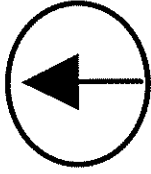
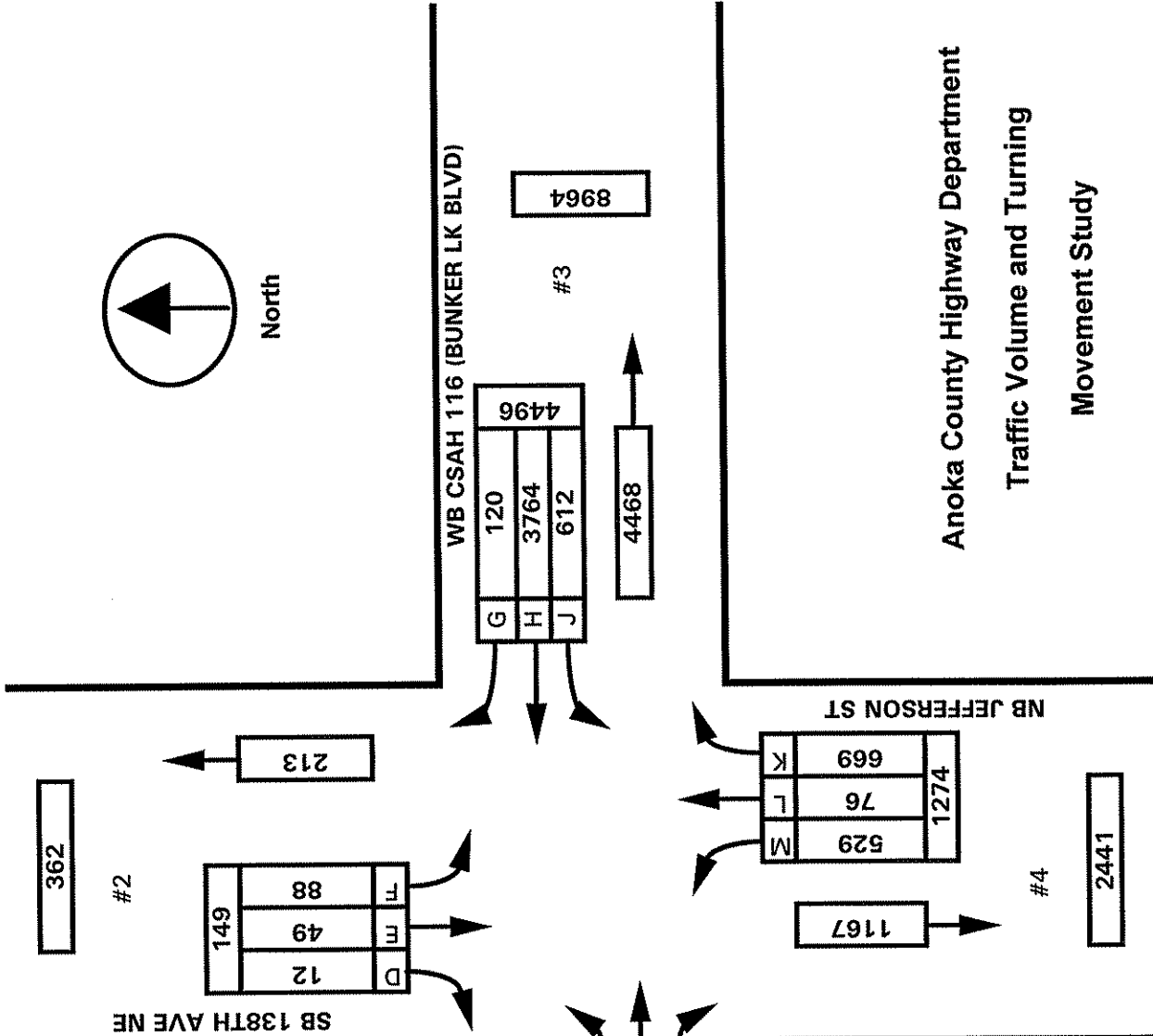


Date : 6/20/96 AM 6/18/96 PM  
 Count Number : TMC 9605  
 Location : CSAH 116 (BUNKER LAKE BLVD) @ JEFFERSON ST/138TH AVE NE



