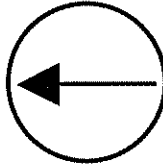


Date : 7/20/99PM 7/22/99AM

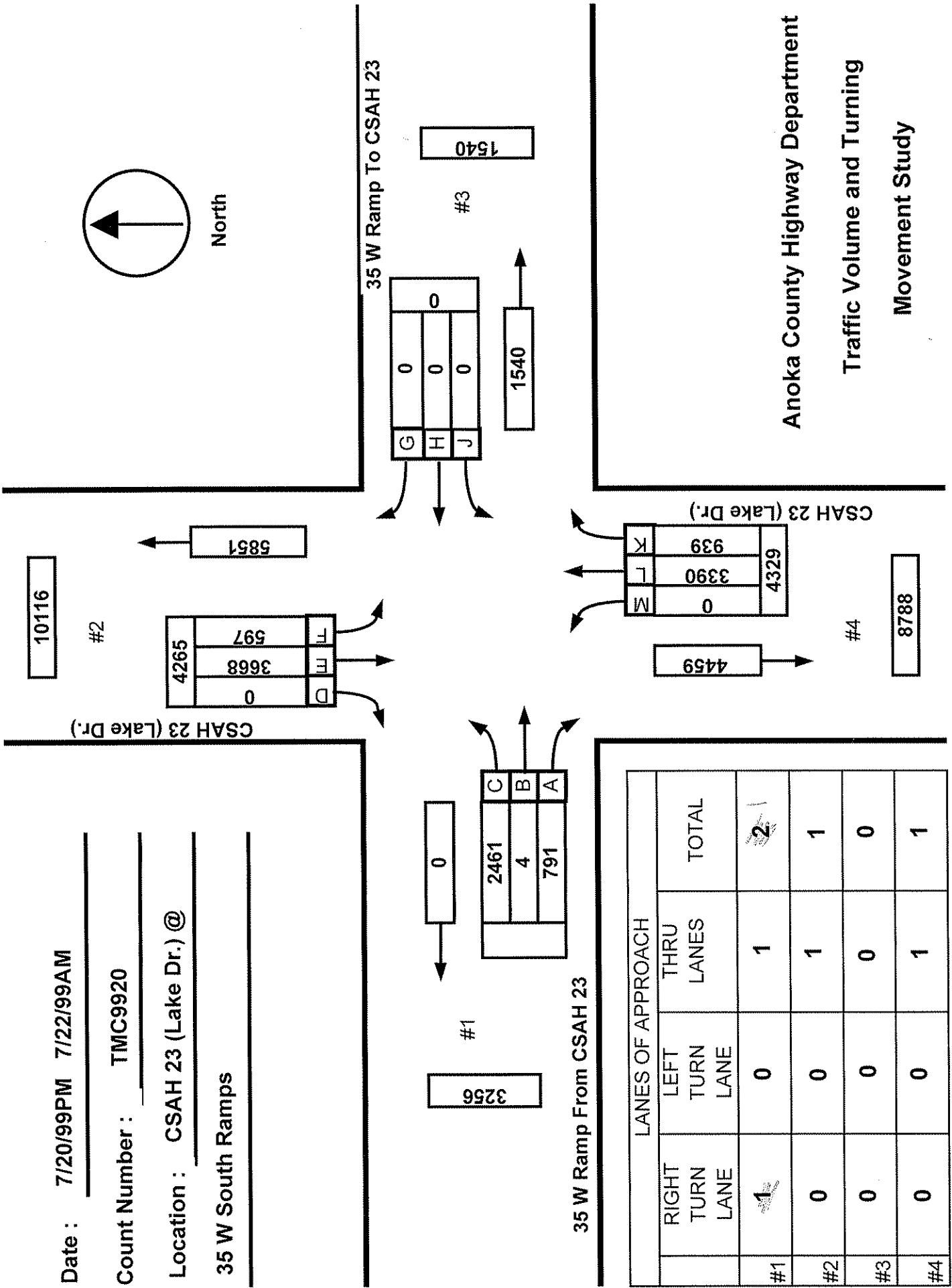
Count Number : TMC9920

Location : CSAH 23 (Lake Dr.) @

35 W South Ramps



North



	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	0	0
#4	0	0	1	1

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Anoka County Highway Department Traffic Volume & Turning Movement Study

