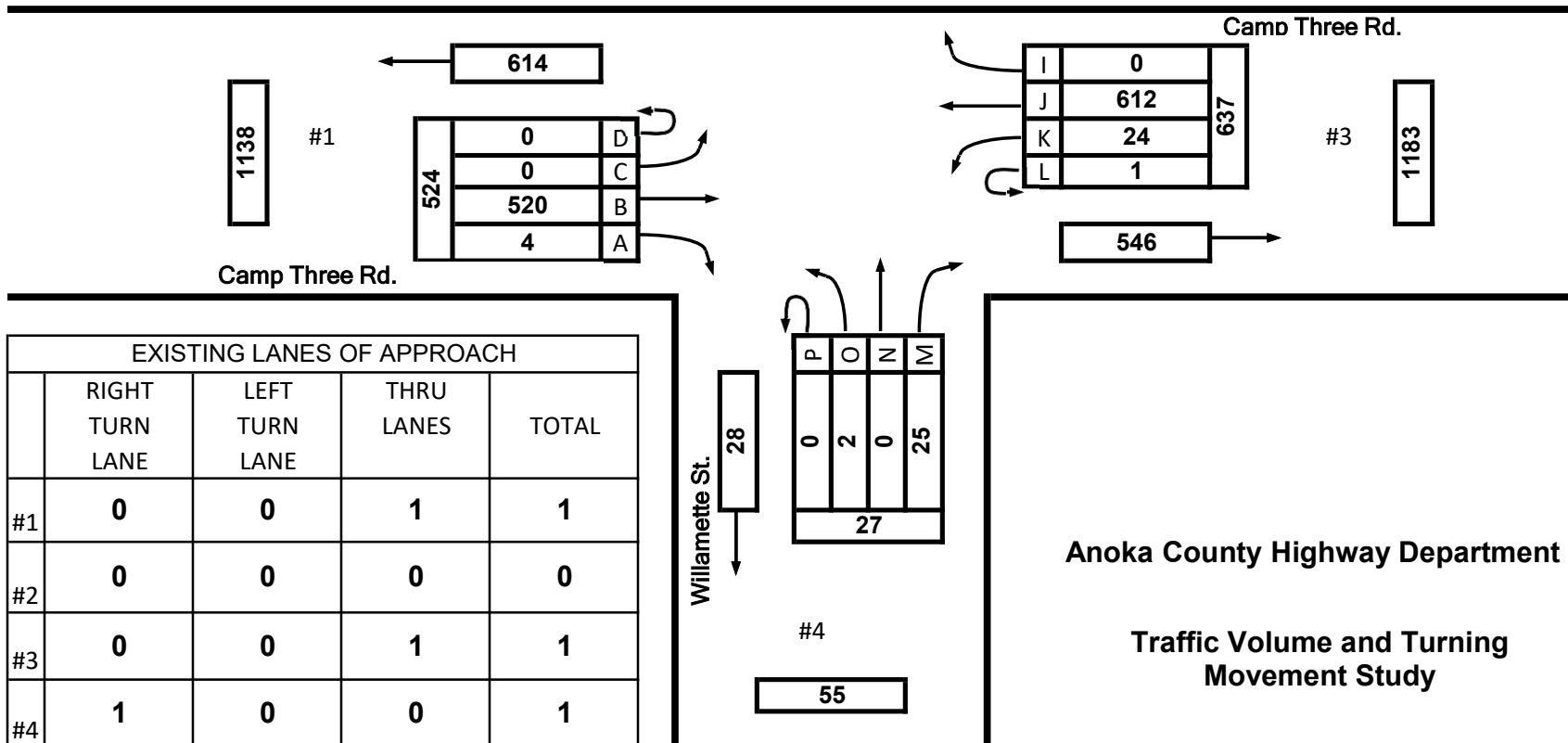
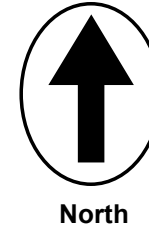


Date : 08/19/21

Count Number : TMC 2134

Location : Camp Three Rd.
@ Willamette St.

