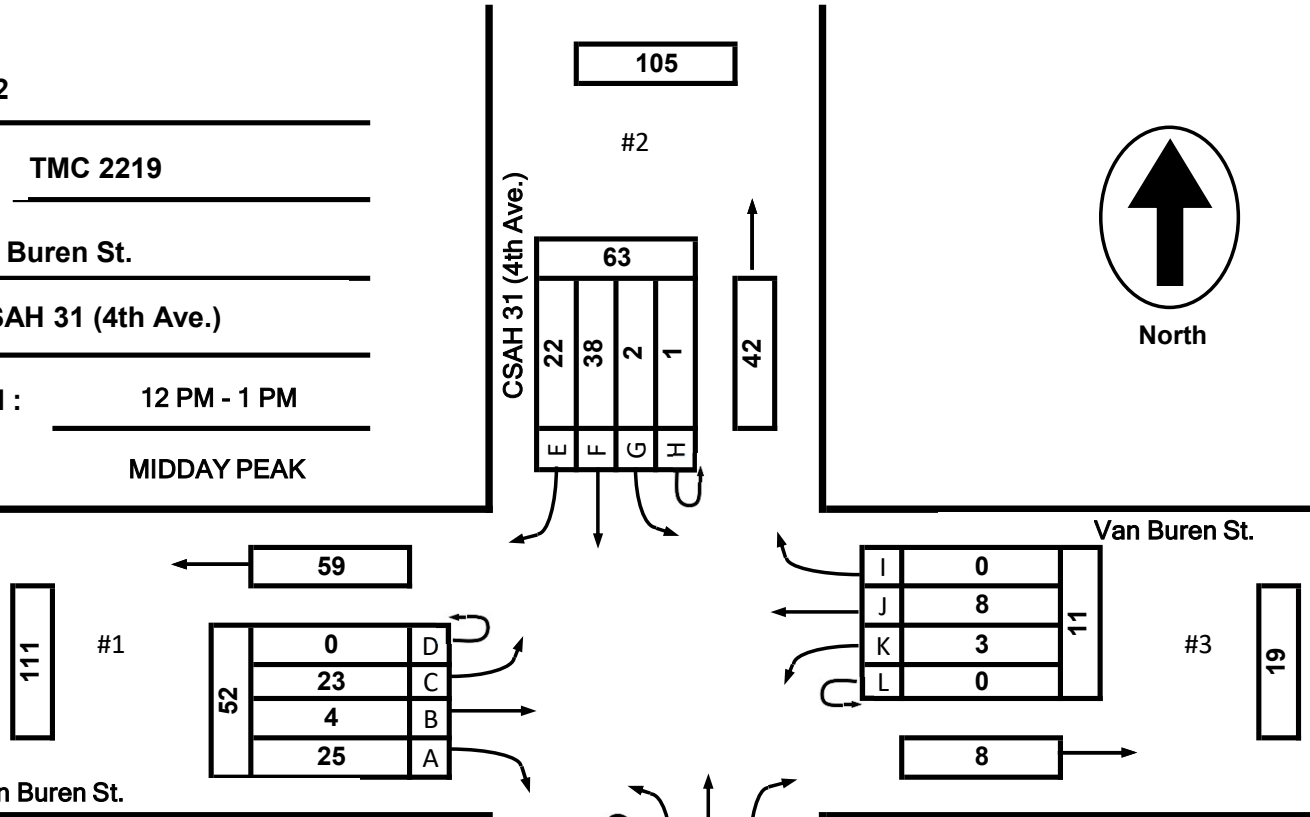
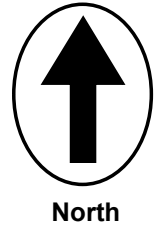
Anoka County Highway Department
 Traffic Volume and Turning Movement Study

Date : 06/21/22

Count Number : TMC 2219

Location : Van Buren St.
@ CSAH 31 (4th Ave.)

