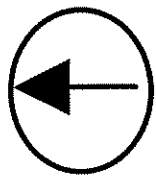


Date : 6/10/96PM 6/12/96AM

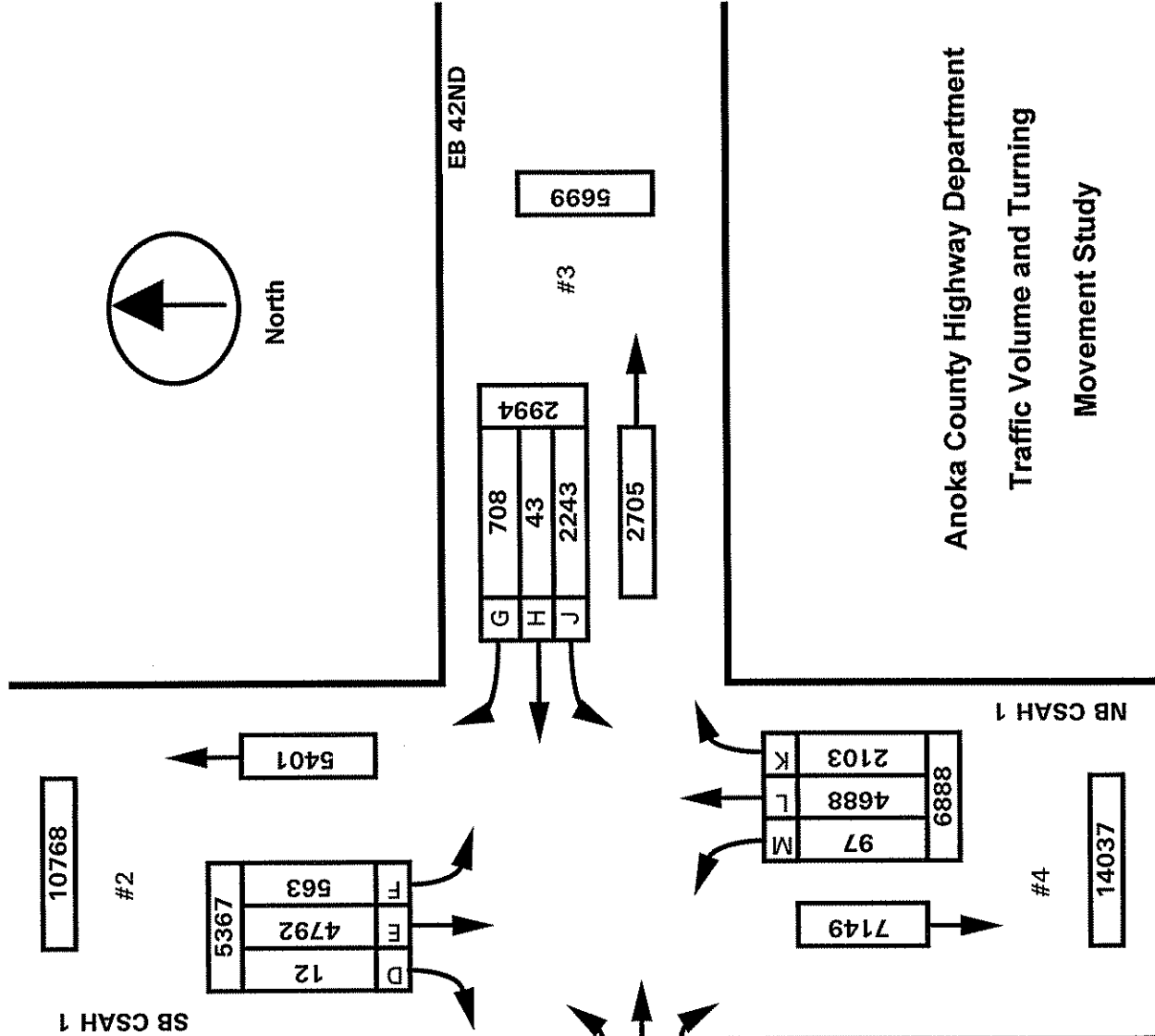
Count Number : TMC9612

Location : CSAH 1 (EAST RIVER ROAD)

@ CSAH 2 (42ND AVE)



