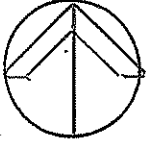


TMC 9325

Date 7/20/93 AM 7:28/93 PM

C.S. Location CSAH 78 (HANSON BLVD)
@ 129TH LANE



North

16A8

#2

EB 129TH LANE

838		F
756		D
82		

7827

#1

15415

7588		C
6875		B
713		

SB CSAH 78 (HANSON BLVD.)

#3

14125

97	7168
7071	
H	
G	

6957

NB CSAH 78 (HANSON BLVD.)

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

Anoka County Highway Dept.
Traffic Volume and Turning
Movement Study

ANOKA COUNTY HIGHWAY DEPARTMENT
TRAFFIC ENGINEERING SECTION
TRAFFIC VOLUME AND
TURNING MOVEMENT STUDY

Site Code : 93250101
Start Date: 07/20/93
File I.D. : TMC9325B
Page : 1

WEATHER: CLEAR/70 CLEAR/75
Counter : TDC EIGHT
Counted by Naomi/Eileen

Vehicle group 1

Date	SB CSAH 78 (HANSON BLVD) Southbound				WB CSAH 78 (HANSON BLVD) Westbound				NB CSAH 78 (HANSON BLVD) Northbound				EB 129th LANE Eastbound				Vehicle Total	Other Total
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left		
06:00	0	1	145	0	0	0	0	0	1	0	23	0	0	19	0	1	189	1
06:15	2	1	192	0	0	0	0	0	1	0	30	1	0	23	0	0	247	3
06:30	7	0	232	0	0	0	0	0	0	0	46	0	0	18	0	2	298	7
06:45	33	0	229	0	0	0	0	0	0	0	48	4	0	33	0	1	315	33
Hr Total	42	2	798	0	0	0	0	0	2	0	147	5	0	93	0	4	1049	44
07:00	12	0	220	0	0	0	0	0	2	0	64	4	2	23	0	2	313	16
07:15	6	1	224	0	0	0	0	0	6	0	74	3	1	35	0	3	340	13
07:30	4	0	204	0	0	0	0	0	8	0	65	3	0	30	0	1	303	12
07:45	8	2	185	0	0	0	0	0	4	0	58	1	2	29	0	0	275	14
Hr Total	30	3	833	0	0	0	0	0	20	0	261	11	5	117	0	6	1231	55
08:00	20	0	130	0	0	0	0	0	13	0	63	5	0	19	0	1	218	33
08:15	8	3	112	0	0	0	0	0	23	0	68	5	0	11	0	0	199	31
08:30	22	1	146	0	0	0	0	0	18	0	73	2	0	8	0	2	232	40
08:45	24	2	77	0	0	0	0	0	16	0	58	5	0	10	0	0	152	40
Hr Total	74	6	465	0	0	0	0	0	70	0	262	17	0	48	0	3	801	144
09:00	23	1	106	0	0	0	0	0	14	0	64	4	0	6	0	1	182	37
09:15	13	0	99	0	0	0	0	0	22	0	75	5	1	6	0	1	186	36
09:30	22	1	87	0	0	0	0	0	18	0	69	4	0	11	0	3	175	40
09:45	18	3	93	0	0	0	0	0	28	0	96	5	1	5	0	4	206	47
Hr Total	76	5	385	0	0	0	0	0	82	0	304	18	2	28	0	9	749	160
10:00	19	3	121	0	0	0	0	0	16	2	63	6	1	8	0	0	203	36
10:15	18	2	79	0	0	0	0	0	20	0	84	4	0	9	0	0	178	38
10:30	30	2	110	0	0	0	0	0	18	0	76	9	0	11	0	0	208	48
10:45	18	1	77	0	0	0	0	0	27	0	87	6	0	7	0	1	179	45
Hr Total	85	8	387	0	0	0	0	0	81	2	310	25	1	35	0	1	768	167
11:00	24	4	105	0	0	0	0	0	16	0	88	8	0	12	0	1	218	40
11:15	11	1	77	0	0	0	0	0	16	0	73	16	2	14	0	1	182	29
11:30	26	3	105	0	0	0	0	0	19	0	77	7	0	6	0	1	199	45
11:45	15	2	89	0	0	0	0	0	26	0	117	11	0	12	0	2	233	41
Hr Total	76	10	376	0	0	0	0	0	77	0	355	42	2	44	0	5	832	155
12:00	10	5	92	0	0	0	0	0	19	0	93	15	1	11	0	1	217	30
12:15	13	1	104	0	0	0	0	0	14	0	82	6	0	8	0	2	203	27
12:30	20	0	118	0	0	0	0	0	18	0	82	7	0	5	0	0	212	38
12:45	21	2	91	0	0	0	0	0	27	0	107	11	0	6	0	5	222	48
Hr Total	64	8	405	0	0	0	0	0	78	0	364	39	1	30	0	8	854	143