File Name : TMC9920
Site Code : 99200201
Start Date : 07/22/1999
Page No : 2

Groups Printed 1 - 1 - Unshifted

Start Time	CSAH 23 (Lake Dr.) Southbound					35 W Ramps (South) Westbound					CSAH 23 (Lake Dr.) Northbound					35 W Ramps (South) Eastbound					EXCLU. Total	INCLU. Total	INT. Total			
	Factor	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy				App. Total		
08:00 PM	1.0	5	30	0	0	35	1.0	0	0	0	0	1.0	0	37	10	1	47	1.0	28	1	13	3	42	4	124	128
08:15 PM		2	29	0	1	31		0	0	0	0		0	34	11	1	45		27	1	14	1	42	3	118	121
08:30 PM		11	44	0	1	55		0	0	0	0		0	40	13	1	53		20	0	7	1	27	3	135	138
08:45 PM		7	35	0	1	42		0	0	0	0		0	30	9	1	39		33	0	12	3	45	5	126	131
Total		25	138	0	3	163		0	0	0	0		0	141	43	4	184		108	2	46	8	156	15	503	518
09:00 PM		3	40	0	0	43		0	0	0	0		0	44	7	1	51		21	0	4	2	25	3	119	122
09:15 PM		5	32	0	0	37		0	0	0	0		0	28	9	2	37		21	0	7	1	28	3	102	105
09:30 PM		4	28	0	1	32		0	0	0	0		0	35	14	0	49		28	0	10	0	38	1	119	120
09:45 PM		7	28	0	0	35		0	0	0	0		0	27	4	1	31		19	0	6	0	25	1	91	92
Total		19	128	0	1	147		0	0	0	0		0	134	34	4	168		89	0	27	3	116	8	431	439
Grand Total		597	3668	0	226	4265		0	0	0	0		0	3390	939	287	4329		2461	4	791	386	3256	899	11850	12749
Approch %		14.0	86.0	0.0				0.0	0.0	0.0			0.0	78.3	21.7				75.6	0.1	24.3					
Total %		5.0	31.0	0.0		36.0		0.0	0.0	0.0			0.0	28.6	7.9		36.5		20.8	0.0	6.7		27.5	7.1	92.9	

or Street Approaches:

Northbound:

CSAH 23 (Lake Dr.)

Data File: C:\APPS\Data Files\TMC9920.war
 Count Type: IMC. Channel: 0. Count Date: 7/22/99
 Number of Lanes: 1
 Approach Speed: 50
 Total Approach Traffic: 4329

Southbound:

CSAH 23 (Lake Dr.)

Data File: C:\APPS\Data Files\TMC9920.war
 Count Type: IMC. Channel: 0. Count Date: 7/22/99
 Number of Lanes: 1
 Approach Speed: 50
 Total Approach Traffic: 4265

Minor Street Approaches:

Eastbound:

35 W Ramps (South)

Data File: C:\APPS\Data Files\TMC9920.war
 Count Type: IMC. Channel: 0. Count Date: 7/22/99
 Number of Lanes: 2
 Approach Speed: 0
 Total Approach Traffic: 3256

Westbound:

35 W Ramps (South)

Data File: C:\APPS\Data Files\TMC9920.war
 Count Type: IMC. Channel: 0. Count Date: 7/22/99
 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	E	17		140		70		112
1	0	0	E	18		140		70		112
2	0	0	E	19		140		70		112
3	0	0	E	20		140		70		112
4	0	0	E	21		140		70		112
5	0	0	E	22		140		70		112
6	486	123	E	15	MAIN	140	SIDE	70	--BOTH--	112
7	620	157	E	13	--BOTH--	140	--BOTH--	70	--BOTH--	112
8	504	189	E	7	--BOTH--	140	SIDE	70	--BOTH--	112
9	445	161	E	11	--BOTH--	140	SIDE	70	--BOTH--	112
10	497	161	E	12	--BOTH--	140	SIDE	70	--BOTH--	112
11	521	173	E	9	--BOTH--	140	SIDE	70	--BOTH--	112
12	525	194	E	6	--BOTH--	140	--BOTH--	70	--BOTH--	112
13	534	181	E	8	--BOTH--	140	--BOTH--	70	--BOTH--	112
14	486	244	E	5	--BOTH--	140	SIDE	70	--BOTH--	112
15	689	310	E	3	--BOTH--	140	--BOTH--	70	--BOTH--	112
16	847	332	E	2	--BOTH--	140	--BOTH--	70	--BOTH--	112
17	798	336	E	1	--BOTH--	140	--BOTH--	70	--BOTH--	112
18	586	257	E	4	--BOTH--	140	--BOTH--	70	--BOTH--	112
19	394	166	E	10	--BOTH--	140	SIDE	70	SIDE	112
20	347	156	E	14	SIDE	140	SIDE	70	SIDE	112
21	315	116	E	16		140	SIDE	70	SIDE	112
22	0	0	E	23		140		70		112
23	0	0	E	24		140		70		112

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

SATISFIED for 13 hours. Criteria--Main St.: 350; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 7 hours. Criteria--Main St.: 525; 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: 1179.

