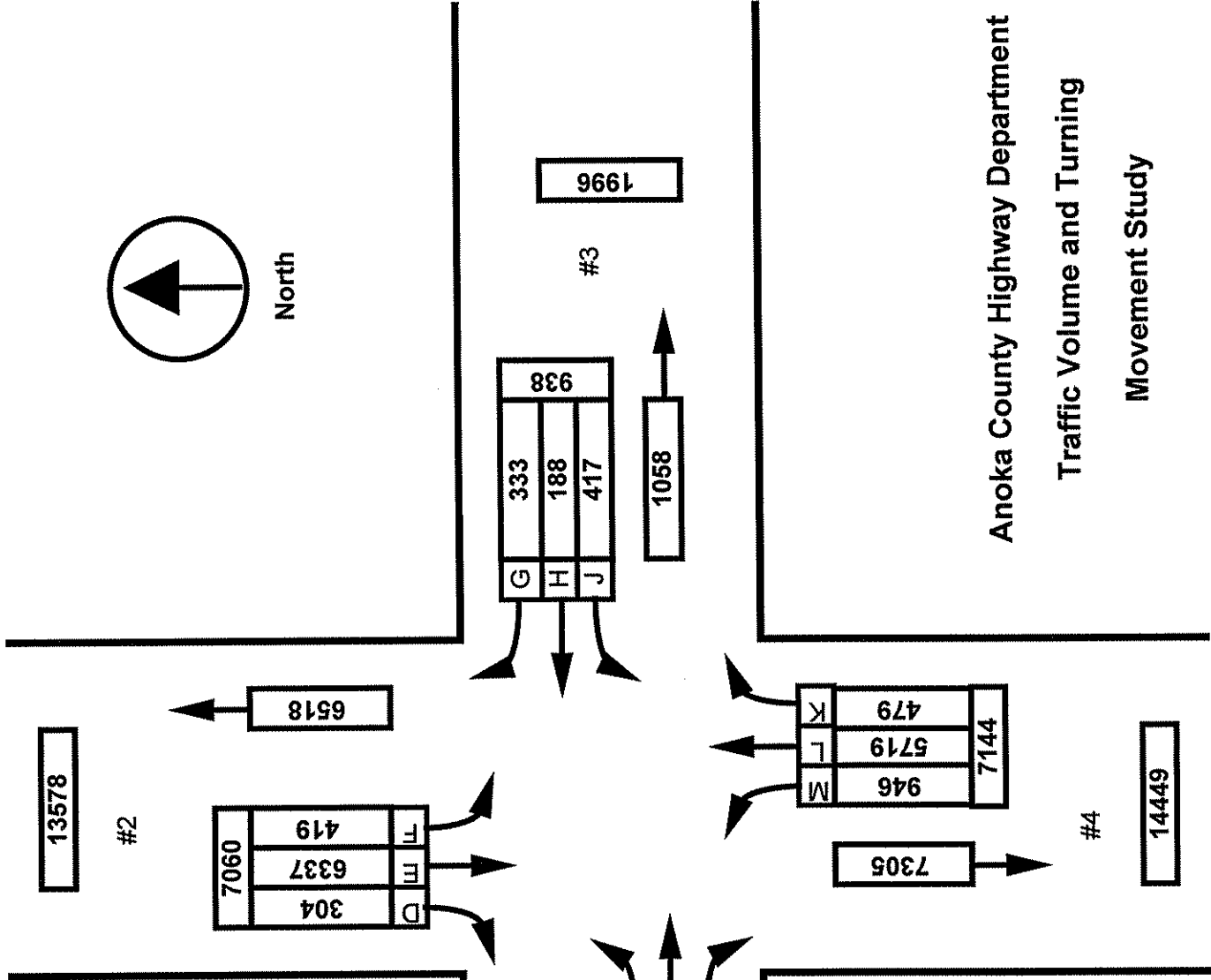
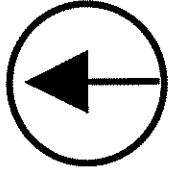


Date : 12/19-12/20/96AM 12/17-12/18/96PM

Count Number : TMC9627

Location : CSAH 78 (HANSON BLVD) @

113TH AVE NW



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Weather :
 Counted by: Ann
 Board # : 1
 Other :

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 Horsham, PA.