ANOKA COUNTY HIGHWAY DEPARTMENT
 TRAFFIC ENGINEERING SECTION
 TRAFFIC VOLUME AND
 TURNING MOVEMENT STUDY

Site Code : 93250101
 Start Date: 07/20/93
 File I.D. : TMC9325B
 Page : 2

WEATHER: CLEAR/70 CLEAR/75
 Counter : TDC EIGHT
 Counted by Naomi/Eileen

Vehicle group 1

Date	SB CSAH 78 (HANSON BLVD) Southbound				Westbound				INB CSAH 78 (HANSON BLVD) Northbound				Eastbound				Vehicle Total	Other Total	
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left			
07/20/93																			
13:00	13	0	103	0	0	0	0	0	17	0	96	5	0	12	0	0	0	216	30
13:15	19	0	76	0	0	0	0	0	17	0	85	9	0	10	0	3	0	183	36
13:30	19	1	109	0	0	0	0	0	18	0	92	7	0	7	0	1	0	217	37
13:45	18	0	89	0	0	0	0	0	13	0	92	10	0	5	0	0	0	196	31
Hr Total	69	1	377	0	0	0	0	0	65	0	365	31	0	34	0	4	0	812	134
14:00	25	3	107	0	0	0	0	0	25	0	105	12	0	8	0	0	0	235	50
14:15	18	3	99	0	0	0	0	0	21	0	99	7	3	13	0	1	0	222	42
14:30	17	2	127	0	0	0	0	0	27	0	122	20	2	7	0	2	0	280	46
14:45	28	2	118	0	0	0	0	0	23	0	120	14	1	7	0	3	0	264	52
Hr Total	88	10	451	0	0	0	0	0	96	0	446	53	6	35	0	6	0	1001	190
15:00	16	3	108	0	0	0	0	0	21	0	138	12	1	12	0	0	0	273	38
15:15	16	1	84	0	0	0	0	0	23	0	157	7	1	3	0	2	0	254	40
15:30	20	2	103	0	0	0	0	0	18	0	178	18	2	14	0	0	0	315	40
15:45	12	0	93	0	0	0	0	0	27	0	178	16	3	12	0	0	0	299	42
Hr Total	64	6	388	0	0	0	0	0	89	0	651	53	7	41	0	2	0	1141	160
16:00	1	3	103	0	0	0	0	0	18	0	178	17	0	10	0	1	0	312	19
16:15	2	1	87	0	0	0	0	0	25	0	159	15	0	9	0	1	0	272	27
16:30	3	0	111	0	0	0	0	0	6	0	186	29	0	16	0	2	0	344	9
16:45	3	0	130	0	0	0	0	0	3	0	185	32	0	19	0	0	0	366	6
Hr Total	9	4	431	0	0	0	0	0	52	0	708	93	0	54	0	4	0	1294	61
17:00	3	1	112	0	0	0	0	0	2	0	186	29	0	9	0	0	0	337	5
17:15	1	1	98	0	0	0	0	0	2	0	177	19	0	26	0	0	0	321	3
17:30	0	1	84	0	0	0	0	0	3	0	209	29	0	7	0	0	0	330	3
17:45	2	2	111	0	0	0	0	0	2	0	196	20	0	18	0	4	0	351	4
Hr Total	6	5	405	0	0	0	0	0	9	0	768	97	0	60	0	4	0	1339	15
18:00	9	3	136	0	0	0	0	0	4	0	245	20	0	17	0	5	0	426	13
18:15	7	1	108	0	0	0	0	0	1	0	142	21	0	14	0	2	0	288	8
18:30	2	1	103	0	0	0	0	0	1	0	144	15	0	12	1	1	0	277	3
18:45	2	4	139	0	0	0	0	0	2	0	176	9	1	9	0	5	0	342	5
Hr Total	20	9	486	0	0	0	0	0	8	0	707	65	1	52	1	13	0	1333	29
19:00	2	2	90	0	0	0	0	0	7	0	157	18	0	8	0	2	0	277	9
19:15	4	0	79	0	0	0	0	0	1	0	118	15	0	11	0	2	0	225	5
19:30	1	1	94	0	0	0	0	0	1	0	119	8	0	7	0	0	0	229	2
19:45	0	3	67	0	0	0	0	0	0	0	92	17	0	14	0	2	0	195	0
Hr Total	7	6	330	0	0	0	0	0	9	0	486	58	0	40	0	6	0	926	16

