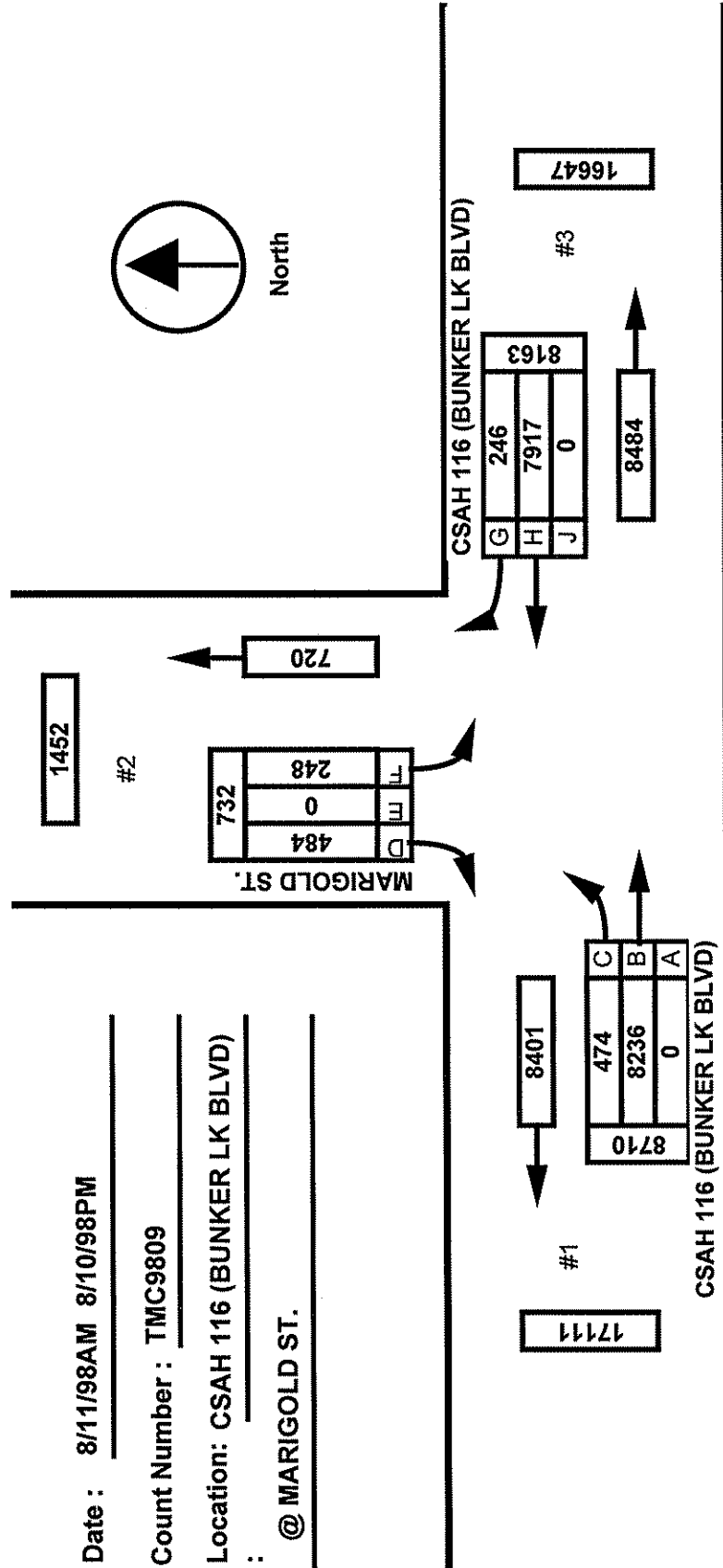


Date : 8/11/98AM 8/10/98PM

Count Number : TMC9809

Location: CSAH 116 (BUNKER LK BLVD)

@ MARIGOLD ST.



	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	1	1

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

Weather :
 Counted by: Sarah and Vallie
 Board # :
 cher :

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 Horsham, PA.