Collection Period : 24 Hours



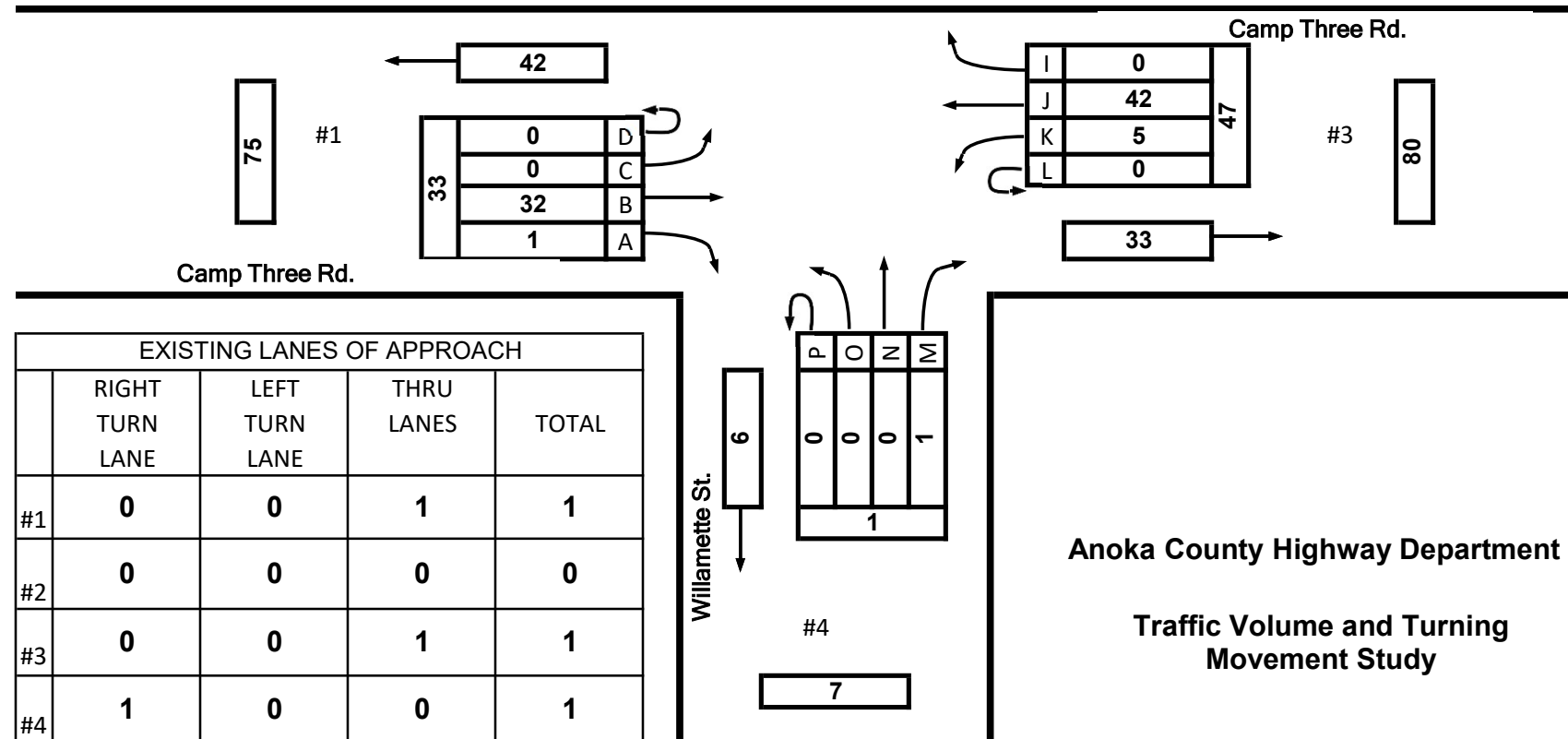
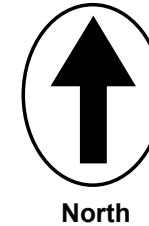
Date : 08/19/21

Count Number : TMC 2134

Location : Camp Three Rd.
@ Willamette St.

