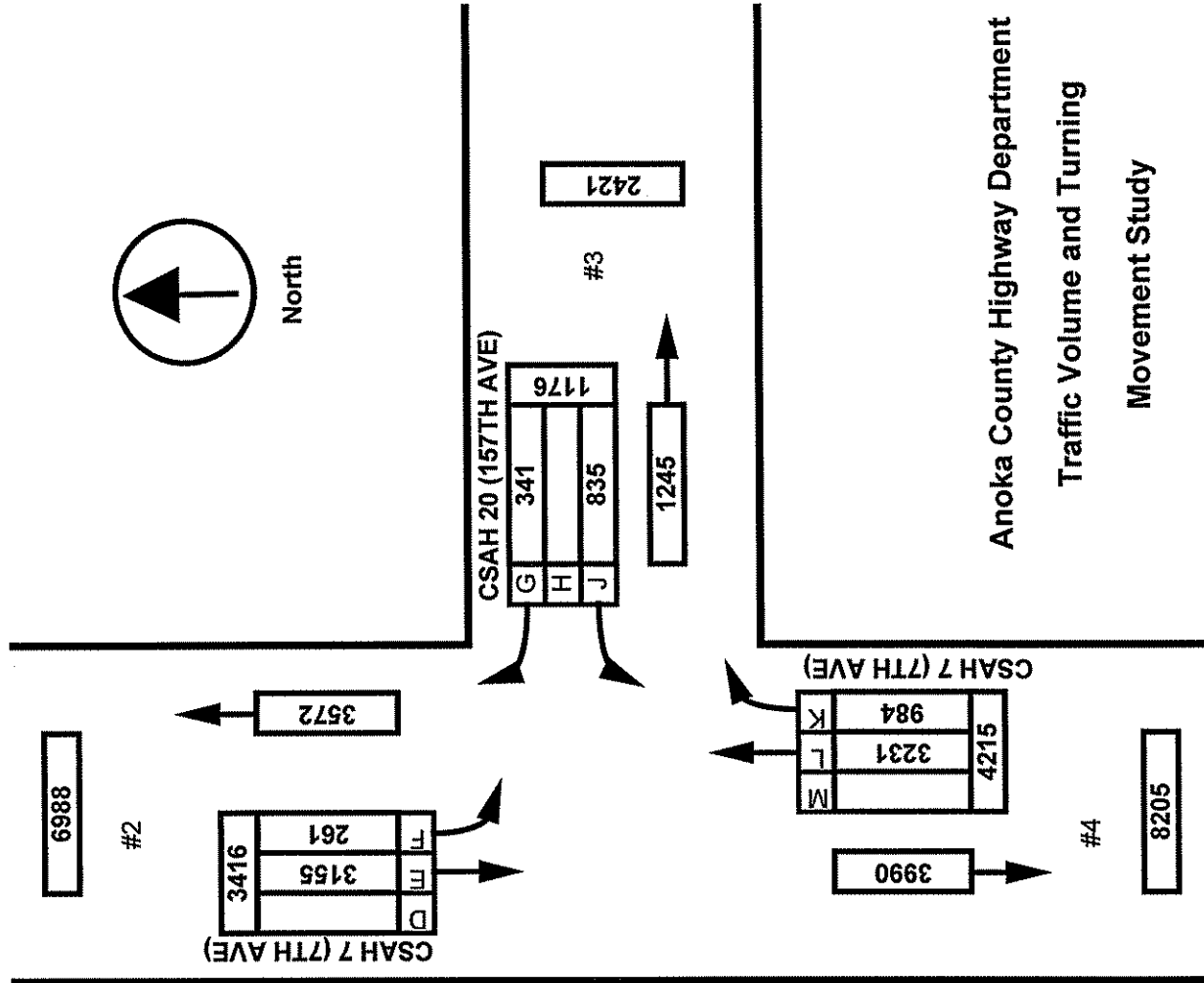


Date : 6/20/97AM 6/19/97PM

Count Number : TMC9709

Location : CSAH 7 (7TH AVE)

@ CSAH 20 (157TH AVE)



Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

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

Weather : CLOUDY AND 65
 Counted by: SARAH AND JANELE
 Board # :
 Ther :

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Study Name: TMC9709
 Site Code : 97090202
 Start Date: 06/20/97
 Page : 1

