

Date : 03/15/04

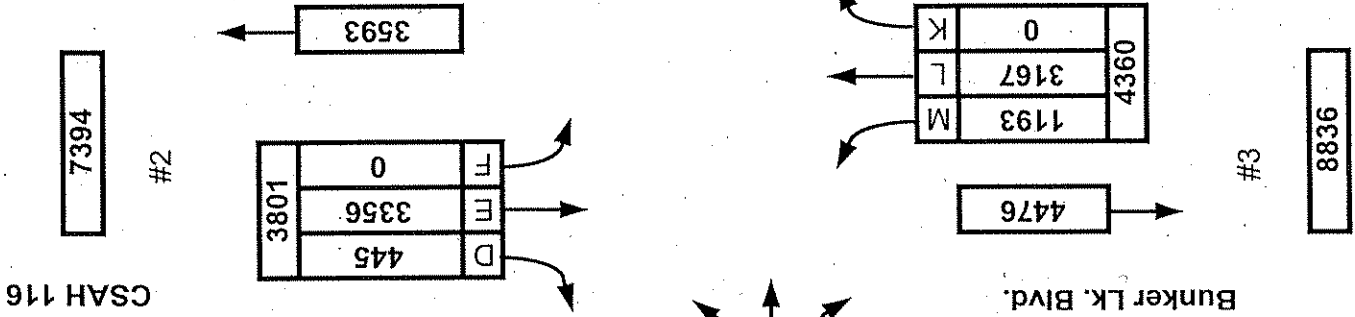
Count Number : TMC0402

Location : CSAH 116 (Bunker Lk. Blvd.)

@ Prairie Rd.



North



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

1546	426	0	1120
	C	B	A

445	3356	0	3801
D	E	F	

1193	3167	0	4360
M	L	K	

Bunker Lk. Blvd.

Prairie Rd.

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

8836

7394

#2

3593

1638

#1

3184

4476

#3

**ANOKA COUNTY HIGHWAY
PC-WARRANTS
TRAFFIC SIGNAL WARRANT ANALYSIS**

Study Name : TMC0402
Study Date : 03/22/04
Page No. : 1

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 116
Number of Lanes: 2
Approach Speed: 41
Total Approach Volume: 4,365

Westbound: CSAH 116
Number of Lanes: 2
Approach Speed: 55
Total Approach Volume: 3,801

