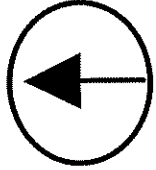


Date : 6/4/96AM 6/5/96PM

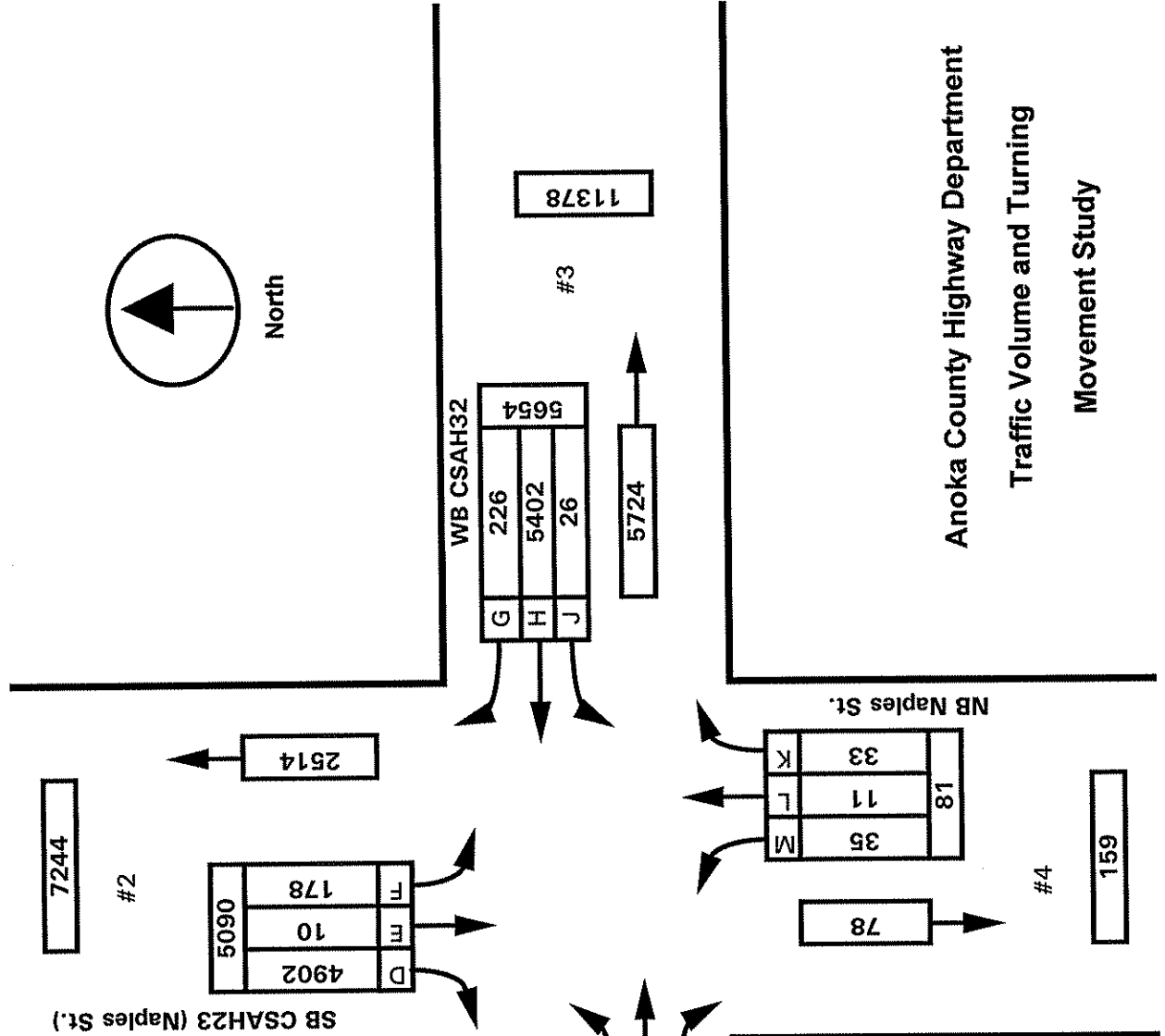
Count Number : TMC9601

Location : CSAH32 (85th Ave./CR "J") @

CSAH23 (Naples St.)