WEATHER: CLEAR/70 CLEAR/75
 Counter : TDC EIGHT
 Counted by Naomi/Eileen

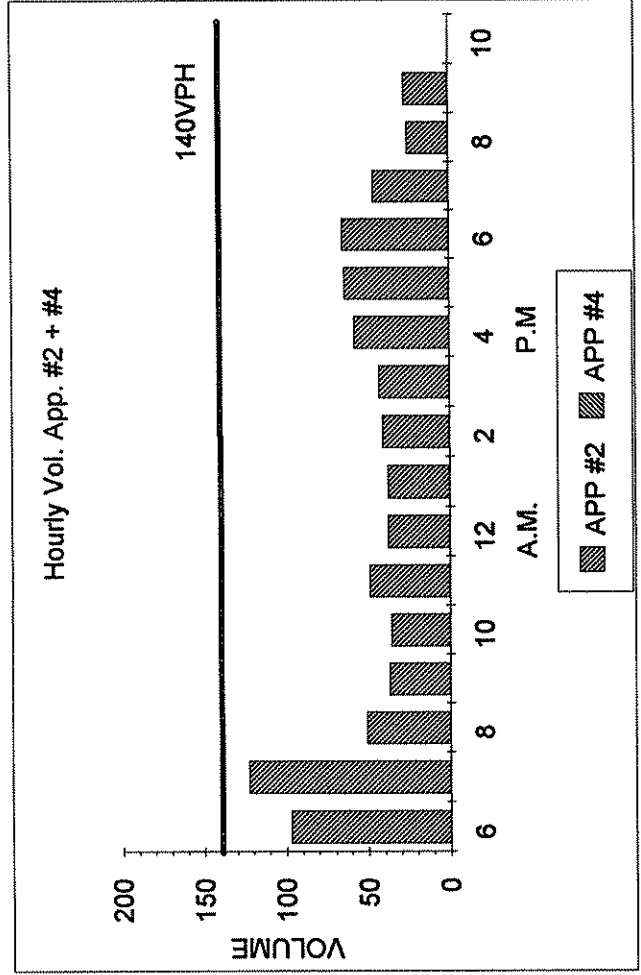
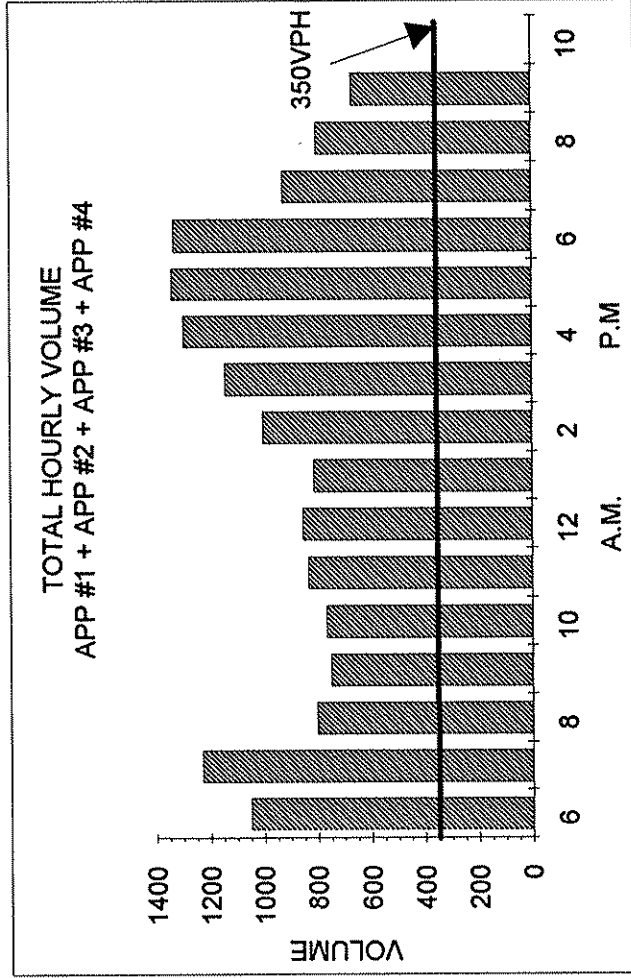
ANOKA COUNTY HIGHWAY DEPARTMENT
 TRAFFIC ENGINEERING SECTION
