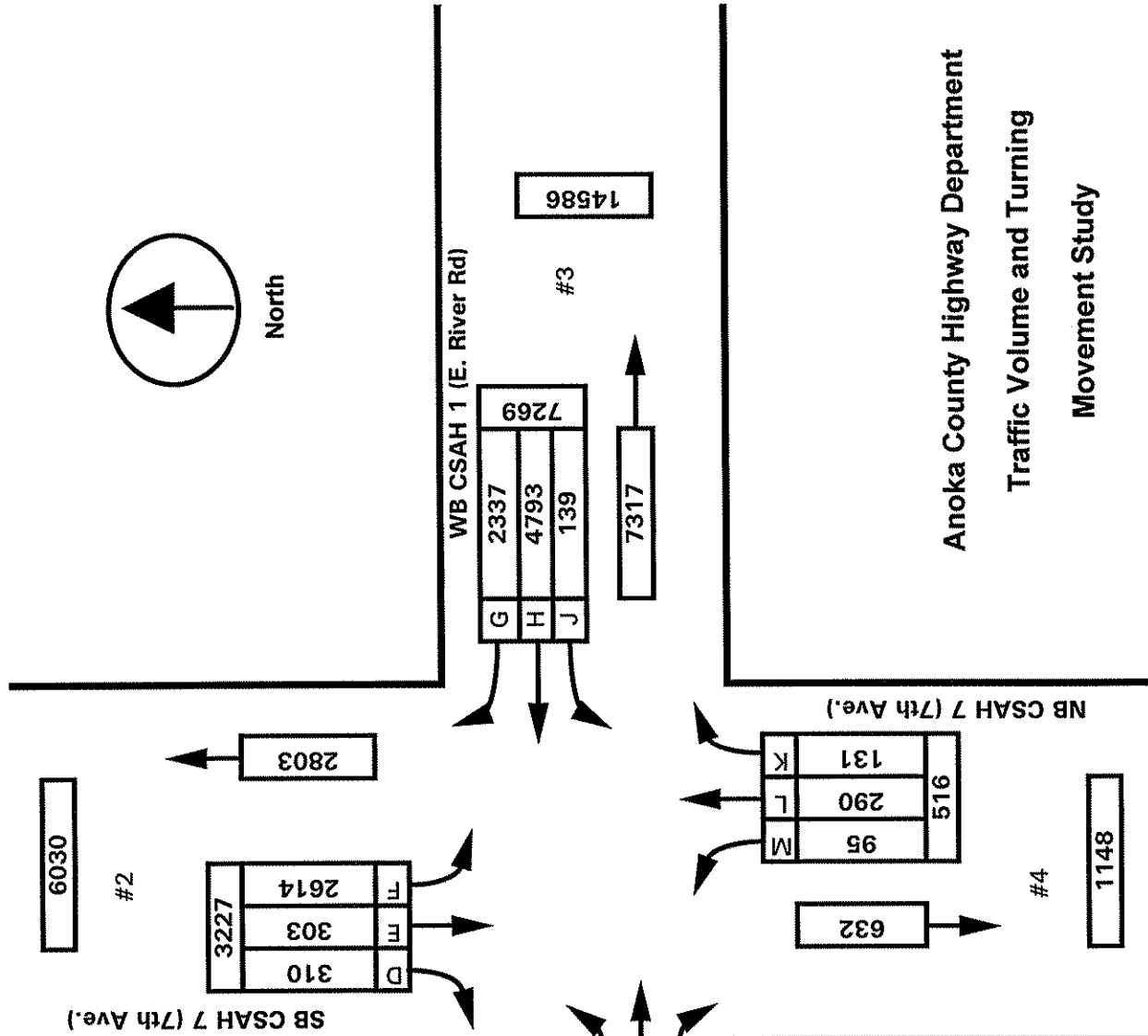


Date : 7/18/96 AM 7/15/96 PM

Count Number : TMC 9611

Location : CSAH 1 (East River Rd.) @

CSAH 7 (7th Ave)



Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

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

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather :SUNNY 80

Counted by:Ann and Gabe

Card # :

Other :