Study Name: TMC9809
 Site Code : 98090202
 Start Date: 08/11/98
 Page : 1

Vehicle group 1

Start Time	MARIGOLD ST. Southbound			CSAH 116 (BUNKER LK BL) Westbound			CSAH 116 (BUNKER LK BL) Eastbound			Intrvl. Total	Exclude Total	Include Total
	Left	Right	Other	Thru	Right	Other	Left	Thru	Other			
08/11/98												
06:00	3	6	1	61	1	2	0	46	2	122	5	117
06:15	1	9	0	96	1	3	1	63	2	176	5	171
06:30	8	15	0	125	4	4	2	62	4	224	8	216
06:45	4	18	0	147	6	3	1	94	5	278	8	270
Hour	16	48	1	429	12	12	4	265	13	800	26	774
07:00	3	10	0	137	0	2	4	87	5	248	7	241
07:15	7	10	1	116	1	6	2	108	13	264	20	244
07:30	7	19	2	135	4	10	3	76	3	259	15	244
07:45	11	4	1	164	0	6	6	127	13	332	20	312
Hour	28	43	4	552	5	24	15	398	34	1103	62	1041
08:00	3	11	2	105	6	5	3	75	7	217	14	203
08:15	3	6	2	104	4	10	6	67	4	206	16	190
08:30	5	10	2	98	2	6	3	77	6	209	14	195
08:45	2	11	2	107	3	6	6	94	8	239	16	223
Hour	13	38	8	414	15	27	18	313	25	871	60	811
09:00	1	6	0	86	3	5	4	85	7	197	12	185
09:15	2	7	3	83	1	5	5	76	7	189	15	174
09:30	5	14	1	122	3	4	6	70	3	228	8	220
09:45	3	7	3	101	3	5	5	94	16	237	24	213
Hour	11	34	7	392	10	19	20	325	33	851	59	792
10:00	4	9	5	109	3	4	5	84	8	231	17	214
10:15	5	6	1	110	2	7	3	89	1	224	9	215
10:30	4	7	4	102	6	5	11	97	9	245	18	227
10:45	2	8	4	98	3	8	2	108	1	234	13	221
Hour	15	30	14	419	14	24	21	378	19	934	57	877
11:00	3	7	0	107	7	7	6	96	3	236	10	226
11:15	2	6	0	112	5	9	4	130	8	276	17	259
11:30	8	9	1	129	2	7	6	120	5	287	13	274
11:45	2	6	0	151	5	10	8	127	10	319	20	299
Hour	15	28	1	499	19	33	24	473	26	1118	60	1058
12:00	3	10	2	118	1	7	11	124	7	283	16	267
12:15	9	5	0	123	1	5	7	123	3	276	8	268
12:30	6	5	1	113	3	6	8	103	6	251	13	238
12:45	4	13	1	124	6	10	9	139	11	317	22	295
Hour	22	33	4	478	11	28	35	489	27	1127	59	1068

Weather :
 Counted by: Sarah and Vallie
 Board # :
 cher :

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Study Name: TMC9809
 Site Code : 98090202
 Start Date: 08/11/98
 Page : 2

Vehicle group 1

Start Time	MARIGOLD ST. Southbound			CSAH 116 (BUNKER LK BL) Westbound			CSAH 116 (BUNKER LK BL) Eastbound			Intrvl.	Exclude	Include
	Left	Right	Other	Thru	Right	Other	Left	Thru	Other	Total	Total	Total
13:00	5	5	0	129	3	6	2	113	4	267	10	257
13:15	3	7	3	127	5	4	7	141	7	304	14	290
13:30	4	5	0	115	2	3	8	100	6	243	9	234
13:45	3	3	0	117	0	4	5	121	4	257	8	249
Hour	15	20	3	488	10	17	22	475	21	1071	41	1030
14:00	0	8	0	99	3	3	6	122	9	250	12	238
14:15	3	5	0	92	4	4	7	117	1	233	5	228
14:30	2	6	0	101	2	4	4	122	2	243	6	237
14:45	0	8	1	112	2	4	8	129	11	275	16	259
Hour	5	27	1	404	11	15	25	490	23	1001	39	962
15:00	4	4	0	120	7	5	5	164	4	313	9	304
15:15	3	2	0	131	3	6	11	157	0	313	6	307
15:30	8	3	0	138	2	8	12	179	7	357	15	342
15:45	1	8	0	141	7	7	12	158	5	339	12	327
Hour	16	17	0	530	19	26	40	658	16	1322	42	1280
16:00	5	4	0	160	5	5	15	187	4	385	9	376
16:15	5	11	1	156	8	1	7	204	3	396	5	391
16:30	4	5	0	170	5	2	6	235	5	432	7	425
16:45	5	10	0	190	6	9	12	265	1	498	10	488
Hour	19	30	1	676	24	17	40	891	13	1711	31	1680
17:00	5	2	0	183	8	3	14	199	3	417	6	411
17:15	5	5	1	190	7	1	16	188	3	416	5	411
17:30	3	10	0	173	7	2	4	217	0	416	2	414
17:45	5	9	0	189	1	2	17	193	2	418	4	414
Hour	18	26	1	735	23	8	51	797	8	1667	17	1650
18:00	4	8	0	182	3	2	10	206	1	416	3	413
18:15	7	12	0	152	4	3	12	172	5	367	8	359
18:30	6	4	2	163	4	3	18	162	3	365	8	357
18:45	6	5	0	167	3	1	7	157	2	348	3	345
Hour	23	29	2	664	14	9	47	697	11	1496	22	1474
19:00	6	6	0	145	4	2	11	176	0	350	2	348
19:15	2	9	0	106	1	1	11	151	0	281	1	280
19:30	2	7	0	120	3	1	4	129	0	266	1	265
19:45	2	6	0	105	7	0	17	147	1	285	1	284
Hour	12	28	0	476	15	4	43	603	1	1182	5	1177