Study Name: TMC9627
 Site Code : 96270102
 Start Date: 12/19/96
 Page : 1

Vehicle group 1

Start Time	CSAH 78 (HANSON BLVD) Southbound				113th Ave. Westbound				CSAH 78 (HANSON BLVD) Northbound				113th Ave. Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
12/19/96																			
06:00	4	115	0	6	7	0	1	1	0	25	2	0	5	0	11	0	177	7	170
06:15	2	161	0	2	7	0	4	0	2	38	5	1	6	2	17	0	247	3	244
06:30	1	157	1	3	5	2	3	2	8	47	4	2	14	1	15	0	265	7	258
06:45	0	158	1	6	7	2	0	1	12	59	2	3	12	3	12	0	278	10	268
Hour	7	591	2	17	26	4	8	4	22	169	13	6	37	6	55	0	967	27	940
07:00	6	154	1	3	9	8	1	2	27	84	7	4	11	0	13	0	330	9	321
07:15	8	149	4	12	7	6	1	0	41	72	8	3	9	6	14	0	340	15	325
07:30	15	160	3	5	6	7	7	1	52	73	2	7	16	7	28	1	390	14	376
07:45	21	178	5	4	12	5	4	1	26	69	6	11	10	7	18	3	380	19	361
Hour	50	641	13	24	34	26	13	4	146	298	23	25	46	20	73	4	1440	57	1383
08:00	18	207	2	17	6	3	5	3	16	109	8	17	2	3	8	1	425	38	387
08:15	7	157	0	7	10	1	5	1	4	65	8	4	10	1	8	1	289	13	276
08:30	8	89	4	7	7	3	3	1	4	60	4	3	4	2	12	1	212	12	200
08:45	4	67	2	2	10	3	4	3	9	64	7	10	7	1	6	0	199	15	184
Hour	37	520	8	33	33	10	17	8	33	298	27	34	23	7	34	3	1125	78	1047
09:00	11	68	1	3	6	2	6	0	2	72	2	7	8	9	5	2	204	12	192
09:15	2	59	4	2	8	2	3	0	7	81	8	16	6	4	8	0	210	18	192
09:30	7	60	4	2	6	2	6	1	6	61	5	6	8	0	3	1	178	10	168
09:45	11	45	2	3	4	1	8	0	7	44	5	6	6	1	5	0	148	9	139
Hour	31	232	11	10	24	7	23	1	22	258	20	35	28	14	21	3	740	49	691
10:00	5	66	2	3	3	2	6	2	9	76	6	6	2	2	3	1	194	12	182
10:15	9	76	2	3	9	1	3	1	4	71	4	3	8	3	7	1	205	8	197
10:30	7	78	2	6	10	1	4	0	10	56	7	1	5	2	5	0	194	7	187
10:45	7	67	6	3	6	1	3	2	4	71	11	4	6	0	2	2	195	11	184
Hour	28	287	12	15	28	5	16	5	27	274	28	14	21	7	17	4	788	38	750
11:00	5	87	2	8	9	0	6	0	2	62	3	3	3	2	7	1	200	12	188
11:15	7	65	3	6	6	0	11	0	7	68	5	5	3	1	14	1	202	12	190
11:30	13	90	1	3	8	4	9	0	10	61	11	4	2	2	5	0	223	7	216
11:45	7	100	3	4	6	2	6	1	8	55	7	1	2	0	4	0	206	6	200
Hour	32	342	9	21	29	6	32	1	27	246	26	13	10	5	30	2	831	37	794
12:00	5	83	2	6	9	1	10	1	10	77	11	7	5	3	6	2	238	16	222
12:15	6	85	3	2	11	2	9	1	7	85	9	7	4	2	2	0	235	10	225
12:30	6	93	2	2	5	2	7	0	9	79	7	0	4	2	2	0	220	2	218
12:45	6	86	6	7	4	1	4	1	13	75	2	8	6	2	10	1	232	17	215
Hour	23	347	13	17	29	6	30	3	39	316	29	22	19	9	20	3	925	45	880

Weather :
 Counted by: Ann
 Board # : 1
 Other :

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Study Name: TMC9627
 Site Code : 96270102
 Start Date: 12/19/96
 Page : 2