Study Name: TMC9611

Site Code : 96110202

Start Date: 07/15/96

Page : 1

Vehicle group 1

Start Time	CSAH 7 (7TH AVE) From North				CSAH 1 (EAST RIVER RD) From East				CSAH 7 (7TH AVE) From South				CSAH 1 (EAST RIVER RD) From West				Intvl	Exclu	Inclu
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY			
07/15/96																			
06:00	5	0	16	0	2	15	0	0	0	3	1	1	0	30	2	5	80	6	74
06:15	9	1	35	1	12	29	0	2	0	2	2	0	0	32	1	1	127	4	123
06:30	4	1	35	0	19	50	1	1	2	1	0	0	1	50	0	3	168	4	164
06:45	1	0	73	4	12	51	0	2	0	2	0	0	0	52	1	2	200	8	192
Hour	19	2	159	5	45	145	1	5	2	8	3	1	1	164	4	11	575	22	553
07:00	3	1	54	5	15	49	0	1	2	2	3	0	0	46	2	2	185	8	177
07:15	0	3	55	2	12	61	0	0	1	2	1	0	0	64	1	4	206	6	200
07:30	3	2	46	1	23	70	0	5	1	9	3	0	1	59	1	4	228	10	218
07:45	4	0	60	2	23	65	0	3	1	3	0	0	3	78	2	3	247	8	239
Hour	10	6	215	10	73	245	0	9	5	16	7	0	4	247	6	13	866	32	834
08:00	2	2	46	2	21	65	1	5	4	6	0	0	1	47	3	0	205	7	198
08:15	6	3	44	4	16	46	0	1	3	3	2	0	0	72	2	1	203	6	197
08:30	10	1	41	1	24	63	0	10	0	6	1	0	1	75	2	2	237	13	224
08:45	5	4	36	2	26	75	3	1	1	3	1	0	5	59	2	2	225	5	220
Hour	23	10	167	9	87	249	4	17	8	18	4	0	7	253	9	5	870	31	839
09:00	7	7	40	4	24	57	0	3	0	2	2	0	2	57	3	3	211	10	201
09:15	6	2	40	2	24	64	1	5	1	9	3	0	2	42	1	2	204	9	195
09:30	2	5	34	2	22	61	4	4	2	5	0	0	5	62	5	3	216	9	207
09:45	3	3	51	0	27	70	2	6	2	2	2	0	6	74	2	6	256	12	244
Hour	18	17	165	8	97	252	7	18	5	18	7	0	15	235	11	14	887	40	847
10:00	7	3	46	1	24	79	2	4	4	5	3	0	3	67	3	0	251	5	246
10:15	9	2	32	2	34	71	3	3	2	0	3	0	8	71	3	1	244	6	238
10:30	6	7	39	0	32	65	1	4	0	4	0	0	2	66	2	2	230	6	224
10:45	6	3	41	7	43	81	5	7	2	5	0	0	4	60	3	2	269	16	253
Hour	28	15	158	10	133	296	11	18	8	14	6	0	17	264	11	5	994	33	961
11:00	4	3	61	3	30	71	2	3	2	1	1	0	7	95	3	5	291	11	280
11:15	8	8	51	3	23	96	1	4	1	5	2	0	1	82	3	3	291	10	281
11:30	7	4	51	2	49	92	3	7	3	4	1	0	6	75	2	2	308	11	297
11:45	8	12	55	1	51	82	2	7	0	6	0	0	2	87	2	2	317	10	307
Hour	27	27	218	9	153	341	8	21	6	16	4	0	16	339	10	12	1207	42	1165
12:00	6	5	52	2	37	89	0	3	7	8	1	0	4	103	3	5	325	10	315
12:15	7	8	44	1	32	83	2	3	4	2	3	0	4	83	2	3	281	7	274
12:30	7	4	47	3	55	92	6	3	2	7	4	1	4	79	4	0	318	7	311
12:45	6	12	49	2	38	114	4	6	3	5	1	0	8	100	7	5	360	13	347
Hour	26	29	192	8	162	378	12	15	16	22	9	1	20	365	16	13	1284	37	1247

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather :SUNNY 80
 Counted by:Ann and Gabe
 Yard # :
 Other :

