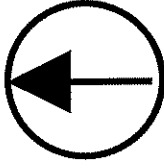


Date: 6/30/98AM 6/29/98PM

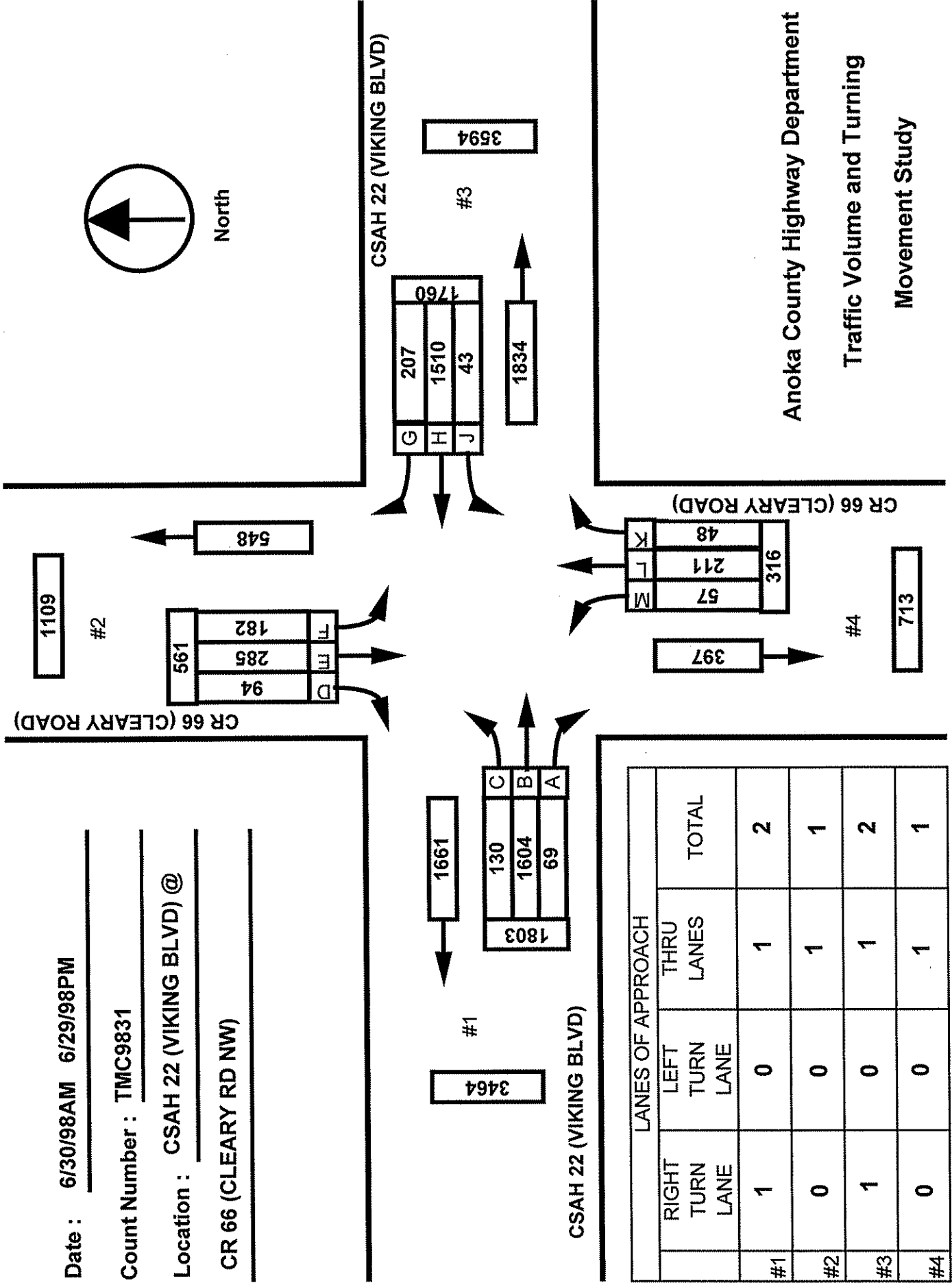
Count Number: TMC9831

Location: CSAH 22 (VIKING BLVD) @

CR 66 (CLEARLY RD NW)



North



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

Anoka County Highway Department  
 Traffic Volume and Turning  
 Movement Study

PETRA Software

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 Jamar Technologies, Inc.  
 Horsham, PA.

