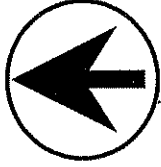


Date : 6/13/01

Count Number : TMC0113

Location : CSAH 7

@Sunny Ln/Anoka Treatment Center



North

CSAH 7

17050

#2

8360	D	82
8175	E	
103	F	

8690

Sunny Ln.

#3

122	G	440
1	H	
317	J	

548

988

167

#1

303

136	A	77
5	B	
54	C	

Anoka Treatment Center

CSAH 7

8569

#4

84	M	9038
8514	L	
440	K	

17607

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

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

**Anoka County Highway Department
Traffic Engineering
Traffic Volume and Turning Movement Study**

Weather: Cloudy, Rainy
Counter: TDC-8
Counted by: Jessica/Melissa

File Name : TMC0113
Site Code : 01130201
Start Date : 06/14/2001
Page No : 1

Groups Printed- 1 - Unshifted

Start Time	CSAH 7 Southbound					Sunny Ln. Westbound					Northbound					Anoka Treatment Center Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total			
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	226	5	5	231	5	0	1	0	6	1	30	2	3	33	1	0	0	0	1	8	271	279
06:15	0	279	1	5	280	5	0	0	0	5	1	38	0	1	39	0	0	0	0	0	6	324	330
06:30	0	282	2	4	284	4	0	1	0	5	1	50	2	3	53	0	0	0	0	0	7	342	349
06:45	0	251	7	3	258	3	0	0	0	3	6	57	0	4	63	1	0	0	0	1	7	325	332
Total	0	1038	15	17	1053	17	0	2	0	19	9	175	4	11	188	2	0	0	0	2	28	1262	1290
07:00	0	197	6	4	203	4	0	1	0	5	0	81	4	2	85	0	0	0	0	0	6	293	299
07:15	3	200	2	4	205	3	0	0	0	3	1	63	2	3	66	0	0	2	0	2	7	276	283
07:30	2	242	4	7	248	5	0	3	1	8	2	74	2	1	78	1	0	4	0	5	9	339	348
07:45	1	281	4	3	286	2	0	2	0	4	2	73	7	2	82	1	0	1	0	2	5	374	379
Total	6	920	16	18	942	14	0	6	1	20	5	291	15	8	311	2	0	7	0	9	27	1282	1309
08:00	0	179	3	7	182	3	0	3	0	6	7	61	0	2	68	0	0	1	0	1	9	257	266
08:15	0	161	4	7	165	6	0	0	0	6	3	57	4	3	64	1	0	0	0	1	10	236	246
08:30	0	158	4	1	162	3	0	0	0	3	2	47	2	4	51	0	0	1	0	1	5	217	222
08:45	0	125	0	2	125	2	0	1	0	3	1	56	2	5	59	2	0	1	0	3	7	190	197
Total	0	623	11	17	634	14	0	4	0	18	13	221	8	14	242	3	0	3	0	6	31	900	931
09:00	0	95	1	2	96	2	0	0	0	2	1	52	0	2	53	2	0	0	0	2	4	153	157
09:15	0	112	0	2	112	3	0	0	0	3	0	69	5	5	74	0	0	0	0	0	7	189	196
09:30	2	113	1	3	116	3	0	0	1	3	0	64	4	8	68	0	0	0	0	0	12	187	199
09:45	2	132	2	5	136	4	0	1	0	5	2	65	3	3	70	1	0	2	0	3	8	214	222
Total	4	452	4	12	460	12	0	1	1	13	3	250	12	18	265	3	0	2	0	5	31	743	774
10:00	0	91	1	3	92	5	0	1	0	6	0	69	1	1	70	0	0	3	0	3	4	171	175
10:15	1	104	0	4	105	3	0	5	1	8	1	76	5	5	82	1	0	0	0	1	10	196	206
10:30	0	100	0	9	100	5	0	2	0	7	0	74	9	8	83	0	0	1	0	1	17	191	208
10:45	1	125	0	2	126	4	0	1	1	5	2	77	5	7	84	0	0	0	0	0	10	215	225
Total	2	420	1	18	423	17	0	9	2	26	3	296	20	21	319	1	0	4	0	5	41	773	814
11:00	3	112	1	3	116	3	0	0	0	3	3	88	1	4	92	0	0	2	0	2	7	213	220