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Site Code : 93250101
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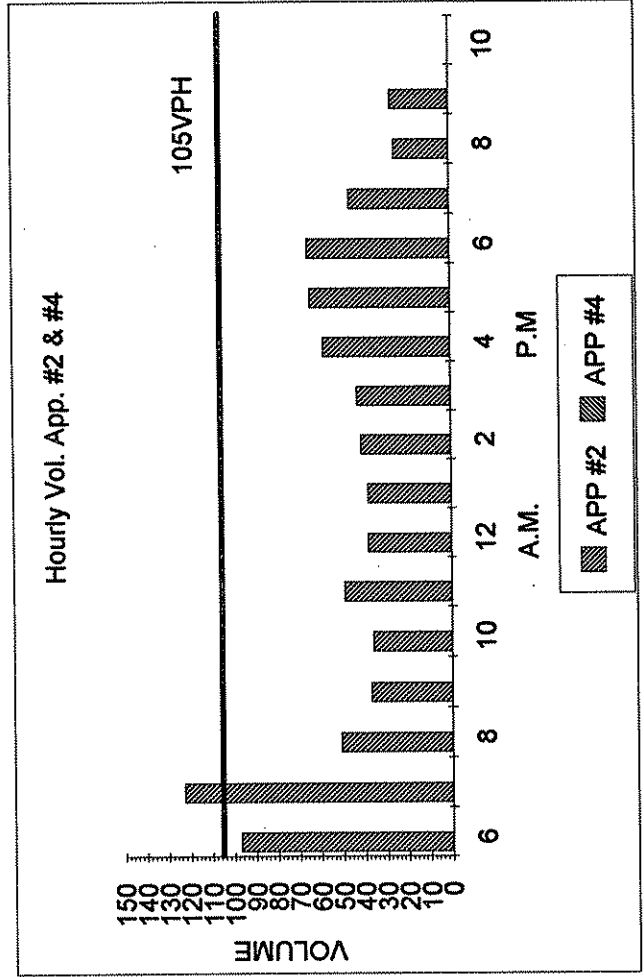
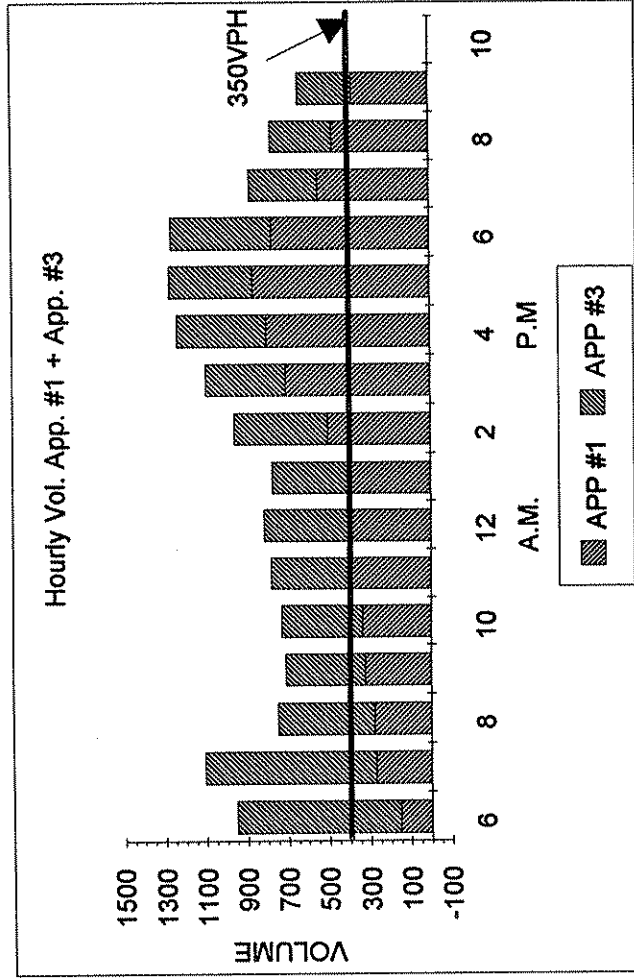
Vehicle group 1