Study Name: TMC9611
 Site Code : 96110202
 Start Date: 07/15/96
 Page : 2

Vehicle group 1

Start Time	CSAH 7 (7TH AVE) From North				CSAH 1 (EAST RIVER RD) From East				CSAH 7 (7TH AVE) From South				CSAH 1 (EAST RIVER RD) From West				Intvl	Exclu	Inclu
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY			
13:00	7	4	53	1	48	93	5	6	5	6	1	1	11	81	2	4	328	12	316
13:15	3	4	45	2	53	87	3	1	1	5	2	0	6	67	4	2	285	5	280
13:30	8	4	57	3	46	89	2	3	4	9	4	0	4	78	3	3	317	9	308
13:45	9	3	46	4	39	73	2	2	3	3	0	0	7	92	3	0	286	6	280
Hour	27	15	201	10	186	342	12	12	13	23	7	1	28	318	12	9	1216	32	1184
14:00	5	5	38	0	37	89	5	4	3	7	2	0	1	92	4	3	295	7	288
14:15	3	3	47	1	31	90	2	4	4	5	3	0	3	96	3	2	297	7	290
14:30	5	4	43	1	36	73	2	3	4	5	4	1	2	105	4	5	297	10	287
14:45	6	2	44	1	43	82	4	4	5	6	5	1	2	93	3	3	304	9	295
Hour	19	14	172	3	147	334	13	15	16	23	14	2	8	386	14	13	1193	33	1160
15:00	3	8	46	1	39	89	3	4	4	2	2	0	4	78	1	1	285	6	279
15:15	9	7	41	3	47	113	0	9	4	4	3	1	5	106	1	2	355	15	340
15:30	7	6	38	0	55	95	1	1	2	2	0	0	2	96	1	2	308	3	305
15:45	7	6	48	2	59	98	3	4	3	5	3	0	2	92	3	1	336	7	329
Hour	26	27	173	6	200	395	7	18	13	13	8	1	13	372	6	6	1284	31	1253
16:00	1	7	41	3	52	98	2	7	1	8	1	0	3	99	2	1	326	11	315
16:15	1	12	38	0	63	94	4	2	1	4	0	0	4	98	3	2	326	4	322
16:30	3	4	37	1	78	110	5	3	3	6	3	0	5	134	6	4	402	8	394
16:45	9	13	46	1	58	89	1	2	1	6	1	0	5	96	6	1	335	4	331
Hour	14	36	162	5	251	391	12	14	6	24	5	0	17	427	17	8	1389	27	1362
17:00	2	10	34	1	61	107	5	4	1	2	2	0	3	95	3	0	330	5	325
17:15	2	11	38	1	69	112	4	6	0	5	1	0	1	87	1	0	338	7	331
17:30	4	8	48	0	61	111	1	3	3	4	1	0	3	83	1	2	333	5	328
17:45	2	5	33	0	44	97	5	2	4	6	5	0	2	75	4	1	285	3	282
Hour	10	34	153	2	235	427	15	15	8	17	9	0	9	340	9	3	1286	20	1266
18:00	11	5	53	0	60	93	5	1	2	9	1	0	4	92	6	0	342	1	341
18:15	8	6	42	0	32	72	4	1	5	11	1	0	3	76	3	0	264	1	263
18:30	5	3	34	0	45	66	1	1	0	8	1	0	0	73	3	2	242	3	239
18:45	4	2	33	0	37	72	4	1	3	3	0	0	8	66	2	1	236	2	234
Hour	28	16	162	0	174	303	14	4	10	31	3	0	15	307	14	3	1084	7	1077
19:00	6	5	31	1	37	72	2	2	2	5	1	0	3	53	3	1	224	4	220
19:15	5	6	40	0	30	67	0	1	1	5	0	0	3	62	1	1	222	2	220
19:30	4	8	40	0	31	63	1	2	1	3	0	0	0	60	3	1	217	3	214
19:45	5	7	26	0	39	51	5	0	1	5	1	0	2	45	5	0	192	0	192
Hour	20	26	137	1	137	253	8	5	5	18	2	0	8	220	12	3	855	9	846

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather :SUNNY 80
 Counted by:Ann and Gabe
 Board # :
 Other :