Collection Period : 10 - 11:00 AM

AM PEAK



Anoka County Highway Department
 Traffic Volume and Turning Movement Study

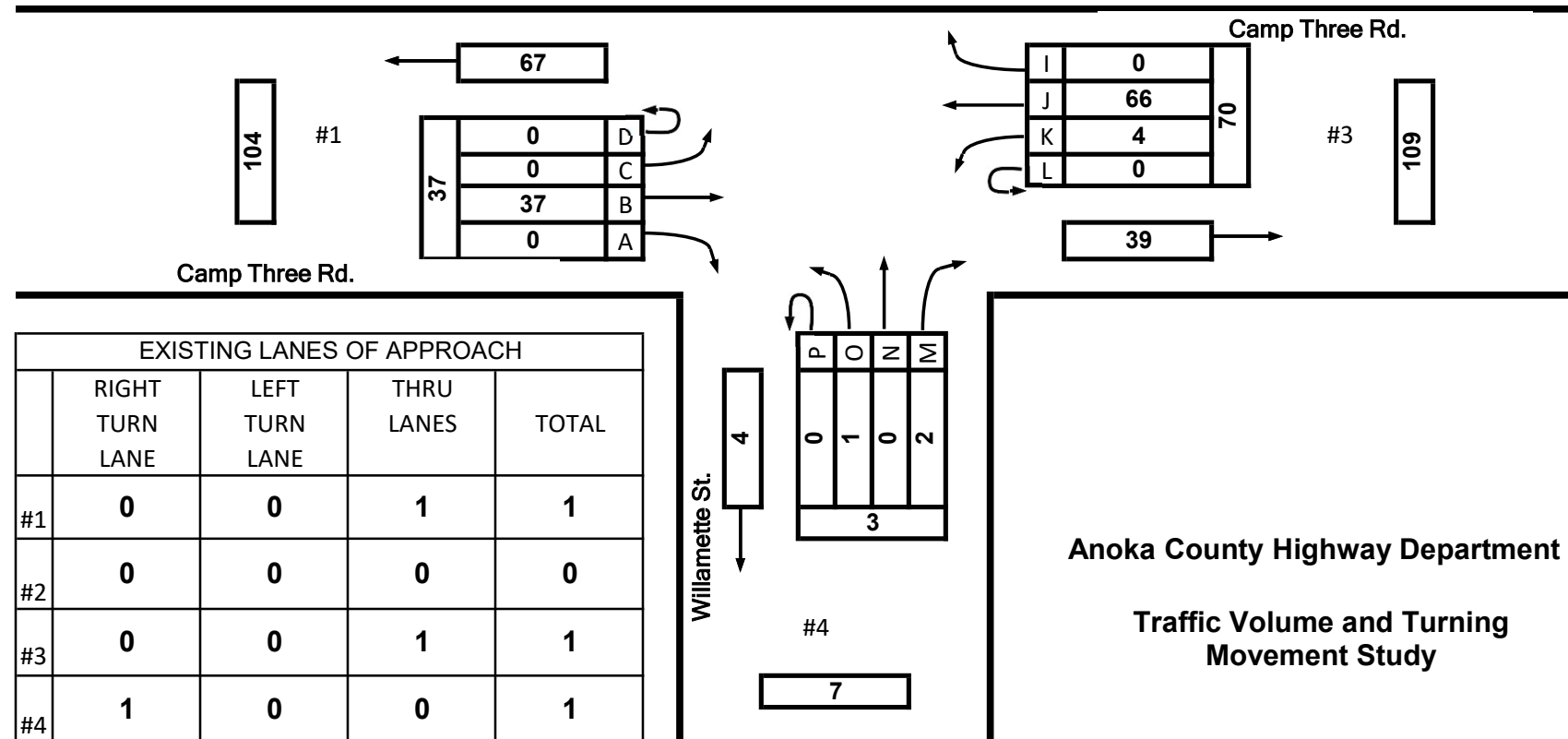
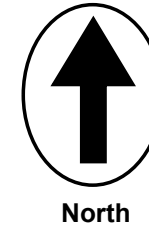
Date : 08/19/21

Count Number : TMC 2134

Location : Camp Three Rd.
@ Willamette St.