Date	SB CSAH 78 (HANSON BLVD) Southbound				WB CSAH 78 (HANSON BLVD) Westbound				NB CSAH 78 (HANSON BLVD) Northbound				EB 129th LANE Eastbound				Vehicle Total	Other Total
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left		
20:00	1	1	84	0	0	0	0	0	1	0	89	13	0	2	0	0	189	2
20:15	0	2	59	0	0	0	0	0	0	0	116	13	0	9	0	0	199	0
20:30	2	1	76	0	0	0	0	0	1	0	95	13	0	8	0	1	194	3
20:45	2	3	77	0	0	0	0	0	1	0	116	17	0	2	0	3	218	3
Hr Total	5	7	296	0	0	0	0	0	3	0	416	56	0	21	0	4	800	8
21:00	1	5	71	0	0	0	0	0	0	0	86	10	0	6	0	1	179	1
21:15	0	1	60	0	0	0	0	0	0	0	90	10	0	8	0	0	169	0
21:30	0	0	64	0	0	0	0	0	0	0	83	14	0	7	0	1	169	0
21:45	0	1	63	0	0	0	0	0	0	0	66	16	0	3	0	1	150	0
Hr Total	1	7	258	0	0	0	0	0	0	0	325	50	0	24	0	3	667	1
TOTAL	716	97	7071	0	0	0	0	0	741	2	6875	713	25	756	1	82	15597	1482