Collection Period : 12 PM - 1 PM
MIDDAY PEAK



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

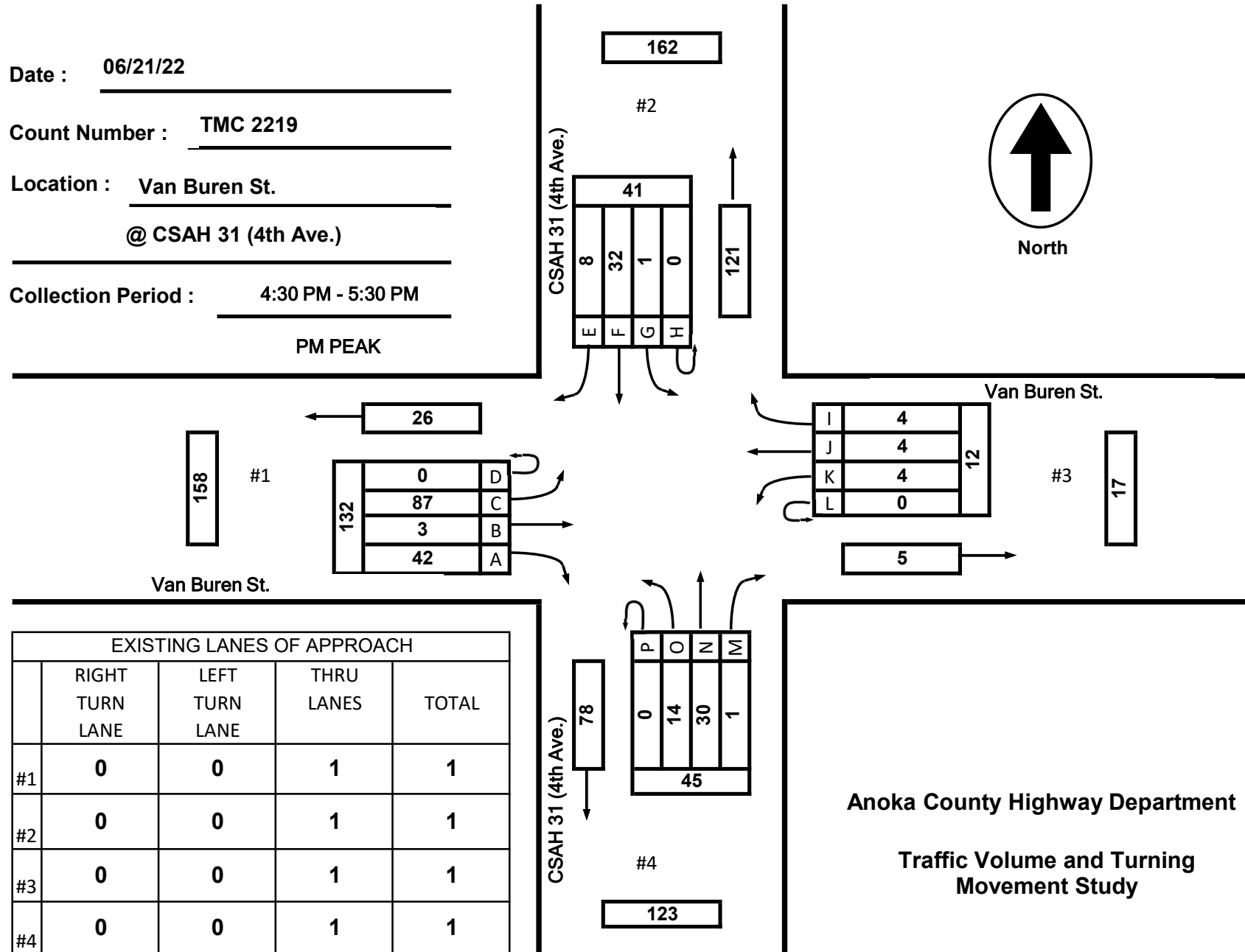
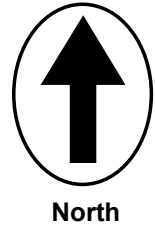
Anoka County Highway Department
Traffic Volume and Turning Movement Study

Date : 06/21/22

Count Number : TMC 2219

Location : Van Buren St.
@ CSAH 31 (4th Ave.)

Collection Period : 4:30 PM - 5:30 PM
PM PEAK



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

Anoka County Highway Department
Traffic Volume and Turning Movement Study



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2219
 Site Code :
 Start Date : 06/21/2022
 Page No : 1

Weather: Warm & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Cars + - Trucks

Start Time	CSAH 31 (4th Ave.) Southbound						Van Buren St. Westbound						CSAH 31 (4th Ave.) Northbound						Van Buren St. Eastbound						Exclu. Total	Inclu. Total	Int. Total		
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total					
00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
00:15	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	0	0	0	0
00:30	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
00:45	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	0	0	0	0
Total	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3
01:00	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	0	0	0	0
01:15	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	0	0	0	0
01:30	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	0	0	0	0
01:45	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	0	0	0	0
Total	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	0	0	0	0
02:00	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	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	2	2	2	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	1	0	0	1	0	4	4	4	
03:00	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	0	0	0	0
03:15	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	0	0	0	0
03:30	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
03:45	0	3	0	0	0	3	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	
Total	0	4	0	0	0	4	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	
04:00	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	0	0	0	0
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	
04:30	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
04:45	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
Total	1	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3	3	3	
05:00	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	
05:15	1	2	0	0	0	3	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	1	4	5	5	
05:30	2	1	0	0	0	3	0	0	0	1	0	1	0	1	0	0	2	0	0	0	0	0	0	0	0	6	6	6	
05:45	3	3	0	0	0	6	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	7	7	7	
Total	6	8	0	0	0	14	0	0	0	1	1	1	1	1	2	0	4	0	0	0	0	0	0	0	1	19	20	20	



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2219
 Site Code :
 Start Date : 06/21/2022
 Page No : 2

Weather: Warm & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Cars + - Trucks

