

Date : 07/27/00

Count Number : TMC0019

Location : CSAH 14 @

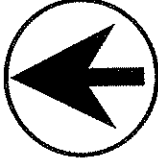
I 35E (East Ramps)

Ramp to I 35E Northbound

2084 #2



2084



North

CSAH 14

G	1124
H	4929
J	6053

11788 #3

5735

10967 #1

C	943
B	2951
A	3894
7073	

CSAH 14

Ramp from I 35E Northbound

K	2784
L	17
M	2144
4945	

#4

4945

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

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

Anoka County Highway Department
Traffic Engineering

Traffic Volume and Turning Movement Study

Weather: Partly Cloudy
Counter TDC-8
Counted by: Ryan & Justin

File Name : TMC0019
Site Code : 00190101
Start Date : 07/27/2000
Page No : 1

Groups Printed: 1 - Unshifted

Start Time	Ramp to 35E Northbound Southbound					CSAH 14 Westbound					Ramp from 35E Northbound Northbound					CSAH 14 Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total								
	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	1.0	1.0	1.0				1.0				
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	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
06:00	0	0	0	0	0	0	134	15	0	149	11	0	19	1	30	9	55	0	2	64	3	243	246					
06:15	0	0	0	0	0	0	113	5	1	118	13	0	28	1	41	5	67	0	0	72	2	231	233					
06:30	0	0	0	0	0	0	120	6	1	126	20	1	24	0	45	13	102	0	0	115	1	286	287					
06:45	0	0	0	0	0	0	108	5	1	113	35	1	48	4	84	12	91	0	0	103	5	300	305					
Total	0	0	0	0	0	0	475	31	3	506	79	2	119	6	200	39	315	0	2	354	11	1060	1071					
07:00	0	0	0	0	0	0	113	4	1	117	24	0	44	2	68	18	86	0	0	104	3	289	292					
07:15	0	0	0	0	0	0	101	4	2	105	15	0	49	0	64	10	105	0	0	115	2	284	286					
07:30	0	0	0	0	0	0	97	16	2	113	24	0	53	3	77	5	74	0	0	79	5	269	274					
07:45	0	0	0	0	0	0	79	12	0	91	30	1	28	1	59	10	102	0	0	112	1	262	263					
Total	0	0	0	0	0	0	390	36	5	426	93	1	174	6	268	43	367	0	0	410	11	1104	1115					
08:00	0	0	0	0	0	0	82	5	3	87	13	0	26	1	39	16	56	0	2	72	6	198	204					
08:15	0	0	0	0	0	0	85	10	2	95	19	0	31	1	50	9	65	0	0	74	3	219	222					
08:30	0	0	0	0	0	0	102	16	0	118	15	0	29	1	44	12	46	0	4	58	5	220	225					
08:45	0	0	0	0	0	0	83	16	1	99	20	0	32	3	52	19	48	0	1	67	5	218	223					
Total	0	0	0	0	0	0	352	47	6	399	67	0	118	6	185	56	215	0	7	271	19	855	874					
09:00	0	0	0	0	0	0	88	10	1	98	20	0	29	1	49	11	46	0	0	57	2	204	206					
09:15	0	0	0	0	0	0	83	16	3	99	15	0	20	3	35	16	31	0	0	47	6	181	187					
09:30	0	0	0	0	0	0	81	18	0	99	9	0	28	2	37	8	39	0	0	47	2	183	185					
09:45	0	0	0	0	0	0	75	15	1	90	22	0	30	3	52	14	36	0	0	50	4	192	196					
Total	0	0	0	0	0	0	327	59	5	386	66	0	107	9	173	49	152	0	0	201	14	760	774					
10:00	0	0	0	0	0	0	52	14	1	66	15	0	18	3	33	15	30	0	0	45	4	144	148					
10:15	0	0	0	0	0	0	79	10	1	89	23	0	38	1	61	15	37	0	0	52	2	202	204					
10:30	0	0	0	0	0	0	52	7	0	59	26	1	35	2	62	7	26	0	0	33	2	154	156					