Weather :  
 Counted by: Sarah and Alison  
 Card # :  
 Character :

Study Name: TMC9831  
 Site Code : 98310202  
 Start Date: 06/30/98  
 Page : 1

Vehicle group 1

Start Time	CR 66 (CLEARY ROAD) Southbound				CSAH 22 (VIKING BLVD) Westbound				CR 66 (CLEARY ROAD) Northbound				CSAH 22 (VIKING BLVD) Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
06/30/98																			
06:00	9	12	2	4	1	46	0	7	1	0	0	0	0	21	1	5	109	16	93
06:15	2	18	2	0	0	38	1	10	1	3	0	0	0	23	0	8	106	18	88
06:30	8	13	1	1	1	30	1	3	1	1	2	0	1	18	0	5	86	9	77
06:45	12	7	1	3	0	50	1	9	4	0	1	1	0	20	4	5	118	18	100
Hour	31	50	6	8	2	164	3	29	7	4	3	1	1	82	5	23	419	61	358
07:00	6	11	3	1	1	42	3	7	1	1	2	0	1	26	0	5	110	13	97
07:15	2	7	5	0	0	30	3	1	0	0	1	0	2	28	1	6	86	7	79
07:30	6	15	5	1	0	37	5	8	1	2	1	0	2	23	0	6	112	15	97
07:45	3	3	2	0	0	26	1	10	0	2	0	0	0	19	1	3	70	13	57
Hour	17	36	15	2	1	135	12	26	2	5	4	0	5	96	2	20	378	48	330
08:00	3	5	1	3	1	29	3	10	0	1	0	1	2	23	0	11	93	25	68
08:15	3	4	1	1	1	22	0	4	1	0	0	0	1	35	1	8	82	13	69
08:30	2	5	0	0	1	18	1	2	0	0	0	0	4	21	0	8	62	10	52
08:45	1	0	0	0	0	10	0	1	0	1	0	0	0	2	2	0	17	1	16
Hour	9	14	2	4	3	79	4	17	1	2	0	1	7	81	3	27	254	49	205
09:00	1	4	0	1	0	13	4	6	0	1	3	0	1	19	4	7	64	14	50
09:15	0	4	1	1	1	26	2	17	1	3	3	2	0	20	1	5	87	25	62
09:30	1	7	0	0	0	23	1	4	0	0	1	0	5	18	2	6	68	10	58
09:45	3	3	0	0	0	18	3	7	1	1	0	0	1	19	0	9	65	16	49
Hour	5	18	1	2	1	80	10	34	2	5	7	2	7	76	7	27	284	65	219
10:00	5	4	2	2	0	23	1	8	2	1	1	0	0	23	0	8	80	18	62
10:15	4	3	2	1	0	10	1	3	0	2	0	0	0	17	0	4	47	8	39
10:30	1	3	2	0	1	22	2	6	1	0	0	1	0	16	0	4	59	11	48
10:45	1	5	2	0	0	23	3	9	2	6	0	1	0	14	1	2	69	12	57
Hour	11	15	8	3	1	78	7	26	5	9	1	2	0	70	1	18	255	49	206
11:00	1	4	1	1	2	18	1	5	0	2	0	1	0	13	0	5	54	12	42
11:15	2	2	0	1	0	13	4	5	1	2	0	0	1	10	0	2	43	8	35
11:30	1	4	1	2	1	20	1	4	0	4	0	1	0	27	1	7	74	14	60
11:45	4	2	0	1	0	12	2	2	0	3	1	1	3	24	1	7	63	11	52
Hour	8	12	2	5	3	63	8	16	1	11	1	3	4	74	2	21	234	45	189
12:00	2	1	1	1	0	24	1	8	2	5	0	2	3	22	0	6	78	17	61
12:15	1	4	2	0	1	17	4	2	0	4	0	0	2	13	1	4	55	6	49
12:30	4	4	1	2	2	20	4	7	0	1	0	0	3	13	0	6	67	15	52
12:45	1	4	4	2	2	29	6	13	2	3	1	0	0	16	1	7	91	22	69
Hour	8	13	8	5	5	90	15	30	4	13	1	2	8	64	2	23	291	60	231