TMC9325 STOP WARRANT STUDY



TMC9325 SIGNAL WARRANT1 STUDY



TMC9325 SIGNAL WARRANT2 STUDY

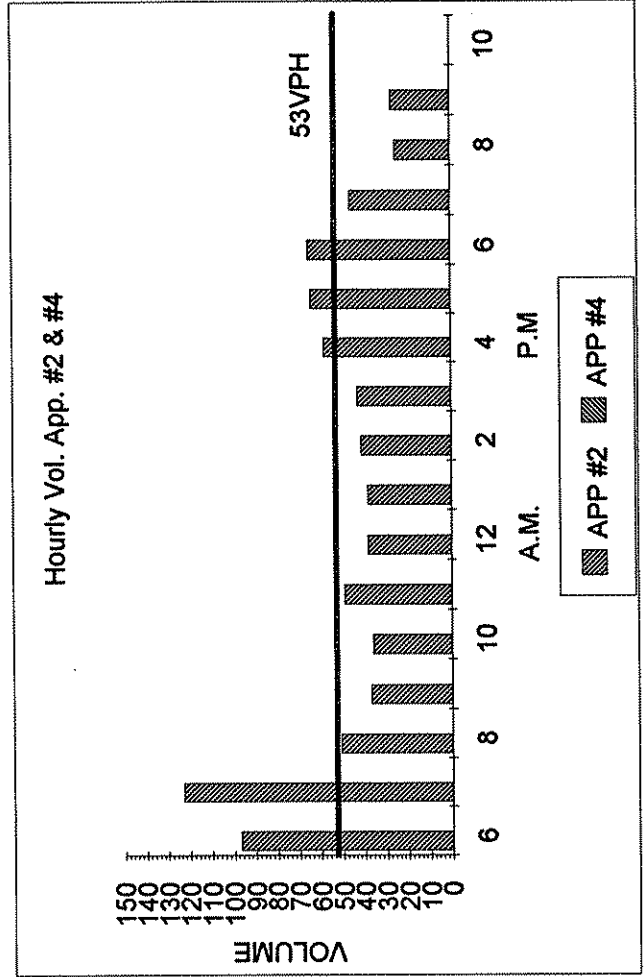
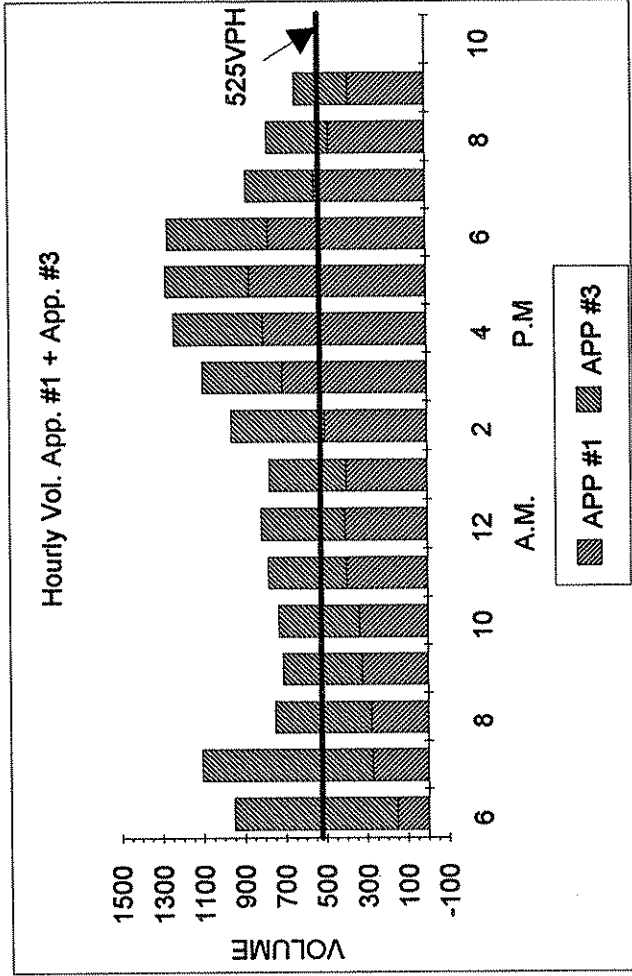
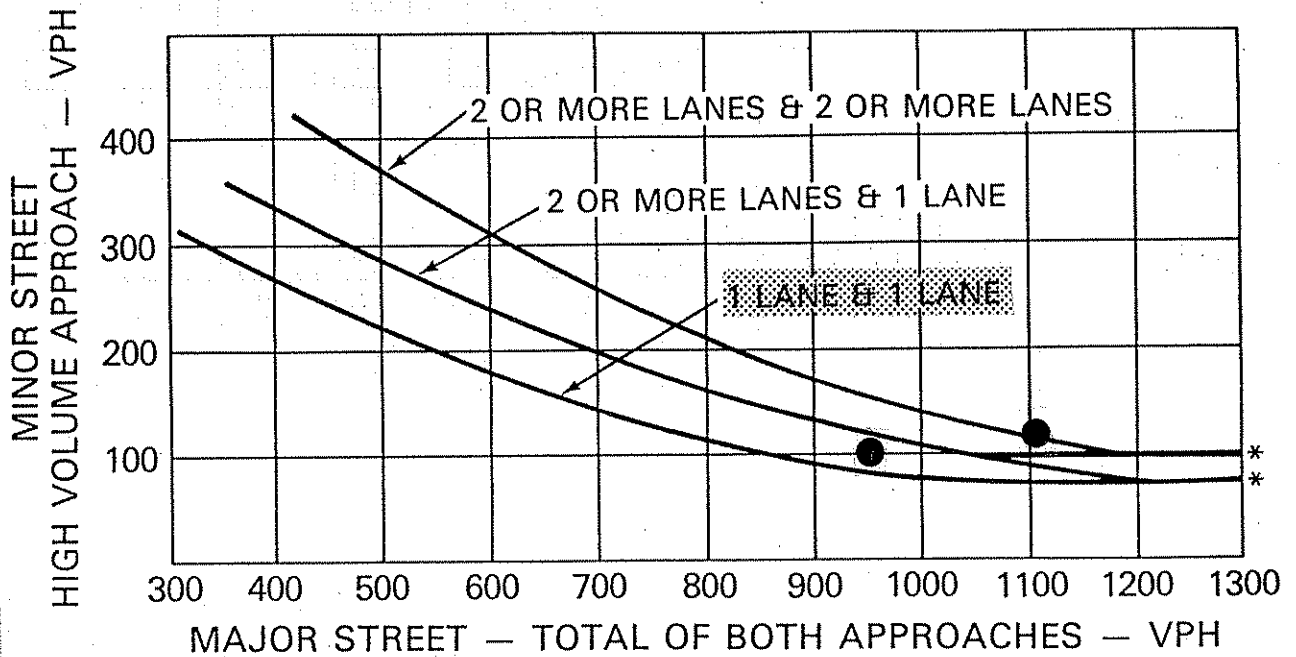