Vehicle group 1

Start Time	7TH AVE (CSAH 7) Southbound			157TH (CSAH 20) Westbound			7TH AVE (CSAH 7) Northbound			Intrvl. Total	Exclude Total	Include Total
	Left	Thru	Other	Left	Right	Other	Thru	Right	Other			
06/20/97												
06:00	3	134	2	18	0	2	0	4	0	163	4	159
06:15	2	146	1	18	2	1	5	6	1	182	3	179
06:30	3	160	1	18	0	1	8	6	1	198	3	195
06:45	5	94	0	17	2	1	16	2	0	137	1	136
Hour	13	534	4	71	4	5	29	18	2	680	11	669
07:00	3	98	1	14	4	0	7	9	3	139	4	135
07:15	3	95	2	30	1	0	17	17	0	165	2	163
07:30	2	100	1	28	0	0	12	8	1	152	2	150
07:45	6	82	4	32	2	2	11	4	2	145	8	137
Hour	14	375	8	104	7	2	47	38	6	601	16	585
08:00	2	81	2	13	5	0	23	8	5	139	7	132
08:15	3	68	1	12	1	1	17	6	5	114	7	107
08:30	1	61	3	17	2	0	15	10	2	111	5	106
08:45	1	40	1	19	1	0	21	4	4	91	5	86
Hour	7	250	7	61	9	1	76	28	16	455	24	431
09:00	7	35	2	13	4	0	17	13	4	95	6	89
09:15	5	51	0	9	1	1	19	7	1	94	2	92
09:30	9	43	2	15	5	1	21	9	0	105	3	102
09:45	2	36	1	12	0	4	13	8	0	76	5	71
Hour	23	165	5	49	10	6	70	37	5	370	16	354
10:00	1	28	2	10	4	1	28	13	1	88	4	84
10:15	3	23	0	10	5	0	33	14	8	96	8	88
10:30	3	48	1	10	0	1	21	5	4	93	6	87
10:45	6	43	1	11	4	0	35	15	3	118	4	114
Hour	13	142	4	41	13	2	117	47	16	395	22	373
11:00	1	51	1	14	5	1	36	13	1	123	3	120
11:15	4	57	1	11	6	1	31	16	2	129	4	125
11:30	5	39	1	14	10	0	49	15	1	134	2	132
11:45	5	47	4	10	2	0	44	10	2	124	6	118
Hour	15	194	7	49	23	2	160	54	6	510	15	495
12:00	3	35	0	12	8	0	62	24	1	145	1	144
12:15	5	41	2	11	2	3	52	10	5	131	10	121
12:30	6	31	2	6	4	0	50	17	1	117	3	114
12:45	3	35	1	9	5	1	29	10	2	95	4	91
Hour	17	142	5	38	19	4	193	61	9	488	18	470

Weather : CLOUDY AND 65
 Counted by: SARAH AND JANELE
 Board # :
 ther :

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Study Name: TMC9709
 Site Code : 97090202
 Start Date: 06/20/97
 Page : 2

Vehicle group 1

Start Time	7TH AVE (CSAH 7) Southbound			157TH (CSAH 20) Westbound			7TH AVE (CSAH 7) Northbound			Intrvl. Total	Exclude Total	Include Total
	Left	Thru	Other	Left	Right	Other	Thru	Right	Other			
13:00	3	44	0	10	6	1	53	12	4	133	5	128
13:15	2	47	0	20	12	1	35	19	1	137	2	135
13:30	2	38	1	15	2	0	53	22	3	136	4	132
13:45	2	44	2	15	4	2	48	12	5	134	9	125
Hour	9	173	3	60	24	4	189	65	13	540	20	520
14:00	3	27	2	13	4	1	59	11	3	123	6	117
14:15	9	54	2	24	7	3	31	13	5	148	10	138
14:30	6	57	5	16	8	2	49	20	4	167	11	156
14:45	5	30	0	11	6	2	59	18	1	132	3	129
Hour	23	168	9	64	25	8	198	62	13	570	30	540
15:00	6	38	1	8	6	2	85	29	2	177	5	172
15:15	0	41	3	19	9	2	90	32	2	198	7	191
15:30	2	51	1	16	10	0	102	30	6	218	7	211
15:45	6	33	4	6	10	0	73	23	1	156	5	151
Hour	14	163	9	49	35	4	350	114	11	749	24	725
16:00	2	37	1	15	5	2	128	28	5	223	8	215
16:15	2	44	1	7	14	4	91	24	2	189	7	182
16:30	6	39	0	13	7	0	120	39	1	225	1	224
16:45	6	38	1	17	12	1	153	31	1	260	3	257
Hour	16	158	3	52	38	7	492	122	9	897	19	878
17:00	6	30	1	18	8	2	143	25	4	237	7	230
17:15	9	44	3	15	9	0	116	40	0	236	3	233
17:30	9	56	0	22	8	0	129	28	1	253	1	252
17:45	6	51	0	18	16	0	82	20	6	199	6	193
Hour	30	181	4	73	41	2	470	113	11	925	17	908
18:00	7	49	2	15	8	0	110	24	0	215	2	213
18:15	4	44	0	16	7	0	60	17	0	148	0	148
18:30	6	37	2	8	11	0	66	15	0	145	2	143
18:45	5	42	0	8	3	1	57	19	1	136	2	134
Hour	22	172	4	47	29	1	293	75	1	644	6	638
19:00	4	35	2	12	9	0	55	9	0	126	2	124
19:15	3	44	2	3	5	0	48	11	0	116	2	114
19:30	2	31	0	8	4	0	64	11	0	120	0	120
19:45	6	23	0	7	7	0	54	13	1	111	1	110
Hour	15	133	4	30	25	0	221	44	1	473	5	468