Collection Period : 3:15 - 4:15 PM

PM PEAK



Anoka County Highway Department
 Traffic Volume and Turning Movement Study

**Camp Three Rd and Willamette St
Columbus MN
Thursday, August 19, 2021**

Time	Southbound None						Westbound Camp Three Rd						Northbound Willamette St						Eastbound Camp Three 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	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
Hourly Total	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	2	0	0	2	9
1:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	4
1:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3	0	0	3	6
2:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	5
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	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
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 Total	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
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	1	0	0	1	0	0	0	1	0	1	0	0	1	0	0	1	3
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	3	0	0	3	4
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
Hourly Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	2	0	0	7	0	0	7	10
5:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	2	0	0	6	0	0	6	9
5:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	9	0	0	9	10
5:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	7	0	0	7	9
5:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	10	0	0	10	11
Hourly Total	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	2	0	2	0	0	32	0	0	32	39
6:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	7	0	0	7	8
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	8
6:30 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	1	0	1	0	0	14	0	0	14	22
6:45 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	12	0	0	12	16
Hourly Total	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	1	0	1	0	0	41	0	0	41	54
7:00 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	12	0	0	12	18
7:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	14	0	0	14	16
7:30 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	13	0	0	13	19
7:45 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	16	0	0	16	24
Hourly Total	0	0	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	0	0	0	55	0	0	55	77

**Camp Three Rd and Willamette St
Columbus MN
Thursday, August 19, 2021**

Time	Southbound None						Westbound Camp Three Rd						Northbound Willamette St						Eastbound Camp Three 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	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	13
8:15 AM	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	1	0	0	1	0	9	0	0	0	23
8:30 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	7	0	0	0	11
8:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	1	0	0	1	0	6	0	0	0	10
Hourly Total	0	0	0	0	0	0	0	0	23	0	0	23	0	0	0	2	0	0	2	0	32	0	0	0	67
9:00 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	7	0	0	0	15
9:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	8	0	0	0	10
9:30 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	1	0	0	1	0	7	0	0	0	12
9:45 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	6	0	0	0	12
Hourly Total	0	0	0	0	0	0	0	0	20	0	0	20	0	0	0	1	0	0	1	0	28	0	0	0	49
10:00 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	1	0	0	1	0	6	0	0	0	14
10:15 AM	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	10	0	0	0	21
10:30 AM	0	0	0	0	0	0	0	3	11	0	0	14	0	0	0	0	0	0	0	0	8	0	0	0	22
10:45 AM	0	0	0	0	0	0	0	2	13	0	0	15	0	0	0	0	0	0	0	0	8	1	0	0	24
Hourly Total	0	0	0	0	0	0	0	5	42	0	0	47	0	0	0	1	0	0	1	0	32	1	0	0	81
11:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	6	0	0	0	9
11:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	1	0	0	1	0	4	0	0	0	9
11:30 AM	0	0	0	0	0	0	0	1	10	0	0	11	0	0	0	0	0	0	0	0	5	0	0	0	16
11:45 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	1	0	0	1	0	8	0	0	0	16
Hourly Total	0	0	0	0	0	0	0	1	24	0	0	25	0	0	0	2	0	0	2	0	23	0	0	0	60
12:00 PM	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	0	0	2	0	0	0	10
12:15 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	6	0	0	0	11
12:30 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	13	0	0	0	19
12:45 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	1	0	0	1	0	5	0	0	0	11
Hourly Total	0	0	0	0	0	0	0	1	23	0	0	24	0	0	0	1	0	0	1	0	26	0	0	0	61
1:00 PM	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	0	0	2	0	0	0	16
1:15 PM	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	0	0	7	0	0	0	15
1:30 PM	0	0	0	0	0	0	0	1	10	0	0	11	0	0	0	0	0	0	0	0	2	1	0	0	14
1:45 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	6	0	0	0	12
Hourly Total	0	0	0	0	0	0	0	2	37	0	0	39	0	0	0	0	0	0	0	0	17	1	0	0	57
2:00 PM	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	0	0	6	0	0	0	11
2:15 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	1	0	0	0	0	1	0	11	0	0	0	18
2:30 PM	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	0	0	8	0	0	0	21
2:45 PM	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	1	0	0	1	0	8	0	0	0	21
Hourly Total	0	0	0	0	0	0	0	1	35	0	0	36	0	1	0	1	0	0	2	0	33	0	0	0	71
3:00 PM	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	0	0	11	0	0	0	16
3:15 PM	0	0	0	0	0	0	0	3	18	0	0	21	0	0	0	2	0	0	2	0	5	0	0	0	28
3:30 PM	0	0	0	0	0	0	0	1	11	0	0	12	0	0	0	0	0	0	0	0	11	0	0	0	23
3:45 PM	0	0	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	0	0	10	0	0	0	27
Hourly Total	0	0	0	0	0	0	0	5	50	0	0	55	0	0	0	2	0	0	2	0	37	0	0	0	94