Minor Street Approaches

Northbound: none
Number of Lanes: 2

Total Approach Volume: 0

Southbound: Prairie Rd.
Number of Lanes: 2

Total Approach Volume: 1,546

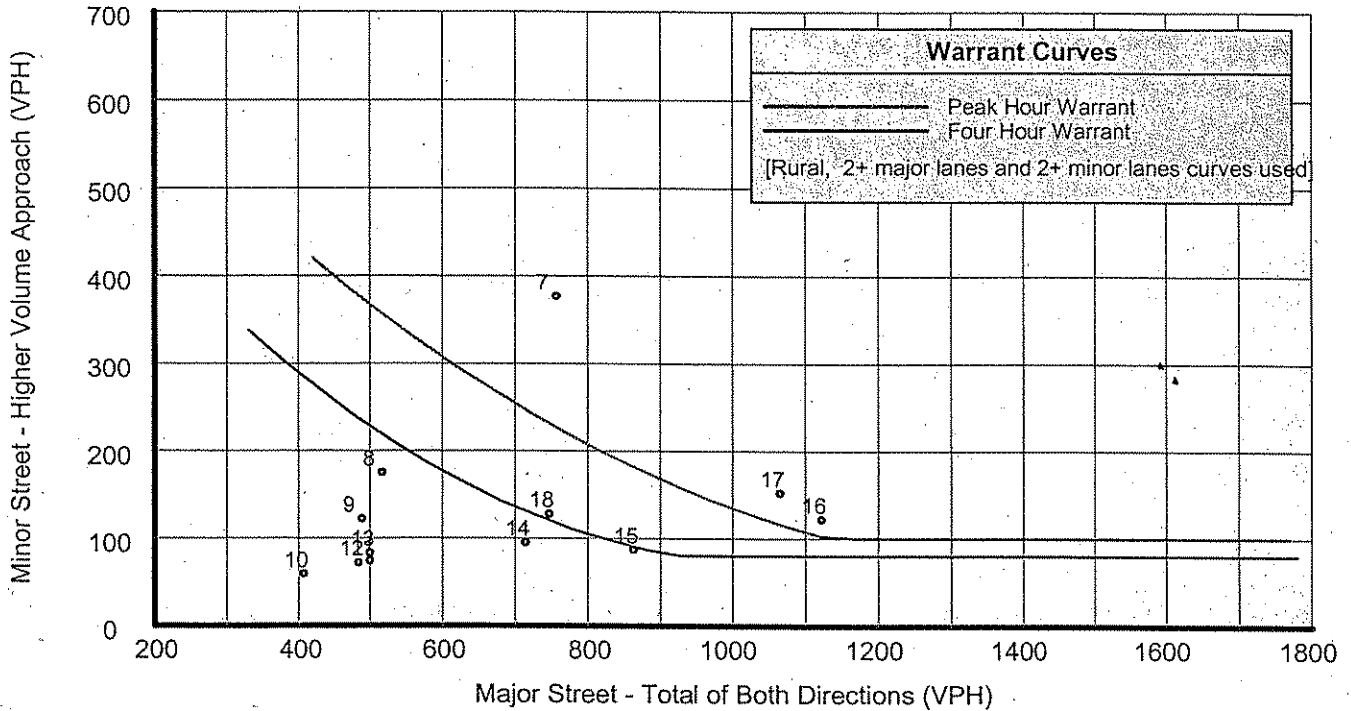
Warrant Summary (Rural values apply.)

Warrant 1 - Eight Hour Vehicular Volumes	Not Satisfied
Warrant 1A - Minimum Vehicular Volume	Not Satisfied
Required volumes reached for 3 hours, 8 are needed	
Warrant 1B - Interruption of Continuous Traffic	Not Satisfied
Required volumes reached for 6 hours, 8 are needed	
Warrant 1 A&B - Combination of Warrants	Not Satisfied
Required volumes reached for 5 hours, 8 are needed	
Warrant 2 - Four Hour Volumes	Satisfied
Number of hours (4) volumes exceed minimum >= minimum required (4).	
Warrant 3 - Peak Hour	Satisfied
Warrant 3A - Peak Hour Volumes	Satisfied
Volumes exceed minimums for at least one hour.	
Warrant 3B - Peak Hour Delay	Satisfied
Number of hours (7) volumes exceed minimum >= required (1). Delay data not evaluated.	
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

ANOKA COUNTY HIGHWAY PC-WARRANTS TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name : TMC0402
Study Date : 03/22/04
Page No. : 2

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

Hour Begin	Major Total	Higher Minor Vol	Dir	War-1A			War-1B			War-1A&B		
				Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
01:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
02:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
03:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
04:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
05:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
06:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
07:00	757	377	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
08:00	517	175	SB	420-Yes	140-Yes	Both	630-No	70-Yes	Minor	504-Yes	112-Yes	Both
09:00	489	122	SB	420-Yes	140-No	Major	630-No	70-Yes	Minor	504-No	112-Yes	Minor
10:00	407	59	SB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
11:00	500	74	SB	420-Yes	140-No	Major	630-No	70-Yes	Minor	504-No	112-No	---
12:00	484	72	SB	420-Yes	140-No	Major	630-No	70-Yes	Minor	504-No	112-No	---
13:00	500	83	SB	420-Yes	140-No	Major	630-No	70-Yes	Minor	504-No	112-No	---
14:00	714	95	SB	420-Yes	140-No	Major	630-Yes	70-Yes	Both	504-Yes	112-No	Major
15:00	863	87	SB	420-Yes	140-No	Major	630-Yes	70-Yes	Both	504-Yes	112-No	Major
16:00	1,122	122	SB	420-Yes	140-No	Major	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
17:00	1,066	152	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
18:00	747	128	SB	420-Yes	140-No	Major	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
19:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
20:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
21:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
22:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
23:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---