Weather :
 Counted by: Sarah and Vallie
 Board # :
 Ther :

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Study Name: TMC9809
 Site Code : 98090202
 Start Date: 08/11/98
 Page : 3

Vehicle group 1

Start Time	MARIGOLD ST. Southbound			CSAH 116 (BUNKER LK BL) Westbound			CSAH 116 (BUNKER LK BL) Eastbound			Intrvl. Total	Exclude Total	Include Total
	Left	Right	Other	Thru	Right	Other	Left	Thru	Other			
20:00	3	6	0	131	13	1	9	143	4	310	5	305
20:15	5	6	0	87	5	2	11	163	3	282	5	277
20:30	3	12	1	103	2	0	10	144	2	277	3	274
20:45	1	8	0	121	6	1	12	113	1	263	2	261
Hour	12	32	1	442	26	4	42	563	10	1132	15	1117
21:00	6	4	0	105	4	0	11	132	0	262	0	262
21:15	1	8	0	86	7	1	7	103	0	213	1	212
21:30	0	1	0	68	5	0	3	109	0	186	0	186
21:45	1	8	0	60	2	0	6	77	0	154	0	154
Hour	8	21	0	319	18	1	27	421	0	815	1	814
Total	248	484	48	7917	246	268	474	8236	280	18201	596	17605
% Apr.	31.7	62.0	6.1	93.9	2.9	3.1	5.2	91.6	3.1	-	-	-
% Int.	1.3	2.6	0.2	43.4	1.3	1.4	2.6	45.2	1.5	-	-	-

Major Street Approaches:

Eastbound:

CSAH 116 (BUNKER LK BLVD)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9809.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/11/98
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 8710

Westbound:

CSAH 116 (BUNKER LK BLVD)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9809.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/11/98
 Number of Lanes: 1
 Approach Speed: 50
 Total Approach Traffic: 8163

Minor Street Approaches:

Northbound:

Data File: C:\APPS\PETRA2\DATAFILE\TMC9809.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/11/98
 Number of Lanes: 1
 Approach Speed: 0
 Total Approach Traffic: 0

Southbound:

MARIGOLD ST.

Data File: C:\APPS\PETRA2\DATAFILE\TMC9809.PDF
 Count Type: IMC. Channel: 0. Count Date: 8/11/98
 Number of Lanes: 1
 Approach Speed: 0
 Total Approach Traffic: 732

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	710	64 S 2	MAIN 105	--BOTH-- 52	MAIN 84
7	970	71 S 1	MAIN 105	--BOTH-- 52	MAIN 84
8	760	51 S 5	MAIN 105	MAIN 52	MAIN 84
9	747	45 S 7	MAIN 105	MAIN 52	MAIN 84
10	832	45 S 8	MAIN 105	MAIN 52	MAIN 84
11	1015	43 S 11	MAIN 105	MAIN 52	MAIN 84
12	1013	55 S 3	MAIN 105	--BOTH-- 52	MAIN 84
13	995	35 S 13	MAIN 105	MAIN 52	MAIN 84
14	930	32 S 15	MAIN 105	MAIN 52	MAIN 84
15	1247	33 S 14	MAIN 105	MAIN 52	MAIN 84
16	1631	49 S 6	MAIN 105	MAIN 52	MAIN 84
17	1606	44 S 9	MAIN 105	MAIN 52	MAIN 84
18	1422	52 S 4	MAIN 105	--BOTH-- 52	MAIN 84
19	1137	40 S 12	MAIN 105	MAIN 52	MAIN 84
20	1073	44 S 10	MAIN 105	MAIN 52	MAIN 84
21	785	29 S 16	MAIN 105	MAIN 52	MAIN 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

NOT SATISFIED. Required values reached for 0 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 4 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: 1680.