**Camp Three Rd and Willamette St
Columbus MN
Thursday, August 19, 2021**

Time	Southbound None						Westbound Camp Three Rd						Northbound Willamette St						Eastbound Camp Three 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	0	0	0	0	0	0	0	20	0	0	20	0	1	0	2	0	0	3	0	0	11	0	0	11	34
4:15 PM	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	1	0	0	1	0	0	4	0	0	4	20
4:30 PM	0	0	0	0	0	0	0	0	17	0	0	17	0	0	0	1	0	0	1	0	0	7	0	0	7	25
4:45 PM	0	0	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	0	0	0	0	9	0	0	9	28
Hourly Total	0	0	0	0	0	0	0	0	71	0	0	71	0	1	0	4	0	0	5	0	0	31	0	0	31	107
5:00 PM	0	0	0	0	0	0	0	1	20	0	0	21	0	0	0	0	0	0	0	0	0	15	0	0	15	36
5:15 PM	0	0	0	0	0	0	0	1	11	0	0	12	0	0	0	0	0	0	0	0	0	11	0	0	11	23
5:30 PM	0	0	0	0	0	0	0	1	14	0	0	15	0	0	0	0	0	0	0	0	0	8	0	0	8	23
5:45 PM	0	0	0	0	0	0	1	0	14	0	0	15	0	0	0	1	0	0	1	0	0	8	0	0	8	24
Hourly Total	0	0	0	0	0	0	1	3	59	0	0	63	0	0	0	1	0	0	1	0	0	42	0	0	42	106
6:00 PM	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	1	0	0	1	0	0	9	0	0	9	24
6:15 PM	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	0	0	0	6	1	0	7	21
6:30 PM	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	1	0	0	1	0	0	7	0	0	7	23
6:45 PM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	0	5	0	0	5	15
Hourly Total	0	0	0	0	0	0	0	0	53	0	0	53	0	0	0	2	0	0	2	0	0	27	1	0	28	83
7:00 PM	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	0	0	0	5	0	0	5	10
7:15 PM	0	0	0	0	0	0	0	1	15	0	0	16	0	0	0	0	0	0	0	0	0	6	0	0	6	22
7:30 PM	0	0	0	0	0	0	0	1	12	0	0	13	0	0	0	0	0	0	0	0	0	3	0	0	3	16
7:45 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	1	0	0	1	0	0	4	0	0	4	11
Hourly Total	0	0	0	0	0	0	0	3	37	0	0	40	0	0	0	1	0	0	1	0	0	18	0	0	18	69
8:00 PM	0	0	0	0	0	0	0	2	15	0	0	17	0	0	0	0	0	0	0	0	0	5	0	0	5	22
8:15 PM	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	1	0	0	1	0	0	4	0	0	4	17
8:30 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	5	0	0	5	12
8:45 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	4	0	0	4	10
Hourly Total	0	0	0	0	0	0	0	2	40	0	0	42	0	0	0	1	0	0	1	0	0	18	0	0	18	61
9:00 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	1	0	0	1	0	0	4	0	0	4	11
9:15 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	0	3	0	0	3	11
9:30 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	0	2	0	0	2	10
9:45 PM	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	0	0	4	1	0	5	8
Hourly Total	0	0	0	0	0	0	0	1	24	0	0	25	0	0	0	1	0	0	1	0	0	13	1	0	14	40
10:00 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	1	5
10:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hourly Total	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	0	1	0	0	1	11
11:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
11:45 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Hourly Total	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	0	1	0	0	1	9
DAILY TOTAL	0	0	0	0	0	0	1	24	612	0	0	637	0	2	0	25	0	27	0	0	520	4	0	524	1188	
Cars	0	0	0	0	0	0	1	24	598	0	0	623	0	2	0	25	0	27	0	0	511	4	0	515	1165	
Heavy Vehicles	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	0	0	9	0	0	9	23	
Heavy Vehicle %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.29%	0.00%	0.00%	2.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.73%	0.00%	0.00%	1.72%	1.94%	