Vehicle group 1

Start Time	CSAH 78 (HANSON BLVD) Southbound				113th Ave. Westbound				CSAH 78 (HANSON BLVD) Northbound				113th Ave. Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
13:00	14	86	2	0	9	2	2	0	10	64	10	3	5	0	5	0	212	3	209
13:15	5	84	5	4	7	3	12	3	10	97	4	4	8	0	1	0	247	11	236
13:30	4	70	5	4	6	1	6	1	6	73	9	2	9	0	6	2	204	9	195
13:45	8	67	1	4	7	3	3	1	10	72	7	0	7	2	10	1	203	6	197
Hour	31	307	13	12	29	9	23	5	36	306	30	9	29	2	22	3	866	29	837
14:00	3	63	13	3	5	1	4	0	9	95	7	8	8	3	6	0	228	11	217
14:15	15	97	2	6	11	3	2	0	16	82	10	3	7	2	9	1	266	10	256
14:30	9	158	5	12	7	1	7	2	12	92	14	6	20	3	22	1	371	21	350
14:45	9	122	11	21	6	2	7	0	15	107	9	13	7	3	12	1	345	35	310
Hour	36	440	31	42	29	7	20	2	52	376	40	30	42	11	49	3	1210	77	1133
15:00	13	109	10	13	7	7	4	0	13	91	7	9	9	5	10	1	308	23	285
15:15	9	81	3	4	5	2	6	1	15	86	11	4	15	2	10	2	256	11	245
15:30	7	82	9	4	10	4	7	1	15	114	10	6	6	1	6	1	283	12	271
15:45	15	92	9	3	4	6	6	1	24	129	5	1	8	7	13	2	325	7	318
Hour	44	364	31	24	26	19	23	3	67	420	33	20	38	15	39	6	1172	53	1119
16:00	8	100	4	0	6	8	19	2	13	102	8	3	7	1	5	1	287	6	281
16:15	3	114	12	3	11	5	11	0	24	89	12	3	5	2	10	0	304	6	298
16:30	3	118	6	1	6	3	21	0	28	161	9	9	2	3	7	1	378	11	367
16:45	7	121	10	3	13	4	6	0	26	130	10	3	13	2	9	0	357	6	351
Hour	21	453	32	7	36	20	57	2	91	482	39	18	27	8	31	2	1326	29	1297
17:00	8	107	4	1	10	9	9	1	41	155	10	2	2	3	13	0	375	4	371
17:15	3	103	13	3	4	4	10	0	26	141	17	1	10	4	11	0	350	4	346
17:30	8	98	5	1	12	7	5	0	26	102	13	3	7	5	15	0	307	4	303
17:45	2	110	8	1	4	8	3	0	50	170	10	6	12	1	7	0	392	7	385
Hour	21	418	30	6	30	28	27	1	143	568	50	12	31	13	46	0	1424	19	1405
18:00	2	106	6	0	3	5	6	0	24	149	12	1	9	3	9	0	335	1	334
18:15	5	115	7	0	9	4	6	0	24	128	11	3	8	4	8	0	332	3	329
18:30	4	176	8	2	6	7	3	0	25	124	14	2	6	6	6	0	389	4	385
18:45	6	152	9	0	7	6	2	0	29	170	10	2	9	3	7	0	412	2	410
Hour	17	549	30	2	25	22	17	0	102	571	47	8	32	16	30	0	1468	10	1458
19:00	6	145	5	1	7	1	4	1	26	144	9	2	7	3	13	1	375	5	370
19:15	5	78	8	2	3	2	2	0	14	93	6	1	8	3	13	0	238	3	235
19:30	3	75	5	0	1	2	1	0	13	73	5	1	9	4	4	0	196	1	195
19:45	6	89	10	0	4	3	3	0	6	85	6	0	12	2	6	0	232	0	232
Hour	20	387	28	3	15	8	10	1	59	395	26	4	36	12	36	1	1041	9	1032

Weather :
 Counted by: Ann
 Board # : 1
 Other :

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Study Name: TMC9627
 Site Code : 96270102
 Start Date: 12/19/96
 Page : 3