Weather :  
 Counted by: Sarah and Alison  
 Board # :  
 Observer :

PETRA Software  
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 Jamar Technologies, Inc.  
 Horsham, PA.

Study Name: TMC9831  
 Site Code : 98310202  
 Start Date: 06/30/98  
 Page : 2

Vehicle group 1

Start Time	CR 66 (CLEARY ROAD)				CSAH 22 (VIKING BLVD)				CR 66 (CLEARY ROAD)				CSAH 22 (VIKING BLVD)				Intvl	Exclu	Inclu
	Southbound		Westbound		Northbound		Eastbound		Total	Total	Total								
	Left	Thru	Right	Other	Left	Thru	Right	Other				Left	Thru	Right	Other	Left	Thru	Right	Other
13:00	2	4	0	1	2	19	0	5	0	2	0	0	0	19	3	5	62	11	51
13:15	1	3	0	0	1	28	4	11	1	1	1	0	1	25	0	6	83	17	66
13:30	1	3	0	1	2	17	2	3	0	2	0	0	3	11	1	5	51	9	42
13:45	1	5	0	3	0	16	2	4	1	2	0	0	5	23	2	7	71	14	57
Hour	5	15	0	5	5	80	8	23	2	7	1	0	9	78	6	23	267	51	216
14:00	4	2	0	1	2	27	1	5	1	0	2	2	0	29	1	9	86	17	69
14:15	2	6	2	2	1	23	1	4	0	2	2	0	1	26	2	2	76	8	68
14:30	3	5	1	2	1	19	1	4	2	1	1	0	4	35	1	6	86	12	74
14:45	4	2	1	0	0	29	2	5	1	3	1	1	0	33	2	12	96	18	78
Hour	13	15	4	5	4	98	5	18	4	6	6	3	5	123	6	29	344	55	289
15:00	1	0	1	0	0	15	3	1	1	5	0	1	2	26	2	2	60	4	56
15:15	2	3	1	2	0	17	3	4	1	4	0	0	1	30	0	1	69	7	62
15:30	1	2	1	0	0	27	4	10	5	4	1	0	3	38	3	8	107	18	89
15:45	1	0	1	0	0	36	5	5	0	12	1	0	3	38	1	6	109	11	98
Hour	5	5	4	2	0	95	15	20	7	25	2	1	9	132	6	17	345	40	305
16:00	8	7	3	3	0	27	5	6	0	4	1	0	6	50	1	6	127	15	112
16:15	3	6	2	0	0	38	2	4	1	10	2	0	4	50	3	5	130	9	121
16:30	2	8	1	1	2	25	7	4	2	7	0	1	7	41	1	5	114	11	103
16:45	9	8	1	2	2	34	8	8	1	12	3	3	3	38	6	5	143	18	125
Hour	22	29	7	6	4	124	22	22	4	33	6	4	20	179	11	21	514	53	461
17:00	0	6	0	0	2	37	8	8	0	4	2	1	7	47	0	4	126	13	113
17:15	3	3	0	0	1	23	6	2	1	8	2	1	5	51	1	3	110	6	104
17:30	5	6	4	0	3	45	9	6	6	10	2	1	3	31	0	6	137	13	124
17:45	3	3	1	1	1	26	5	1	1	8	0	0	2	41	0	2	95	4	91
Hour	11	18	5	1	7	131	28	17	8	30	6	3	17	170	1	15	468	36	432
18:00	2	5	8	1	0	37	7	5	2	8	0	1	6	49	0	4	135	11	124
18:15	5	3	1	0	1	28	6	1	2	6	0	0	4	22	2	2	83	3	80
18:30	5	8	1	3	1	21	2	2	0	11	0	0	3	31	0	4	92	9	83
18:45	1	5	1	1	0	24	6	1	0	4	4	0	2	35	0	1	85	3	82
Hour	13	21	11	5	2	110	21	9	4	29	4	1	15	137	2	11	395	26	369
19:00	4	4	3	1	0	12	7	2	1	1	0	0	2	19	4	0	60	3	57
19:15	2	2	4	1	0	19	4	3	0	5	1	0	4	18	1	2	66	6	60
19:30	1	2	4	1	1	22	1	1	0	0	0	0	1	24	1	0	59	2	57
19:45	0	5	2	0	1	11	3	0	2	2	2	0	4	29	1	2	64	2	62
Hour	7	13	13	3	2	64	15	6	3	8	3	0	11	90	7	4	249	13	236