**Camp Three Rd and Willamette St
Columbus MN
Thursday, August 19, 2021**

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							
10:00 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	1	0	1	0	0	6	0	0	6	0	0	0	0	0	0	6
10:15 AM	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	10
10:30 AM	0	0	0	0	0	0	0	3	11	0	0	14	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	8
10:45 AM	0	0	0	0	0	0	0	2	13	0	0	15	0	0	0	0	0	0	0	0	8	1	0	9	0	0	0	0	0	0	9
Peak Hour Total PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5	42	0.000	0.000	47	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	32	1	0.000	33	0.000	0.000	0.800	0.250	0.000	0.825	0.800

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							
3:15 PM	0	0	0	0	0	0	0	3	18	0	0	21	0	0	0	2	0	2	0	0	5	0	0	5	0	0	0	0	0	0	5
3:30 PM	0	0	0	0	0	0	0	1	11	0	0	12	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	11
3:45 PM	0	0	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	10
4:00 PM	0	0	0	0	0	0	0	0	20	0	0	20	0	1	0	2	0	3	0	0	11	0	0	11	0	0	0	0	0	0	11
Peak Hour Total PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4	66	0.000	0.000	70	0.000	0.250	0.000	0.500	0.000	0.417	0.000	0.000	37	0.000	0.000	37	0.000	0.000	0.841	0.000	0.000	0.841	0.841

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

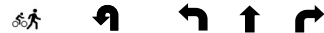


Total Vehicles on Leg 1138	Vehicles Entering Intersection 524	Eastbound	Cars	0	0	0	
			Heavy	0	0	0	
	Total		0	0	0		
	Vehicles Exiting Intersection 614		Cars	511	9	520	
			Heavy	4	0	4	

Daily Volumes

Cars	0	0	0	Westbound	Vehicles Entering Intersection 637	Total Vehicles on Leg 1183
Heavy	0	0	0			
Total	0	0	0			
Cars	598	14	612			
Heavy	24	0	24			
Total	1	0	1	Vehicles Exiting Intersection 546		
Cars	0	0	0			

Cars	0	0	2	0	25
Heavy	0	0	0	0	0
Total	0	0	2	0	25
Northbound					
Vehicles Entering Intersection 27			Vehicles Exiting Intersection 28		
Total Vehicles On Leg			55		



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2134

Study Date : 08/19/2021

Signal Warrants - Summary

Major Street Approaches

Eastbound: Camp Three Rd.

Number of Lanes : 1

Total Approach Volume: 524

Westbound: Camp Three Rd.

Number of Lanes : 1

Total Approach Volume: 637

Minor Street Approaches

Northbound: Willamette St.

Number of Lanes : 1

Total Approach Volume: 27

Warrant Summary (Rural 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: TMC 2134