Weather : CLOUDY AND 65
 Counted by: SARAH AND JANELE
 Board # :
 Other :

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Study Name: TMC9709
 Site Code : 97090202
 Start Date: 06/20/97
 Page : 3

Vehicle group 1

Start Time	7TH AVE (CSAH 7) Southbound			157TH (CSAH 20) Westbound			7TH AVE (CSAH 7) Northbound			Intrvl. Total	Exclude Total	Include Total
	Left	Thru	Other	Left	Right	Other	Thru	Right	Other			
20:00	1	23	0	9	2	0	53	22	0	110	0	110
20:15	2	23	0	11	11	0	44	12	0	103	0	103
20:30	5	33	0	4	6	1	52	13	0	114	1	113
20:45	7	34	0	7	5	0	46	12	0	111	0	111
Hour	15	113	0	31	24	1	195	59	0	438	1	437
21:00	6	21	1	3	4	0	41	14	0	90	1	89
21:15	5	21	0	4	6	1	45	19	0	101	1	100
21:30	4	31	0	5	2	0	24	7	0	73	0	73
21:45	0	19	0	4	3	0	21	7	0	54	0	54
Hour	15	92	1	16	15	1	131	47	0	318	2	316
Total	261	3155	77	835	341	50	3231	984	119	9053	246	8807
% Apr.	7.4	90.3	2.2	68.1	27.8	4.0	74.5	22.7	2.7	-	-	-
% Int.	2.8	34.8	0.8	9.2	3.7	0.5	35.6	10.8	1.3	-	-	-

Major Street Approaches:

Northbound:

7TH AVE (CSAH 7)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9709.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/20/97
 Number of Lanes: 2
 Approach Speed: 55
 Total Approach Traffic: 4215

Southbound:

7TH AVE (CSAH 7)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9709.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/20/97
 Number of Lanes: 1
 Approach Speed: 55
 Total Approach Traffic: 3416

Minor Street Approaches:

Eastbound:

Data File: C:\APPS\PETRA2\DATAFILE\TMC9709.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/20/97
 Number of Lanes: 1
 Approach Speed: 0
 Total Approach Traffic: 0

Westbound:

157TH (CSAH 20)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9709.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/20/97
 Number of Lanes: 1
 Approach Speed: 55
 Total Approach Traffic: 1176

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	W	17		105		52		84
1	0	0	W	18		105		52		84
2	0	0	W	19		105		52		84
3	0	0	W	20		105		52		84
4	0	0	W	21		105		52		84
5	0	0	W	22		105		52		84
6	594	75	W	8	MAIN	105	SIDE	52	MAIN	84
7	474	111	W	2	--BOTH--	105	SIDE	52	SIDE	84
8	361	70	W	10		105	SIDE	52		84
9	295	59	W	11		105	SIDE	52		84
10	319	54	W	15		105	SIDE	52		84
11	423	72	W	9	MAIN	105	SIDE	52		84
12	413	57	W	12		105	SIDE	52		84
13	436	84	W	5	MAIN	105	SIDE	52	SIDE	84
14	451	89	W	4	MAIN	105	SIDE	52	SIDE	84
15	641	84	W	6	MAIN	105	--BOTH--	52	--BOTH--	84
16	788	90	W	3	MAIN	105	--BOTH--	52	--BOTH--	84
17	794	114	W	1	--BOTH--	105	--BOTH--	52	--BOTH--	84
18	562	76	W	7	MAIN	105	SIDE	52	MAIN	84
19	413	55	W	13		105	SIDE	52		84
20	382	55	W	14		105	SIDE	52		84
21	285	31	W	16		105		52		84
22	0	0	W	23		105		52		84
23	0	0	W	24		105		52		84