PETRA Software

Weather :  
 Counted by: Sarah and Alison  
 Board # :  
 Checker :

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 Horsham, PA.

Study Name: TMC9831  
 Site Code : 98310202  
 Start Date: 06/30/98  
 Page : 3

Vehicle group 1

Start Time	CR 66 (CLEARY ROAD) Southbound				CSAH 22 (VIKING BLVD) Westbound				CR 66 (CLEARY ROAD) Northbound				CSAH 22 (VIKING BLVD) Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
20:00	5	2	1	0	0	26	7	7	0	1	1	0	0	21	1	1	73	8	65
20:15	5	0	1	0	0	15	4	3	1	1	0	0	2	27	2	3	64	6	58
20:30	1	1	0	0	0	24	6	1	0	5	2	0	3	23	0	1	67	2	65
20:45	0	2	1	1	2	9	2	0	0	4	0	1	1	15	2	3	43	5	38
Hour	11	5	3	1	2	74	19	11	1	11	3	1	6	86	5	8	247	21	226
21:00	0	1	0	0	0	11	3	1	1	4	0	0	2	20	0	1	44	2	42
21:15	2	1	1	0	0	13	6	2	0	1	0	0	1	20	0	1	48	3	45
21:30	1	1	3	1	0	14	2	1	0	3	0	0	1	11	3	1	42	3	39
21:45	3	3	1	0	1	7	4	0	1	5	0	0	2	15	0	1	43	1	42
Hour	6	6	5	1	1	45	15	4	2	13	0	0	6	66	3	4	177	9	168
Total	182	285	94	58	43	1510	207	308	57	211	48	24	130	1604	69	291	5121	681	4440
% Apr.	29.4	46.0	15.1	9.3	2.0	73.0	10.0	14.8	16.7	62.0	14.1	7.0	6.2	76.5	3.2	13.8	-	-	-
% Int.	3.5	5.5	1.8	1.1	0.8	29.4	4.0	6.0	1.1	4.1	0.9	0.4	2.5	31.3	1.3	5.6	-	-	-

Major Street Approaches:

Eastbound:

CSAH 22 (VIKING BLVD)  
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9831.PDF  
 Count Type: IMC. Channel: 0. Count Date: 6/30/98  
 Number of Lanes: 2  
 Approach Speed: 55  
 Total Approach Traffic: 1803

Westbound:

CSAH 22 (VIKING BLVD)  
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9831.PDF  
 Count Type: IMC. Channel: 0. Count Date: 6/30/98  
 Number of Lanes: 2  
 Approach Speed: 55  
 Total Approach Traffic: 1760

Minor Street Approaches:

Northbound:

