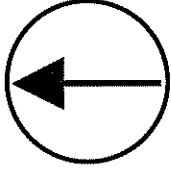


Date : 7/14/99AM 7/12/99PM

Count Number : TMC9918

Location : CSAH 14 (Main St.) @

CR 84 (Otter Lake Rd.)



North

CSAH 14 (Main St.)

G	0
H	4686
J	235

4921

#2

9762

4841

5373

#1

10619

C	0
B	4557
A	689

5246

CSAH 14 (Main St.)

CR 84 (Otter Lake Rd.)

M	687
L	0
K	284

971

#3

924

1895

	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

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

Anoka County Highway Department
Traffic Volume & Turning Movement Study

Weather
Counter TDC-8
Counted by Mike and Ryan

File Name : TMC9918
Site Code : 99180101
Start Date : 07/12/1999
Page No : 1

Groups Printed1 - Unshifted

Start Time	Southbound				CSAH 14 (Main St.) Westbound				CR 84 (Otter Lake Rd.) Northbound				CSAH 14 (Main St.) Eastbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy			
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
06:00	0	0	0	0	6	90	0	4	5	0	1	0	0	25	8	1	5	135	140
06:15	0	0	0	0	1	124	0	6	6	0	5	0	0	37	13	1	7	186	193
06:30	0	0	0	0	3	121	0	3	4	0	2	1	0	68	16	2	6	214	220
06:45	0	0	0	0	7	129	0	2	5	0	8	0	0	85	19	5	7	253	260
Total	0	0	0	0	17	464	0	15	20	0	16	1	0	215	56	9	25	788	813
07:00	0	0	0	0	5	90	0	6	5	0	3	1	0	76	15	5	12	194	206
07:15	0	0	0	0	8	120	0	3	14	0	9	1	0	97	20	4	8	268	276
07:30	0	0	0	0	4	100	0	5	3	0	2	0	0	59	14	4	9	182	191
07:45	0	0	0	0	9	96	0	10	7	0	7	2	0	79	12	6	18	210	228
Total	0	0	0	0	26	406	0	24	29	0	21	4	0	311	61	19	47	854	901
08:00	0	0	0	0	3	71	0	2	9	0	7	3	0	74	24	7	12	188	200
08:15	0	0	0	0	4	88	0	8	10	0	13	0	0	68	17	11	19	200	219
08:30	0	0	0	0	1	87	0	6	10	0	1	0	0	62	16	15	21	177	198
08:45	0	0	0	0	3	68	0	9	10	0	8	0	0	78	8	6	15	175	190
Total	0	0	0	0	11	314	0	25	39	0	29	3	0	282	65	39	67	740	807
09:00	0	0	0	0	3	57	0	5	10	0	5	4	0	55	15	13	22	145	167
09:15	0	0	0	0	2	64	0	3	6	0	5	2	0	68	8	2	7	153	160
09:30	0	0	0	0	6	67	0	7	6	0	3	0	0	74	9	12	19	165	184
09:45	0	0	0	0	2	64	0	9	12	0	4	3	0	43	9	9	21	134	155
Total	0	0	0	0	13	252	0	24	34	0	17	9	0	240	41	36	69	597	666
10:00	0	0	0	0	2	65	0	11	14	0	4	1	0	54	11	13	25	150	175
10:15	0	0	0	0	0	73	0	10	5	0	2	4	0	57	3	8	22	140	162
10:30	0	0	0	0	1	68	0	13	7	0	2	2	0	65	6	20	35	149	184
10:45	0	0	0	0	3	75	0	11	12	0	5	1	0	62	12	10	22	169	191
Total	0	0	0	0	6	281	0	45	38	0	13	8	0	238	32	51	104	608	712
11:00	0	0	0	0	5	62	0	4	6	0	6	2	0	46	8	10	16	133	149
11:15	0	0	0	0	3	69	0	13	16	0	5	2	0	60	11	15	30	164	194
11:30	0	0	0	0	2	41	0	6	7	0	6	0	0	46	3	9	15	105	120
11:45	0	0	0	0	8	76	0	12	11	0	5	2	0	50	22	9	23	172	195
Total	0	0	0	0	18	248	0	35	40	0	22	6	0	202	44	43	84	574	658
12:00	0	0	0	0	2	80	0	12	10	0	5	3	0	58	12	18	33	167	200
12:15	0	0	0	0	2	86	0	6	20	0	3	7	0	70	18	8	21	199	220
12:30	0	0	0	0	3	57	0	8	12	0	4	1	0	66	11	13	22	153	175
12:45	0	0	0	0	0	55	0	15	15	0	4	6	0	50	14	15	36	138	174
Total	0	0	0	0	7	278	0	41	57	0	16	17	0	244	55	54	112	657	769
13:00	0	0	0	0	3	61	0	14	16	0	3	3	0	61	10	11	28	154	182
13:15	0	0	0	0	4	88	0	15	7	0	6	2	0	75	12	16	33	192	225
13:30	0	0	0	0	0	75	0	10	15	0	4	3	0	65	16	13	26	175	201
13:45	0	0	0	0	2	62	0	3	13	0	9	2	0	68	7	9	14	161	175
Total	0	0	0	0	9	286	0	42	51	0	22	10	0	269	45	49	101	682	783
14:00	0	0	0	0	9	67	0	12	12	0	2	3	0	66	3	14	29	159	188
14:15	0	0	0	0	6	59	0	8	14	0	4	3	0	72	11	9	20	166	186
14:30	0	0	0	0	6	54	0	10	6	0	7	2	0	65	10	9	21	148	169
14:45	0	0	0	0	4	57	0	4	4	0	4	1	0	90	6	4	9	165	174
Total	0	0	0	0	25	237	0	34	36	0	17	9	0	293	30	36	79	638	717
15:00	0	0	0	0	0	90	0	7	10	0	0	1	0	64	16	5	13	180	193
15:15	0	0	0	0	4	57	0	5	6	0	8	1	0	82	13	4	10	170	180
15:30	0	0	0	0	4	64	0	4	8	0	5	0	0	106	11	5	9	198	207
15:45	0	0	0	0	5	57	0	7	11	0	4	1	0	93	16	4	12	186	198
Total	0	0	0	0	13	268	0	23	35	0	17	3	0	345	56	18	44	734	778