10:45	0	0	0	0	0	0	81	14	2	95	21	1	34	1	56	8	27	0	0	35	3	186	189					
Total	0	0	0	0	0	0	264	45	4	309	85	2	125	7	212	45	120	0	0	165	11	686	697					
11:00	0	0	0	0	0	0	86	11	0	97	26	1	17	3	44	10	33	0	0	43	3	184	187					
11:15	0	0	0	0	0	0	62	9	2	71	44	0	35	5	79	11	53	0	1	64	8	214	222					
11:30	0	0	0	0	0	0	62	22	2	84	31	0	13	4	44	12	47	0	0	59	6	187	193					
11:45	0	0	0	0	0	0	87	26	7	113	23	0	36	5	59	20	40	0	1	60	13	232	245					
Total	0	0	0	0	0	0	297	68	11	365	124	1	101	17	226	53	173	0	2	226	30	817	847					
12:00	0	0	0	0	0	0	79	20	1	99	22	1	37	3	60	6	23	0	0	29	4	188	192					
12:15	0	0	0	0	0	0	56	16	2	72	37	0	30	3	67	7	29	0	0	36	5	175	180					
12:30	0	0	0	0	0	0	63	13	3	76	36	0	30	2	66	14	39	0	0	53	5	195	200					
12:45	0	0	0	0	0	0	78	17	3	95	18	1	36	5	55	12	43	0	1	55	9	205	214					
Total	0	0	0	0	0	0	276	66	9	342	113	2	133	13	248	39	134	0	1	173	23	763	786					
13:00	0	0	0	0	0	0	74	15	0	89	17	1	52	2	70	15	40	0	1	55	3	214	217					
13:15	0	0	0	0	0	0	66	17	2	83	28	1	20	2	49	10	37	0	0	47	4	179	183					
13:30	0	0	0	0	0	0	71	28	2	99	28	0	31	3	59	16	38	0	1	54	6	212	218					
13:45	0	0	0	0	0	0	73	24	2	97	26	0	32	3	58	14	41	0	1	55	6	210	216					
Total	0	0	0	0	0	0	284	84	6	368	99	2	135	10	236	55	156	0	3	211	19	815	834					
14:00	0	0	0	0	0	0	76	7	3	83	29	0	39	3	68	10	40	0	0	50	6	201	207					
14:15	0	0	0	0	0	0	77	11	4	88	21	0	37	1	58	12	30	0	2	42	7	188	195					
14:30	0	0	0	0	0	0	63	12	1	75	39	0	61	2	100	27	55	0	2	82	5	257	262					
14:45	0	0	0	0	0	0	64	18	3	82	49	0	44	4	93	19	48	0	1	67	8	242	250					
Total	0	0	0	0	0	0	280	48	11	328	138	0	181	10	319	68	173	0	5	241	26	888	914					
15:00	0	0	0	0	0	0	78	20	5	98	47	0	60	2	107	22	32	0	2	54	9	259	268					
15:15	0	0	0	0	0	0	72	19	3	91	50	0	80	0	130	24	56	0	0	80	3	301	304					
15:30	0	0	0	0	0	0	109	36	3	145	59	2	84	2	145	25	41	0	1	66	6	356	362					
15:45	0	0	0	0	0	0	95	32	0	127	51	1	98	1	150	18	60	0	2	78	3	355	358					
Total	0	0	0	0	0	0	354	107	11	461	207	3	322	5	532	89	189	0	5	278	21	1271	1292					
16:00	0	0	0	0	0	0	122	78	2	200	62	0	86	2	148	25	63	0	0	88	4	436	440					
16:15	0	0	0	0	0	0	109	31	1	140	65	0	92	3	157	15	60	0	1	75	5	372	377					
16:30	0	0	0	0	0	0	106	52	1	158	56	0	89	1	145	10	52	0	0	62	2	365	367					
16:45	0	0	0	0	0	0	90	38	0	128	69	0	88	1	157	22	70	0	0	92	1	377	378					
Total	0	0	0	0	0	0	427	199	4	626	252	0	355	7	607	72	245	0	1	317	12	1550	1562					
17:00	0	0	0	0	0	0	107	30	0	137	70	0	77	0	147	29	45	0	0	74	0	358	358					
17:15	0	0	0	0	0	0	102	28	2	130	52	0	73	0	125	42	74	0	1	116	3	371	374					
17:30	0	0	0	0	0	0	121	34	0	155	60	0	70	0	130	27	78	0	0	105	0	390	390					
17:45	0	0	0	0	0	0	85	29	1	114	66	0	73	1	139	41	59	0	0	100	2	353	355					
Total	0	0	0	0	0	0	415	121	3	536	248	0	293	1	541	139	256	0	1	395	5	1472	1477					