11:15	0	126	0	7	126	4	0	1	0	5	0	89	4	6	93	1	0	1	0	2	13	226	239
11:30	1	106	1	4	108	4	0	1	1	5	0	96	4	3	100	2	0	0	0	2	8	215	223
11:45	1	99	0	7	100	5	0	1	0	6	1	83	5	1	89	0	0	2	0	2	8	197	205
Total	5	443	2	21	450	16	0	3	1	19	4	356	14	14	374	3	0	5	0	8	36	851	887
12:00	3	120	0	2	123	8	0	0	0	8	1	112	7	2	120	2	0	1	0	3	4	254	258
12:15	0	130	3	7	133	0	0	0	0	0	3	110	9	7	122	0	2	4	0	6	14	261	275
12:30	1	110	0	1	111	4	0	0	0	4	0	81	2	5	83	1	0	3	0	4	6	202	208
12:45	0	125	2	3	127	0	0	1	0	1	2	115	2	4	119	0	0	0	0	0	7	247	254
Total	4	485	5	13	494	12	0	1	0	13	6	418	20	18	444	3	2	8	0	13	31	964	995
13:00	0	137	2	6	139	5	0	0	0	5	2	122	5	7	129	0	0	3	0	3	13	276	289
13:15	1	170	1	7	172	7	0	0	1	7	2	100	8	3	110	0	0	0	0	0	11	289	300
13:30	0	105	0	2	105	4	0	2	1	6	1	99	6	4	106	1	0	1	0	2	7	219	226
13:45	0	117	3	1	120	6	0	1	0	7	2	102	6	3	110	0	0	0	0	0	4	237	241
Total	1	529	6	16	536	22	0	3	2	25	7	423	25	17	455	1	0	4	0	5	35	1021	1056
14:00	1	96	3	3	100	5	0	4	2	9	2	121	4	5	127	0	1	1	0	2	10	238	248
14:15	0	109	0	4	109	4	0	1	0	5	1	122	4	5	127	2	0	3	0	5	9	246	255
14:30	2	144	2	3	148	4	0	3	1	7	3	153	6	8	162	2	0	4	0	6	12	323	335
14:45	2	112	5	5	119	4	0	0	0	4	2	184	10	5	196	1	0	0	0	1	10	320	330
Total	5	461	10	15	476	17	0	8	3	25	8	580	24	23	612	5	1	8	0	14	41	1127	1168
15:00	1	122	4	7	127	8	0	1	0	9	2	232	9	7	243	1	0	4	0	5	14	384	398
15:15	2	107	1	6	110	4	0	6	0	10	0	208	8	4	216	3	0	4	0	7	10	343	353
15:30	0	102	1	2	103	7	0	3	0	10	0	246	8	9	254	8	0	5	0	13	11	380	391
15:45	0	106	0	4	106	8	0	2	0	10	3	280	12	5	295	2	0	2	0	4	9	415	424
Total	3	437	6	19	446	27	0	12	0	39	5	966	37	25	1008	14	0	15	0	29	44	1522	1566
16:00	2	102	0	3	104	6	0	1	2	7	0	281	12	8	293	2	0	0	0	2	13	406	419
16:15	2	118	0	3	120	5	0	2	0	7	0	254	19	8	273	0	0	2	0	2	11	402	413
16:30	3	97	1	2	101	5	0	1	0	6	1	354	8	7	363	6	0	0	1	6	10	476	486
16:45	6	129	0	7	135	5	0	5	1	10	2	316	22	2	340	0	0	5	0	5	10	490	500
Total	13	446	1	15	460	21	0	9	3	30	3	1205	61	25	1269	8	0	7	1	15	44	1774	1818

or Street Approaches:

Northbound:

CSAH 7

Data File: C:\Program Files\PCWarrants\TMC0113.war
 Count Type: IMC. Channel: 0. Count Date: 6/14/ 1
 Number of Lanes: 2
 Approach Speed: 40
 Total Approach Traffic: 9038

Southbound:

CSAH 7

Data File: C:\Program Files\PCWarrants\TMC0113.war
 Count Type: IMC. Channel: 0. Count Date: 6/14/ 1
 Number of Lanes: 2
 Approach Speed: 40
 Total Approach Traffic: 8360

Minor Street Approaches:

Eastbound:

Anoka Treatment Center

Data File: C:\Program Files\PCWarrants\TMC0113.war
 Count Type: IMC. Channel: 0. Count Date: 6/14/ 1
 Number of Lanes: 1
 Approach Speed: 30
 Total Approach Traffic: 136

Westbound:

Sunny Ln.