Start Time	CSAH 31 (4th Ave.) Southbound						Van Buren St. Westbound						CSAH 31 (4th Ave.) Northbound						Van Buren St. Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
06:00	6	1	0	0	0	7	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	1	0	1	10	11
06:15	4	3	0	0	0	7	0	0	0	0	0	0	0	2	5	0	0	7	0	0	1	0	0	1	0	15	15
06:30	10	5	0	0	0	15	0	0	0	0	0	0	0	2	8	0	0	10	0	1	0	0	0	1	0	26	26
06:45	16	4	1	0	0	21	0	0	0	0	0	0	0	5	8	0	0	13	3	0	4	0	0	7	0	41	41
Total	36	13	1	0	0	50	0	0	0	0	0	0	0	9	24	0	0	33	3	1	5	0	1	9	1	92	93
07:00	14	3	1	0	0	18	0	0	0	0	0	0	0	8	2	0	0	10	3	0	1	0	0	4	0	32	32
07:15	13	6	0	0	0	19	0	0	0	0	1	0	0	9	10	0	0	19	1	0	0	0	0	1	1	39	40
07:30	19	9	0	0	0	28	0	1	0	0	0	1	1	9	20	0	0	30	3	0	3	0	2	6	2	65	67
07:45	38	9	0	0	0	47	3	1	0	0	0	4	0	7	34	0	0	41	1	0	1	0	5	2	5	94	99
Total	84	27	1	0	0	112	3	2	0	0	1	5	1	33	66	0	0	100	8	0	5	0	7	13	8	230	238
08:00	17	10	0	0	1	27	0	2	1	0	0	3	0	2	13	0	0	15	1	0	1	0	1	2	2	47	49
08:15	8	5	0	0	0	13	0	0	0	0	0	0	0	6	7	0	0	13	0	0	1	0	1	1	1	27	28
08:30	9	6	0	0	0	15	1	0	0	0	1	1	0	3	9	0	0	12	0	0	1	0	0	1	1	29	30
08:45	7	4	0	0	0	11	2	0	0	0	0	2	0	2	6	0	0	8	1	1	3	0	0	5	0	26	26
Total	41	25	0	0	1	66	3	2	1	0	1	6	0	13	35	0	0	48	2	1	6	0	2	9	4	129	133
09:00	2	3	1	0	0	6	0	1	0	0	0	1	1	5	5	0	3	11	3	0	4	0	0	7	3	25	28
09:15	4	7	0	0	0	11	0	0	0	0	0	0	0	4	1	0	0	5	2	0	3	0	0	5	0	21	21
09:30	3	10	1	0	0	14	0	3	0	0	1	3	0	5	3	0	0	8	4	2	2	0	0	8	1	33	34
09:45	5	8	0	0	0	13	1	2	1	0	0	4	1	5	2	0	0	8	6	0	0	0	1	6	1	31	32
Total	14	28	2	0	0	44	1	6	1	0	1	8	2	19	11	0	3	32	15	2	9	0	1	26	5	110	115
10:00	6	4	0	0	0	10	0	1	1	0	0	2	1	2	3	0	0	6	4	0	4	0	0	8	0	26	26
10:15	6	7	0	0	0	13	0	1	0	0	0	1	0	5	1	0	0	6	2	1	0	0	2	3	2	23	25
10:30	4	3	0	0	0	7	1	0	0	0	0	1	0	3	1	0	0	4	1	0	1	0	2	2	2	14	16
10:45	0	11	0	1	1	12	0	0	0	0	0	0	0	2	3	0	0	5	3	0	1	0	0	4	1	21	22
Total	16	25	0	1	1	42	1	2	1	0	0	4	1	12	8	0	0	21	10	1	6	0	4	17	5	84	89
11:00	4	7	0	0	0	11	0	2	0	0	0	2	1	5	2	0	0	8	2	2	3	0	1	7	1	28	29
11:15	2	5	0	0	0	7	1	3	2	0	0	6	1	5	7	0	0	13	6	0	1	0	1	7	1	33	34
11:30	4	11	0	0	0	15	0	2	0	0	0	2	1	6	5	0	1	12	6	2	3	0	0	11	1	40	41
11:45	1	9	0	0	0	10	0	6	0	0	0	6	1	4	2	0	1	7	5	5	2	0	1	12	2	35	37
Total	11	32	0	0	0	43	1	13	2	0	0	16	4	20	16	0	2	40	19	9	9	0	3	37	5	136	141
12:00	7	10	0	0	0	17	0	2	0	0	0	2	0	7	4	0	0	11	11	1	6	0	0	18	0	48	48
12:15	4	7	1	0	0	12	0	4	2	0	0	6	1	5	8	0	0	14	3	2	5	0	0	10	0	42	42
12:30	5	9	0	0	0	14	0	1	1	0	0	2	1	2	7	0	1	10	8	0	10	0	0	18	1	44	45



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2219
 Site Code :
 Start Date : 06/21/2022
 Page No : 3

Weather: Warm & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Cars + - Trucks