Anoka County Highway Department Traffic Volume & Turning Movement Study

File Name : TMC9918
Site Code : 99180101
Start Date : 07/12/1999
Page No : 2

Groups Printed1 - Unshifted

Start Time	Southbound				CSAH 14 (Main St.) Westbound				CR 84 (Otter Lake Rd.) Northbound				CSAH 14 (Main St.) Eastbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy			
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
16:00	0	0	0	0	1	93	0	3	10	0	0	2	0	101	14	3	8	219	227
16:15	0	0	0	0	2	122	0	6	9	0	0	1	0	121	11	4	11	265	276
16:30	0	0	0	0	3	107	0	5	33	0	2	4	0	108	15	7	16	268	284
16:45	0	0	0	0	1	94	0	8	16	0	8	3	0	123	12	3	14	254	268
Total	0	0	0	0	7	416	0	22	68	0	10	10	0	453	52	17	49	1006	1055
17:00	0	0	0	0	9	87	0	2	37	0	11	4	0	119	16	1	7	279	286
17:15	0	0	0	0	6	94	0	6	31	0	6	2	0	120	7	6	14	264	278
17:30	0	0	0	0	4	103	0	8	21	0	2	0	0	115	10	4	12	255	267
17:45	0	0	0	0	4	85	0	4	20	0	3	1	0	139	9	7	12	260	272
Total	0	0	0	0	23	369	0	20	109	0	22	7	0	493	42	18	45	1058	1103
18:00	0	0	0	0	4	89	0	9	9	0	5	0	0	125	8	2	11	240	251
18:15	0	0	0	0	5	88	0	2	22	0	8	1	0	108	18	5	8	249	257
18:30	0	0	0	0	8	86	0	1	10	0	3	0	0	83	6	6	7	196	203
18:45	0	0	0	0	6	58	0	0	5	0	3	0	0	64	6	0	0	142	142
Total	0	0	0	0	23	321	0	12	46	0	19	1	0	380	38	13	26	827	853
19:00	0	0	0	0	3	70	0	1	7	0	4	0	0	61	11	2	3	156	159
19:15	0	0	0	0	6	38	0	2	15	0	5	1	0	65	10	4	7	139	146
19:30	0	0	0	0	3	61	0	2	6	0	1	1	0	48	10	2	5	129	134
19:45	0	0	0	0	5	48	0	0	7	0	1	0	0	58	4	1	1	123	124
Total	0	0	0	0	17	217	0	5	35	0	11	2	0	232	35	9	16	547	563
20:00	0	0	0	0	1	44	0	1	7	0	1	0	0	56	4	0	1	113	114
20:15	0	0	0	0	3	33	0	1	9	0	3	0	0	59	8	2	3	115	118
20:30	0	0	0	0	1	33	0	2	1	0	4	0	0	41	3	1	3	83	86
20:45	0	0	0	0	3	46	0	2	4	0	4	0	0	45	5	0	2	107	109
Total	0	0	0	0	8	156	0	6	21	0	12	0	0	201	20	3	9	418	427
21:00	0	0	0	0	4	32	0	0	4	0	10	0	0	29	4	0	0	83	83
21:15	0	0	0	0	4	51	0	2	20	0	8	0	0	46	6	0	2	135	137
21:30	0	0	0	0	2	56	0	2	3	0	1	0	0	43	1	1	3	106	109
21:45	0	0	0	0	2	34	0	2	2	0	1	0	0	41	6	1	3	86	89
Total	0	0	0	0	12	173	0	6	29	0	20	0	0	159	17	2	8	410	418
Grand Total	0	0	0	0	235	4686	0	379	687	0	284	90	0	4557	689	416	885	11138	12023