North



Anoka County Highway Department  
 Traffic Volume and Turning  
 Movement Study

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

ANOKA COUNTY HIGHWAY DEPARTMENT

Weather : SUNNY AM; OVERCAST PM

TRAFFIC ENGINEERING SECTION

Study Name: TMC9605

Counted by: ANN & GABE

TRAFFIC STUDY

Site Code : 96050202

Board # :

Start Date: 06/18/96

Other :

Page : 1

Vehicle group 1

Start Time	138TH AVE. NE From North				CSAH 116 (BUNKER LAKE) From East				JEFFERSON ST. From South				CSAH 116 (BUNKER LAKE) From West				Intvl	Exclu	Inclu	
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY				Total
06/18/96																				
06:00	0	1	0	0	0	22	7	3	2	0	1	0	1	67	0	0	104	3	101	
06:15	0	1	0	0	0	39	14	2	2	0	9	0	4	72	0	1	144	3	141	
06:30	0	0	4	0	1	44	10	3	2	0	9	0	6	105	0	2	186	5	181	
06:45	0	0	1	0	0	36	12	7	7	0	7	0	8	101	0	7	186	14	172	
Hour	0	2	5	0	1	141	43	15	13	0	26	0	19	345	0	10	620	25	595	
07:00	0	2	4	0	0	41	13	2	6	0	4	0	7	102	1	6	188	8	180	
07:15	0	1	2	0	2	51	7	7	4	1	5	0	5	129	0	6	220	13	207	
07:30	0	0	2	0	0	56	17	8	14	0	13	0	6	100	0	6	222	14	208	
07:45	0	1	1	0	4	46	21	4	9	0	9	1	16	83	0	7	202	12	190	
Hour	0	4	9	0	6	194	58	21	33	1	31	1	34	414	1	25	832	47	785	
08:00	1	1	0	0	3	38	4	3	7	0	6	1	10	64	0	5	143	9	134	
08:15	0	1	1	0	1	37	3	6	6	0	2	0	2	51	0	6	116	12	104	
08:30	0	0	2	0	3	36	5	5	8	3	6	2	8	65	1	7	151	14	137	
08:45	2	1	1	1	0	38	5	3	8	1	5	0	6	47	0	6	124	10	114	
Hour	3	3	4	1	7	149	17	17	29	4	19	3	26	227	1	24	534	45	489	
09:00	0	0	1	0	1	26	6	2	9	0	1	1	12	42	0	5	106	8	98	
09:15	0	2	1	0	1	31	3	2	8	1	6	0	7	43	0	5	110	7	103	
09:30	0	0	3	0	1	46	7	10	9	1	4	0	4	43	0	4	132	14	118	
09:45	0	0	0	0	2	42	2	4	3	0	4	0	10	32	0	5	104	9	95	
Hour	0	2	5	0	5	145	18	18	29	2	15	1	33	160	0	19	452	38	414	
10:00	0	0	1	0	1	32	9	4	9	1	8	0	6	48	0	4	123	8	115	
10:15	0	1	2	1	4	46	12	5	6	0	9	0	11	36	1	1	135	7	128	
10:30	0	0	1	0	3	47	9	4	11	0	8	0	7	45	0	2	137	6	131	
10:45	0	0	1	0	3	37	4	5	5	0	8	1	5	33	2	2	106	8	98	
Hour	0	1	5	1	11	162	34	18	31	1	33	1	29	162	3	9	501	29	472	
11:00	0	1	1	0	3	45	11	7	5	2	12	1	15	50	0	7	160	15	145	
11:15	1	3	1	0	0	41	7	8	3	0	6	1	8	34	0	6	119	15	104	
11:30	0	0	0	0	2	54	9	7	5	0	3	1	6	51	1	0	139	8	131	
11:45	0	2	3	0	1	43	6	2	13	3	6	0	12	58	3	9	161	11	150	
Hour	1	6	5	0	6	183	33	24	26	5	27	3	41	193	4	22	579	49	530	
12:00	0	1	1	0	0	42	9	4	14	1	15	0	2	55	0	6	150	10	140	
12:15	0	1	2	0	0	50	2	6	7	1	9	0	11	51	1	5	146	11	135	
12:30	0	2	3	0	4	44	5	3	13	2	6	1	8	58	0	5	154	9	145	
12:45	0	1	3	0	1	44	8	5	10	1	5	0	8	64	0	4	154	9	145	
Hour	0	5	9	0	5	180	24	18	44	5	35	1	29	228	1	20	604	39	565	