Start Time	CSAH 31 (4th Ave.) Southbound						Van Buren St. Westbound						CSAH 31 (4th Ave.) Northbound						Van Buren St. Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
12:45	6	12	1	1	0	20	0	1	0	0	0	1	0	4	10	0	1	14	3	1	2	0	0	6	1	41	42
Total	22	38	2	1	0	63	0	8	3	0	0	11	2	18	29	0	2	49	25	4	23	0	0	52	2	175	177
13:00	7	8	0	0	1	15	0	1	0	0	1	1	1	6	5	0	0	12	5	1	5	0	1	11	3	39	42
13:15	6	7	1	0	0	14	0	0	0	0	0	0	0	4	6	0	1	10	3	1	2	0	1	6	2	30	32
13:30	2	8	0	0	0	10	1	1	0	0	1	2	0	4	3	0	1	7	6	1	2	0	0	9	2	28	30
13:45	3	10	0	0	0	13	0	0	1	0	0	1	0	11	8	0	2	19	3	0	2	0	1	5	3	38	41
Total	18	33	1	0	1	52	1	2	1	0	2	4	1	25	22	0	4	48	17	3	11	0	3	31	10	135	145
14:00	8	6	0	0	0	14	0	1	0	0	0	1	0	6	3	0	0	9	2	0	0	0	1	2	1	26	27
14:15	4	6	0	0	1	10	0	1	1	0	0	2	0	4	3	0	0	7	2	2	1	0	0	5	1	24	25
14:30	1	5	0	0	1	6	1	1	0	0	0	2	1	8	7	0	0	16	2	1	0	0	1	3	2	27	29
14:45	3	4	0	0	0	7	1	5	0	0	0	6	0	4	2	0	0	6	1	1	5	0	0	7	0	26	26
Total	16	21	0	0	2	37	2	8	1	0	0	11	1	22	15	0	0	38	7	4	6	0	2	17	4	103	107
15:00	3	6	0	0	1	9	1	2	0	0	1	3	1	10	5	0	0	16	5	0	5	0	0	10	2	38	40
15:15	1	8	0	0	0	9	0	1	0	0	0	1	0	2	2	0	0	4	3	0	5	0	1	8	1	22	23
15:30	4	9	0	0	2	13	0	0	0	0	0	0	0	9	0	0	1	9	6	2	11	0	1	19	4	41	45
15:45	4	3	0	0	0	7	0	1	1	0	0	2	1	7	1	0	0	9	2	2	5	0	0	9	0	27	27
Total	12	26	0	0	3	38	1	4	1	0	1	6	2	28	8	0	1	38	16	4	26	0	2	46	7	128	135
16:00	1	8	0	0	0	9	2	1	0	0	0	3	0	10	4	0	0	14	4	0	12	0	0	16	0	42	42
16:15	3	5	0	0	1	8	0	4	0	0	0	4	0	2	1	0	0	3	6	0	7	0	0	13	1	28	29
16:30	4	10	0	0	0	14	2	2	0	0	0	4	0	6	1	0	1	7	25	3	46	0	2	74	3	99	102
16:45	2	7	0	0	0	9	0	1	1	0	0	2	1	6	3	0	0	10	10	0	22	0	0	32	0	53	53
Total	10	30	0	0	1	40	4	8	1	0	0	13	1	24	9	0	1	34	45	3	87	0	2	135	4	222	226
17:00	1	9	0	0	0	10	1	1	3	0	0	5	0	11	4	0	0	15	2	0	7	0	0	9	0	39	39
17:15	1	6	1	0	1	8	1	0	0	0	1	1	0	7	6	0	1	13	5	0	12	0	1	17	4	39	43
17:30	2	2	0	0	0	4	0	1	0	0	1	1	0	4	3	0	1	7	7	0	9	0	0	16	2	28	30
17:45	2	6	0	0	0	8	0	0	0	0	0	0	1	8	4	0	1	13	1	0	3	0	1	4	2	25	27
Total	6	23	1	0	1	30	2	2	3	0	2	7	1	30	17	0	3	48	15	0	31	0	2	46	8	131	139
18:00	2	5	0	0	0	7	0	0	0	0	0	0	0	1	3	0	2	4	2	1	7	0	0	10	2	21	23
18:15	1	6	0	0	0	7	0	0	1	0	1	1	0	3	1	1	0	5	2	1	2	0	2	5	3	18	21
18:30	0	2	0	0	0	2	0	1	1	0	0	2	0	3	1	0	1	4	1	0	1	0	0	2	1	10	11
18:45	1	4	0	0	1	5	0	0	0	0	0	0	0	4	2	0	0	6	2	1	5	0	0	8	1	19	20
Total	4	17	0	0	1	21	0	1	2	0	1	3	0	11	7	1	3	19	7	3	15	0	2	25	7	68	75



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2219
 Site Code :
 Start Date : 06/21/2022
 Page No : 4

Weather: Warm & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Cars + - Trucks