- 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: 504; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

NOT SATISFIED. Required values reached for 1 hours.

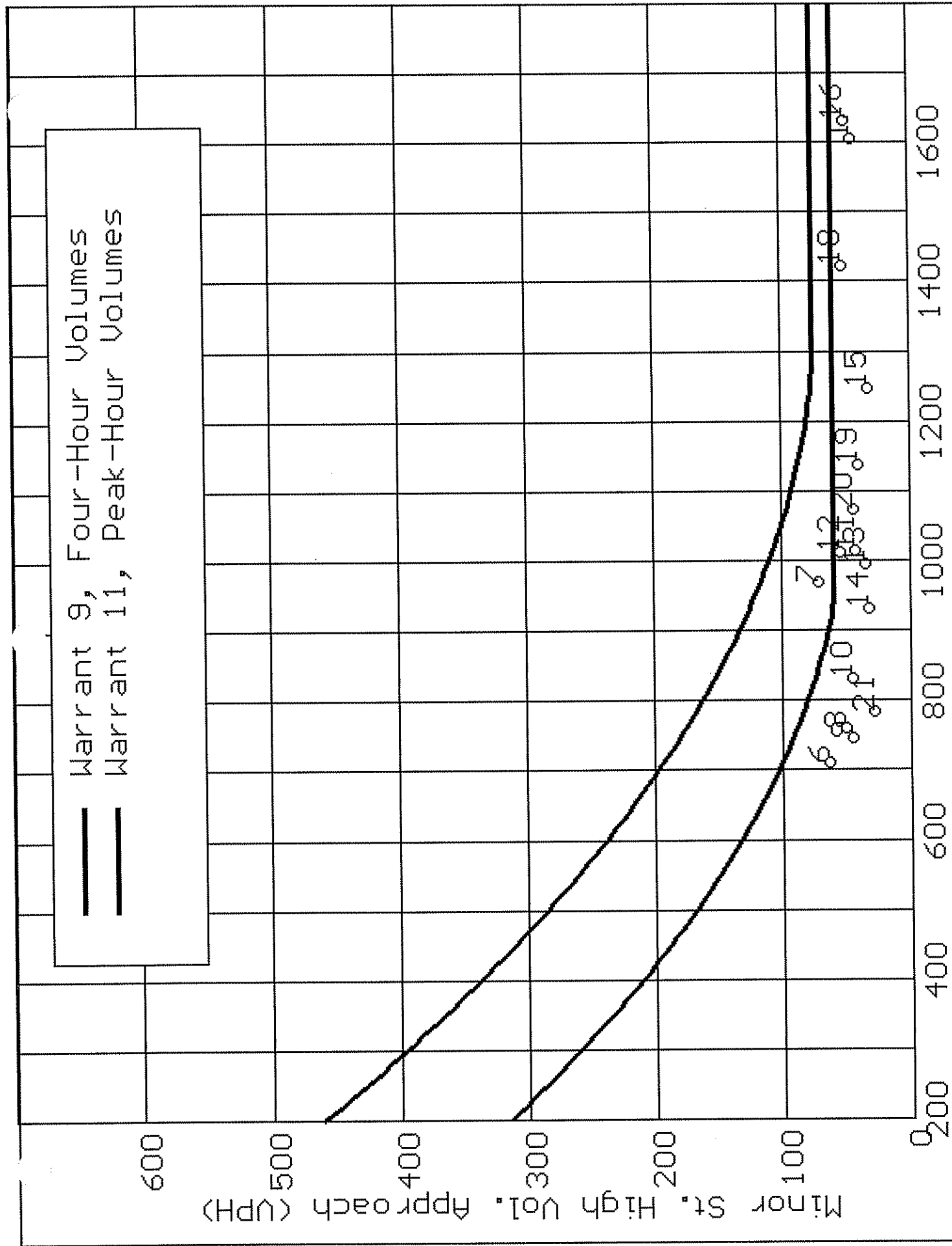
Warrant 10 - Peak Hour Delay

NOT SATISFIED. Peak hour (1600 hours) volume not adequate.