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather : SUNNY AM; OVERCAST PM

Counted by: ANN & GABE

Board # :

ther :

Study Name: TMC9605

Site Code : 96050202

Start Date: 06/18/96

Page : 2

Vehicle group 1

Start Time	138TH AVE. NE From North				CSAH 116 (BUNKER LAKE) From East				JEFFERSON ST. From South				CSAH 116 (BUNKER LAKE) From West				Intvl	Exclu	Inclu
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY			
13:00	2	0	2	0	2	44	11	3	9	2	8	0	10	54	2	10	159	13	146
13:15	0	1	2	1	3	37	5	5	5	3	7	1	6	62	0	5	143	12	131
13:30	0	1	2	0	2	56	9	4	10	1	12	2	4	53	0	3	159	9	150
13:45	0	0	1	0	4	59	6	2	6	1	6	0	3	66	0	6	160	8	152
Hour	2	2	7	1	11	196	31	14	30	7	33	3	23	235	2	24	621	42	579
14:00	0	1	1	0	3	47	7	4	4	1	4	0	8	59	1	4	144	8	136
14:15	0	0	2	0	2	51	14	6	11	0	6	1	6	56	0	5	160	12	148
14:30	0	0	2	0	3	64	8	7	0	2	6	0	6	54	0	2	154	9	145
14:45	0	0	0	0	0	51	15	4	9	1	3	1	7	58	0	5	154	10	144
Hour	0	1	5	0	8	213	44	21	24	4	19	2	27	227	1	16	612	39	573
15:00	1	0	0	0	3	47	7	7	10	0	7	0	5	58	0	3	148	10	138
15:15	0	1	1	0	1	52	8	3	19	1	7	0	4	64	0	4	165	7	158
15:30	0	2	0	0	2	88	13	7	12	0	7	1	7	73	0	7	219	15	204
15:45	0	1	2	0	0	88	16	5	10	2	13	0	10	58	0	3	208	8	200
Hour	1	4	3	0	6	275	44	22	51	3	34	1	26	253	0	17	740	40	700
16:00	1	1	1	0	3	96	8	3	24	2	11	0	10	60	1	5	226	8	218
16:15	1	1	1	0	1	98	12	2	11	1	6	0	12	69	0	5	220	7	213
16:30	0	1	1	0	2	127	10	6	22	2	7	1	19	62	0	4	264	11	253
16:45	0	1	1	0	2	115	15	7	18	1	12	0	7	74	0	1	254	8	246
Hour	2	4	4	0	8	436	45	18	75	6	36	1	48	265	1	15	964	34	930
17:00	0	0	2	0	2	145	10	5	24	4	11	0	9	93	0	7	312	12	300
17:15	0	0	0	0	5	139	12	2	35	3	11	0	9	75	0	3	294	5	289
17:30	0	0	9	0	2	113	19	3	23	4	10	0	6	82	0	4	275	7	268
17:45	0	1	1	0	5	112	20	2	22	1	15	0	12	76	0	3	270	5	265
Hour	0	1	12	0	14	509	61	12	104	12	47	0	36	326	0	17	1151	29	1122
18:00	0	1	2	0	3	108	23	2	22	1	12	1	17	69	0	3	264	6	258
18:15	0	6	0	0	3	79	7	0	11	4	16	0	6	54	0	3	189	3	186
18:30	0	0	2	0	1	71	5	0	10	2	10	0	9	53	0	0	163	0	163
18:45	0	1	0	0	4	75	8	3	19	1	12	1	8	64	0	3	199	7	192
Hour	0	8	4	0	11	333	43	5	62	8	50	2	40	240	0	9	815	16	799
19:00	0	0	2	0	4	57	9	2	13	2	14	0	14	48	0	0	165	2	163
19:15	1	1	1	0	2	51	12	1	7	2	7	0	5	48	0	1	139	2	137
19:30	1	2	3	1	1	58	5	1	12	2	8	0	7	22	1	1	125	3	122
19:45	0	1	1	0	2	45	6	0	3	1	7	0	6	47	0	2	121	2	119
Hour	2	4	7	1	9	211	32	4	35	7	36	0	32	165	1	4	550	9	541