Study Name: TMC9611
 Site Code : 96110202
 Start Date: 07/15/96
 Page : 3

Vehicle group 1

Start Time	CSAH 7 (7TH AVE) From North				CSAH 1 (EAST RIVER RD) From East				CSAH 7 (7TH AVE) From South				CSAH 1 (EAST RIVER RD) From West				Intvl Total	Exclu Total	Inclu Total
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY			
	20:00	0	5	20	0	33	55	6	0	2	4	1	0	4	43	0			
20:15	5	4	42	0	32	59	1	0	4	6	1	0	3	45	10	1	213	1	212
20:30	5	3	24	0	36	57	0	0	1	7	1	0	2	47	3	1	187	1	186
20:45	0	5	25	0	28	68	1	3	1	4	2	0	1	52	3	0	193	3	190
Hour	10	17	111	0	129	239	8	3	8	21	5	0	10	187	16	2	766	5	761
21:00	0	5	11	0	34	69	1	1	0	2	1	0	1	38	4	0	167	1	166
21:15	2	3	27	0	33	58	1	0	0	3	1	0	1	35	2	0	166	0	166
21:30	1	2	14	0	42	36	3	1	0	2	0	0	0	49	1	2	153	3	150
21:45	2	2	17	0	19	40	2	0	2	1	0	0	0	26	2	0	113	0	113
Hour	5	12	69	0	128	203	7	2	2	8	2	0	2	148	9	2	599	4	595
Total	310	303	2614	86	2337	4793	139	191	131	290	95	6	190	4572	176	122	16355	405	15950
% Apr.	9.3	9.1	78.9	2.5	31.3	64.2	1.8	2.5	25.0	55.5	18.1	1.1	3.7	90.3	3.4	2.4	-	-	-
% Int.	1.8	1.8	15.9	0.5	14.2	29.3	0.8	1.1	0.8	1.7	0.5	-	1.1	27.9	1.0	0.7	-	-	-

Jr Street Approaches:

Eastbound:

CSAH 1 (EAST RIVER RD)

Data File: C:\PETRA2\DATAFILE\TMC9611.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/15/96
 Number of Lanes: 2
 Approach Speed: 35
 Total Approach Traffic: 4938

Westbound:

CSAH 1 (EAST RIVER RD)

Data File: C:\PETRA2\DATAFILE\TMC9611.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/15/96
 Number of Lanes: 2
 Approach Speed: 35
 Total Approach Traffic: 7269

Minor Street Approaches:

Northbound:

CSAH 7 (7TH AVE)

Data File: C:\PETRA2\DATAFILE\TMC9611.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/15/96
 Number of Lanes: 1
 Approach Speed: 30
 Total Approach Traffic: 516

Southbound:

CSAH 7 (7TH AVE)

Data File: C:\PETRA2\DATAFILE\TMC9611.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/15/96
 Number of Lanes: 1
 Approach Speed: 35
 Total Approach Traffic: 3227

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		150		75		120
1	0	0	S	18		150		75		120
2	0	0	S	19		150		75		120
3	0	0	S	20		150		75		120
4	0	0	S	21		150		75		120
5	0	0	S	22		150		75		120
6	360	180	S	14	SIDE	150	SIDE	75	SIDE	120
7	575	231	S	4	SIDE	150	SIDE	75	SIDE	120
8	609	200	S	10	--BOTH--	150	SIDE	75	SIDE	120
9	617	200	S	11	--BOTH--	150	SIDE	75	SIDE	120
10	732	201	S	9	--BOTH--	150	SIDE	75	--BOTH--	120
11	867	272	S	1	--BOTH--	150	SIDE	75	--BOTH--	120
12	953	247	S	2	--BOTH--	150	--BOTH--	75	--BOTH--	120
13	898	243	S	3	--BOTH--	150	SIDE	75	--BOTH--	120
14	902	205	S	8	--BOTH--	150	--BOTH--	75	--BOTH--	120
15	993	226	S	5	--BOTH--	150	--BOTH--	75	--BOTH--	120
16	1115	212	S	6	--BOTH--	150	--BOTH--	75	--BOTH--	120
17	1035	197	S	12	--BOTH--	150	--BOTH--	75	--BOTH--	120
18	827	206	S	7	--BOTH--	150	SIDE	75	--BOTH--	120
19	638	183	S	13	--BOTH--	150	SIDE	75	SIDE	120
20	589	138	S	15		150	SIDE	75	SIDE	120
21	497	86	S	16		150	SIDE	75		120
22	0	0	S	23		150		75		120
23	0	0	S	24		150		75		120

Warrant Summary:

Urban values apply.