Apprch %	0.0	0.0	0.0		4.8	95.2	0.0		70.8	0.0	29.2		0.0	86.9	13.1				
Total %	0.0	0.0	0.0		2.1	42.1	0.0		6.2	0.0	2.5		0.0	40.9	6.2		7.4	92.6	

Major Street Approaches:

Eastbound:

CSAH 14 (Main St.)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9918.war
 Count Type: IMC. Channel: 0. Count Date: 7/12/99
 Number of Lanes: 2
 Approach Speed: 55
 Total Approach Traffic: 5246

Westbound:

CSAH 14 (Main St.)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9918.war
 Count Type: IMC. Channel: 0. Count Date: 7/12/99
 Number of Lanes: 1
 Approach Speed: 55
 Total Approach Traffic: 4921

Minor Street Approaches:

Northbound:

CR 84 (Otter Lake Rd.)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9918.war
 Count Type: IMC. Channel: 0. Count Date: 7/12/99
 Number of Lanes: 1
 Approach Speed: 50
 Total Approach Traffic: 971

Southbound:

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9918.war
 Count Type: IMC. Channel: 0. Count Date: 7/12/99
 Number of Lanes: 1
 Approach Speed: 0
 Total Approach Traffic: 0

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

Hour	Main (Total)	Side			Warrant 1		Warrant 2		Warrant 8	
		Vol.	Dir.	Rank	Meets?	Criteria	Meets?	Criteria	Meets?	Criteria
0	0	0	N	17		105		52		84
1	0	0	N	18		105		52		84
2	0	0	N	19		105		52		84
3	0	0	N	20		105		52		84
4	0	0	N	21		105		52		84
5	0	0	N	22		105		52		84
6	752	36	N	15	MAIN	105	MAIN	52	MAIN	84
7	804	50	N	12	MAIN	105	MAIN	52	MAIN	84
8	672	68	N	5	MAIN	105	--BOTH--	52	MAIN	84
9	546	51	N	10	MAIN	105		52	MAIN	84
10	557	51	N	11	MAIN	105		52	MAIN	84
11	512	62	N	7	MAIN	105	SIDE	52	MAIN	84
12	584	73	N	3	MAIN	105	SIDE	52	MAIN	84
13	609	73	N	4	MAIN	105	SIDE	52	MAIN	84
14	585	53	N	8	MAIN	105	SIDE	52	MAIN	84
15	682	52	N	9	MAIN	105	--BOTH--	52	MAIN	84
16	928	78	N	2	MAIN	105	--BOTH--	52	MAIN	84
17	927	131	N	1	--BOTH--	105	--BOTH--	52	--BOTH--	84
18	762	65	N	6	MAIN	105	--BOTH--	52	MAIN	84
19	501	46	N	14	MAIN	105		52		84
20	385	33	N	16		105		52		84
21	361	49	N	13		105		52		84
22	0	0	N	23		105		52		84
23	0	0	N	24		105		52		84