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather : SUNNY AM; OVERCAST PM

Counted by: ANN & GABE

Board # :

Other :

Study Name: TMC9605

Site Code : 96050202

Start Date: 06/18/96

Page : 3

Vehicle group 1

Start Time	138TH AVE. NE From North				CSAH 116 (BUNKER LAKE) From East				JEFFERSON ST. From South				CSAH 116 (BUNKER LAKE) From West				Intvl	Exclu	Inclu
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY			
20:00	0	1	1	0	0	46	3	0	6	4	8	0	7	22	0	1	99	1	98
20:15	0	0	1	0	1	51	9	0	6	3	12	0	14	30	0	1	128	1	127
20:30	0	0	0	0	4	68	15	1	6	2	8	1	10	38	0	0	153	2	151
20:45	0	0	0	0	0	46	21	1	7	2	13	0	6	37	0	0	133	1	132
Hour	0	1	2	0	5	211	48	2	25	11	41	1	37	127	0	2	513	5	508
21:00	0	1	0	0	1	62	15	0	30	0	26	0	7	42	0	0	184	0	184
21:15	0	0	0	0	3	65	11	0	13	0	8	0	8	32	0	0	140	0	140
21:30	0	0	0	0	2	58	6	0	11	0	11	0	6	39	1	0	134	0	134
21:45	1	0	2	0	1	41	5	0	4	0	2	0	5	31	1	0	93	0	93
Hour	1	1	2	0	7	226	37	0	58	0	47	0	26	144	2	0	551	0	551
Total	12	49	88	4	120	3764	612	229	669	76	529	20	506	3711	17	233	10639	486	10153
% Apr.	7.8	32.0	57.5	2.6	2.5	79.6	12.9	4.8	51.7	5.8	40.8	1.5	11.3	83.0	0.3	5.2	-	-	-
% Int.	0.1	0.4	0.8	-	1.1	35.3	5.7	2.1	6.2	0.7	4.9	0.1	4.7	34.8	0.1	2.1	-	-	-

Major Street Approaches:

Eastbound:

CSAH 116 (BUNKER LAKE BLVD)  
 Data File: C:\PETRA2\DATAFILE\TMC9605.PDF  
 Count Type: IMC. Channel: 0. Count Date: 6/18/96  
 Number of Lanes: 2  
 Approach Speed: 55  
 Total Approach Traffic: 4234

Westbound:

CSAH 116 (BUNKER LAKE BLVD)  
 Data File: C:\PETRA2\DATAFILE\TMC9605.PDF  
 Count Type: IMC. Channel: 0. Count Date: 6/18/96  
 Number of Lanes: 1  
 Approach Speed: 50  
 Total Approach Traffic: 4496

Minor Street Approaches:

Northbound:

JEFFERSON ST.  
 Data File: C:\PETRA2\DATAFILE\TMC9605.PDF  
 Count Type: IMC. Channel: 0. Count Date: 6/18/96  
 Number of Lanes: 1  
 Approach Speed: 40  
 Total Approach Traffic: 1274

Southbound:

138TH AVE. NE  
 Data File: C:\PETRA2\DATAFILE\TMC9605.PDF  
 Count Type: IMC. Channel: 0. Count Date: 6/18/96  
 Number of Lanes: 1  
 Approach Speed: 30  
 Total Approach Traffic: 149