Warrant 1 - Minimum Vehicular Volumes

SATISFIED for 12 hours. Criteria--Main St.: 600; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 5 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

NOT SATISFIED. At least one street has no major approaches. Peak hour total entering volume: 1362.

- 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 9 hours. Criteria--Main: 720; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

SATISFIED for 8 hours.

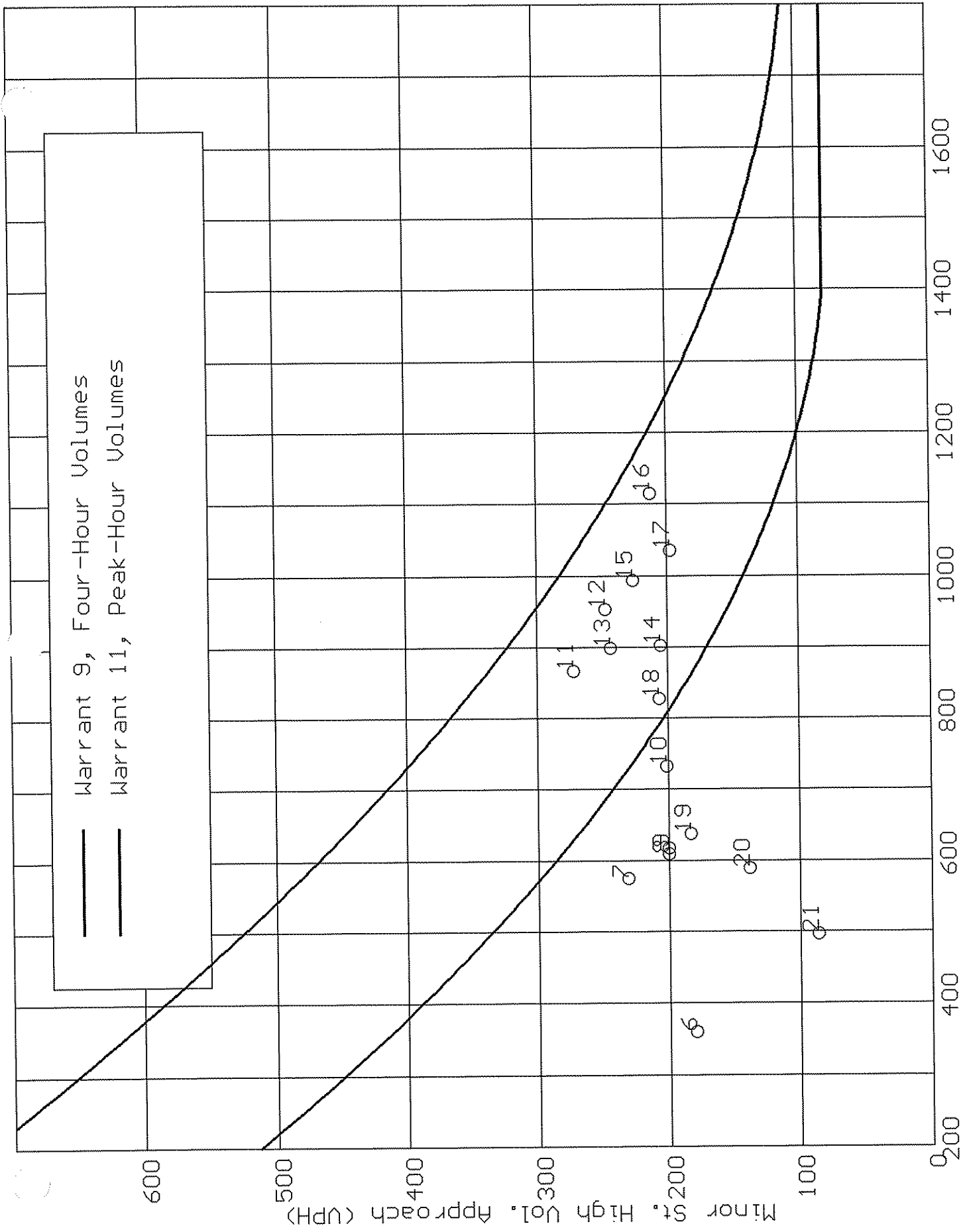
Warrant 10 - Peak Hour Delay

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.



