

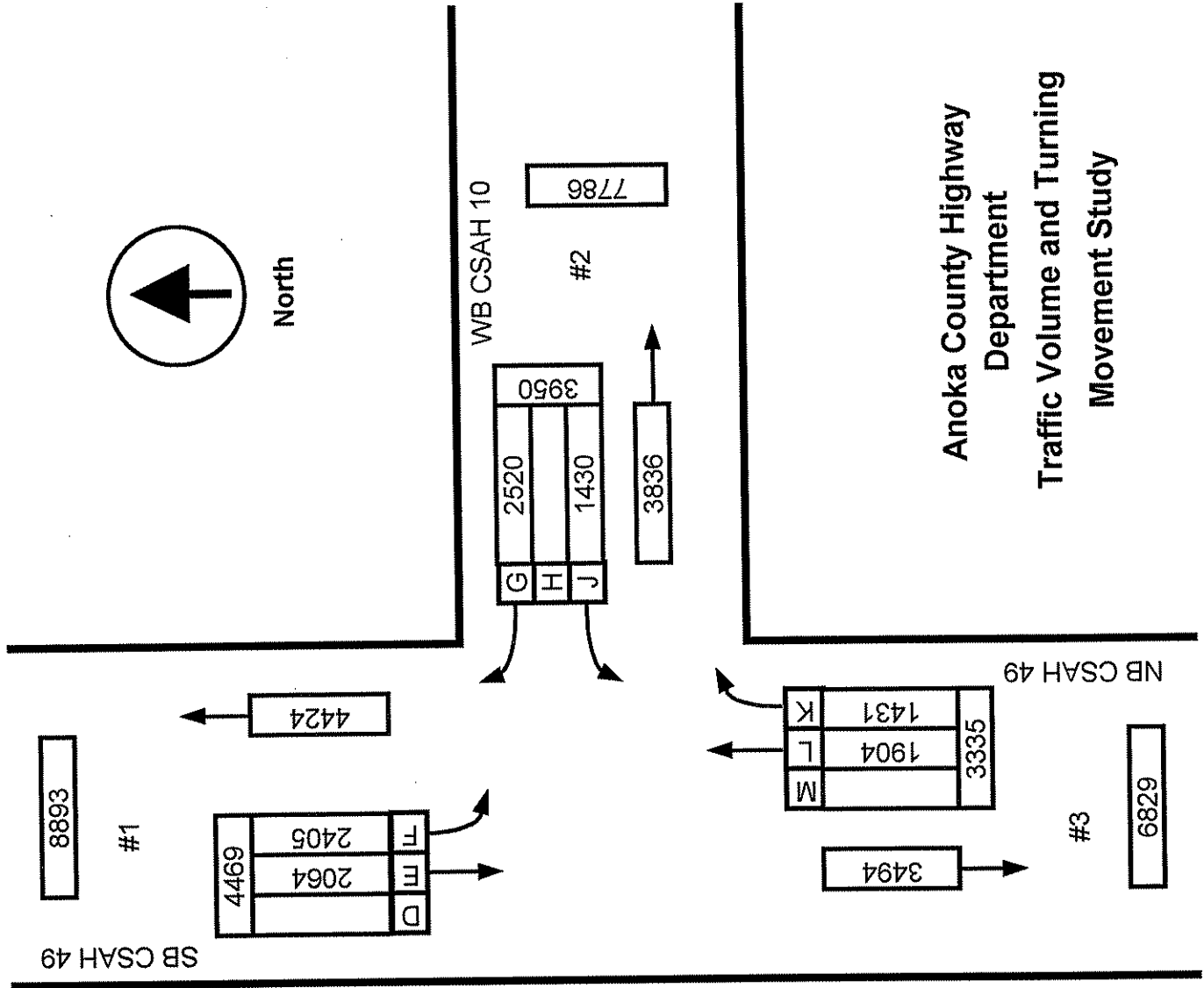
Date : 1/5/99AM 1/6/99PM

Count Number : TMC9901

Location : CSAH 49 (HODGSON ROAD) @

CSAH 10 (BIRCH STREET)