FIGURE 4-6. PEAK HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

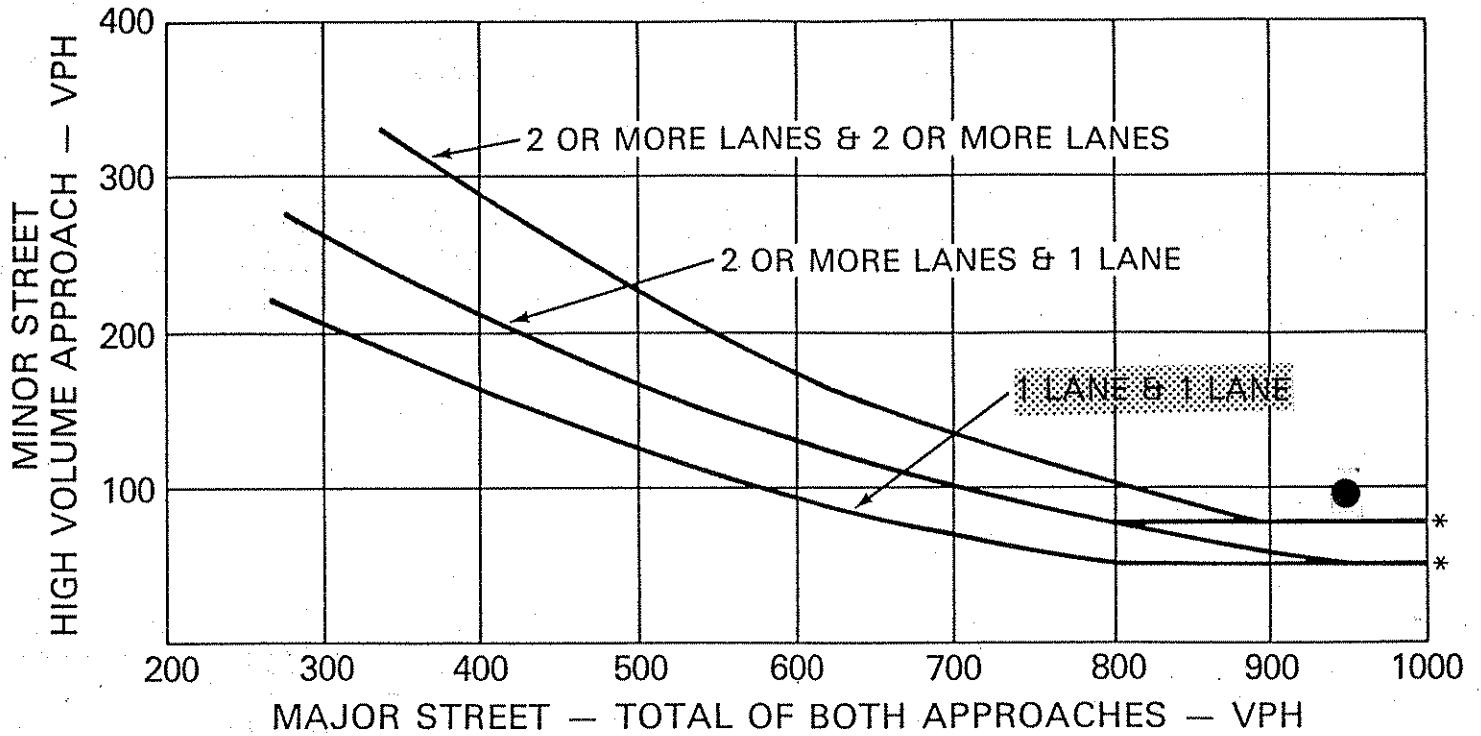
● = VOLUMES WHICH EXCEED THE THRESHOLD AND ARE REPRESENTED ON THE GRAPH.

★ = VOLUMES WHICH EXCEED THE THRESHOLD BUT CANNOT BE REPRESENTED ON THE GRAPH.

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	952	97
7-8 am	1108	123
8-9 am	750	51
9-10 am	712	37
10-11 am	730	36
11-12 pm	783	49
12-1 pm	816	38
1-2 pm	774	38
2-3 pm	960	41
3-4 pm	1098	43
4-5 pm	1236	58
5-6 pm	1275	64
6-7 pm	1267	65
7-8 pm	880	46
8-9 pm	775	25
9-10 pm	640	27

FIGURE 4-8. FOUR HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

● = VOLUMES WHICH EXCEED THE THRESHOLD AND ARE REPRESENTED ON THE GRAPH.