- 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

SATISFIED for 13 hours. Criteria--Main: 420; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

SATISFIED for 10 hours.

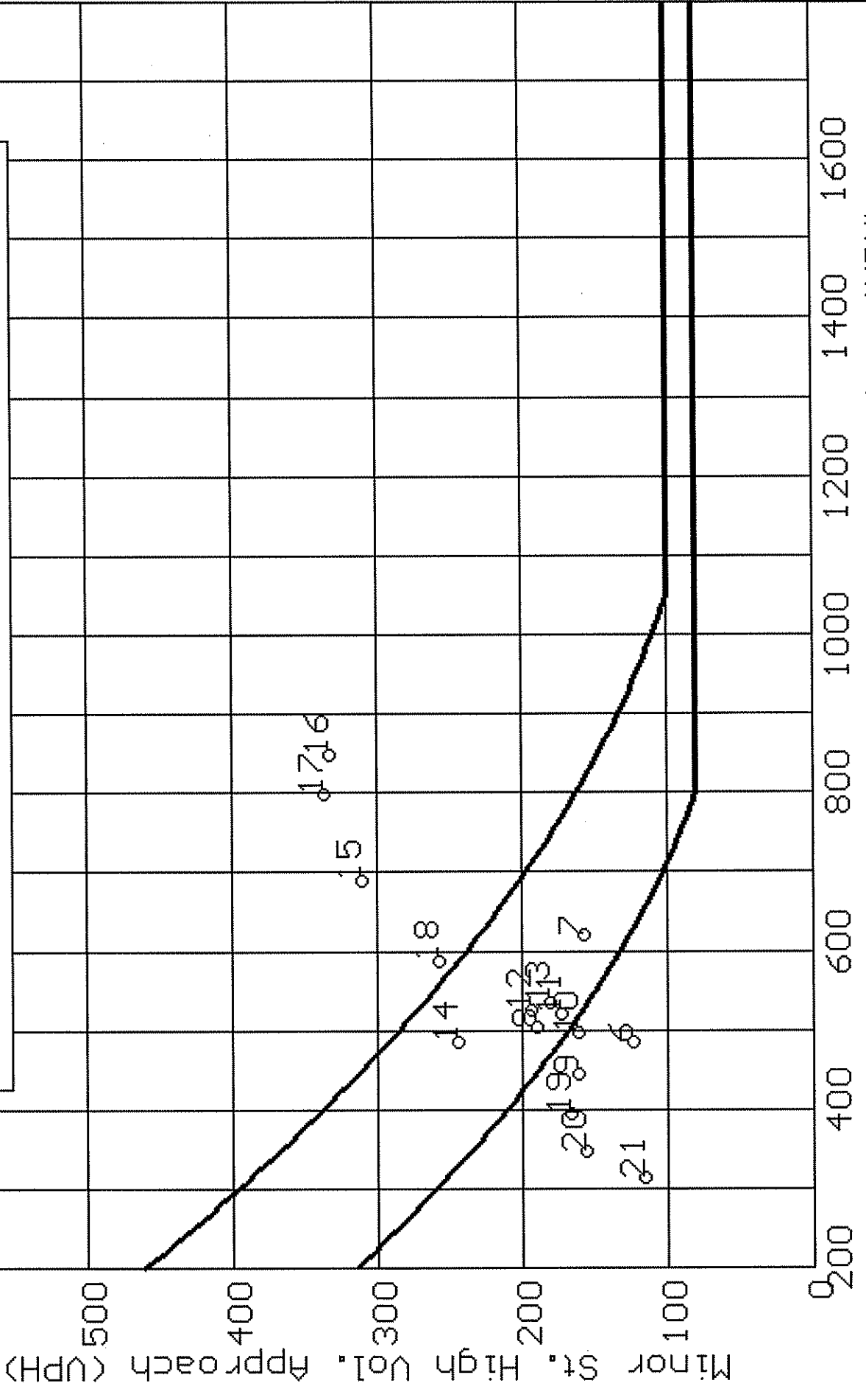
Warrant 10 - Peak Hour Delay

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

Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 150.