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



Anoka County Highway
Department
Traffic Volume and Turning
Movement Study

Anoka County Highway Department

Traffic Engineering

Traffic Volume and Turning Movement Study

File Name : TMC9901
Site Code : 99010201
Start Date : 01/05/1999
Page : 1

WEATHER:
COUNTER TDC-8
COUNTED BY: Dick and Josie

Groups Printed: 1 - Unshifted

Start Time	CSAH 49 (Hodgson Rd) Southbound				CSAH 10 (Birch St) Westbound				CSAH 49 (Hodgson Rd) Northbound				Eastbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy			
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
06:00	24	41	0	0	24	0	9	0	0	12	1	0	0	0	0	0	0	111	111
06:15	21	74	0	2	53	0	20	1	0	6	1	0	0	0	0	0	3	175	178
06:30	40	71	0	0	56	0	24	0	0	7	4	0	0	0	0	0	0	202	202
06:45	38	82	0	0	66	0	41	0	0	10	11	1	0	0	0	0	1	248	249
Total	123	268	0	2	199	0	94	1	0	35	17	1	0	0	0	0	4	736	740
07:00	46	83	0	2	69	0	42	0	0	25	15	0	0	0	0	0	2	280	282
07:15	41	88	0	1	78	0	87	2	0	37	21	0	0	0	0	0	3	352	355
07:30	71	92	0	8	72	0	76	5	0	34	22	0	0	0	0	0	13	367	380
07:45	65	100	0	9	83	0	79	1	0	33	16	3	0	0	0	0	13	376	389
Total	223	363	0	20	302	0	284	8	0	129	74	3	0	0	0	0	31	1375	1408
08:00	35	76	0	8	51	0	80	7	0	37	11	0	0	0	0	0	15	290	305
08:15	41	54	0	11	55	0	48	1	0	28	11	0	0	0	0	0	12	237	249
08:30	31	47	0	7	31	0	23	2	0	17	6	0	0	0	0	0	9	155	164
08:45	47	39	0	11	34	0	37	0	0	18	19	0	0	0	0	0	11	194	205
Total	154	216	0	37	171	0	188	10	0	100	47	0	0	0	0	0	47	876	923
09:00	32	29	0	7	68	0	67	4	0	27	15	0	0	0	0	0	11	238	249
09:15	18	31	0	4	22	0	30	3	0	19	9	0	0	0	0	0	7	129	136
09:30	29	26	0	5	14	0	30	3	0	32	6	0	0	0	0	0	8	137	145
09:45	21	27	0	3	20	0	15	1	0	19	10	3	0	0	0	0	7	112	119
Total	100	113	0	19	124	0	142	11	0	97	40	3	0	0	0	0	33	616	649
10:00	28	21	0	3	15	0	21	2	0	11	10	0	0	0	0	0	5	106	111
10:15	15	11	0	1	15	0	21	0	0	8	4	0	0	0	0	0	1	74	75
10:30	14	17	0	2	7	0	20	1	0	10	10	0	0	0	0	0	3	78	81
10:45	14	14	0	1	13	0	21	0	0	14	8	0	0	0	0	0	1	84	85
Total	71	63	0	7	50	0	83	3	0	43	32	0	0	0	0	0	10	342	352
11:00	21	13	0	1	13	0	20	1	0	23	9	0	0	0	0	0	2	99	101
11:15	26	28	0	6	16	0	26	1	0	22	13	0	0	0	0	0	7	131	138
11:30	40	19	0	4	7	0	19	1	0	16	13	0	0	0	0	0	5	114	119
11:45	39	22	0	1	11	0	26	3	0	15	19	0	0	0	0	0	4	132	136
Total	126	82	0	12	47	0	91	6	0	76	54	0	0	0	0	0	18	476	494
12:00	26	15	0	3	10	0	19	2	0	17	14	0	0	0	0	0	5	101	106
12:15	28	22	0	1	14	0	22	1	0	14	15	0	0	0	0	0	2	115	117
12:30	28	17	0	2	9	0	44	2	0	21	4	3	0	0	0	0	7	123	130
12:45	29	21	0	2	9	0	22	1	0	27	16	0	0	0	0	0	3	124	127
Total	111	75	0	8	42	0	107	6	0	79	49	3	0	0	0	0	17	463	480
13:00	15	27	0	5	19	0	13	0	0	23	13	2	0	0	0	0	7	110	117
13:15	23	19	0	1	11	0	14	0	0	29	11	0	0	0	0	0	1	107	108
13:30	21	16	0	2	11	0	25	2	0	20	17	0	0	0	0	0	4	110	114
13:45	21	31	0	0	9	0	25	1	0	29	14	0	0	0	0	0	1	129	130
Total	80	93	0	8	50	0	77	3	0	101	55	2	0	0	0	0	13	456	469
14:00	20	31	0	2	17	0	27	2	0	38	14	0	0	0	0	0	4	147	151
14:15	27	28	0	4	9	0	31	0	0	45	15	0	0	0	0	0	4	155	159
14:30	40	27	0	12	15	0	50	4	0	44	19	0	0	0	0	0	16	195	211
14:45	30	31	0	2	9	0	41	4	0	41	24	0	0	0	0	0	6	176	182
Total	117	117	0	20	50	0	149	10	0	168	72	0	0	0	0	0	30	673	703
15:00	89	45	0	12	9	0	45	2	0	36	26	0	0	0	0	0	14	250	264
15:15	60	33	0	12	20	0	42	1	0	42	36	0	0	0	0	0	13	233	246
15:30	65	41	0	4	15	0	48	0	0	54	37	0	0	0	0	0	4	260	264
15:45	59	46	0	3	34	0	93	12	0	60	47	0	0	0	0	0	15	339	354
Total	273	165	0	31	78	0	228	15	0	192	146	0	0	0	0	0	46	1082	1128
16:00	66	41	0	13	21	0	71	3	0	60	46	0	0	0	0	0	16	305	321
16:15	57	54	0	11	21	0	54	0	0	69	40	0	0	0	0	0	11	295	306
16:30	65	28	0	2	22	0	64	2	0	77	54	1	0	0	0	0	5	310	315
16:45	64	39	0	2	16	0	63	2	0	85	66	0	0	0	0	0	4	333	337
Total	252	162	0	28	80	0	252	7	0	291	206	1	0	0	0	0	36	1243	1279