North



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	1	0	1	2
#4	0	0	1	1

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Study Name: TMC9601

Site Code : 96010202

Start Date: 06/04/96

Page : 1

Weather : cloudy and rainy

Counted by: Ann and Gabe

Board # :

Other :

Vehicle group 1

Start Time	CSAH23 (Naples St.) Southbound				CSAH32 (CR "J") Westbound				Naples St. Northbound				CSAH32 (CR "J") Eastbound				Intvl	Exclu	Inclu	
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY				Total
06/04/96																				
06:00	95	0	1	5	2	122	0	15	0	0	0	0	0	27	7	6	280	26	254	
06:15	90	0	2	3	3	130	0	13	0	0	0	0	0	32	12	5	290	21	269	
06:30	109	0	1	7	5	146	0	4	1	0	0	0	1	82	14	11	381	22	359	
06:45	115	0	5	8	4	160	0	8	0	0	0	0	0	89	18	5	412	21	391	
Hour	409	0	9	23	14	558	0	40	1	0	0	0	1	230	51	27	1363	90	1273	
07:00	125	0	7	20	5	161	0	6	0	0	0	2	0	82	16	5	429	33	396	
07:15	140	0	10	9	8	161	0	8	0	0	0	0	0	75	17	4	432	21	411	
07:30	117	0	8	8	10	162	0	8	0	0	0	0	0	102	16	14	445	30	415	
07:45	84	0	7	1	6	141	0	9	0	0	0	0	1	90	21	7	367	17	350	
Hour	466	0	32	38	29	625	0	31	0	0	0	2	1	349	70	30	1673	101	1572	
08:00	69	0	3	6	5	132	1	9	0	0	0	0	1	47	12	6	291	21	270	
08:15	86	0	4	11	3	142	1	22	0	0	1	1	1	33	16	8	329	42	287	
08:30	93	0	5	7	3	125	0	21	0	0	2	2	0	40	19	9	326	39	287	
08:45	96	0	3	14	2	123	2	16	0	0	0	0	0	42	13	7	318	37	281	
Hour	344	0	15	38	13	522	4	68	0	0	3	3	2	162	60	30	1264	139	1125	
09:00	78	0	4	6	2	104	1	13	2	1	0	1	1	36	21	7	277	27	250	
09:15	69	0	1	13	3	78	1	11	0	0	1	0	1	37	27	8	250	32	218	
09:30	83	1	3	5	1	84	0	15	1	0	0	0	0	43	21	6	263	26	237	
09:45	59	0	2	4	1	79	1	8	0	0	0	0	3	50	18	15	240	27	213	
Hour	289	1	10	28	7	345	3	47	3	1	1	1	5	166	87	36	1030	112	918	
10:00	77	0	1	6	3	66	0	8	0	0	0	0	0	35	23	12	231	26	205	
10:15	73	0	2	6	4	54	0	10	1	0	1	0	1	40	25	10	227	26	201	
10:30	70	0	0	3	0	61	1	9	0	1	0	0	2	37	25	9	218	21	197	
10:45	76	0	2	3	2	55	0	4	0	1	0	0	2	48	32	10	235	17	218	
Hour	296	0	5	18	9	236	1	31	1	2	1	0	5	160	105	41	911	90	821	
11:00	53	0	0	2	1	71	0	7	0	0	2	2	1	37	28	7	211	18	193	
11:15	73	0	2	5	1	51	1	4	0	0	1	0	0	52	33	11	234	20	214	
11:30	76	0	1	7	2	46	0	8	2	1	1	0	0	66	44	11	265	26	239	
11:45	74	1	5	7	1	59	0	7	0	0	0	0	1	66	36	8	265	22	243	
Hour	276	1	8	21	5	227	1	26	2	1	4	2	2	221	141	37	975	86	889	
12:00	85	1	3	4	2	54	1	7	2	1	1	0	3	55	44	11	274	22	252	
12:15	74	0	4	5	1	78	0	16	1	0	1	0	1	64	35	7	287	28	259	
12:30	75	0	4	5	2	56	0	8	0	0	1	1	0	58	34	2	246	16	230	
12:45	78	0	1	4	4	73	0	5	0	0	3	0	1	70	46	13	298	22	276	
Hour	312	1	12	18	9	261	1	36	3	1	6	1	5	247	159	33	1105	88	1017	