Warrant 11 - Peak Hour Volume

SATISFIED for 4 hours.



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

Major St. Total of Both Approaches (UPH)



NORTH

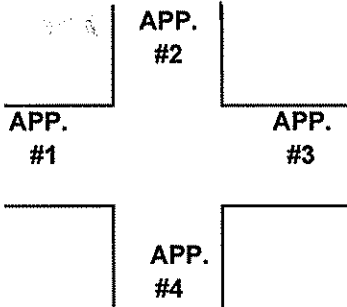
COUNT LOCATION:

CSAH 23 (LAKE DR.) @
35 W RAMPS (SOUTH)

DATE:

7/22/99

APP. #1=35 W RAMP TO CSAH 23
APP. #2 =CSAH 23 (LAKE DR.)
APP. #3=35W RAMP FROM CSAH 23
APP. #4=CSAH 23 (LAKE DR.)



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		
6:15-6:30						17		
6:30-6:45						10		
6:45-7:00						6		1
HOURLY TOTAL						HOURLY TOTAL		49
7:00-7:15						16		
7:15-7:30						13		
7:30-7:45						20		1
7:45-8:00						29		
HOURLY TOTAL						HOURLY TOTAL		79
8:00-8:15						27		2
8:15-8:30						22		1
8:30-8:45						19		1
8:45-9:00						19		
HOURLY TOTAL						HOURLY TOTAL		91
9:00-9:15						6		
9:15-9:30						22		
9:30-9:45						19		
9:45-10:00						26		
HOURLY TOTAL						HOURLY TOTAL		73
10:00-10:15						16		
10:15-10:30						14	1	
10:30-10:45						21		
10:45-11:00						15		
HOURLY TOTAL						HOURLY TOTAL		67
11:00-11:15						29		
11:15-11:30						17		
11:30-11:45						25	3	
11:45-12:00						25		1
HOURLY TOTAL						HOURLY TOTAL		100
12:00-12:15						22		1
12:15-12:30						18	1	
12:30-12:45						25		
12:45-1:00						15		
HOURLY TOTAL						HOURLY TOTAL		82
1:00-1:15						17		2
1:15-1:30						21		
1:30-1:45						17		
1:45-2:00						21	1	
HOURLY TOTAL						HOURLY TOTAL		79



NORTH

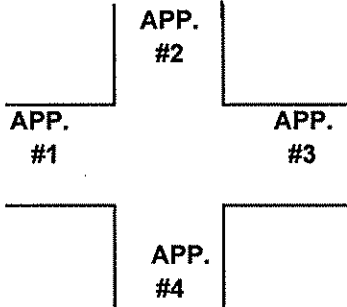
COUNT LOCATION:

CSAH 23 (LAKE DR.) @
35 W RAMPS (SOUTH)

DATE:

7/21/99

APP. #1=35 W
RAMP TO CSAH 23
APP. #2 =CSAH 23
(LAKE DR.)
APP. #3=35 W
RAMP FROM CSAH 23
APP. #4=CSAH 23
(LAKE DR.)



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						10		
2:15-2:30						14		
2:30-2:45						11	1	
2:45-3:00						16		
HOURLY TOTAL						HOURLY TOTAL		52
3:00-3:15						27		
3:15-3:30						10		
3:30-3:45						15		
3:45-4:00						11	1	
HOURLY TOTAL						HOURLY TOTAL		64
4:00-4:15						15		
4:15-4:30						14		
4:30-4:45						8		
4:45-5:00						11		
HOURLY TOTAL						HOURLY TOTAL		48
5:00-5:15						10		2
5:15-5:30						5		
5:30-5:45						8		
5:45-6:00						3		1
HOURLY TOTAL						HOURLY TOTAL		29
6:00-6:15						7		
6:15-6:30						10		
6:30-6:45						8		
6:45-7:00						5		
HOURLY TOTAL						HOURLY TOTAL		30
7:00-7:15						5		
7:15-7:30						9		
7:30-7:45						4		
7:45-8:00						2		
HOURLY TOTAL						HOURLY TOTAL		20
8:00-8:15						4		
8:15-8:30						3		
8:30-8:45						3		
8:45-9:00						5		
HOURLY TOTAL						HOURLY TOTAL		15
9:00-9:15						3		
9:15-9:30						3		
9:30-9:45						1		
9:45-10:00						1		
HOURLY TOTAL						HOURLY TOTAL		8