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 1 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 5 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: 1058.

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

Warrant 9 - Four Hour Volumes

NOT SATISFIED. Required values reached for 2 hours.

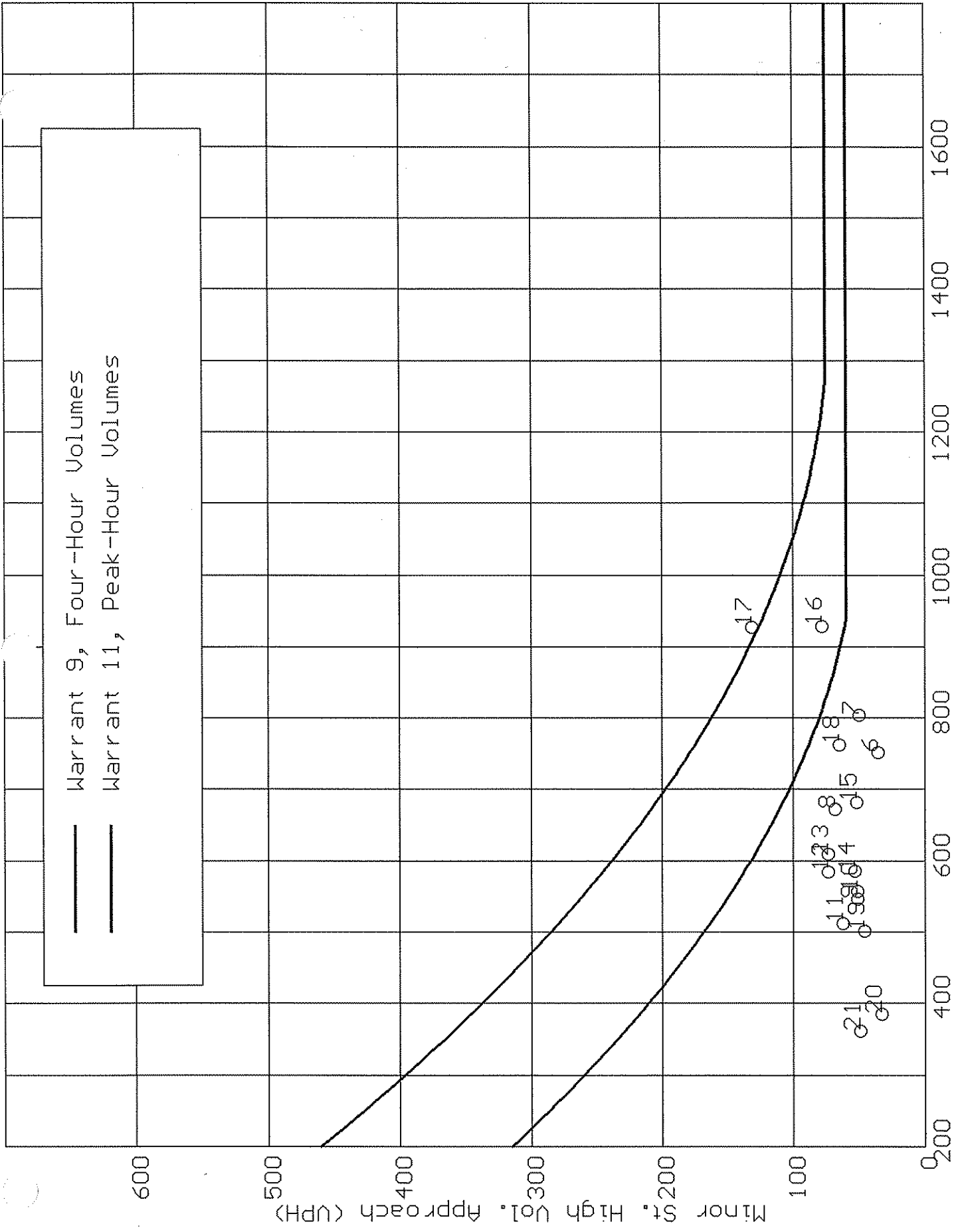
Warrant 10 - Peak Hour Delay

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.