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather :cloudy and rainy

Counted by:Ann and Gabe

Board # :

ther :

Study Name: TMC9601

Site Code : 96010202

Start Date: 06/04/96

Page : 2

Vehicle group 1

Start Time	CSAH23 (Naples St.) Southbound				CSAH32 (CR "J") Westbound				Naples St. Northbound				CSAH32 (CR "J") Eastbound				Intvl	Exclu	Inclu
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY			
13:00	102	0	5	8	3	65	0	14	0	0	0	0	0	55	37	16	305	38	267
13:15	75	0	0	5	3	66	1	5	0	0	0	0	0	61	37	8	261	18	243
13:30	96	0	5	7	2	59	0	8	1	0	0	0	2	62	17	14	273	29	244
13:45	87	0	2	5	2	58	0	7	1	0	1	2	1	76	34	17	293	31	262
Hour	360	0	12	25	10	248	1	34	2	0	1	2	3	254	125	55	1132	116	1016
14:00	78	0	1	6	0	64	1	2	1	0	2	2	0	60	31	17	265	27	238
14:15	64	0	0	2	2	55	0	3	1	0	0	1	0	78	41	13	260	19	241
14:30	86	1	2	9	2	68	0	5	1	0	1	0	0	86	41	14	316	28	288
14:45	58	0	2	8	4	70	1	3	0	0	1	0	1	83	50	10	291	21	270
Hour	286	1	5	25	8	257	2	13	3	0	4	3	1	307	163	54	1132	95	1037
15:00	82	0	4	2	7	61	0	3	0	0	1	1	0	102	45	8	316	14	302
15:15	81	0	3	3	4	60	0	11	0	0	0	0	1	114	57	9	343	23	320
15:30	86	1	2	8	6	91	0	6	0	1	2	1	2	124	58	10	398	25	373
15:45	68	1	3	7	7	96	0	7	0	0	0	0	1	135	60	9	394	23	371
Hour	317	2	12	20	24	308	0	27	0	1	3	2	4	475	220	36	1451	85	1366
16:00	63	0	1	7	5	107	0	7	1	0	0	0	0	135	61	17	404	31	373
16:15	90	0	4	2	5	88	0	8	0	0	0	0	0	163	48	14	422	24	398
16:30	83	0	5	6	8	125	0	9	0	0	0	0	0	187	57	9	489	24	465
16:45	63	0	3	1	9	89	0	9	0	1	2	0	0	195	89	13	474	23	451
Hour	299	0	13	16	27	409	0	33	1	1	2	0	0	680	255	53	1789	102	1687
17:00	69	1	5	2	4	107	0	8	0	0	0	0	2	187	61	12	458	22	436
17:15	59	0	9	3	6	94	1	5	2	0	1	0	1	205	79	8	473	16	457
17:30	89	0	3	2	7	110	2	6	0	1	0	0	1	194	73	11	499	19	480
17:45	99	0	5	5	9	84	0	4	0	0	1	0	0	190	51	9	457	18	439
Hour	316	1	22	12	26	395	3	23	2	1	2	0	4	776	264	40	1887	75	1812
18:00	77	0	1	3	14	106	1	8	1	0	2	0	1	142	61	13	430	24	406
18:15	70	0	3	2	4	99	0	10	0	0	0	0	0	137	46	8	379	20	359
18:30	88	0	0	0	5	94	0	5	0	1	0	0	3	128	45	13	382	18	364
18:45	73	2	4	2	3	94	0	4	3	1	0	0	1	102	48	5	342	11	331
Hour	308	2	8	7	26	393	1	27	4	2	2	0	5	509	200	39	1533	73	1460
19:00	64	0	0	1	1	84	3	2	1	0	1	0	1	107	36	7	308	10	298
19:15	66	1	0	1	2	75	1	7	1	0	1	0	0	80	26	9	270	17	253
19:30	52	0	2	0	0	55	0	0	2	1	2	0	1	73	34	6	228	6	222
19:45	38	0	1	0	1	57	1	0	0	0	1	0	0	85	46	6	236	6	230
Hour	220	1	3	2	4	271	5	9	4	1	5	0	2	345	142	28	1042	39	1003