North



Anoka County Highway Department
Traffic Volume and Turning
Movement Study

WB CSAH 2

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

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather : sunny 85
 Counted by: Ann and Gabe
 Board # :
 Aer :

Study Name: TMC9612
 Site Code : 96120202
 Start Date: 06/10/96
 Page : 1

Vehicle group 1

Start Time	CSAH1 (E. River Rd.)				CSAH2 (42nd Ave.)				CSAH1 (E. River Rd.)				(42nd Ave.)				Intvl	Exclu	Inclu
	Southbound		Westbound		Northbound		Eastbound		Southbound		Northbound		Eastbound						
Time	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Total	Total	Total
06/10/96																			
06:00	1	136	5	5	9	0	31	1	10	38	0	3	1	0	0	0	240	9	231
06:15	0	209	5	2	9	1	59	2	9	22	5	3	0	0	0	0	326	7	319
06:30	1	245	10	1	12	1	69	2	24	47	0	4	1	0	0	0	417	7	410
06:45	0	220	12	7	22	1	61	2	27	47	7	5	2	0	0	0	413	14	399
Hour	2	810	32	15	52	3	220	7	70	154	12	15	4	0	0	0	1396	37	1359
07:00	1	213	7	4	16	2	75	1	17	84	10	9	2	0	1	0	442	14	428
07:15	2	268	15	3	30	4	99	1	12	56	14	7	0	2	0	0	513	11	502
07:30	0	275	10	11	11	0	104	1	21	33	1	3	3	0	0	1	474	16	458
07:45	0	215	9	6	22	0	78	7	22	49	2	10	10	2	0	2	434	25	409
Hour	3	971	41	24	79	6	356	10	72	222	27	29	15	4	1	3	1863	66	1797
08:00	1	150	8	11	7	0	47	2	11	53	1	6	5	1	0	1	304	20	284
08:15	1	105	9	12	4	0	40	1	22	39	2	11	2	0	0	0	248	24	224
08:30	0	97	8	16	9	0	38	6	19	37	2	13	3	0	0	0	248	35	213
08:45	0	84	7	16	5	0	31	4	23	41	3	14	2	0	0	0	230	34	196
Hour	2	436	32	55	25	0	156	13	75	170	8	44	12	1	0	1	1030	113	917
09:00	0	82	5	11	12	0	15	4	14	40	1	12	0	0	0	0	196	27	169
09:15	0	52	2	19	5	0	23	3	13	35	2	11	2	2	0	0	169	33	136
09:30	0	42	5	8	3	0	21	3	18	34	1	7	2	2	0	0	146	18	128
09:45	0	34	4	11	7	1	23	3	25	48	1	10	2	1	0	1	171	25	146
Hour	0	210	16	49	27	1	82	13	70	157	5	40	6	5	0	1	682	103	579
10:00	0	40	3	8	4	1	26	0	24	38	0	12	1	0	0	1	158	21	137
10:15	0	44	4	7	6	0	16	5	24	44	1	8	0	0	0	0	159	20	139
10:30	0	43	14	15	11	1	21	4	22	41	0	13	0	1	0	0	186	32	154
10:45	0	45	6	8	5	3	34	2	22	57	1	17	2	0	0	0	202	27	175
Hour	0	172	27	38	26	5	97	11	92	180	2	50	3	1	0	1	705	100	605
11:00	1	46	10	10	10	0	24	2	20	55	0	6	2	0	0	0	186	18	168
11:15	0	42	13	12	9	2	21	1	37	57	2	12	4	1	0	0	213	25	188
11:30	0	45	16	11	16	2	31	1	51	76	2	18	3	1	0	0	273	30	243
11:45	1	41	12	9	16	1	26	1	36	55	3	6	3	3	1	0	214	16	198
Hour	2	174	51	42	51	5	102	5	144	243	7	42	12	5	1	0	886	89	797
12:00	0	57	9	13	16	2	33	5	35	68	4	17	0	1	0	1	261	36	225
12:15	0	58	9	13	14	1	34	1	20	56	2	9	1	2	0	0	220	23	197
12:30	0	48	4	12	12	1	33	1	27	44	3	7	6	2	0	1	201	21	180
12:45	0	78	6	14	10	1	36	1	35	54	4	9	5	2	0	2	257	26	231
Hour	0	241	28	52	52	5	136	8	117	222	13	42	12	7	0	4	939	106	833