Vehicle group 1

Start Time	CSAH 78 (HANSON BLVD) Southbound				113th Ave. Westbound				CSAH 78 (HANSON BLVD) Northbound				113th Ave. Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
20:00	6	87	6	2	5	1	5	0	14	184	11	0	4	3	10	0	338	2	336
20:15	3	69	8	0	2	1	3	0	10	118	7	0	8	0	7	0	236	0	236
20:30	2	58	5	1	3	4	3	0	10	111	6	0	8	3	9	0	223	1	222
20:45	2	50	5	0	2	0	1	0	8	88	4	0	6	3	6	0	175	0	175
Hour	13	264	24	3	12	6	12	0	42	501	28	0	26	9	32	0	972	3	969
21:00	1	48	6	1	3	2	1	1	11	82	7	0	4	0	2	0	169	2	167
21:15	2	39	3	1	3	0	2	0	12	65	5	0	9	2	8	0	151	1	150
21:30	2	49	4	2	5	1	2	0	7	54	5	0	4	2	2	1	140	3	137
21:45	3	59	4	1	1	2	0	0	8	40	3	1	4	2	4	0	132	2	130
Hour	8	195	17	5	12	5	5	1	38	241	20	1	21	6	16	1	592	8	584
Total	419	6337	304	241	417	188	333	41	946	5719	479	251	466	160	551	35	16887	568	16319
% Apr.	5.7	86.7	4.1	3.3	42.5	19.2	34.0	4.1	12.7	77.3	6.4	3.3	38.4	13.2	45.4	2.8	-	-	-
% Int.	2.4	37.5	1.8	1.4	2.4	1.1	1.9	0.2	5.6	33.8	2.8	1.4	2.7	0.9	3.2	0.2	-	-	-

For Street Approaches:

Northbound:

CSAH 78 (HANSON BLVD)
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9627.PDF
 Count Type: IMC. Channel: 0. Count Date: 12/19/96
 Number of Lanes: 2
 Approach Speed: 40
 Total Approach Traffic: 7144

Southbound:

CSAH 78 (HANSON BLVD)
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9627.PDF
 Count Type: IMC. Channel: 0. Count Date: 12/19/96
 Number of Lanes: 2
 Approach Speed: 40
 Total Approach Traffic: 7060

Minor Street Approaches:

Eastbound:

113th Ave.
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9627.PDF
 Count Type: IMC. Channel: 0. Count Date: 12/19/96
 Number of Lanes: 2
 Approach Speed: 0
 Total Approach Traffic: 1177

Westbound:

113th Ave.
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9627.PDF
 Count Type: IMC. Channel: 0. Count Date: 12/19/96
 Number of Lanes: 2
 Approach Speed: 0
 Total Approach Traffic: 938

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	200	100	160
1	0	0 W 18	200	100	160
2	0	0 W 19	200	100	160
3	0	0 W 20	200	100	160
4	0	0 W 21	200	100	160
5	0	0 W 22	200	100	160
6	804	98 E 4	MAIN 200	100	MAIN 160
7	1171	139 E 1	MAIN 200	--BOTH-- 100	MAIN 160
8	923	64 E 12	MAIN 200	MAIN 100	MAIN 160
9	574	63 E 13	200	100	160
10	656	49 W 15	MAIN 200	100	160
11	682	67 W 9	MAIN 200	100	160
12	767	65 W 11	MAIN 200	100	MAIN 160
13	723	61 W 14	MAIN 200	100	MAIN 160
14	975	102 E 3	MAIN 200	--BOTH-- 100	MAIN 160
15	959	92 E 5	MAIN 200	MAIN 100	MAIN 160
16	1118	113 W 2	MAIN 200	--BOTH-- 100	MAIN 160
17	1230	90 E 6	MAIN 200	MAIN 100	MAIN 160
18	1316	78 E 8	MAIN 200	MAIN 100	MAIN 160
19	915	84 E 7	MAIN 200	MAIN 100	MAIN 160
20	872	67 E 10	MAIN 200	100	MAIN 160
21	519	43 E 16	200	100	160
22	0	0 W 23	200	100	160
23	0	0 W 24	200	100	160

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 3 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: 1458.

- 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 1 hours.

Warrant 10 - Peak Hour Delay

NOT SATISFIED. Peak hour (1800 hours) volume not adequate.

Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 150.