**ANOKA COUNTY HIGHWAY
PC-WARRANTS
TRAFFIC SIGNAL WARRANT ANALYSIS**

Study Name : TMC0402
Study Date : 03/22/04

Multi-Way Stop Warrant Report

Major Street Approaches

Eastbound: CSAH 116
Total Approach Volume: 4,365
Approach Speed: 55

Westbound: CSAH 116
Total Approach Volume: 3,801
Approach Speed: 55

Minor Street Approaches

Northbound: none
Total Approach Volume: 0

Southbound: Prairie Rd.
Total Approach Volume: 1,546

Warrant Summary

Criteria A - Interim Measure Not Evaluated
If traffic signals are justified, stop signs can be installed as an interim measure.

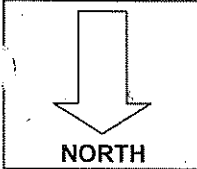
Criteria B - Crash Experience Not Evaluated
Number of crashes (0) is less than the minimum required (5).

Criteria C - Minimum Volumes and Delays Not Satisfied
Delay data not evaluated
Required volumes reached for 3 hours, 8 are needed

Criteria D - 80% of Volumes, Delays, and Crashes Not Evaluated
Delay data not evaluated
Required volumes reached for 0 hours, 8 are needed

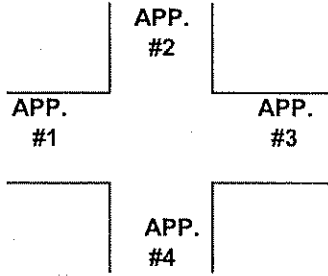
Analysis of 8-Hour Volume Warrants:

Time	Major Crit Total	Minor Total	Crit C			Crit D		
			Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00 - 01:00	0	0	210-No	140-No	No	240-No	160-No	No
01:00 - 02:00	0	0	210-No	140-No	No	240-No	160-No	No
02:00 - 03:00	0	0	210-No	140-No	No	240-No	160-No	No
03:00 - 04:00	0	0	210-No	140-No	No	240-No	160-No	No
04:00 - 05:00	0	0	210-No	140-No	No	240-No	160-No	No
05:00 - 06:00	0	0	210-No	140-No	No	240-No	160-No	No
06:00 - 07:00	0	0	210-No	140-No	No	240-No	160-No	No
07:00 - 08:00	757	377	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
08:00 - 09:00	517	175	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
09:00 - 10:00	489	122	210-Yes	140-No	Major	240-Yes	160-No	Major
10:00 - 11:00	407	59	210-Yes	140-No	Major	240-Yes	160-No	Major
11:00 - 12:00	500	74	210-Yes	140-No	Major	240-Yes	160-No	Major
12:00 - 13:00	484	72	210-Yes	140-No	Major	240-Yes	160-No	Major
13:00 - 14:00	500	83	210-Yes	140-No	Major	240-Yes	160-No	Major
14:00 - 15:00	714	95	210-Yes	140-No	Major	240-Yes	160-No	Major
15:00 - 16:00	863	87	210-Yes	140-No	Major	240-Yes	160-No	Major
16:00 - 17:00	1,122	122	210-Yes	140-No	Major	240-Yes	160-No	Major
17:00 - 18:00	1,066	152	210-Yes	140-Yes	Both	240-Yes	160-No	Major
18:00 - 19:00	747	128	210-Yes	140-No	Major	240-Yes	160-No	Major
19:00 - 20:00	0	0	210-No	140-No	No	240-No	160-No	No
20:00 - 21:00	0	0	210-No	140-No	No	240-No	160-No	No
21:00 - 22:00	0	0	210-No	140-No	No	240-No	160-No	No
22:00 - 23:00	0	0	210-No	140-No	No	240-No	160-No	No
23:00 - 00:00	0	0	210-No	140-No	No	240-No	160-No	No



COUNT LOCATION: CSAH 116 (Bunker Lk. Blvd.) @ DATE: 03/15/2004
Prairie Rd.