Anoka County Highway Department
 Traffic Engineering
 Traffic Volume and
 Turning Movement Study

File Name : TMC9901
 Site Code : 99010201
 Start Date : 01/05/1999
 Page : 2

Groups Printed: 1 - Unshifted

Start Time	CSAH 49 (Hodgson Rd) Southbound				CSAH 10 (Birch St) Westbound				CSAH 49 (Hodgson Rd) Northbound				Eastbound				Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy	Left	Thru	Right	Heavy				
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
17:00	67	42	0	0	24	0	82	1	0	75	73	0	0	0	0	0	0	1	363	364
17:15	84	34	0	0	22	0	118	1	0	74	66	0	0	0	0	0	0	1	398	399
17:30	81	29	0	5	26	0	108	3	0	86	81	0	0	0	0	0	0	8	411	419
17:45	73	31	0	0	21	0	72	1	0	59	76	0	0	0	0	0	0	1	332	333
Total	305	136	0	5	93	0	380	6	0	294	296	0	0	0	0	0	0	11	1504	1515
18:00	56	32	0	1	19	0	75	0	0	55	78	0	0	0	0	0	0	1	315	316
18:15	72	35	0	2	19	0	59	1	0	51	72	0	0	0	0	0	0	3	308	311
18:30	53	26	0	0	32	0	64	1	0	46	44	0	0	0	0	0	0	1	265	266
18:45	62	40	0	0	31	0	69	0	0	46	36	0	0	0	0	0	0	0	284	284
Total	243	133	0	3	101	0	267	2	0	198	230	0	0	0	0	0	0	5	1172	1177
19:00	74	22	0	3	20	0	58	0	0	38	39	0	0	0	0	0	0	3	251	254
19:15	67	21	0	1	5	0	45	0	0	25	27	0	0	0	0	0	0	1	190	191
19:30	46	13	0	0	10	0	34	1	0	21	28	0	0	0	0	0	0	1	152	153
19:45	40	22	0	0	8	0	41	2	0	17	19	0	0	0	0	0	0	2	147	149
Total	227	78	0	4	43	0	178	3	0	101	113	0	0	0	0	0	0	7	740	747
Grand Total	2405	2064	0	204	1430	0	2520	91	0	1904	1431	13	0	0	0	0	0	308	11754	12062
Apprch %	51.5	44.2	0.0	4.4	35.4	0.0	62.4	2.3	0.0	56.9	42.7	0.4	0.0	0.0	0.0	0.0	0.0			
Total %	19.9	17.1	0.0	1.7	11.9	0.0	20.9	0.8	0.0	15.8	11.9	0.1	0.0	0.0	0.0	0.0	0.0	2.6	97.4	

or Street Approaches:

Northbound:

CSAH 49 (Hodgson Rd)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9901.war
 Count Type: IMC. Channel: 0. Count Date: 1/ 5/99
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 3335

Southbound:

CSAH 49 (Hodgson Rd)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9901.war
 Count Type: IMC. Channel: 0. Count Date: 1/ 5/99
 Number of Lanes: 1
 Approach Speed: 50
 Total Approach Traffic: 4469

Minor Street Approaches:

Eastbound:

Not Named

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9901.war
 Count Type: IMC. Channel: 0. Count Date: 1/ 5/99
 Number of Lanes: 1
 Approach Speed: 0
 Total Approach Traffic: 0

Westbound:

CSAH 10 (Birch St)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9901.war
 Count Type: IMC. Channel: 0. Count Date: 1/ 5/99
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 3950

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	15		140		70		112
1	0	0	W	16		140		70		112
2	0	0	W	17		140		70		112
3	0	0	W	18		140		70		112
4	0	0	W	19		140		70		112
5	0	0	W	20		140		70		112
6	443	293	W	7	--BOTH--	140	SIDE	70	SIDE	112
7	789	586	W	1	--BOTH--	140	--BOTH--	70	--BOTH--	112
8	517	359	W	4	--BOTH--	140	SIDE	70	--BOTH--	112
9	350	266	W	8	SIDE	140	SIDE	70	SIDE	112
10	209	133	W	13		140	SIDE	70	SIDE	112
11	338	138	W	12		140	SIDE	70	SIDE	112
12	314	149	W	11	SIDE	140	SIDE	70	SIDE	112
13	329	127	W	14		140	SIDE	70	SIDE	112
14	474	199	W	10	--BOTH--	140	SIDE	70	SIDE	112
15	776	306	W	6	--BOTH--	140	--BOTH--	70	--BOTH--	112
16	911	332	W	5	--BOTH--	140	--BOTH--	70	--BOTH--	112
17	1031	473	W	2	--BOTH--	140	--BOTH--	70	--BOTH--	112
18	804	368	W	3	--BOTH--	140	--BOTH--	70	--BOTH--	112
19	519	221	W	9	--BOTH--	140	SIDE	70	--BOTH--	112
20	0	0	W	21		140		70		112
21	0	0	W	22		140		70		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 9 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 5 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: 1504.

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

Warrant 9 - Four Hour Volumes

SATISFIED for 8 hours.