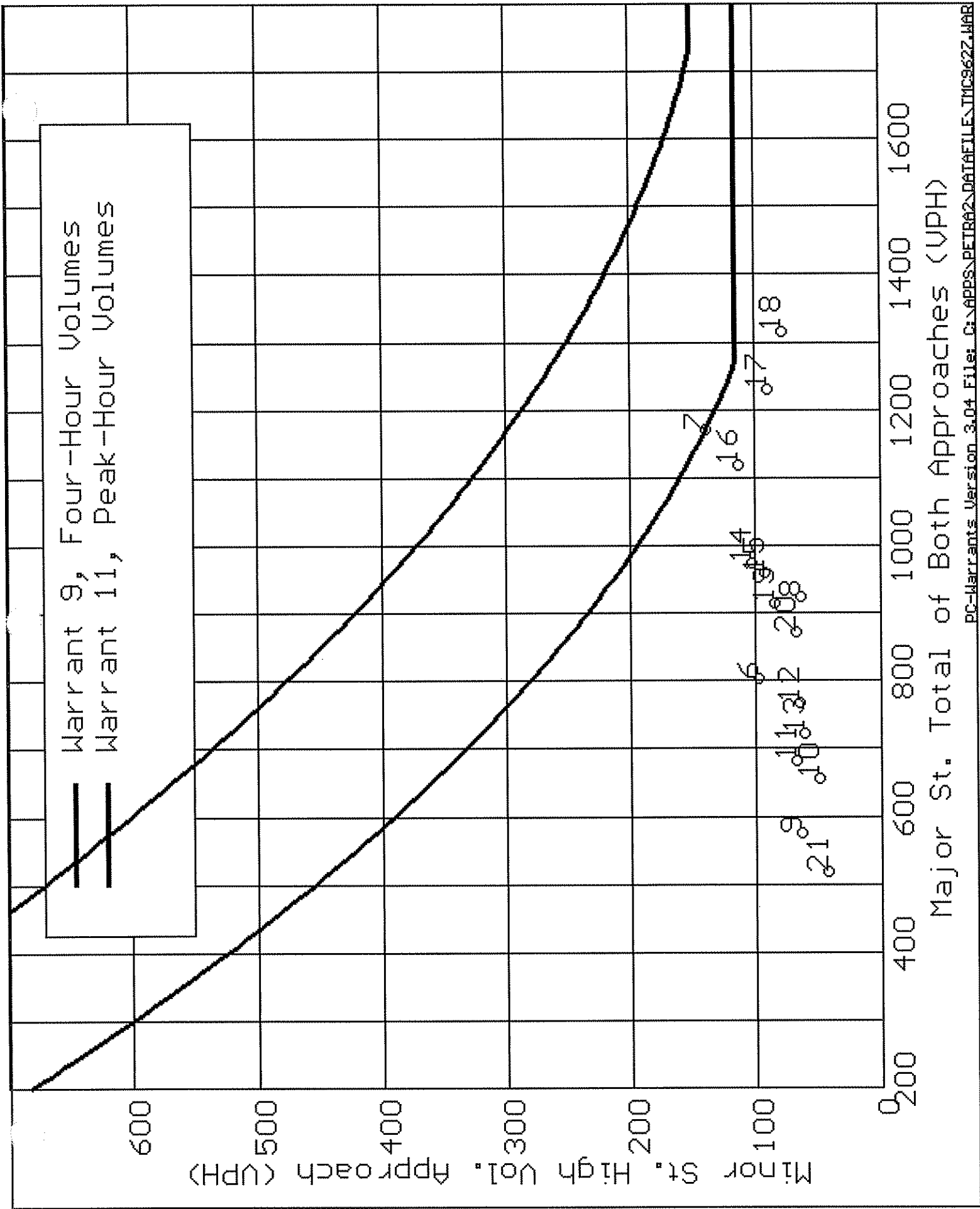
Warrant 11 - Peak Hour Volume

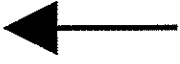
NOT SATISFIED.