APP. #1 = CSAH 116
APP. #2 =
APP. #3 = CSAH 116
APP. #4 = Prairie Rd.



HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT

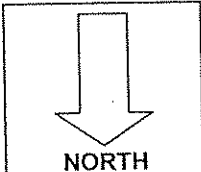
A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.

B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.

C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM								
6:15-6:30								
6:30-6:45								
6:45-7:00								
HOURLY TOTAL						HOURLY TOTAL		
7:00-7:15						4		12
7:15-7:30				1	1	4		6
7:30-7:45						8		3
7:45-8:00						8		3
HOURLY TOTAL					1	HOURLY TOTAL		48
8:00-8:15						8		2
8:15-8:30				2	2	5		6
8:30-8:45						3		9
8:45-9:00						9		
HOURLY TOTAL					2	HOURLY TOTAL		42
9:00-9:15						4		3
9:15-9:30				1	1	5		
9:30-9:45				2	2	6		9
9:45-10:00				3	3	5		
HOURLY TOTAL					6	HOURLY TOTAL		32
10:00-10:15						5		1
10:15-10:30						7		2
10:30-10:45						8		
10:45-11:00						4		
HOURLY TOTAL						HOURLY TOTAL		27
11:00-11:15						12		
11:15-11:30						10		1
11:30-11:45				1	1	8		
11:45-12:00						5		
HOURLY TOTAL					1	HOURLY TOTAL		36
12:00-12:15						9		
12:15-12:30						10		1
12:30-12:45						5		2
12:45-1:00						8		3
HOURLY TOTAL						HOURLY TOTAL		38
1:00-1:15						8		
1:15-1:30						10		
1:30-1:45				1	1	10		
1:45-2:00						6		
HOURLY TOTAL					1	HOURLY TOTAL		34
TOTAL						TOTAL		257

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COUNT LOCATION:

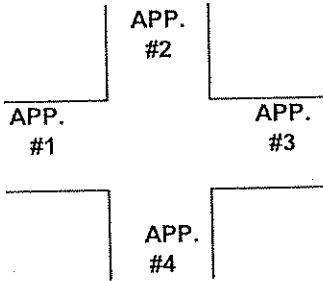
CSAH 116 (Bunker Lk. Blvd.) @

DATE:

03/16/2004

Prairie Rd.

APP. #1 = CSAH 116
APP. #2 =
APP. #3 = CSAH 116
APP. #4 = Prairie Rd.



- HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT
- A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.
 - B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.
 - C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
2:00-2:15PM						5		4
2:15-2:30						10		5
2:30-2:45						6		8
2:45-3:00						9		2
HOURLY TOTAL						HOURLY TOTAL		49
3:00-3:15						7		1
3:15-3:30				3	3	4		2
3:30-3:45						8		2
3:45-4:00						6		3
HOURLY TOTAL					3	HOURLY TOTAL		33
4:00-4:15						4		11
4:15-4:30						4		4
4:30-4:45						4		14
4:45-5:00						2		1
HOURLY TOTAL						HOURLY TOTAL		44
5:00-5:15				1	1	7		1
5:15-5:30				1	1	1		3
5:30-5:45						3		2
5:45-6:00						3		
HOURLY TOTAL					2	HOURLY TOTAL		20
6:00-6:15						2		2
6:15-6:30						2		
6:30-6:45						3		
6:45-7:00						1		
HOURLY TOTAL						HOURLY TOTAL		9
					TOTAL	TOTAL		412

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