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

Hour	Main (Total)	Side Vol.	Side Dir.	Side Rank	Warrant 1 Meets?	Warrant 1 Criteria	Warrant 2 Meets?	Warrant 2 Criteria	Warrant 8 Meets?	Warrant 8 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	549	39	N	16	MAIN	105		52	MAIN	84
7	707	65	N	10	MAIN	105	--BOTH--	52	MAIN	84
8	427	52	N	13	MAIN	105	SIDE	52		84
9	361	46	N	15		105		52		84
10	401	65	N	11		105	SIDE	52		84
11	460	58	N	12	MAIN	105	SIDE	52		84
12	467	84	N	6	MAIN	105	SIDE	52	SIDE	84
13	498	70	N	9	MAIN	105	SIDE	52		84
14	520	47	N	14	MAIN	105		52	MAIN	84
15	604	88	N	5	MAIN	105	SIDE	52	--BOTH--	84
16	803	117	N	3	--BOTH--	105	--BOTH--	52	--BOTH--	84
17	946	163	N	1	--BOTH--	105	--BOTH--	52	--BOTH--	84
18	667	120	N	2	--BOTH--	105	--BOTH--	52	--BOTH--	84
19	450	78	N	7	MAIN	105	SIDE	52		84
20	428	77	N	8	MAIN	105	SIDE	52		84
21	442	105	N	4	--BOTH--	105	SIDE	52	SIDE	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 4 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

## Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 4 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. At least one street has no major approaches. Peak hour total entering volume: 1122.

- 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 4 hours. Criteria--Main: 504; Side: See Volume Summary.

## Warrant 9 - Four Hour Volumes

NOT SATISFIED. Required values reached for 3 hours.