Study Date : 08/19/2021

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 = **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 EB	+	Major WB	=		Minor NB	Minor SB	
16:30 - 17:30	42	+	69	=	111	1	0	No
16:45 - 17:45	43	+	67	=	110	0	0	No
15:15 - 16:15	37	+	70	=	107	5	0	No
16:15 - 17:15	35	+	72	=	107	2	0	No
17:00 - 18:00	42	+	63	=	105	1	0	No
16:00 - 17:00	31	+	71	=	102	5	0	No
15:45 - 16:45	32	+	69	=	101	5	0	No
15:30 - 16:30	36	+	64	=	100	4	0	No
15:00 - 16:00	37	+	55	=	92	2	0	No
17:15 - 18:15	36	+	56	=	92	2	0	No
17:30 - 18:30	32	+	58	=	90	2	0	No
17:45 - 18:45	31	+	58	=	89	3	0	No
14:45 - 15:45	35	+	50	=	85	3	0	No
14:30 - 15:30	32	+	51	=	83	3	0	No
18:00 - 19:00	28	+	53	=	81	2	0	No
10:00 - 11:00	33	+	47	=	80	1	0	No
07:30 - 08:30	48	+	30	=	78	1	0	No
07:00 - 08:00	55	+	22	=	77	0	0	No
10:15 - 11:15	33	+	43	=	76	0	0	No
14:15 - 15:15	38	+	36	=	74	2	0	No
07:15 - 08:15	53	+	19	=	72	0	0	No
06:30 - 07:30	52	+	19	=	71	1	0	No
07:45 - 08:45	42	+	28	=	70	1	0	No
19:15 - 20:15	18	+	52	=	70	1	0	No
06:45 - 07:45	51		18		69	0	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2134

Study Date : 08/19/2021

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 = **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 Camp Three Rd.				=	Total	Minor Road Willamette St.		Met?
	Major EB	+	Major WB				Minor NB	Minor SB	
16:30 - 17:30	42	+	69	=	111	1	0	No	
16:45 - 17:45	43	+	67	=	110	0	0	No	
15:15 - 16:15	37	+	70	=	107	5	0	No	
16:15 - 17:15	35	+	72	=	107	2	0	No	
17:00 - 18:00	42	+	63	=	105	1	0	No	
16:00 - 17:00	31	+	71	=	102	5	0	No	
15:45 - 16:45	32	+	69	=	101	5	0	No	
15:30 - 16:30	36	+	64	=	100	4	0	No	
15:00 - 16:00	37	+	55	=	92	2	0	No	
17:15 - 18:15	36	+	56	=	92	2	0	No	
17:30 - 18:30	32	+	58	=	90	2	0	No	
17:45 - 18:45	31	+	58	=	89	3	0	No	
14:45 - 15:45	35	+	50	=	85	3	0	No	
14:30 - 15:30	32	+	51	=	83	3	0	No	
18:00 - 19:00	28	+	53	=	81	2	0	No	
10:00 - 11:00	33	+	47	=	80	1	0	No	
07:30 - 08:30	48	+	30	=	78	1	0	No	
07:00 - 08:00	55	+	22	=	77	0	0	No	
10:15 - 11:15	33	+	43	=	76	0	0	No	
14:15 - 15:15	38	+	36	=	74	2	0	No	
07:15 - 08:15	53	+	19	=	72	0	0	No	
06:30 - 07:30	52	+	19	=	71	1	0	No	
07:45 - 08:45	42	+	28	=	70	1	0	No	
19:15 - 20:15	18	+	52	=	70	1	0	No	
06:45 - 07:45	51		18		69	0	0	No	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2134

Study Date : 08/19/2021

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 = **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 Camp Three Rd.

Minor Road Willamette St.

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
16:30 - 17:30	42	+	69	=	111	1	0	No
16:45 - 17:45	43	+	67	=	110	0	0	No
15:15 - 16:15	37	+	70	=	107	5	0	No
16:15 - 17:15	35	+	72	=	107	2	0	No
17:00 - 18:00	42	+	63	=	105	1	0	No
16:00 - 17:00	31	+	71	=	102	5	0	No
15:45 - 16:45	32	+	69	=	101	5	0	No
15:30 - 16:30	36	+	64	=	100	4	0	No
15:00 - 16:00	37	+	55	=	92	2	0	No
17:15 - 18:15	36	+	56	=	92	2	0	No
17:30 - 18:30	32	+	58	=	90	2	0	No
17:45 - 18:45	31	+	58	=	89	3	0	No

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:30 - 17:30	42	+	69	=	111	1	0	No
16:45 - 17:45	43	+	67	=	110	0	0	No
15:15 - 16:15	37	+	70	=	107	5	0	No
16:15 - 17:15	35	+	72	=	107	2	0	No
17:00 - 18:00	42	+	63	=	105	1	0	No
16:00 - 17:00	31	+	71	=	102	5	0	No
15:45 - 16:45	32	+	69	=	101	5	0	No
15:30 - 16:30	36	+	64	=	100	4	0	No
15:00 - 16:00	37	+	55	=	92	2	0	No
17:15 - 18:15	36	+	56	=	92	2	0	No
17:30 - 18:30	32	+	58	=	90	2	0	No
17:45 - 18:45	31	+	58	=	89	3	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2134

Study Date : 08/19/2021

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.