CR 66 (CLEARY ROAD)  
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9831.PDF  
 Count Type: IMC. Channel: 0. Count Date: 6/30/98  
 Number of Lanes: 1  
 Approach Speed: 55  
 Total Approach Traffic: 316

Southbound:

CR 66 (CLEARY ROAD)  
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9831.PDF  
 Count Type: IMC. Channel: 0. Count Date: 6/30/98  
 Number of Lanes: 1  
 Approach Speed: 55  
 Total Approach Traffic: 561

Analysis of 8-Hour Volume Warrants (Criteria refers to high volume side street for that hour):

Hour	Main	Side			Warrant 1		Warrant 2		Warrant 3	
Begin	(Total)	Vol.	Dir.	Rank	Meets?	Criteria	Meets?	Criteria	Meets?	Criteria
0	0	0	S	17		105		52		84
1	0	0	S	18		105		52		84
2	0	0	S	19		105		52		84
3	0	0	S	20		105		52		84
4	0	0	S	21		105		52		84
5	0	0	S	22		105		52		84
6	257	87	S	1		105	SIDE	52	SIDE	84
7	251	68	S	2		105	SIDE	52		84
8	177	25	S	11		105		52		84
9	181	24	S	12		105		52		84
10	157	34	S	6		105		52		84
11	154	22	S	13		105		52		84
12	184	29	S	10		105		52		84
13	186	20	S	14		105		52		84
14	241	32	S	9		105		52		84
15	257	34	N	7		105		52		84
16	360	58	S	3		105	SIDE	52		84
17	354	44	N	5		105		52		84
18	287	45	S	4		105		52		84
19	189	33	S	8		105		52		84
20	192	19	S	15		105		52		84
21	136	17	S	16		105		52		84
22	0	0	S	23		105		52		84
23	0	0	S	24		105		52		84

## Warrant Summary:

Rural values apply.

## Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 0 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

## Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 0 hours. Criteria--Main St.: 630; Side St.: See Volume Summary.

## Warrant 3 - Minimum Pedestrian Volumes

NOT SATISFIED. Ped volumes too low. Criteria--190 Peds in peak hour, 100 peds in 4th high hour.

## Warrant 4 - School Crossing

NOT APPLICABLE. Gap data has not been defined.

## Warrant 5 - Progressive Movement

NOT SATISFIED. Adjacent signals closer than 1000 feet and/or not part of coordinated system.

## Warrant 6 - Accident Experience

NOT SATISFIED. 0 correctable accidents is fewer than required 5.

Correctable Accidents: 0; Right Angle Accidents: 0; Left Turn Accidents: 0; Other Accidents: 0.

## Warrant 7 - Systems Warrant

NOT SATISFIED. Peak hour total entering volume 461 does not meet criteria of 1000

- Approaches which are part of the principal through traffic roadway network.
- Approaches which include rural or suburban highways outside, entering or traversing a city.
- Approaches which appear as a major route in an official transportation plan.

## Warrant 8 - Combination of Warrants

NOT SATISFIED. Required values reached for 0 hours. Criteria--Main: 504; Side: See Volume Summary.

## Warrant 9 - Four Hour Volumes

NOT SATISFIED. Required values reached for 0 hours.

## Warrant 10 - Peak Hour Delay

NOT SATISFIED. Peak hour (1600 hours) volume not adequate.

Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 100.