★ = VOLUMES WHICH EXCEED THE THRESHOLD BUT CANNOT BE REPRESENTED ON THE GRAPH.

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
● 6-7 am	952	97
★ 7-8 am	1108	123
8-9 am	750	51
9-10 am	712	37
10-11 am	730	36
11-12 pm	783	49
12-1 pm	816	38
1-2 pm	774	38
2-3 pm	960	41
3-4 pm	1098	43
4-5 pm	1236	58
★★ 5-6 pm	1275	64
★★ 6-7 pm	1267	65
7-8 pm	880	46
8-9 pm	775	25
9-10 pm	640	27

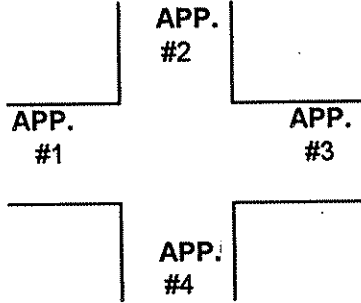


NORTH

COUNT LOCATION: CSAH 78 (HANSON BLVD) @
129TH LANE

DATE: 7/20/93

APP. #1=EB 129TH LANE
APP. #2=SB CSAH 78 (HANSON BLVD)
APP. #3=
APP. #4=NB CSAH 78 (HANSON BLVD)



- 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								
6:15-6:30								2
6:30-6:45						1		6
6:45-7:00						2		32
HOURLY TOTAL						HOURLY TOTAL		43
7:00-7:15						3		13
7:15-7:30						6		8
7:30-7:45						7		4
7:45-8:00						4		11
HOURLY TOTAL						HOURLY TOTAL		56
8:00-8:15						33		
8:15-8:30						30		1
8:30-8:45						38		2
8:45-9:00						36		
HOURLY TOTAL						HOURLY TOTAL		140
9:00-9:15	2				2	37		1
9:15-9:30						34		1
9:30-9:45						39		
9:45-10:00						46		
HOURLY TOTAL					2	HOURLY TOTAL		158
10:00-10:15						34		
10:15-10:30						36		2
10:30-10:45						35		12
10:45-11:00						44		1
HOURLY TOTAL						HOURLY TOTAL		164
11:00-11:15						36		2
11:15-11:30						27		2
11:30-11:45						42		2
11:45-12:00						43		
HOURLY TOTAL						HOURLY TOTAL		154
12:00-12:15						27		2
12:15-12:30						26		1
12:30-12:45						37		1
12:45-1:00						48		1
HOURLY TOTAL						HOURLY TOTAL		143
1:00-1:15						29		
1:15-1:30						33		2
1:30-1:45						37		
1:45-2:00						31		
HOURLY TOTAL						HOURLY TOTAL		132



NORTH

COUNT LOCATION: CSAH 78 (HANSON BLVD) @
129TH LANE

DATE: 7/28/93

APP. #1=EB 129TH LANE
APP. #2=SB CSAH 78 (HANSON BLVD)
APP. #3=
APP. #4=NB CSAH 78 (HANSON BLVD)

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						50		
2:15-2:30	1				1	41		1
2:30-2:45						45		2
2:45-3:00						52		
HOURLY TOTAL					1	HOURLY TOTAL		191
3:00-3:15						35		2
3:15-3:30						40		
3:30-3:45	1				1	38		1
3:45-4:00						41		
HOURLY TOTAL					1	HOURLY TOTAL		157
4:00-4:15						5		14
4:15-4:30						7		21
4:30-4:45						4		5
4:45-5:00						2		4
HOURLY TOTAL						HOURLY TOTAL		62
5:00-5:15						1		4
5:15-5:30	1				1	2		1
5:30-5:45						2		1
5:45-6:00						3		1
HOURLY TOTAL					1	HOURLY TOTAL		15
6:00-6:15						14		
6:15-6:30						7		1
6:30-6:45						3		
6:45-7:00						4		
HOURLY TOTAL						HOURLY TOTAL		29
7:00-7:15						10		
7:15-7:30						5		
7:30-7:45						2		
7:45-8:00								
HOURLY TOTAL						HOURLY TOTAL		17
8:00-8:15						2		
8:15-8:30	2				2			
8:30-8:45	1				1	3		
8:45-9:00						3		
HOURLY TOTAL					3	HOURLY TOTAL		8
9:00-9:15						1		
9:15-9:30								
9:30-9:45								
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		1