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 2 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 3 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 908 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 3 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.

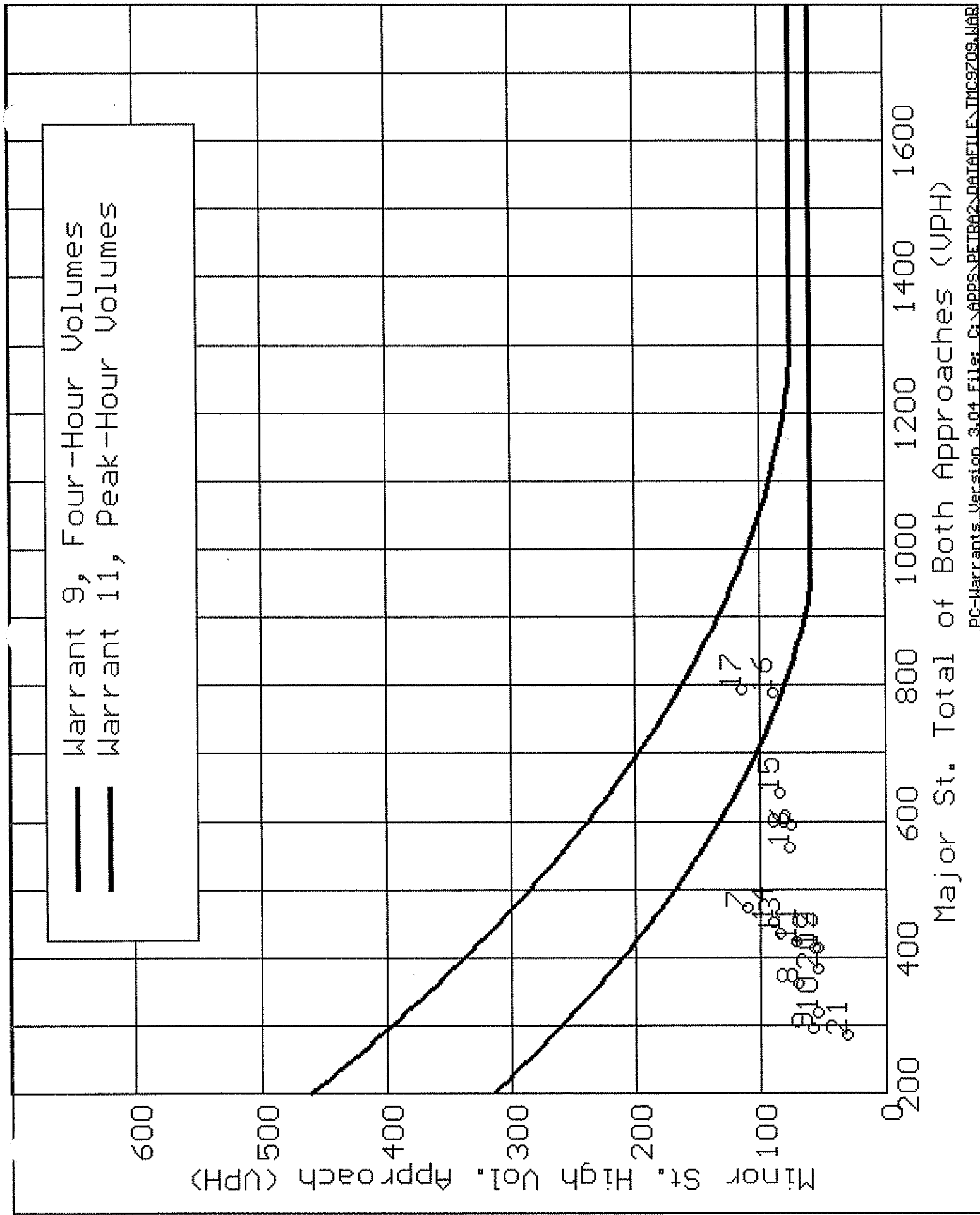
Warrant 11 - Peak Hour Volume

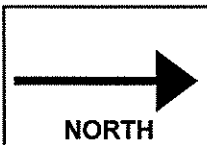
NOT SATISFIED.