Start Time	CSAH 31 (4th Ave.) Southbound						Van Buren St. Westbound						CSAH 31 (4th Ave.) Northbound						Van Buren St. Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
19:00	0	2	0	0	1	2	0	0	1	0	0	1	0	3	0	0	0	3	1	0	1	0	0	2	1	8	9
19:15	2	5	0	0	1	7	0	0	1	0	0	1	0	6	0	0	2	6	2	0	1	0	1	3	4	17	21
19:30	0	5	0	0	2	5	0	0	0	0	0	0	0	5	2	0	0	7	0	0	1	0	0	1	2	13	15
19:45	0	3	0	0	1	3	0	0	0	0	0	0	0	2	0	0	0	2	1	0	2	0	0	3	1	8	9
Total	2	15	0	0	5	17	0	0	2	0	0	2	0	16	2	0	2	18	4	0	5	0	1	9	8	46	54
20:00	0	7	0	0	0	7	0	0	0	0	0	0	0	8	1	0	0	9	1	0	0	0	0	1	0	17	17
20:15	0	1	0	0	0	1	0	1	0	0	1	1	0	4	0	0	0	4	0	2	0	0	0	2	1	8	9
20:30	0	5	0	0	3	5	0	0	0	0	2	0	0	3	0	0	0	3	0	0	0	0	0	0	5	8	13
20:45	0	1	0	0	2	1	0	0	0	0	2	0	0	1	1	0	0	2	1	0	0	0	1	1	5	4	9
Total	0	14	0	0	5	14	0	1	0	0	5	1	0	16	2	0	0	18	2	2	0	0	1	4	11	37	48
21:00	0	6	0	0	0	6	0	0	0	0	0	0	0	2	0	0	3	2	0	1	0	0	1	1	4	9	13
21:15	0	4	0	0	0	4	0	0	1	0	0	1	0	4	0	0	0	4	0	0	0	0	0	0	0	9	9
21:30	0	4	0	0	1	4	0	0	0	0	1	0	0	4	0	0	0	4	0	0	1	0	0	1	2	9	11
21:45	1	1	0	0	0	2	0	0	0	0	0	0	0	2	1	0	0	3	0	0	1	0	0	1	0	6	6
Total	1	15	0	0	1	16	0	0	1	0	1	1	0	12	1	0	3	13	0	1	2	0	1	3	6	33	39
22:00	1	1	0	0	0	2	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	6	6
22:15	0	1	0	0	0	1	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	4	4
22:30	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	3	3
22:45	0	2	0	0	0	2	0	0	0	0	0	0	1	1	1	0	0	3	0	0	1	0	1	1	1	6	7
Total	1	5	0	0	0	6	0	0	0	0	0	0	1	4	6	0	0	11	0	0	2	0	1	2	1	19	20
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	6	0	1	0	0	7	0	10	10
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	0	5	0	5	5
23:30	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	2
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	4	7	0	6	0	0	13	0	18	18
Grand Total	302	401	8	2	22	713	20	59	20	1	16	100	18	321	282	1	24	622	202	38	255	0	35	495	97	1930	2027
Apprch %	42.4	56.2	1.1	0.3			20	59	20	1			2.9	51.6	45.3	0.2		40.8	7.7	51.5	0						
Total %	15.6	20.8	0.4	0.1		36.9	1	3.1	1	0.1		5.2	0.9	16.6	14.6	0.1		32.2	10.5	2	13.2	0		25.6	4.8	95.2	
Cars +	297	362	8	1		690	20	55	19	1		111	17	292	273	1		607	200	36	252	0		523	0	0	1931
% Cars +	98.3	90.3	100	50	100	93.9	100	93.2	95	100	100	95.7	94.4	91	96.8	100	100	94	99	94.7	98.8	0	100	98.7	0	0	95.3
Trucks	5	39	0	1		45	0	4	1	0		5	1	29	9	0		39	2	2	3	0		7	0	0	96
% Trucks	1.7	9.7	0	50	0	6.1	0	6.8	5	0	0	4.3	5.6	9	3.2	0	0	6	1	5.3	1.2	0	0	1.3	0	0	4.7



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2219
 Site Code :
 Start Date : 06/21/2022
 Page No : 5

Weather: Warm & Sunny
 CountCAM 2
 Study Conducted By: Sam

Start Time	CSAH 31 (4th Ave.) Southbound					Van Buren St. Westbound					CSAH 31 (4th Ave.) Northbound					Van Buren St. Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
Peak Hour Analysis From 00:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	13	6	0	0	19	0	0	0	0	0	0	9	10	0	19	1	0	0	0	1	39
07:30	19	9	0	0	28	0	1	0	0	1	1	9	20	0	30	3	0	3	0	6	65
07:45	38	9	0	0	47	3	1	0	0	4	0	7	34	0	41	1	0	1	0	2	94
08:00	17	10	0	0	27	0	2	1	0	3	0	2	13	0	15	1	0	1	0	2	47
Total Volume	87	34	0	0	121	3	4	1	0	8	1	27	77	0	105	6	0	5	0	11	245
% App. Total	71.9	28.1	0	0		37.5	50	12.5	0		1	25.7	73.3	0		54.5	0	45.5	0		
PHF	.572	.850	.000	.000	.644	.250	.500	.250	.000	.500	.250	.750	.566	.000	.640	.500	.000	.417	.000	.458	.652