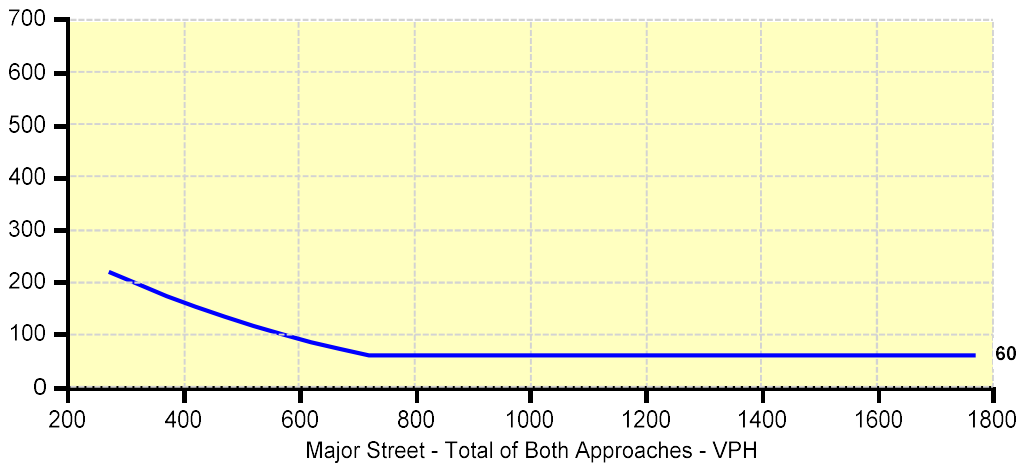
Summary

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

Site Data Required

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

Time	Major Road Camp Three Rd.				=	Total	Minor Road Willamette St.		Met?
	Major EB	+	Major WB				Minor NB	Minor SB	
16:30 - 17:30	42	+	69	=	111	1	0	No	
16:45 - 17:45	43	+	67	=	110	0	0	No	
15:15 - 16:15	37	+	70	=	107	5	0	No	
16:15 - 17:15	35	+	72	=	107	2	0	No	
17:00 - 18:00	42	+	63	=	105	1	0	No	
16:00 - 17:00	31	+	71	=	102	5	0	No	
15:45 - 16:45	32	+	69	=	101	5	0	No	
15:30 - 16:30	36	+	64	=	100	4	0	No	
15:00 - 16:00	37	+	55	=	92	2	0	No	
17:15 - 18:15	36	+	56	=	92	2	0	No	
17:30 - 18:30	32	+	58	=	90	2	0	No	



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2134

Study Date : 08/19/2021

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 = **True**
 Number of Major Lanes = **1**
 Number of Minor Lanes = **1**

Time	Major Road Camp Three Rd.				=	Total	Minor Road Willamette St.		Met?
	Major EB	+	Major WB				Minor NB	Minor SB	
16:30 - 17:30	42	+	69	=	111	1	0	No	
16:45 - 17:45	43	+	67	=	110	0	0	No	
15:15 - 16:15	37	+	70	=	107	5	0	No	
16:15 - 17:15	35	+	72	=	107	2	0	No	
17:00 - 18:00	42	+	63	=	105	1	0	No	
16:00 - 17:00	31	+	71	=	102	5	0	No	
15:45 - 16:45	32	+	69	=	101	5	0	No	
15:30 - 16:30	36	+	64	=	100	4	0	No	
15:00 - 16:00	37	+	55	=	92	2	0	No	
17:15 - 18:15	36	+	56	=	92	2	0	No	
17:30 - 18:30	32	+	58	=	90	2	0	No	