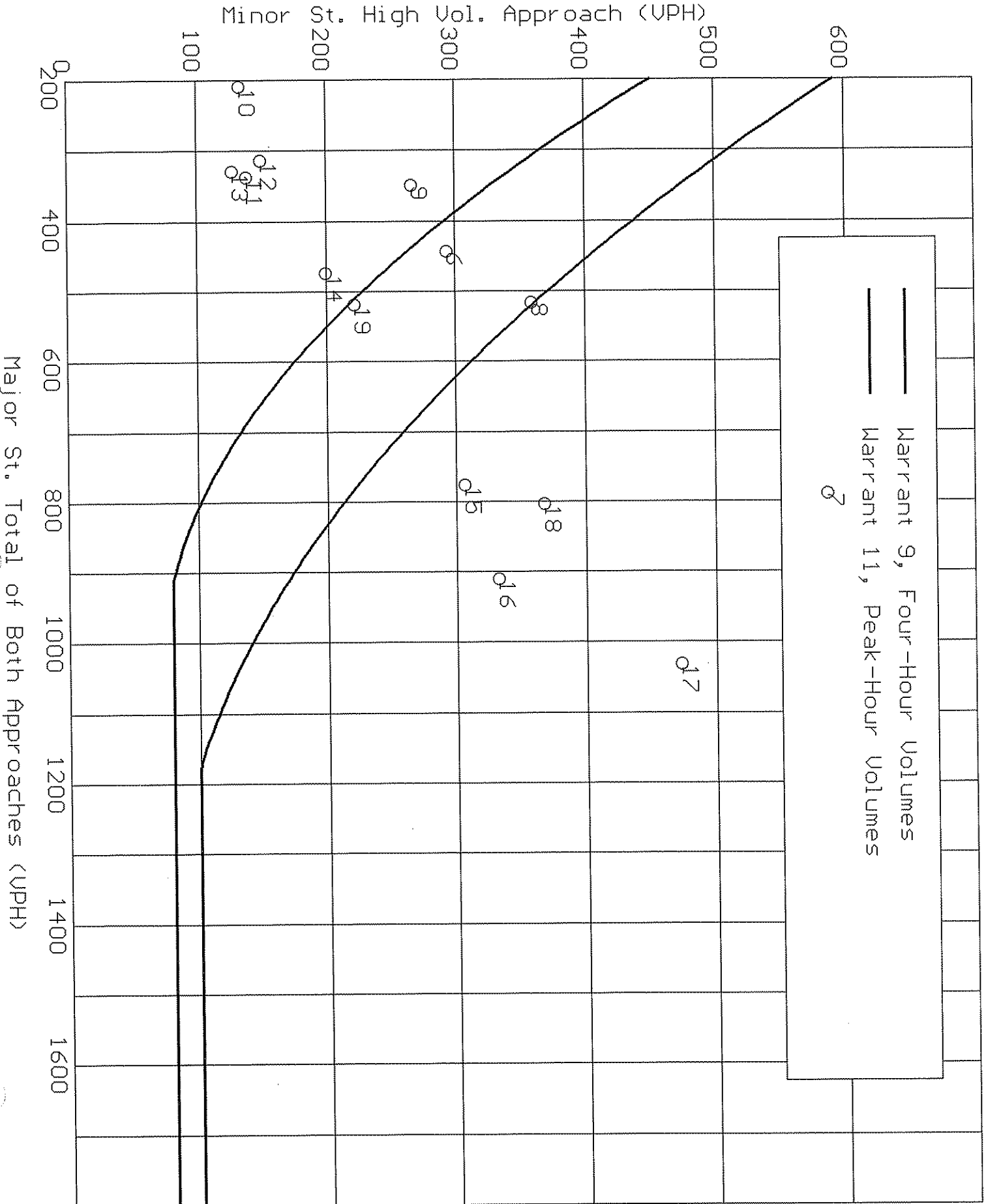
Warrant 10 - Peak Hour Delay

NOT APPLICABLE. Volume requirements satisfied, but side street peak hour delay not defined.

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

Warrant 11 - Peak Hour Volume

SATISFIED for 6 hours.





COUNT LOCATION:

CSAH 49 (HODGSON ROAD) @

DATE:

1/5/99

CSAH 10 (BIRCH STREET)

APP. #1= SB CSAH 49
(HODGSON ROAD)
APP. #2 =WB CSAH 10
(BIRCH STREET)
APP. #3=NB CSAH 49
(HODGSON ROAD)

APP.
#1

APP.
#2

APP.
#3

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								1
6:15-6:30						2		1
6:30-6:45								
6:45-7:00						1		4
HOURLY TOTAL						HOURLY TOTAL		9
7:00-7:15						2		13
7:15-7:30						1		18
7:30-7:45						2		15
7:45-8:00						4		13
HOURLY TOTAL						HOURLY TOTAL		68
8:00-8:15								20
8:15-8:30						9		8
8:30-8:45						5		13
8:45-9:00						8		9
HOURLY TOTAL						HOURLY TOTAL		72
9:00-9:15						3		29
9:15-9:30						4		9
9:30-9:45						10		1
9:45-10:00						5		3
HOURLY TOTAL						HOURLY TOTAL		64
10:00-10:15						5		2
10:15-10:30						3		1
10:30-10:45						3		1
10:45-11:00						3		3
HOURLY TOTAL						HOURLY TOTAL		21
11:00-11:15						1		2
11:15-11:30						10		1
11:30-11:45						9		6
11:45-12:00						7		
HOURLY TOTAL						HOURLY TOTAL		36
12:00-12:15						5		7
12:15-12:30						1		1
12:30-12:45						4		3
12:45-1:00						2		3
HOURLY TOTAL						HOURLY TOTAL		26
1:00-1:15						6		8
1:15-1:30						3		1
1:30-1:45						9		
1:45-2:00						5		1
HOURLY TOTAL						HOURLY TOTAL		33



COUNT LOCATION:

CSAH 49 (HODGSON ROAD) @
CSAH 10 (BIRCH STREET)

DATE:

1/6/99

APP. #1= SB CSAH 49
(HODGSON ROAD)
APP. #2 =WB CSAH 10
(BIRCH STREET)
APP. #3=NB CSAH 49
(HODGSON ROAD)

APP.
#1

APP.
#2

APP.
#3

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		13
2:15-2:30						4		15
2:30-2:45						15		14
2:45-3:00						1		10
HOURLY TOTAL						HOURLY TOTAL		78
3:00-3:15						5		16
3:15-3:30						11		10
3:30-3:45						3		9
3:45-4:00						4		14
HOURLY TOTAL						HOURLY TOTAL		72
4:00-4:15								19
4:15-4:30								17
4:30-4:45								3
4:45-5:00								4
HOURLY TOTAL						HOURLY TOTAL		43
5:00-5:15						2		
5:15-5:30						4		
5:30-5:45						5		3
5:45-6:00						1		1
HOURLY TOTAL						HOURLY TOTAL		16
6:00-6:15						1		2
6:15-6:30						2		2
6:30-6:45						1		
6:45-7:00								
HOURLY TOTAL						HOURLY TOTAL		8
7:00-7:15						2		
7:15-7:30						1		
7:30-7:45						1		
7:45-8:00						2		
HOURLY TOTAL						HOURLY TOTAL		6
8:00-8:15								
8:15-8:30								
8:30-8:45								
8:45-9:00								
HOURLY TOTAL						HOURLY TOTAL		
9:00-9:15								
9:15-9:30								
9:30-9:45								
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		