## Warrant 11 - Peak Hour Volume

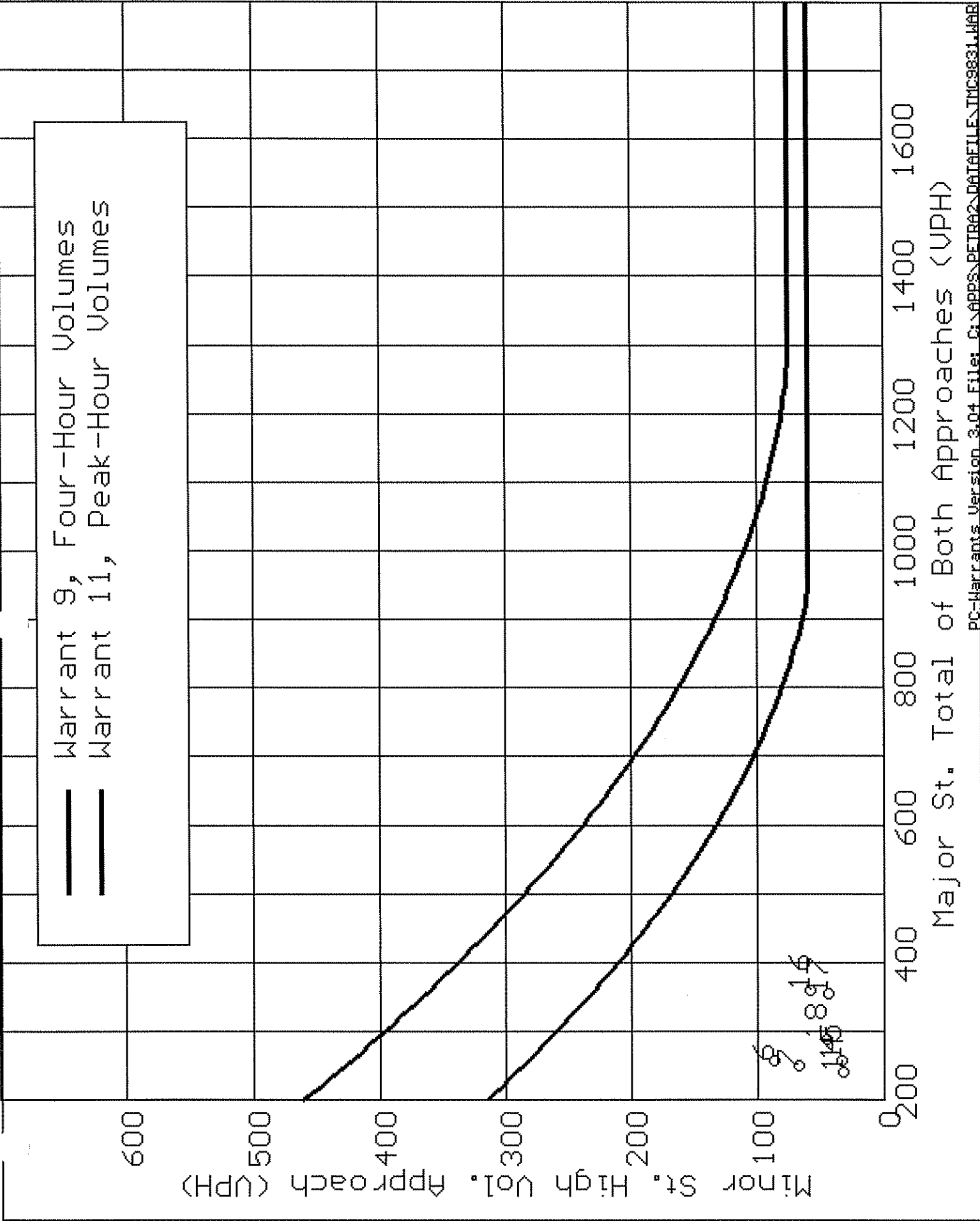
NOT SATISFIED.

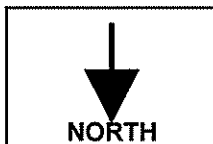
Minor St. High Vol. Approach (VPH)

Warrant 9, Four-Hour Volumes  
Warrant 11, Peak-Hour Volumes

Major St. Total of Both Approaches (VPH)

Major St. Total of Both Approaches (VPH)





**COUNT LOCATION:**

CSAH 22 (VIKING BLVD) @  
CR 66 (CLEARY RD NW)