Data File: C:\Program Files\PCWarrants\TMC0113.war
 Count Type: IMC. Channel: 0. Count Date: 6/14/ 1
 Number of Lanes: 1
 Approach Speed: 30
 Total Approach Traffic: 440

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	W	17		150		75		120
1	0	0	W	18		150		75		120
2	0	0	W	19		150		75		120
3	0	0	W	20		150		75		120
4	0	0	W	21		150		75		120
5	0	0	W	22		150		75		120
6	1241	19	W	11	MAIN	150	MAIN	75	MAIN	120
7	1253	20	W	10	MAIN	150	MAIN	75	MAIN	120
8	876	18	W	13	MAIN	150		75	MAIN	120
9	725	13	W	15	MAIN	150		75	MAIN	120
10	742	26	W	6	MAIN	150		75	MAIN	120
11	824	19	W	12	MAIN	150		75	MAIN	120
12	938	13	W	16	MAIN	150	MAIN	75	MAIN	120
13	991	25	W	7	MAIN	150	MAIN	75	MAIN	120
14	1088	25	W	8	MAIN	150	MAIN	75	MAIN	120
15	1454	39	W	3	MAIN	150	MAIN	75	MAIN	120
16	1729	30	W	5	MAIN	150	MAIN	75	MAIN	120
17	1743	25	W	9	MAIN	150	MAIN	75	MAIN	120
18	1262	38	W	4	MAIN	150	MAIN	75	MAIN	120
19	1042	64	W	1	MAIN	150	MAIN	75	MAIN	120
20	887	48	W	2	MAIN	150		75	MAIN	120
21	603	18	W	14	MAIN	150		75		120
22	0	0	W	23		150		75		120
23	0	0	W	24		150		75		120

Warrant Summary:

Urban values apply.

Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 0 hours. Criteria--Main St.: 600; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 0 hours. Criteria--Main St.: 900; 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

SATISFIED. Peak hour total entering volume: 1774. Approaches on both streets satisfy one of the following criteria:

NSEW- 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: 720; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

NOT SATISFIED. Required values reached for 0 hours.