18:00	0	0	0	0	0	0	96	31	1	127	38	1	76	0	115	22	30	0	0	52	1	294	295
18:15	0	0	0	0	0	0	61	19	1	80	54	0	46	1	100	18	51	0	0	69	2	249	251
18:30	0	0	0	0	0	0	48	8	0	56	40	0	51	0	91	21	34	0	0	55	0	202	202
18:45	0	0	0	0	0	0	46	18	0	64	50	0	57	1	107	16	27	0	0	43	1	214	215
Total	0	0	0	0	0	0	251	76	2	327	182	1	230	2	413	77	142	0	0	219	4	959	963
19:00	0	0	0	0	0	0	52	23	0	75	28	1	38	0	67	13	25	0	0	38	0	180	180
19:15	0	0	0	0	0	0	50	14	0	64	43	0	30	1	73	22	41	0	0	63	1	200	201
19:30	0	0	0	0	0	0	63	17	0	80	27	0	40	0	67	15	25	0	0	40	0	187	187
19:45	0	0	0	0	0	0	47	12	1	59	36	0	33	1	69	8	37	0	0	45	2	173	175
Total	0	0	0	0	0	0	212	66	1	278	134	1	141	2	276	58	128	0	0	186	3	740	743
20:00	0	0	0	0	0	0	49	6	0	55	40	0	34	1	74	9	34	0	0	43	1	172	173
20:15	0	0	0	0	0	0	36	12	0	48	26	1	27	0	54	6	18	0	0	24	0	126	126
20:30	0	0	0	0	0	0	47	8	0	55	38	0	27	0	65	9	30	0	0	39	0	159	159
20:45	0	0	0	0	0	0	36	17	0	53	46	1	42	0	89	8	36	0	0	44	0	186	186
Total	0	0	0	0	0	0	168	43	0	211	150	2	130	1	282	32	118	0	0	150	1	643	644
21:00	0	0	0	0	0	0	46	5	0	51	45	0	37	0	82	4	20	0	1	24	1	157	158
21:15	0	0	0	0	0	0	38	9	0	47	21	0	35	0	56	12	14	0	0	26	0	129	129
21:30	0	0	0	0	0	0	35	7	0	42	22	0	26	1	48	7	18	0	0	25	1	115	116
21:45	0	0	0	0	0	0	38	7	0	45	19	0	22	0	41	6	16	0	0	22	0	108	108
Total	0	0	0	0	0	0	157	28	0	185	107	0	120	1	227	29	68	0	1	97	2	509	511
Grand Total	0	0	0	0	0	0	492	112	81	6053	214	17	278	103	4945	943	295	0	28	3894	212	14892	15104
Apprch %	0.0	0.0	0.0		0.0	0.0	81.4	18.6		40.6	43.4	0.3	56.3		33.2	24.2	75.8	0.0		26.1	1.4	98.6	
Total %	0.0	0.0	0.0		0.0	0.0	33.1	7.5		40.6	14.4	0.1	18.7		33.2	6.3	19.8	0.0		26.1	1.4	98.6	

Major Street Approaches:

Eastbound:

CSAH 14

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0019.war
 Count Type: IMC. Channel: 0. Count Date: 7/27/ 0
 Number of Lanes: 1
 Approach Speed: 50
 Total Approach Traffic: 3894

Westbound:

CSAH 14

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0019.war
 Count Type: IMC. Channel: 0. Count Date: 7/27/ 0
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 6053

Minor Street Approaches:

Northbound:

Ramp from 35E Northbound

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0019.war
 Count Type: IMC. Channel: 0. Count Date: 7/27/ 0
 Number of Lanes: 1
 Approach Speed: 40
 Total Approach Traffic: 4945

Southbound:

Ramp to 35E Northbound

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0019.war
 Count Type: IMC. Channel: 0. Count Date: 7/27/ 0
 Number of Lanes: 1
 Approach Speed: 50
 Total Approach Traffic: 0