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00																					
12:00	7	10	0	0	17	0	2	0	0	2	0	7	4	0	11	11	1	6	0	18	48
12:15	4	7	1	0	12	0	4	2	0	6	1	5	8	0	14	3	2	5	0	10	42
12:30	5	9	0	0	14	0	1	1	0	2	1	2	7	0	10	8	0	10	0	18	44
12:45	6	12	1	1	20	0	1	0	0	1	0	4	10	0	14	3	1	2	0	6	41
Total Volume	22	38	2	1	63	0	8	3	0	11	2	18	29	0	49	25	4	23	0	52	175
% App. Total	34.9	60.3	3.2	1.6		0	72.7	27.3	0		4.1	36.7	59.2	0		48.1	7.7	44.2	0		
PHF	.786	.792	.500	.250	.788	.000	.500	.375	.000	.458	.500	.643	.725	.000	.875	.568	.500	.575	.000	.722	.911

Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	4	10	0	0	14	2	2	0	0	4	0	6	1	0	7	25	3	46	0	74	99
16:45	2	7	0	0	9	0	1	1	0	2	1	6	3	0	10	10	0	22	0	32	53
17:00	1	9	0	0	10	1	1	3	0	5	0	11	4	0	15	2	0	7	0	9	39
17:15	1	6	1	0	8	1	0	0	0	1	0	7	6	0	13	5	0	12	0	17	39
Total Volume	8	32	1	0	41	4	4	4	0	12	1	30	14	0	45	42	3	87	0	132	230
% App. Total	19.5	78	2.4	0		33.3	33.3	33.3	0		2.2	66.7	31.1	0		31.8	2.3	65.9	0		
PHF	.500	.800	.250	.000	.732	.500	.500	.333	.000	.600	.250	.682	.583	.000	.750	.420	.250	.473	.000	.446	.581



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Warm & Sunny
 CountCAM 2
 Study Conducted By: Sam

File Name : TMC 2219
 Site Code :
 Start Date : 06/21/2022
 Page No : 1

Groups Printed- Trucks

Start Time	CSAH 31 (4th Ave.) Southbound					Van Buren St. Westbound					CSAH 31 (4th Ave.) Northbound					Van Buren St. Eastbound					Int. Total	
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total		
00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
06:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
06:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	2
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
08:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	4
09:00	0	1	0	0	1	0	1	0	0	1	0	1	1	0	2	0	0	0	0	0	0	4



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2219
 Site Code :
 Start Date : 06/21/2022
 Page No : 2

Weather: Warm & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Trucks

Start Time	CSAH 31 (4th Ave.) Southbound					Van Buren St. Westbound					CSAH 31 (4th Ave.) Northbound					Van Buren St. Eastbound					Int. Total	
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total		
09:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:30	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	4
09:45	1	1	0	0	2	0	1	0	0	1	1	1	0	0	2	0	0	0	0	0	0	5
Total	1	5	0	0	6	0	2	0	0	2	1	3	2	0	6	0	0	0	0	0	0	14
10:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3	4
10:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
10:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2
10:45	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	2	1	1	0	0	4	11
11:00	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
11:15	0	1	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	3
11:30	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
11:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	3	0	0	4	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	0	8
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
12:15	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	3
12:30	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:45	1	3	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	6
Total	1	6	0	1	8	0	0	1	0	1	0	1	0	0	1	0	0	2	0	0	2	12
13:00	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
13:15	1	2	0	0	3	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	5
13:30	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	3
13:45	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3
Total	1	6	0	0	7	0	0	0	0	0	0	5	2	0	7	0	0	0	0	0	0	14
14:00	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4
14:15	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4
14:30	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	5
14:45	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	3
Total	1	6	0	0	7	0	1	0	0	1	0	7	1	0	8	0	0	0	0	0	0	16
15:00	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3
15:15	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2
Total	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8
16:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
16:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC 2219
 Site Code :
 Start Date : 06/21/2022
 Page No : 3

Weather: Warm & Sunny
 CountCAM 2
 Study Conducted By: Sam

Groups Printed- Trucks

Start Time	CSAH 31 (4th Ave.) Southbound					Van Buren St. Westbound					CSAH 31 (4th Ave.) Northbound					Van Buren St. Eastbound					Int. Total					
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total						
19:00	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	0
19:15	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	0
19:30	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	0
19:45	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	0
Total	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	0
20:00	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	0
20:15	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	0
20:30	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	0
20:45	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	0
Total	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	0
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
21:15	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	0
21:30	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	0
21:45	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	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
22:00	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	0
22:15	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	0
22:30	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	0
22:45	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	0
Total	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	0
23:00	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	0
23:15	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	0
23:30	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	0
23:45	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	0
Total	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	0
Grand Total	5	39	0	1	45	0	4	1	0	5	1	29	9	0	39	2	2	3	0	7					96	
Apprch %	11.1	86.7	0	2.2		0	80	20	0		2.6	74.4	23.1	0		28.6	28.6	42.9	0							
Total %	5.2	40.6	0	1	46.9	0	4.2	1	0	5.2	1	30.2	9.4	0	40.6	2.1	2.1	3.1	0	7.3						

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 07/11/2022

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 31 (4th Ave.)