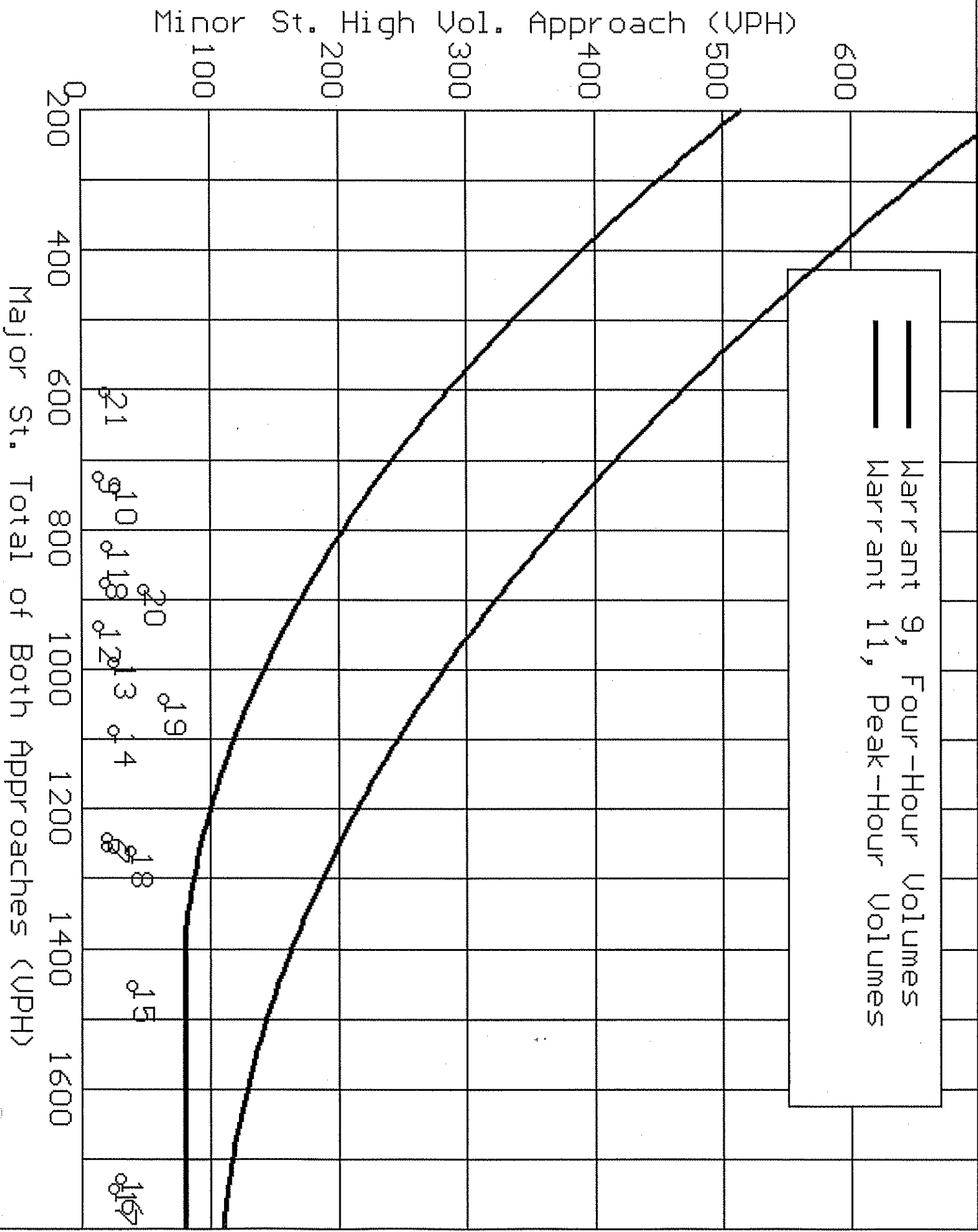
Warrant 10 - Peak Hour Delay

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.



Multiway Stop Warrant Analysis
TMC 0113 CSAH 7 @ Sunny Ln./Anoka Treatment Center
Speed Limit of Major Roadway..... 40

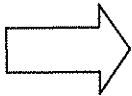
Minimum Traffic Volumes Multiway Stop Warrant Criteria:

- a) The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour (vph) for any 8 hours of an average day, AND:
- b) The combined vehicular and pedestrian volume from the minor street or highway must average at least 200 vph for the same 8 hours, with an average delay to minor street vehicular traffic of at least 30 seconds per vehicle during the maximum hour, BUT:
- c) When the 85-percentile approach speed of the major street traffic exceeds 40 miles per hour, the minimum volume warrant is 70% of the above requirements.

Hour	Total Vehicular Traffic Entering the Intersection	Vehicular Traffic Entering on First Minor Roadway	Vehicular Traffic Entering on Second Minor Roadway	Sum of Minor Approaches	Hours Stop Warrant Met
6 AM - 7 AM	1262	19	2	21	0
7 AM - 8 AM	1282	20	9	29	0
8 AM - 9 AM	900	18	6	24	0
9 AM - 10 AM	743	13	5	18	0
10 AM - 11 AM	773	26	5	31	0
11 AM - 12 PM	851	19	8	27	0
12 PM - 13 PM	964	13	13	26	0
1 PM - 2 PM	1021	25	5	30	0
2 PM - 3 PM	1127	25	14	39	0
3 PM - 4 PM	1522	39	29	68	0
4 PM - 5 PM	1774	30	15	45	0
5 PM - 6 PM	1774	25	6	31	0
6 PM - 7 PM	1305	38	5	43	0
7 PM - 8 PM	1114	64	8	72	0
8 PM - 9 PM	939	48	4	52	0
9 PM - 10 PM	623	18	2	20	0

TOTAL HOURS MET: 0

MULTIWAY STOP WARRANT IS NOT MET



COUNT LOCATION:

CSAH 7 @ Sunny Ln./

DATE:

6/13/01

Anoka Treatment Center

NORTH

APP. #1 = CSAH 7

APP. #2 = Anoka Treatment Center

APP. #3 = CSAH 7

APP. #4 = Sunny Ln.