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

Hour	Main (Total)	Side Vol.	Side Dir.	Side Rank	Warrant 1 Meets?	Warrant 1 Criteria	Warrant 2 Meets?	Warrant 2 Criteria	Warrant 8 Meets?	Warrant 8 Criteria
0	0	0	N	17		105		52		84
1	0	0	N	18		105		52		84
2	0	0	N	19		105		52		84
3	0	0	N	20		105		52		84
4	0	0	N	21		105		52		84
5	0	0	N	22		105		52		84
-6	860	200	N	14	--BOTH--	105	--BOTH--	52	--BOTH--	84
-7	836	268	N	8	--BOTH--	105	--BOTH--	52	--BOTH--	84
-8	670	185	N	15	--BOTH--	105	--BOTH--	52	--BOTH--	84
9	587	173	N	16	--BOTH--	105	SIDE	52	--BOTH--	84
10	474	212	N	13	--BOTH--	105	SIDE	52	SIDE	84
11	591	226	N	12	--BOTH--	105	SIDE	52	--BOTH--	84
-12	515	248	N	9	--BOTH--	105	SIDE	52	--BOTH--	84
13	579	236	N	10	--BOTH--	105	SIDE	52	--BOTH--	84
-14	569	319	N	5	--BOTH--	105	SIDE	52	--BOTH--	84
-15	739	532	N	3	--BOTH--	105	--BOTH--	52	--BOTH--	84
-16	943	607	N	1	--BOTH--	105	--BOTH--	52	--BOTH--	84
-17	931	541	N	2	--BOTH--	105	--BOTH--	52	--BOTH--	84
-18	546	413	N	4	--BOTH--	105	SIDE	52	--BOTH--	84
-19	464	276	N	7	--BOTH--	105	SIDE	52	SIDE	84
20	361	282	N	6	SIDE	105	SIDE	52	SIDE	84
21	282	227	N	11	SIDE	105	SIDE	52	SIDE	84
22	0	0	N	23		105		52		84
23	0	0	N	24		105		52		84

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

SATISFIED for 14 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 6 hours. Criteria--Main St.: 630; Side St.: See Volume Summary.

Warrant 3 - Minimum Pedestrian Volumes

NOT SATISFIED. 8th-High Hour--Pedestrians: 6; Vehicles: 860. Criteria--Pedestrians: 105; Vehicles: 420.

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: 1550.

- Approaches which are part of the principal through traffic roadway network.
- Approaches which connect areas of principal traffic generation.
- Approaches which include rural or suburban highways outside, entering or traversing a city.
- Approaches which have surface street freeway or expressway ramp terminals.
- Approaches which appear as a major route in an official transportation plan.

Warrant 8 - Combination of Warrants

SATISFIED for 12 hours. Criteria--Main: 504; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

SATISFIED for 15 hours.