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather :sunny 85
 Counted by:Ann and Gabe

Study Name: TMC9612
 Site Code : 96120202
 Start Date: 06/10/96
 Page : 2

Vehicle group 1

Start Time	CSAH1 (E. River Rd.) Southbound				CSAH2 (42nd Ave.) Westbound				CSAH1 (E. River Rd.) Northbound				(42nd Ave.) Eastbound				Intvl	Exclu	Inclu	
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY				Total
13:00	1	57	6	7	7	3	29	0	36	58	0	14	3	0	0	0	0	221	21	200
13:15	0	64	7	10	9	1	31	0	23	68	4	15	3	2	0	0	0	237	25	212
13:30	1	98	7	12	11	2	40	3	29	51	4	17	3	0	0	0	0	278	32	246
13:45	0	62	1	10	12	2	35	3	27	42	1	8	2	3	1	1	1	210	22	188
Hour	2	281	21	39	39	8	135	6	115	219	9	54	11	5	1	1	946	100	846	
14:00	0	48	2	6	10	1	30	1	39	94	1	8	1	0	0	0	0	241	15	226
14:15	0	69	7	9	11	2	32	3	42	57	1	11	2	0	0	0	0	246	23	223
14:30	0	88	14	10	12	0	32	1	48	112	3	7	2	1	0	0	0	330	18	312
14:45	0	77	10	12	16	2	27	3	41	67	0	14	2	1	0	0	0	272	29	243
Hour	0	282	33	37	49	5	121	8	170	330	5	40	7	2	0	0	1089	85	1004	
15:00	1	45	10	9	20	4	30	0	56	127	0	9	2	0	0	0	0	313	18	295
15:15	0	60	9	4	6	0	28	2	42	108	1	8	2	0	0	1	1	271	15	256
15:30	0	64	20	6	21	1	41	2	56	169	2	12	6	0	1	0	0	401	20	381
15:45	0	51	8	7	8	0	39	2	54	155	3	10	6	1	1	1	1	346	20	326
Hour	1	220	47	26	55	5	138	6	208	559	6	39	16	1	2	2	1331	73	1258	
16:00	0	63	14	4	12	0	37	0	72	158	1	5	16	7	0	0	0	389	9	380
16:15	0	57	23	8	21	0	33	1	68	183	1	9	0	1	0	0	0	405	18	387
16:30	0	55	30	6	19	0	39	2	74	275	0	8	0	0	0	0	0	508	16	492
16:45	0	70	16	6	15	0	48	0	85	251	0	3	0	0	0	0	0	494	9	485
Hour	0	245	83	24	67	0	157	3	299	867	2	25	16	8	0	0	1796	52	1744	
17:00	0	60	12	1	16	0	40	1	68	259	0	8	0	0	0	0	0	465	10	455
17:15	0	50	10	3	20	0	37	2	86	203	0	10	0	0	0	0	0	421	15	406
17:30	0	48	15	1	18	0	34	3	45	160	0	4	0	0	0	0	0	328	8	320
17:45	0	34	9	1	12	0	27	2	48	130	0	4	0	0	0	0	0	267	7	260
Hour	0	192	46	6	66	0	138	8	247	752	0	26	0	0	0	0	1481	40	1441	
18:00	0	33	15	1	7	0	28	0	41	82	0	3	0	0	0	0	0	210	4	206
18:15	0	42	9	1	15	0	35	1	44	64	0	0	0	0	0	0	0	211	2	209
18:30	0	47	6	1	10	0	30	0	37	51	0	3	0	0	0	0	0	185	4	181
18:45	0	49	8	2	11	0	31	0	23	46	1	3	0	0	0	0	0	174	5	169
Hour	0	171	38	5	43	0	124	1	145	243	1	9	0	0	0	0	780	15	765	
19:00	0	35	7	3	6	0	26	0	29	45	0	2	0	0	0	0	0	153	5	148
19:15	0	40	4	2	5	0	19	1	25	39	0	4	0	0	0	0	0	139	7	132
19:30	0	30	4	1	7	0	22	0	29	28	0	2	0	0	0	0	0	123	3	120
19:45	0	22	7	4	10	0	26	0	25	29	0	1	0	0	0	0	0	124	5	119
Hour	0	127	22	10	28	0	93	1	108	141	0	9	0	0	0	0	539	20	519	