Number of Lanes : 1

Total Approach Volume: 622

Southbound: CSAH 31 (4th Ave.)

Number of Lanes : 1

Total Approach Volume: 713

Minor Street Approaches

Eastbound: Van Buren St.

Number of Lanes : 1

Total Approach Volume: 495

Westbound: Van Buren St.

Number of Lanes : 1

Total Approach Volume: 100

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 : 07/11/2022

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 NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 31 (4th Ave.)					Van Buren St.		
07:15 - 08:15	105	+	121	=	226	11	8	No
07:30 - 08:30	99	+	115	=	214	11	8	No
07:00 - 08:00	100	+	112	=	212	13	5	No
07:45 - 08:45	81	+	102	=	183	6	8	No
06:45 - 07:45	72	+	86	=	158	18	1	No
06:30 - 07:30	52	+	73	=	125	13	0	No
08:00 - 09:00	48	+	66	=	114	9	6	No
12:00 - 13:00	49	+	63	=	112	52	11	No
12:15 - 13:15	50	+	61	=	111	45	10	No
12:30 - 13:30	46	+	63	=	109	41	4	No
12:45 - 13:45	43	+	59	=	102	32	4	No
06:15 - 07:15	40	+	61	=	101	13	0	No
13:00 - 14:00	48	+	52	=	100	31	4	No
11:30 - 12:30	44	+	54	=	98	51	16	No
13:15 - 14:15	45	+	51	=	96	22	4	No
11:45 - 12:45	42	+	53	=	95	58	16	No
13:45 - 14:45	51	+	43	=	94	15	6	No
11:15 - 12:15	43	+	49	=	92	48	16	No
08:15 - 09:15	44	+	45	=	89	14	4	No
13:30 - 14:30	42	+	47	=	89	21	6	No
16:30 - 17:30	45	+	41	=	86	132	12	No
11:00 - 12:00	40	+	43	=	83	37	16	No
10:45 - 11:45	38	+	45	=	83	29	10	No
06:00 - 07:00	33	+	50	=	83	9	0	No
08:30 - 09:30	36		43		79	18	4	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 07/11/2022

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 NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 31 (4th Ave.)					Van Buren St.		
07:15 - 08:15	105	+	121	=	226	11	8	No
07:30 - 08:30	99	+	115	=	214	11	8	No
07:00 - 08:00	100	+	112	=	212	13	5	No
07:45 - 08:45	81	+	102	=	183	6	8	No
06:45 - 07:45	72	+	86	=	158	18	1	No
06:30 - 07:30	52	+	73	=	125	13	0	No
08:00 - 09:00	48	+	66	=	114	9	6	No
12:00 - 13:00	49	+	63	=	112	52	11	No
12:15 - 13:15	50	+	61	=	111	45	10	No
12:30 - 13:30	46	+	63	=	109	41	4	No
12:45 - 13:45	43	+	59	=	102	32	4	No
06:15 - 07:15	40	+	61	=	101	13	0	No
13:00 - 14:00	48	+	52	=	100	31	4	No
11:30 - 12:30	44	+	54	=	98	51	16	No
13:15 - 14:15	45	+	51	=	96	22	4	No
11:45 - 12:45	42	+	53	=	95	58	16	No
13:45 - 14:45	51	+	43	=	94	15	6	No
11:15 - 12:15	43	+	49	=	92	48	16	No
08:15 - 09:15	44	+	45	=	89	14	4	No
13:30 - 14:30	42	+	47	=	89	21	6	No
16:30 - 17:30	45	+	41	=	86	132	12	No
11:00 - 12:00	40	+	43	=	83	37	16	No
10:45 - 11:45	38	+	45	=	83	29	10	No
06:00 - 07:00	33	+	50	=	83	9	0	No
08:30 - 09:30	36		43		79	18	4	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 07/11/2022

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 31 (4th Ave.)

Minor Road
Van Buren St.

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
07:15 - 08:15	105	+	121	=	226	11	8	No
07:30 - 08:30	99	+	115	=	214	11	8	No
07:00 - 08:00	100	+	112	=	212	13	5	No
07:45 - 08:45	81	+	102	=	183	6	8	No
06:45 - 07:45	72	+	86	=	158	18	1	No
06:30 - 07:30	52	+	73	=	125	13	0	No
08:00 - 09:00	48	+	66	=	114	9	6	No
12:00 - 13:00	49	+	63	=	112	52	11	No
12:15 - 13:15	50	+	61	=	111	45	10	No
12:30 - 13:30	46	+	63	=	109	41	4	No
12:45 - 13:45	43	+	59	=	102	32	4	No
06:15 - 07:15	40	+	61	=	101	13	0	No

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
07:15 - 08:15	105	+	121	=	226	11	8	No
07:30 - 08:30	99	+	115	=	214	11	8	No
07:00 - 08:00	100	+	112	=	212	13	5	No
07:45 - 08:45	81	+	102	=	183	6	8	No
06:45 - 07:45	72	+	86	=	158	18	1	No
06:30 - 07:30	52	+	73	=	125	13	0	No
08:00 - 09:00	48	+	66	=	114	9	6	No
12:00 - 13:00	49	+	63	=	112	52	11	No
12:15 - 13:15	50	+	61	=	111	45	10	No
12:30 - 13:30	46	+	63	=	109	41	4	No
12:45 - 13:45	43	+	59	=	102	32	4	No
06:15 - 07:15	40	+	61	=	101	13	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 07/11/2022

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.