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

Major St. Total of Both Approaches (VPH)



COUNT LOCATION:

CSAH 14 (MAIN ST.) @
CR 84 (OTTER LAKE RD.)

DATE:


7/12/99

APP. #1= EB CSAH 14 (MAIN ST.)
APP. #2 =
APP. #3=WB CSAH 14 (MAIN ST.)
APP. #4= NB CR 84 (OTTER LAKE RD.)

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						5		
6:15-6:30						7		
6:30-6:45						6		
6:45-7:00						7		
HOURLY TOTAL						HOURLY TOTAL		25
7:00-7:15						12		
7:15-7:30						8		
7:30-7:45						9		
7:45-8:00						16		
HOURLY TOTAL						HOURLY TOTAL		45
8:00-8:15						11		
8:15-8:30						19		1
8:30-8:45						21		
8:45-9:00						16		
HOURLY TOTAL						HOURLY TOTAL		68
9:00-9:15						21		
9:15-9:30						6		
9:30-9:45						19		
9:45-10:00						22		
HOURLY TOTAL						HOURLY TOTAL		68
10:00-10:15						26		
10:15-10:30						20	1	
10:30-10:45						36		
10:45-11:00						21		
HOURLY TOTAL						HOURLY TOTAL		104
11:00-11:15						16		
11:15-11:30						30		
11:30-11:45						15		
11:45-12:00						22		
HOURLY TOTAL						HOURLY TOTAL		83
12:00-12:15						29		
12:15-12:30						18		
12:30-12:45						22		
12:45-1:00						35		1
HOURLY TOTAL						HOURLY TOTAL		105
1:00-1:15						28		
1:15-1:30						29		2
1:30-1:45						26		
1:45-2:00						14		
HOURLY TOTAL						HOURLY TOTAL		99


NORTH

APP. #1= EB CSAH 14 (MAIN ST.)
APP. #2 =
APP. #3=WB CSAH 14 (MAIN ST.)
APP. #4= NB CR 84 (OTTER LAKE RD.)

COUNT LOCATION:

CSAH 14 (MAIN ST.) @
 CR 84 (OTTER LAKE RD.)

DATE:

7/12/99

	APP. #2		
APP. #1		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
2:00-2:15PM						5		
2:15-2:30						7		
2:30-2:45						6		
2:45-3:00						7		
HOURLY TOTAL						HOURLY TOTAL		25
3:00-3:15						12		
3:15-3:30						8		
3:30-3:45						9		
3:45-4:00						16		
HOURLY TOTAL						HOURLY TOTAL		45
4:00-4:15						11		
4:15-4:30						19		1
4:30-4:45						21		
4:45-5:00								
HOURLY TOTAL						HOURLY TOTAL		52
5:00-5:15						21		
5:15-5:30						6		
5:30-5:45						19		
5:45-6:00						22		
HOURLY TOTAL						HOURLY TOTAL		68
6:00-6:15						26		
6:15-6:30						20	1	
6:30-6:45						37		
6:45-7:00						21		
HOURLY TOTAL						HOURLY TOTAL		105
7:00-7:15						16		
7:15-7:30						30		
7:30-7:45						15		
7:45-8:00						22		
HOURLY TOTAL						HOURLY TOTAL		83
8:00-8:15						29		
8:15-8:30						18		
8:30-8:45						22		
8:45-9:00						35		1
HOURLY TOTAL						HOURLY TOTAL		105
9:00-9:15						28		
9:15-9:30						29		2
9:30-9:45						26		
9:45-10:00						14		
HOURLY TOTAL						HOURLY TOTAL		99