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather :sunny 85

Counted by:Ann and Gabe

Board # :

Number :

Study Name: TMC9612

Site Code : 96120202

Start Date: 06/10/96

Page : 3

Vehicle group 1

Start Time	CSAH1 (E. River Rd.) Southbound				CSAH2 (42nd Ave.) Westbound				CSAH1 (E. River Rd.) Northbound				(42nd Ave.) Eastbound				Intvl	Exclu	Inclu	
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY				Total
20:00	0	25	8	3	4	0	26	0	12	32	0	1	0	0	0	0	0	111	4	107
20:15	0	35	3	2	3	0	21	0	28	37	0	4	0	0	0	0	0	133	6	127
20:30	0	20	6	0	7	0	21	1	23	27	0	2	0	0	0	0	0	107	3	104
20:45	0	40	6	4	7	0	25	1	16	23	0	1	0	0	0	0	0	123	6	117
Hour	0	120	23	9	21	0	93	2	79	119	0	8	0	0	0	0	0	474	19	455
21:00	0	38	6	4	8	0	20	0	26	24	0	3	0	0	0	0	0	129	7	122
21:15	0	25	5	1	11	0	18	0	28	32	0	0	0	0	0	0	0	120	1	119
21:30	0	34	5	2	6	0	27	0	21	30	0	1	0	0	0	0	0	126	3	123
21:45	0	43	7	2	3	0	30	0	17	24	0	3	0	0	0	0	0	129	5	124
Hour	0	140	23	9	28	0	95	0	92	110	0	7	0	0	0	0	0	504	16	488
Total	12	4792	563	440	708	43	2243	102	2103	4688	97	479	114	39	5	13	16441	1034	15407	
% Apr.	0.2	82.5	9.6	7.5	22.8	1.3	72.4	3.2	28.5	63.6	1.3	6.5	56.6	22.8	2.9	7.6	-	-	-	
% Int.	-	29.1	3.4	2.6	4.3	0.2	13.6	0.6	12.7	28.5	0.5	2.9	0.6	0.2	-	-	-	-	-	

Major Street Approaches:

Northbound:

CSAH1 (E. River Rd.)

Data File: C:\PETRA2\DATAFILE\TMC9612.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/10/96
 Number of Lanes: 2
 Approach Speed: 55
 Total Approach Traffic: 6888

Southbound:

CSAH1 (E. River Rd.)

Data File: C:\PETRA2\DATAFILE\TMC9612.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/10/96
 Number of Lanes: 2
 Approach Speed: 55
 Total Approach Traffic: 5367

Minor Street Approaches:

Eastbound:

(42nd Ave.)

Data File: C:\PETRA2\DATAFILE\TMC9612.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/10/96
 Number of Lanes: 1
 Approach Speed: 0
 Total Approach Traffic: 158

Westbound:

CSAH2 (42nd Ave.)

Data File: C:\PETRA2\DATAFILE\TMC9612.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/10/96
 Number of Lanes: 2
 Approach Speed: 30
 Total Approach Traffic: 2994

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

Hour	Main	Side	Warrant 1	Warrant 2	Warrant 8
Begin	(Total)	Vol. Dir. Rank	Meets? Criteria	Meets? Criteria	Meets? Criteria
0	0	0 W 17	140	70	112
1	0	0 W 18	140	70	112
2	0	0 W 19	140	70	112
3	0	0 W 20	140	70	112
4	0	0 W 21	140	70	112
5	0	0 W 22	140	70	112
6	1080	275 W 2	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
7	1336	441 W 1	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
8	723	181 W 8	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
9	458	110 W 16	MAIN 140	SIDE 70	112
10	473	128 W 12	MAIN 140	SIDE 70	SIDE 112
11	621	158 W 11	--BOTH-- 140	SIDE 70	--BOTH-- 112
12	621	193 W 6	--BOTH-- 140	SIDE 70	--BOTH-- 112
13	647	182 W 7	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
14	820	175 W 9	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
15	1041	198 W 5	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
16	1496	224 W 3	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
17	1237	204 W 4	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
18	598	167 W 10	--BOTH-- 140	SIDE 70	--BOTH-- 112
19	398	121 W 14	140	SIDE 70	SIDE 112
20	341	114 W 15	140	SIDE 70	SIDE 112
21	365	123 W 13	140	SIDE 70	SIDE 112
22	0	0 W 23	140	70	112
23	0	0 W 24	140	70	112

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

SATISFIED for 11 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

SATISFIED for 8 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: 1797.