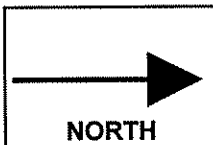
Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 100.

Warrant 11 - Peak Hour Volume

NOT SATISFIED.



Major St. Total of Both Approaches (VPH)



COUNT LOCATION:

CSAH 116 (BUNKER LK BLVD)

DATE:

8/11/98

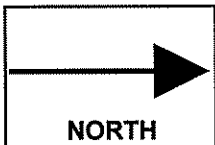
@ MARIGOLD ST.

APP. #1= NB
(DITCH)
APP. #2 = EB CSAH 116
(BUNKER LK BLVD)
APP. #3=SB
MARIGOLD ST.
APP. #4= WB CSAH 116
(BUNKER LK BLVD)

APP. #1 APP. #2
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
6:00-6:15AM						5		
6:15-6:30						6		
6:30-6:45						8		1
6:45-7:00						8		
HOURLY TOTAL						HOURLY TOTAL		28
7:00-7:15				3	3	7		
7:15-7:30						15		1
7:30-7:45						10		2
7:45-8:00				3	3	18		1
HOURLY TOTAL					6	HOURLY TOTAL		54
8:00-8:15						14		
8:15-8:30						15		
8:30-8:45						15		
8:45-9:00						16		
HOURLY TOTAL						HOURLY TOTAL		60
9:00-9:15						12		
9:15-9:30						14		
9:30-9:45						8		
9:45-10:00			1		1	23		1
HOURLY TOTAL					1	HOURLY TOTAL		58
10:00-10:15			1	1	2	18		
10:15-10:30						9		
10:30-10:45						18		
10:45-11:00						14		
HOURLY TOTAL					2	HOURLY TOTAL		59
11:00-11:15						11		
11:15-11:30			2		2	17		
11:30-11:45			1		1	13		
11:45-12:00			1		1	21		
HOURLY TOTAL					4	HOURLY TOTAL		62
12:00-12:15						14		
12:15-12:30						23		
12:30-12:45						10		
12:45-1:00						11		
HOURLY TOTAL						HOURLY TOTAL		58
1:00-1:15						8	1	1
1:15-1:30		1	6		7	13		
1:30-1:45			8		8	10		
1:45-2:00						8		
HOURLY TOTAL					15	HOURLY TOTAL		41



COUNT LOCATION:

CSAH 116 (BUNKER LK BLVD)
@ MARIGOLD ST.

DATE:

8/10/98

APP. #1= NB
(DITCH)
APP. #2 = EB CSAH 116
(BUNKER LK BLVD)
APP. #3=SB
MARIGOLD ST.
APP. #4= WB CSAH 116
(BUNKER LK BLVD)

APP. #1 APP. #3
APP. #2 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						9		
2:15-2:30			1		1	6		
2:30-2:45						6	1	1
2:45-3:00				1	1	4	1	
HOURLY TOTAL					2	HOURLY TOTAL		28
3:00-3:15			1		1	9		1
3:15-3:30			1		1	6		
3:30-3:45			2	1	3	13		2
3:45-4:00			4	1	5	9	1	
HOURLY TOTAL					10	HOURLY TOTAL		41
4:00-4:15			2		2	9		1
4:15-4:30			2		2	9		
4:30-4:45			5		5	6		
4:45-5:00			2		2	9		
HOURLY TOTAL					11	HOURLY TOTAL		34
5:00-5:15			2		2	6		
5:15-5:30			2		2	5		
5:30-5:45						2		
5:45-6:00						2	1	
HOURLY TOTAL					4	HOURLY TOTAL		16
6:00-6:15						3		
6:15-6:30						7		
6:30-6:45		1	1		2	8		
6:45-7:00		1	3		4	1	1	
HOURLY TOTAL					6	HOURLY TOTAL		20
7:00-7:15						1		
7:15-7:30		2	6		8			
7:30-7:45						1		
7:45-8:00			1	1	2	1		
HOURLY TOTAL					10	HOURLY TOTAL		3
8:00-8:15			3		3	2		
8:15-8:30						4		1
8:30-8:45						2		
8:45-9:00						2		
HOURLY TOTAL					3	HOURLY TOTAL		11
9:00-9:15								
9:15-9:30			1		1	1		
9:30-9:45								
9:45-10:00								
HOURLY TOTAL					1	HOURLY TOTAL		1