APP. #2

APP. #1

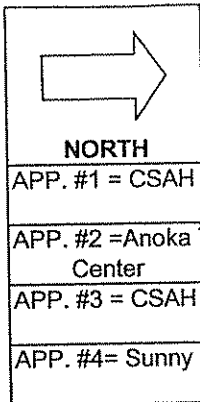
APP. #3

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
6:00-6:15AM				1	1	7	1	
6:15-6:30						4		2
6:30-6:45						6		1
6:45-7:00						6		1
HOURLY TOTAL					1	HOURLY TOTAL		28
7:00-7:15						4		2
7:15-7:30						8		
7:30-7:45				1	1	7		2
7:45-8:00						3		2
HOURLY TOTAL					1	HOURLY TOTAL		28
8:00-8:15						9		
8:15-8:30						9		1
8:30-8:45						5		1
8:45-9:00						5		
HOURLY TOTAL						HOURLY TOTAL		30
9:00-9:15						3		1
9:15-9:30						10		
9:30-9:45						9		
9:45-10:00						9		
HOURLY TOTAL						HOURLY TOTAL		32
10:00-10:15			1		1	4		
10:15-10:30	2		1		3	9		
10:30-10:45			1		1	17		
10:45-11:00	2				2	10		
HOURLY TOTAL					7	HOURLY TOTAL		40
11:00-11:15			2		2	6		
11:15-11:30						13		
11:30-11:45			2		2	8		
11:45-12:00						8		
HOURLY TOTAL					4	HOURLY TOTAL		35
12:00-12:15			1		1	3		1
12:15-12:30			1		1	14		
12:30-12:45			1		1	5		
12:45-1:00			2		2	6		
HOURLY TOTAL					5	HOURLY TOTAL		29
1:00-1:15	2				2	12	2	
1:15-1:30	1				1	11		2
1:30-1:45			3		3	6		
1:45-2:00	1				1	4		
HOURLY TOTAL					7	HOURLY TOTAL		37



COUNT LOCATION:

CSAH 7 @ Sunny Ln.

DATE:

6/13/01

Anoka Treatment Center

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				1	1	11		
2:15-2:30			3		3	3		
2:30-2:45	4		2		6	13		
2:45-3:00	5				5	8		1
HOURLY TOTAL					15	HOURLY TOTAL		36
3:00-3:15			1		1	13		1
3:15-3:30		1	1		2	9		1
3:30-3:45		1			1	10	1	
3:45-4:00	1		1		2	9		
HOURLY TOTAL					6	HOURLY TOTAL		44
4:00-4:15			1		1	11	1	1
4:15-4:30			2		2	11		
4:30-4:45	2		2		4	9		1
4:45-5:00			1		1	10		
HOURLY TOTAL					8	HOURLY TOTAL		44
5:00-5:15	1		5	3	9	18		1
5:15-5:30						7		2
5:30-5:45			1		1	7		2
5:45-6:00	1				1	4	1	1
HOURLY TOTAL					11	HOURLY TOTAL		43
6:00-6:15						2		
6:15-6:30	2				2	3		2
6:30-6:45	1				1	3		
6:45-7:00		2			2	3		2
HOURLY TOTAL					5	HOURLY TOTAL		15
7:00-7:15			1		1	3		
7:15-7:30	1				1	8		2
7:30-7:45						4		
7:45-8:00			2		2	1		
HOURLY TOTAL					4	HOURLY TOTAL		18
8:00-8:15						3		
8:15-8:30						2		1
8:30-8:45	1				1	3		
8:45-9:00								
HOURLY TOTAL					1	HOURLY TOTAL		9
9:00-9:15						5		
9:15-9:30								
9:30-9:45						6		
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		11