**DATE:**

June 30, 1998

APP. #1= WB CSAH 22  
(VIKING BLVD)  
APP. #2 = NB CR 66  
(CLEARY RD NW)  
APP. #3= EB CSAH 22  
(VIKING BLVD)  
APP. #4= SB CR 66  
(CLEARY RD NW)

APP.  
#1

APP.  
#2

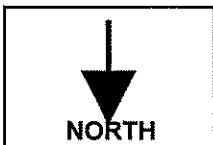
APP.  
#3

APP.  
#4

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						15	1	
6:15-6:30						15	6	
6:30-6:45				1	1	5	1	
6:45-7:00						13	5	1
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>62</b>
7:00-7:15						14		
7:15-7:30						5		
7:30-7:45						15	1	
7:45-8:00						8	6	2
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>51</b>
8:00-8:15						17	4	2
8:15-8:30						8	3	
8:30-8:45						10		
8:45-9:00						1		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>45</b>
9:00-9:15						11	3	
9:15-9:30						21	3	
9:30-9:45						9	3	
9:45-10:00						14	1	1
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>66</b>
10:00-10:15						14	1	
10:15-10:30						6	1	
10:30-10:45						7	1	
10:45-11:00						12	1	
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>43</b>
11:00-11:15						11		
11:15-11:30						6	2	
11:30-11:45						13	2	
11:45-12:00						9	2	
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>45</b>
12:00-12:15			1		1	13	3	
12:15-12:30						5	1	
12:30-12:45						11	4	
12:45-1:00						16	5	2
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>60</b>
1:00-1:15						8	3	
1:15-1:30						15	1	
1:30-1:45						9		
1:45-2:00						9	6	
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>51</b>





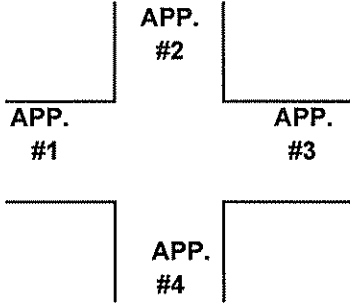
COUNT LOCATION:

CSAH 22 (VIKING BLVD) @  
CR 66 (CLEARY RD NW)

DATE:

June 29, 1998

APP. #1= WB CSAH 22  
(VIKING BLVD)  
APP. #2 = NB CR 66  
(CLEARY RD NW)  
APP. #3= EB CSAH 22  
(VIKING BLVD)  
APP. #4= SB CR 66  
(CLEARY RD NW)



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						15	1	
2:15-2:30						7	1	
2:30-2:45						11	1	
2:45-3:00						12	5	
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>53</b>
3:00-3:15						3	1	
3:15-3:30						1	5	
3:30-3:45						17	1	
3:45-4:00						8	4	
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>40</b>
4:00-4:15						14	1	
4:15-4:30						9	2	
4:30-4:45						7	2	
4:45-5:00						12	6	
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>53</b>
5:00-5:15						8	4	
5:15-5:30						4	1	
5:30-5:45						4	9	
5:45-6:00	1				1	1	1	
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>32</b>
6:00-6:15			2		2	8	4	
6:15-6:30						2	1	
6:30-6:45			1		1	5	1	
6:45-7:00	1				1	2	2	
<b>HOURLY TOTAL</b>					<b>4</b>	<b>HOURLY TOTAL</b>		<b>25</b>
7:00-7:15	1		2		3	2		
7:15-7:30						2	6	
7:30-7:45				1	1	2	1	
7:45-8:00		1	1		2	1	2	
<b>HOURLY TOTAL</b>					<b>6</b>	<b>HOURLY TOTAL</b>		<b>16</b>
8:00-8:15		1			1	7	1	
8:15-8:30		1		1	2	2	4	
8:30-8:45						1	1	
8:45-9:00						3	2	
<b>HOURLY TOTAL</b>					<b>3</b>	<b>HOURLY TOTAL</b>		<b>21</b>
9:00-9:15						1	2	
9:15-9:30							2	
9:30-9:45						2	1	
9:45-10:00						1		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>9</b>