Minor St. High Vol. Approach (VPH)

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

Major St. Total of Both Approaches (VPH)

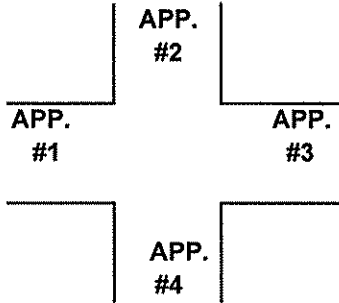




COUNT LOCATION: TMC 9709 CSAH 7 (7TH AVE.) @
CSAH 20 (157TH AVE.)

DATE: 6/20/97

APP. #1=NB CSAH 7
(7TH AVE.)
APP. #2 =
APP. #3=SB CSAH 7
(7TH AVE.)
APP. #4=WB CSAH 20
(157TH AVE.)



- 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						2	1	
6:30-6:45						3		
6:45-7:00						1		
HOURLY TOTAL						HOURLY TOTAL		10
7:00-7:15				1	1	3		1
7:15-7:30						2		
7:30-7:45						3		
7:45-8:00						6		
HOURLY TOTAL					1	HOURLY TOTAL		15
8:00-8:15						5	1	1
8:15-8:30						6		
8:30-8:45						5		
8:45-9:00						5		
HOURLY TOTAL						HOURLY TOTAL		23
9:00-9:15						6		
9:15-9:30						3		
9:30-9:45						2		
9:45-10:00						5		
HOURLY TOTAL						HOURLY TOTAL		16
10:00-10:15	1				1	4		
10:15-10:30						9		
10:30-10:45						6		
10:45-11:00						4		
HOURLY TOTAL					1	HOURLY TOTAL		23
11:00-11:15						3		
11:15-11:30						4		
11:30-11:45						2		
11:45-12:00						6		
HOURLY TOTAL						HOURLY TOTAL		15
12:00-12:15						1		
12:15-12:30	1				1	10		
12:30-12:45						3		
12:45-1:00						4		
HOURLY TOTAL					1	HOURLY TOTAL		18
1:00-1:15						3		
1:15-1:30						2		
1:30-1:45						6		
1:45-2:00						8		
HOURLY TOTAL						HOURLY TOTAL		19



COUNT LOCATION: TMC 9709 CSAH 7 (7TH AVE.) @
 CSAH 20 (157TH AVE.)

DATE: 6/19/97

APP. #1=NB CSAH 7
(7TH AVE.)
 APP. #2 =
 APP. #3=SB CSAH 7
(7TH AVE.)
 APP. #4=WB CSAH 20
(157TH AVE.)

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	1	
2:30-2:45						8		
2:45-3:00						5		
HOURLY TOTAL						HOURLY TOTAL		26
3:00-3:15						4		
3:15-3:30						5		1
3:30-3:45						3		
3:45-4:00	1				1	6		
HOURLY TOTAL					1	HOURLY TOTAL		19
4:00-4:15						7		1
4:15-4:30						6		4
4:30-4:45						1		
4:45-5:00						3		
HOURLY TOTAL						HOURLY TOTAL		22
5:00-5:15						6		
5:15-5:30						2	1	
5:30-5:45								
5:45-6:00	1				1	4		
HOURLY TOTAL					1	HOURLY TOTAL		13
6:00-6:15						2		
6:15-6:30	1				1			
6:30-6:45						2		
6:45-7:00						1	1	
HOURLY TOTAL					1	HOURLY TOTAL		6
7:00-7:15						1		
7:15-7:30						2		
7:30-7:45	1				1			
7:45-8:00								
HOURLY TOTAL					1	HOURLY TOTAL		3
8:00-8:15								
8:15-8:30								
8:30-8:45							1	
8:45-9:00								
HOURLY TOTAL						HOURLY TOTAL		1
9:00-9:15						1		
9:15-9:30						1		
9:30-9:45								
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		2