Minor St. High Vol. Approach (VPH)

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

Major St. Total of Both Approaches (VPH)




NORTH

APP. #1=SB CSAH 78
(HANSON BLVD)

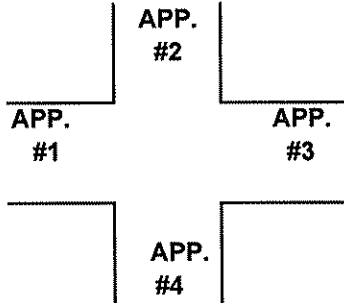
APP. #2 =WB 113TH AVE

APP. #3=NB CSAH 78
(HANSON BLVD)

APP. #4=EB 113TH AVE

COUNT LOCATION: CSAH 78 (HANSON BLVD) @
113TH AVE NW

DATE: 12/19/96



- 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						5		2
6:15-6:30						2		1
6:30-6:45						3		4
6:45-7:00				1	1	3		7
HOURLY TOTAL					1	HOURLY TOTAL		27
7:00-7:15						6		3
7:15-7:30						2		13
7:30-7:45						7		7
7:45-8:00						7		12
HOURLY TOTAL						HOURLY TOTAL		57
8:00-8:15			1		1	5		33
8:15-8:30						4		9
8:30-8:45						2		10
8:45-9:00			1		1	4		11
HOURLY TOTAL					2	HOURLY TOTAL		78
9:00-9:15						8		4
9:15-9:30			1		1	7		11
9:30-9:45						8		2
9:45-10:00						7		2
HOURLY TOTAL					1	HOURLY TOTAL		49
10:00-10:15						11		1
10:15-10:30						8		
10:30-10:45						4		3
10:45-11:00						6		5
HOURLY TOTAL						HOURLY TOTAL		38
11:00-11:15						9		3
11:15-11:30						6		6
11:30-11:45						2		5
11:45-12:00						5		1
HOURLY TOTAL						HOURLY TOTAL		37
12:00-12:15						8		8
12:15-12:30						7		3
12:30-12:45						2		
12:45-1:00						11		6
HOURLY TOTAL						HOURLY TOTAL		45
1:00-1:15						2		1
1:15-1:30						7		4
1:30-1:45						8		1
1:45-2:00						6		
HOURLY TOTAL						HOURLY TOTAL		29

←

NORTH

APP. #1=SB CSAH 78
(HANSON BLVD)

APP. #2 =WB 113TH AVE

APP. #3=NB CSAH 78
(HANSON BLVD)

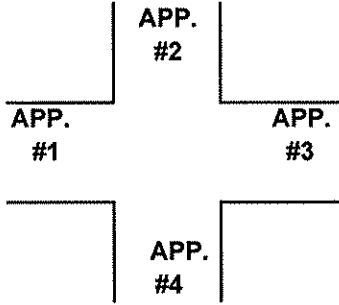
APP. #4=EB 113TH AVE

COUNT LOCATION:

CSAH 78 (HANSON BLVD) @
113TH AVE NW

DATE:

12/19/96



- 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						10		1
2:15-2:30				1	1	6		4
2:30-2:45						9		12
2:45-3:00						7		28
HOURLY TOTAL					1	HOURLY TOTAL		77
3:00-3:15				1	1	8		15
3:15-3:30				1	1	5		6
3:30-3:45						3		9
3:45-4:00				1	1	3		4
HOURLY TOTAL					3	HOURLY TOTAL		53
4:00-4:15				1	1	1		5
4:15-4:30				1	1	2		4
4:30-4:45						4		7
4:45-5:00						5		
HOURLY TOTAL					2	HOURLY TOTAL		28
5:00-5:15						3		1
5:15-5:30						3		1
5:30-5:45				2	2	3		1
5:45-6:00						6		
HOURLY TOTAL					2	HOURLY TOTAL		18
6:00-6:15								1
6:15-6:30	1			1	2			3
6:30-6:45	1				1	4		
6:45-7:00								2
HOURLY TOTAL					3	HOURLY TOTAL		10
7:00-7:15						5		
7:15-7:30						3		
7:30-7:45						1		
7:45-8:00								
HOURLY TOTAL						HOURLY TOTAL		9
8:00-8:15						2		
8:15-8:30								
8:30-8:45						1		
8:45-9:00								
HOURLY TOTAL						HOURLY TOTAL		3
9:00-9:15	1			2	3	2		
9:15-9:30								1
9:30-9:45						2		1
9:45-10:00						2		
HOURLY TOTAL					3	HOURLY TOTAL		8