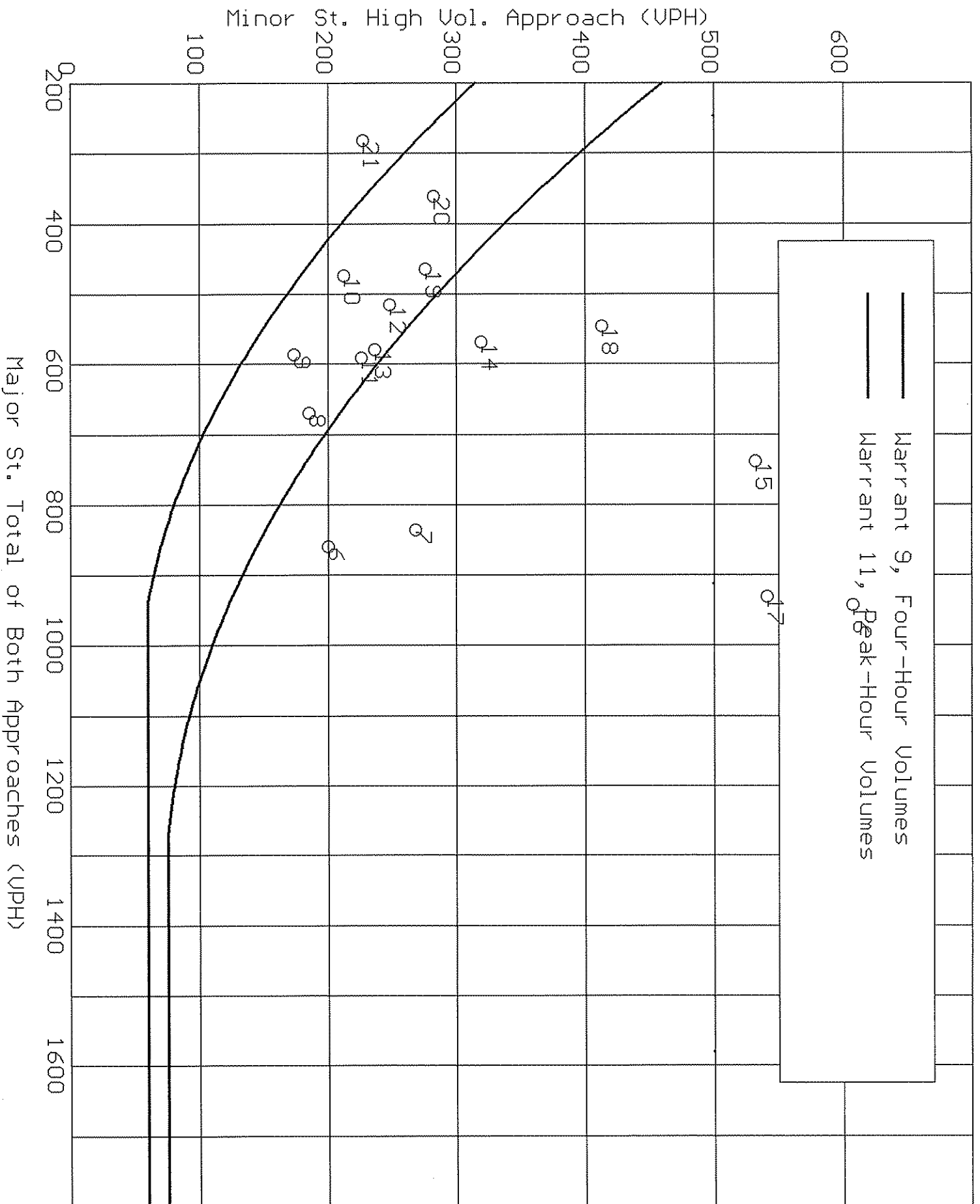
Warrant 10 - Peak Hour Delay

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 7 hours.



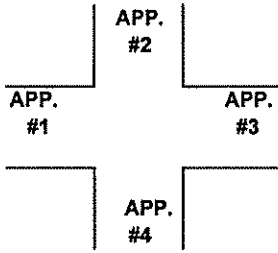


NORTH

COUNT LOCATION: CSAH 14@
I 35E (East Ramps)

DATE: 7/27/00

APP. #1 = EB CSAH 14
APP. #2 =
APP. #3 = WB CSAH 14
APP. #4 = NB I 35E (East Ramps)



- 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						3		
6:15-6:30						2		
6:30-6:45						1		
6:45-7:00						5		
HOURLY TOTAL						HOURLY TOTAL		11
7:00-7:15						3		
7:15-7:30						2		
7:30-7:45						5		
7:45-8:00						1		
HOURLY TOTAL						HOURLY TOTAL		11
8:00-8:15						6		
8:15-8:30						3		
8:30-8:45						5		
8:45-9:00						5		
HOURLY TOTAL						HOURLY TOTAL		19
9:00-9:15						2		
9:15-9:30						5		
9:30-9:45						2		
9:45-10:00						4		
HOURLY TOTAL						HOURLY TOTAL		13
10:00-10:15						2		2
10:15-10:30						2		
10:30-10:45						2		
10:45-11:00						3		
HOURLY TOTAL						HOURLY TOTAL		11
11:00-11:15						3		
11:15-11:30						8		
11:30-11:45						6		
11:45-12:00						13		
HOURLY TOTAL						HOURLY TOTAL		30
12:00-12:15						4		
12:15-12:30						5		
12:30-12:45						5		
12:45-1:00						9		
HOURLY TOTAL						HOURLY TOTAL		23
1:00-1:15						3		
1:15-1:30						4		
1:30-1:45						6		
1:45-2:00						6		
HOURLY TOTAL						HOURLY TOTAL		19

↑
NORTH

APP. #1 = EB CSAH 14

APP. #2 =

APP. #3 = WB CSAH 14

APP. #4 = NB I 35E
(East Ramps)

COUNT LOCATION: CSAH 14@
I 35E (East Ramps)

DATE: 7/25/00

APP. #2

APP. #1 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
2:00-2:15PM						6		
2:15-2:30						7		
2:30-2:45						5		
2:45-3:00						6	1	1
HOURLY TOTAL						HOURLY TOTAL		26
3:00-3:15						9		
3:15-3:30						3		
3:30-3:45						6		
3:45-4:00						3		
HOURLY TOTAL						HOURLY TOTAL		21
4:00-4:15						4		
4:15-4:30						5		
4:30-4:45						3		
4:45-5:00						1		
HOURLY TOTAL						HOURLY TOTAL		13
5:00-5:15								
5:15-5:30						2		1
5:30-5:45								
5:45-6:00						1	1	
HOURLY TOTAL						HOURLY TOTAL		5
6:00-6:15						1		
6:15-6:30						2		
6:30-6:45								
6:45-7:00						1		
HOURLY TOTAL						HOURLY TOTAL		4
7:00-7:15								
7:15-7:30						1		
7:30-7:45								
7:45-8:00						2		
HOURLY TOTAL						HOURLY TOTAL		3
8:00-8:15						1		
8:15-8:30								
8:30-8:45								
8:45-9:00								
HOURLY TOTAL						HOURLY TOTAL		1
9:00-9:15						1		
9:15-9:30								
9:30-9:45						1		
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		2