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather : cloudy and rainy

Counted by: Ann and Gabe

Board # :

Other :

Study Name: TMC9601

Site Code : 96010202

Start Date: 06/04/96

Page : 3

Vehicle group 1

Start Time	CSAH23 (Naples St.) Southbound				CSAH32 (CR "J") Westbound				Naples St. Northbound				CSAH32 (CR "J") Eastbound				Intvl	Exclu	Inclu
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY			
20:00	62	0	0	1	1	33	1	3	2	0	0	0	0	106	26	4	239	8	231
20:15	58	0	4	1	3	55	0	4	0	0	0	0	2	80	25	6	238	11	227
20:30	48	0	0	2	1	50	0	6	1	0	1	1	0	84	29	7	230	16	214
20:45	44	0	0	1	1	44	1	3	3	0	0	0	0	87	40	3	227	7	220
Hour	212	0	4	5	6	182	2	16	6	0	1	1	2	357	120	20	934	42	892
21:00	55	0	2	3	3	40	0	2	0	0	0	0	0	62	35	6	208	11	197
21:15	56	0	1	4	5	45	1	1	0	0	0	0	0	71	34	2	220	7	213
21:30	45	0	1	2	0	42	0	3	0	0	0	0	0	64	23	1	181	6	175
21:45	36	0	4	2	1	38	1	3	1	0	0	0	0	78	23	5	192	10	182
Hour	192	0	8	11	9	165	2	9	1	0	0	0	0	275	115	14	801	34	767
Total	4902	10	178	307	226	5402	26	470	33	11	35	17	42	5513	2277	573	20022	1367	18655
% Apr.	90.8	0.1	3.2	5.6	3.6	88.2	0.4	7.6	34.3	11.4	36.4	17.7	0.4	65.5	27.0	6.8	-	-	-
% Int.	24.4	-	0.8	1.5	1.1	26.9	0.1	2.3	0.1	-	0.1	-	0.2	27.5	11.3	2.8	-	-	-

Major Street Approaches:

Eastbound:

CSAH32 (CR "J")

Data File: C:\PETRA2\DATAFILE\TMC9601.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/ 4/96
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 7832

Westbound:

CSAH32 (CR "J")

Data File: C:\PETRA2\DATAFILE\TMC9601.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/ 4/96
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 5654

Minor Street Approaches:

Northbound:

Naples St.

Data File: C:\PETRA2\DATAFILE\TMC9601.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/ 4/96
 Number of Lanes: 1
 Approach Speed: 0
 Total Approach Traffic: 79

Southbound:

CSAH23 (Naples St.)

Data File: C:\PETRA2\DATAFILE\TMC9601.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/ 4/96
 Number of Lanes: 1
 Approach Speed: 45
 Total Approach Traffic: 5090

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	S	17		105		52		84
1	0	0	S	18		105		52		84
2	0	0	S	19		105		52		84
3	0	0	S	20		105		52		84
4	0	0	S	21		105		52		84
5	0	0	S	22		105		52		84
6	854	418	S	2	--BOTH--	105	--BOTH--	52	--BOTH--	84
7	1074	498	S	1	--BOTH--	105	--BOTH--	52	--BOTH--	84
8	763	359	S	4	--BOTH--	105	--BOTH--	52	--BOTH--	84
9	613	300	S	11	--BOTH--	105	SIDE	52	--BOTH--	84
10	516	301	S	10	--BOTH--	105	SIDE	52	--BOTH--	84
11	597	285	S	13	--BOTH--	105	SIDE	52	--BOTH--	84
12	682	325	S	7	--BOTH--	105	--BOTH--	52	--BOTH--	84
13	641	372	S	3	--BOTH--	105	--BOTH--	52	--BOTH--	84
14	738	292	S	12	--BOTH--	105	--BOTH--	52	--BOTH--	84
15	1031	331	S	6	--BOTH--	105	--BOTH--	52	--BOTH--	84
16	1371	312	S	9	--BOTH--	105	--BOTH--	52	--BOTH--	84
17	1468	339	S	5	--BOTH--	105	--BOTH--	52	--BOTH--	84
18	1134	318	S	8	--BOTH--	105	--BOTH--	52	--BOTH--	84
19	769	224	S	14	--BOTH--	105	--BOTH--	52	--BOTH--	84
20	669	216	S	15	--BOTH--	105	--BOTH--	52	--BOTH--	84
21	566	200	S	16	--BOTH--	105	SIDE	52	--BOTH--	84
22	0	0	S	23		105		52		84
23	0	0	S	24		105		52		84

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

SATISFIED for 16 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

SATISFIED for 12 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: 1812.