Major St. Total of Both Approaches (UPH)



COUNT LOCATION: CSAH 1 (East River Rd.) @
CSAH 7 (7th Ave.)

DATE: 7/18/96

APP. #1=
EB CSAH 1 (E. River Rd)
APP. #2 =
SB CSAH 7
APP. #3=
WB CSAH 1 (E. River Rd)
APP. #4=
NB 7th Ave.

	APP. #2 35MPH	
APP. #1 35MPH		APP. #3 35MPH
	30MPH	
	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						4		2
6:15-6:30	2				2	3		1
6:30-6:45	1				1	2		2
6:45-7:00						3		5
HOURLY TOTAL					3	HOURLY TOTAL		22
7:00-7:15						4		4
7:15-7:30				1	1	1		5
7:30-7:45	2	1		1	4	6		4
7:45-8:00				1	1	6		2
HOURLY TOTAL					6	HOURLY TOTAL		32
8:00-8:15		1			1	3		4
8:15-8:30						3		3
8:30-8:45						6		7
8:45-9:00						2		1
HOURLY TOTAL					1	HOURLY TOTAL		29
9:00-9:15		1			1	8		2
9:15-9:30				1	1	8		2
9:30-9:45						7		3
9:45-10:00						8		4
HOURLY TOTAL					2	HOURLY TOTAL		42
10:00-10:15			1	1	2	3		2
10:15-10:30						5		1
10:30-10:45				1	1	4		2
10:45-11:00				1	1	12		4
HOURLY TOTAL					4	HOURLY TOTAL		33
11:00-11:15						9		2
11:15-11:30				1	1	4		6
11:30-11:45						7	1	4
11:45-12:00	2			2	4	8		2
HOURLY TOTAL					5	HOURLY TOTAL		43
12:00-12:15	1			1	2	8		2
12:15-12:30						7		
12:30-12:45		1		3	4	6		1
12:45-1:00						9		4
HOURLY TOTAL					6	HOURLY TOTAL		37
1:00-1:15	1		1		2	6	1	5
1:15-1:30		4			4	4		1
1:30-1:45						7	1	1
1:45-2:00						4		2
HOURLY TOTAL					6	HOURLY TOTAL		32



COUNT LOCATION: CSAH 1 (East River Rd.) @
CSAH 7 (7th Ave.)

DATE: 7/15/96

APP. #1=
EB CSAH 1 (E. River Rd.)
APP. #2 =
SB CSAH 7
APP. #3=
WB CSAH 1 (E. River Rd.)
APP. #4=
NB 7th Ave.

	APP. #2 35 MPH	
APP. #1 35 MPH		APP. #3 35 MPH
	30 MPH	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						6		1
2:15-2:30						5		2
2:30-2:45			2		2	9		1
2:45-3:00			2		2	7		2
HOURLY TOTAL					4	HOURLY TOTAL		33
3:00-3:15						4		1
3:15-3:30	2			2	4	13		1
3:30-3:45				2	2	3		1
3:45-4:00						7		1
HOURLY TOTAL					6	HOURLY TOTAL		31
4:00-4:15						6		4
4:15-4:30						3		1
4:30-4:45	1			3	4	6		2
4:45-5:00								3
HOURLY TOTAL					4	HOURLY TOTAL		25
5:00-5:15						2		4
5:15-5:30	1	1			2	6		1
5:30-5:45						2		2
5:45-6:00		1			1	2		1
HOURLY TOTAL					3	HOURLY TOTAL		20
6:00-6:15		1	1	1	3			1
6:15-6:30			2		2	2		1
6:30-6:45			1		1			1
6:45-7:00						1		1
HOURLY TOTAL					6	HOURLY TOTAL		7
7:00-7:15						3		1
7:15-7:30						1		1
7:30-7:45						1		2
7:45-8:00	1	1			2			
HOURLY TOTAL					2	HOURLY TOTAL		9
8:00-8:15			2		2			
8:15-8:30			2		2	1		
8:30-8:45			1		1			1
8:45-9:00	2	4			6	2		1
HOURLY TOTAL					11	HOURLY TOTAL		5
9:00-9:15	1	2			3			1
9:15-9:30			2		2			
9:30-9:45						1		2
9:45-10:00								
HOURLY TOTAL					5	HOURLY TOTAL		4