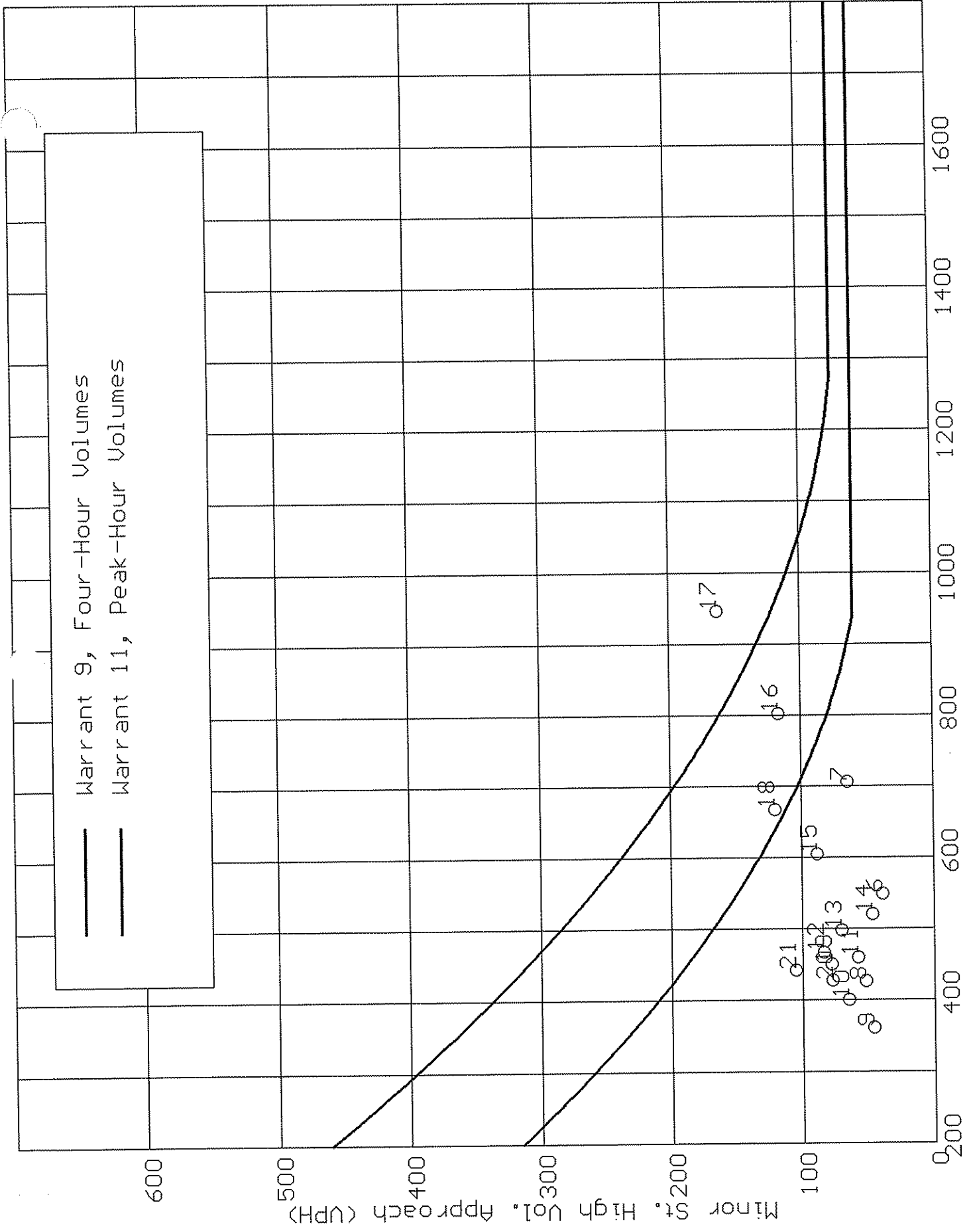
## Warrant 10 - Peak Hour Delay

NOT APPLICABLE. Volume requirements satisfied, but side street peak hour delay not defined.

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

## Warrant 11 - Peak Hour Volume

SATISFIED for 1 hours.



Major St. Total of Both Approaches (UPH)



**NORTH**

**COUNT LOCATION:**

CSAH 116 (BUNKER LAKE BLVD) @  
JEFFERSON ST/138TH AVE NE

**DATE:**

6/20/96

APP. #1= EB CSAH 116  
(BUNKER LAKE BLVD)

APP. #2=  
SB 138TH AVE

APP. #3= WB CSAH 116  
(BUNKER LAKE BLVD)

APP. #4=  
NB JEFFERSON ST NE

APP. #2  
30MPH

APP. #1  
55MPH

APP. #3  
50MPH


40MPH

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						2		1
6:15-6:30						3		
6:30-6:45						5		
6:45-7:00						14		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>25</b>
7:00-7:15						6		2
7:15-7:30	1				1	13		
7:30-7:45			1		1	13		1
7:45-8:00						10	2	
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>47</b>
8:00-8:15						9		
8:15-8:30						12		
8:30-8:45						14		
8:45-9:00						10		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>45</b>
9:00-9:15						8		
9:15-9:30						7		
9:30-9:45						14		
9:45-10:00						9		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>38</b>
10:00-10:15						8		
10:15-10:30			1		1	8		
10:30-10:45						6		
10:45-11:00						8		
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>30</b>
11:00-11:15						14		1
11:15-11:30						15		
11:30-11:45						6		2
11:45-12:00						10		1
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>49</b>
12:00-12:15						10		
12:15-12:30						9		2
12:30-12:45						9		
12:45-1:00						9		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>39</b>
1:00-1:15						10		
1:15-1:30						12		
1:30-1:45						9		
1:45-2:00						8		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>39</b>



  
**NORTH**

APP. #1= EB CSAH 116  
 (BUNKER LK BLVD)  
 APP. #2= SB 138TH AVE  
 APP. #3= WB CSAH 116  
 (BUNKER LK BLVD)  
 APP. #4=  
 NB JEFFERSON ST

**COUNT LOCATION:** CSAH 116 (BUNKER LAKE BLVD) @  
JEFFERSON ST/138TH AVE NE

**DATE:** 6/18/96

<b>APP. #2</b> 30MPH	<b>APP. #3</b> 50MPH
<b>APP. #1</b> 55MPH	<b>APP. #4</b> 40MPH

- 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						8		
2:15-2:30						12		
2:30-2:45						9		
2:45-3:00						10		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>39</b>
3:00-3:15						10		
3:15-3:30						7		
3:30-3:45						15		
3:45-4:00						7		1
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>40</b>
4:00-4:15						8		
4:15-4:30						7		
4:30-4:45						11		
4:45-5:00						8		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>34</b>
5:00-5:15						11		1
5:15-5:30						5		
5:30-5:45		1			1	7		
5:45-6:00						5		
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>29</b>
6:00-6:15						6		
6:15-6:30						3		
6:30-6:45								
6:45-7:00						7		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>16</b>
7:00-7:15						2		
7:15-7:30						2		
7:30-7:45						3		
7:45-8:00						1	1	
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>9</b>
8:00-8:15						1		
8:15-8:30						1		
8:30-8:45						2		
8:45-9:00						1		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>5</b>
9:00-9:15								
9:15-9:30								
9:30-9:45								
9:45-10:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		