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

Warrant 9 - Four Hour Volumes

SATISFIED for 16 hours.

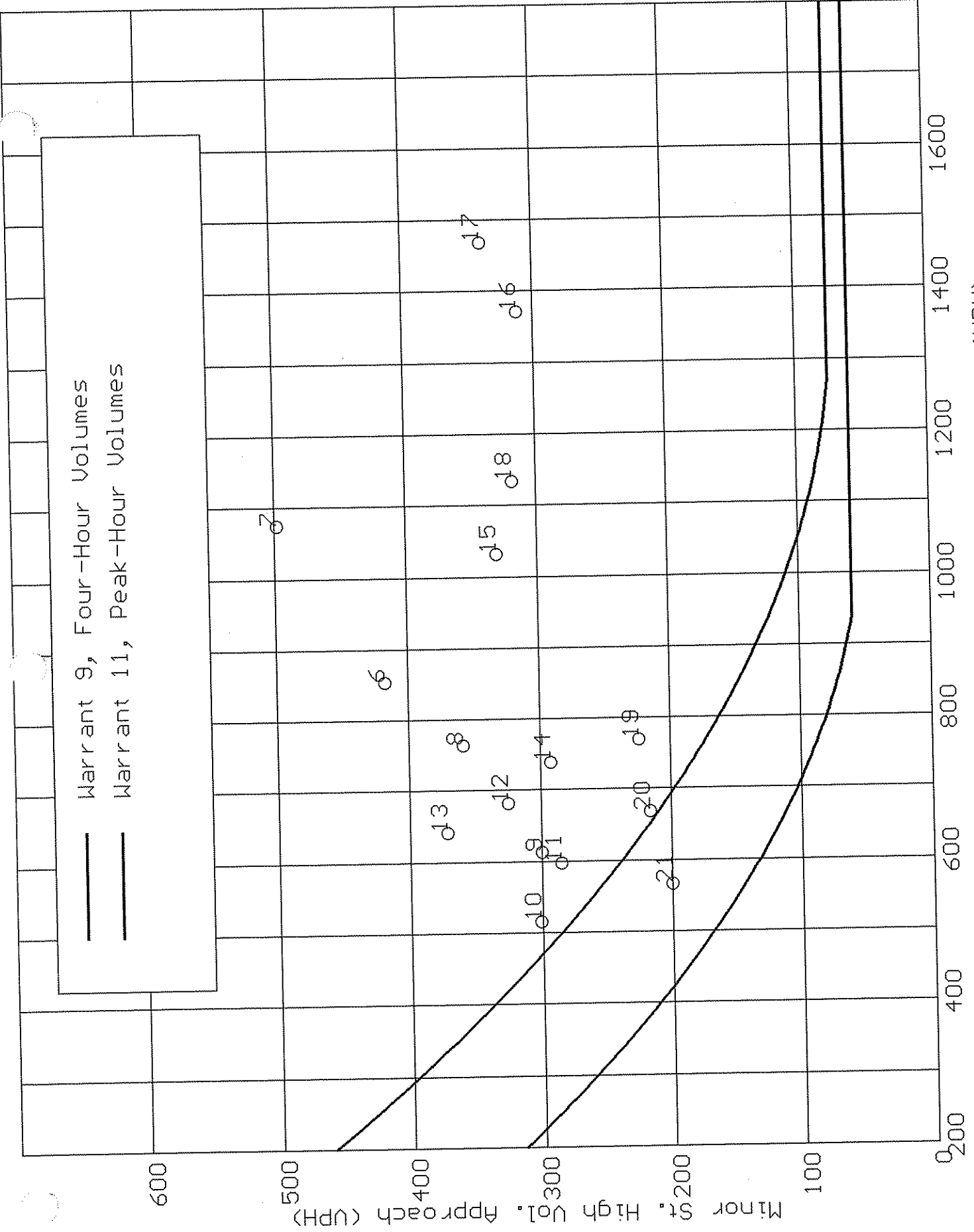
Warrant 10 - Peak Hour Delay

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

SATISFIED for 15 hours.