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

Warrant 9 - Four Hour Volumes

SATISFIED for 9 hours.

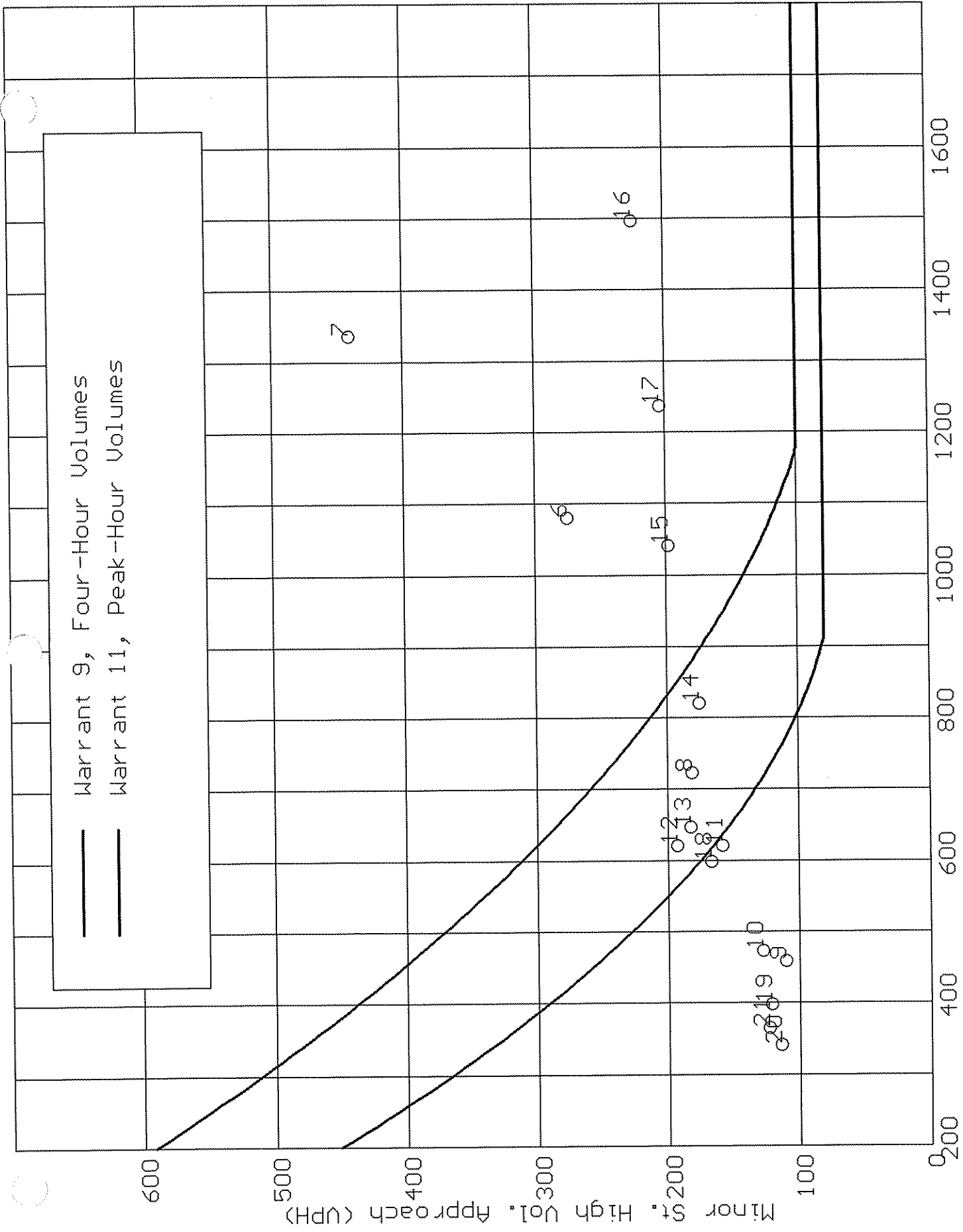
Warrant 10 - Peak Hour Delay

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 5 hours.