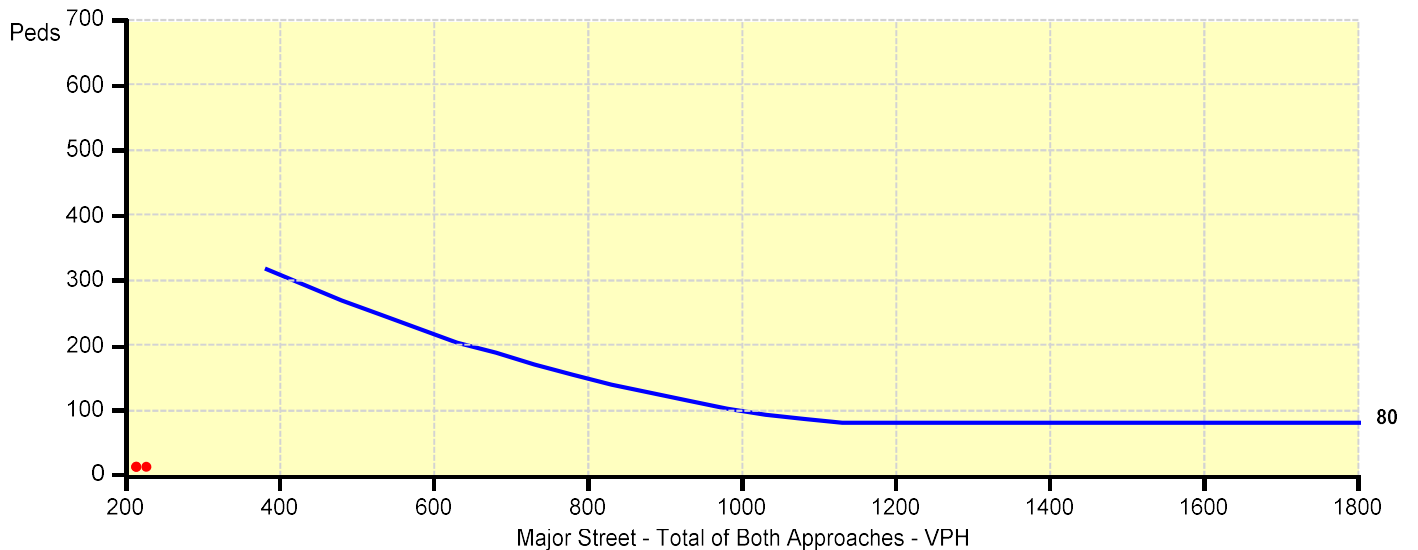
Summary

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 31 (4th Ave.)				Total	Minor Road Van Buren St.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
07:15 - 08:15	105	+	121	=	226	11	8	No
07:30 - 08:30	99	+	115	=	214	11	8	No
07:00 - 08:00	100	+	112	=	212	13	5	No
07:45 - 08:45	81	+	102	=	183	6	8	No
06:45 - 07:45	72	+	86	=	158	18	1	No
06:30 - 07:30	52	+	73	=	125	13	0	No
08:00 - 09:00	48	+	66	=	114	9	6	No
12:00 - 13:00	49	+	63	=	112	52	11	No
12:15 - 13:15	50	+	61	=	111	45	10	No
12:30 - 13:30	46	+	63	=	109	41	4	No
12:45 - 13:45	43	+	59	=	102	32	4	No
06:15 - 07:15	40		61		101	13	0	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 07/11/2022

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 31 (4th Ave.)				Total	Minor Road Van Buren St.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
07:15 - 08:15	105	+	121	=	226	11	8	No
07:30 - 08:30	99	+	115	=	214	11	8	No
07:00 - 08:00	100	+	112	=	212	13	5	No
07:45 - 08:45	81	+	102	=	183	6	8	No
06:45 - 07:45	72	+	86	=	158	18	1	No
06:30 - 07:30	52	+	73	=	125	13	0	No
08:00 - 09:00	48	+	66	=	114	9	6	No
12:00 - 13:00	49	+	63	=	112	52	11	No
12:15 - 13:15	50	+	61	=	111	45	10	No
12:30 - 13:30	46	+	63	=	109	41	4	No
12:45 - 13:45	43	+	59	=	102	32	4	No
06:15 - 07:15	40		61		101	13	0	No