Major St. Total of Both Approaches (UPH)



COUNT LOCATION: CSAH32 (85th Ave.) @
 CSAH23 (Naples St.)

DATE: 6/4/96

APP. #1=
 CSAH32 (85th Ave.)
 APP. #2=
 CSAH23 (Naples St.)
 APP. #3=
 CSAH32 (85th Ave.)
 APP. #4=
 Naples St.

APP. #2
 45mph
 APP. #3
 50mph
 APP. #1
 50mph
 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						22		5
6:15-6:30						17		3
6:30-6:45						15		6
6:45-7:00						17		4
HOURLY TOTAL						HOURLY TOTAL		89
7:00-7:15						26		5
7:15-7:30						18		3
7:30-7:45						25		4
7:45-8:00						16		2
HOURLY TOTAL						HOURLY TOTAL		99
8:00-8:15						19		2
8:15-8:30						38		4
8:30-8:45						33		6
8:45-9:00						31		6
HOURLY TOTAL						HOURLY TOTAL		139
9:00-9:15						27		
9:15-9:30						29		2
9:30-9:45						24		1
9:45-10:00						26		1
HOURLY TOTAL						HOURLY TOTAL		110
10:00-10:15						24	1	1
10:15-10:30						25		
10:30-10:45						21		
10:45-11:00						16	1	
HOURLY TOTAL						HOURLY TOTAL		89
11:00-11:15						18		1
11:15-11:30						20		
11:30-11:45						24		2
11:45-12:00						21		1
HOURLY TOTAL						HOURLY TOTAL		87
12:00-12:15						20		2
12:15-12:30						27		1
12:30-12:45						16		
12:45-1:00						22		
HOURLY TOTAL						HOURLY TOTAL		88
1:00-1:15						38		
1:15-1:30						18		
1:30-1:45						28		1
1:45-2:00						31		
HOURLY TOTAL						HOURLY TOTAL		116



NORTH

COUNT LOCATION:

CSAH32 (85th Ave.) @
CSAH23 (Naples St.)

DATE:

6/5/96

APP. #1= CSAH32 (85th Ave.)
APP. #2= CSAH23 (Naples St.)
APP. #3= CSAH32 (85th Ave.)
APP. #4= Naples St.

APP. #2 45mph	APP. #3 50mph
APP. #1 50mph	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						27		
2:15-2:30						18		1
2:30-2:45						21	1	6
2:45-3:00						20		1
HOURLY TOTAL						HOURLY TOTAL		95
3:00-3:15						10	1	3
3:15-3:30						21		2
3:30-3:45						22		3
3:45-4:00						18		5
HOURLY TOTAL						HOURLY TOTAL		85
4:00-4:15						23		8
4:15-4:30						24		
4:30-4:45						21	1	2
4:45-5:00						23		
HOURLY TOTAL						HOURLY TOTAL		102
5:00-5:15						21		1
5:15-5:30						16		
5:30-5:45						18		1
5:45-6:00		2			2	15		3
HOURLY TOTAL					2	HOURLY TOTAL		75
6:00-6:15						24		
6:15-6:30						18		2
6:30-6:45						16		2
6:45-7:00				1	1	10		1
HOURLY TOTAL					1	HOURLY TOTAL		73
7:00-7:15						10		
7:15-7:30						17		1
7:30-7:45						9		
7:45-8:00						6		
HOURLY TOTAL						HOURLY TOTAL		43
8:00-8:15						8		
8:15-8:30						11		1
8:30-8:45						16		
8:45-9:00						8		
HOURLY TOTAL						HOURLY TOTAL		44
9:00-9:15						11		
9:15-9:30						6		
9:30-9:45						6		
9:45-10:00						10		
HOURLY TOTAL						HOURLY TOTAL		33