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

Major St. Total of Both Approaches (UPH)



NORTH

COUNT LOCATION:

CSAH1 (E. River Rd.) @
CSAH2 (42nd Ave.)

DATE:

6/12/96

APP. #1= CSAH1 (E. River Rd.)
APP. #2= CSAH2 (42nd Ave.)
APP. #3= CSAH1 (E. River Rd.)
APP. #4= 42nd Ave.

APP. #2 30mph	APP. #3 55mph
APP. #1 55mph	APP. #4 55mph

- 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						8		1
6:15-6:30		1		2	3	5		2
6:30-6:45						7		
6:45-7:00						13		1
HOURLY TOTAL					3	HOURLY TOTAL		37
7:00-7:15				2	2	13		1
7:15-7:30						11		1
7:30-7:45						16		1
7:45-8:00						24		1
HOURLY TOTAL					2	HOURLY TOTAL		68
8:00-8:15						18		2
8:15-8:30						23		1
8:30-8:45						35		
8:45-9:00						34		
HOURLY TOTAL						HOURLY TOTAL		113
9:00-9:15						25		2
9:15-9:30						33		
9:30-9:45				1	1	18		
9:45-10:00						24		
HOURLY TOTAL					1	HOURLY TOTAL		102
10:00-10:15						21		
10:15-10:30						20		
10:30-10:45						31		1
10:45-11:00						27		
HOURLY TOTAL						HOURLY TOTAL		100
11:00-11:15						18		
11:15-11:30						24	1	1
11:30-11:45						28	1	
11:45-12:00				2	2	16		
HOURLY TOTAL					2	HOURLY TOTAL		89
12:00-12:15				3	3	34		1
12:15-12:30			1	2	3	23		
12:30-12:45						21		
12:45-1:00				1	1	26		
HOURLY TOTAL					7	HOURLY TOTAL		105
1:00-1:15						21		
1:15-1:30						25		
1:30-1:45						31		
1:45-2:00						21		
HOURLY TOTAL						HOURLY TOTAL		98



NORTH

APP. #1= CSAH1 (E. River Rd.)
APP. #2= CSAH2 (42nd Ave.)
APP. #3= CSAH1 (E. River Rd.)
APP. #4= 42nd Ave.

COUNT LOCATION: CSAH1 (E. River Rd.) @
CSAH2 (42nd Ave.)

DATE: 6/10/96

APP.
#2
30mph

APP.
#1
55mph

APP.
#3
55mph

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				2	2	14	1	
2:15-2:30				3	3	27		1
2:30-2:45						17		1
2:45-3:00			1	1	2	29		
HOURLY TOTAL					7	HOURLY TOTAL		90
3:00-3:15				1	1	17		1
3:15-3:30						15		
3:30-3:45						11		1
3:45-4:00						18		1
HOURLY TOTAL					1	HOURLY TOTAL		64
4:00-4:15						9		1
4:15-4:30			2		2	16		2
4:30-4:45				1	1	17		1
4:45-5:00						9		
HOURLY TOTAL					3	HOURLY TOTAL		55
5:00-5:15				1	1	9		1
5:15-5:30				2	2	13		2
5:30-5:45						6		2
5:45-6:00						6		1
HOURLY TOTAL					3	HOURLY TOTAL		40
6:00-6:15						4		
6:15-6:30				1	1	2		
6:30-6:45						3		1
6:45-7:00				2	2	4		
HOURLY TOTAL					3	HOURLY TOTAL		14
7:00-7:15	2				2	4		1
7:15-7:30						7		
7:30-7:45						3		
7:45-8:00						5		
HOURLY TOTAL					2	HOURLY TOTAL		20
8:00-8:15						3		1
8:15-8:30			2	1	3	5		
8:30-8:45			2	1	3	3		
8:45-9:00						6		
HOURLY TOTAL					6	HOURLY TOTAL		18
9:00-9:15						6		1
9:15-9:30						1		
9:30-9:45						3		
9:45-10:00						5		
HOURLY TOTAL						HOURLY TOTAL		16