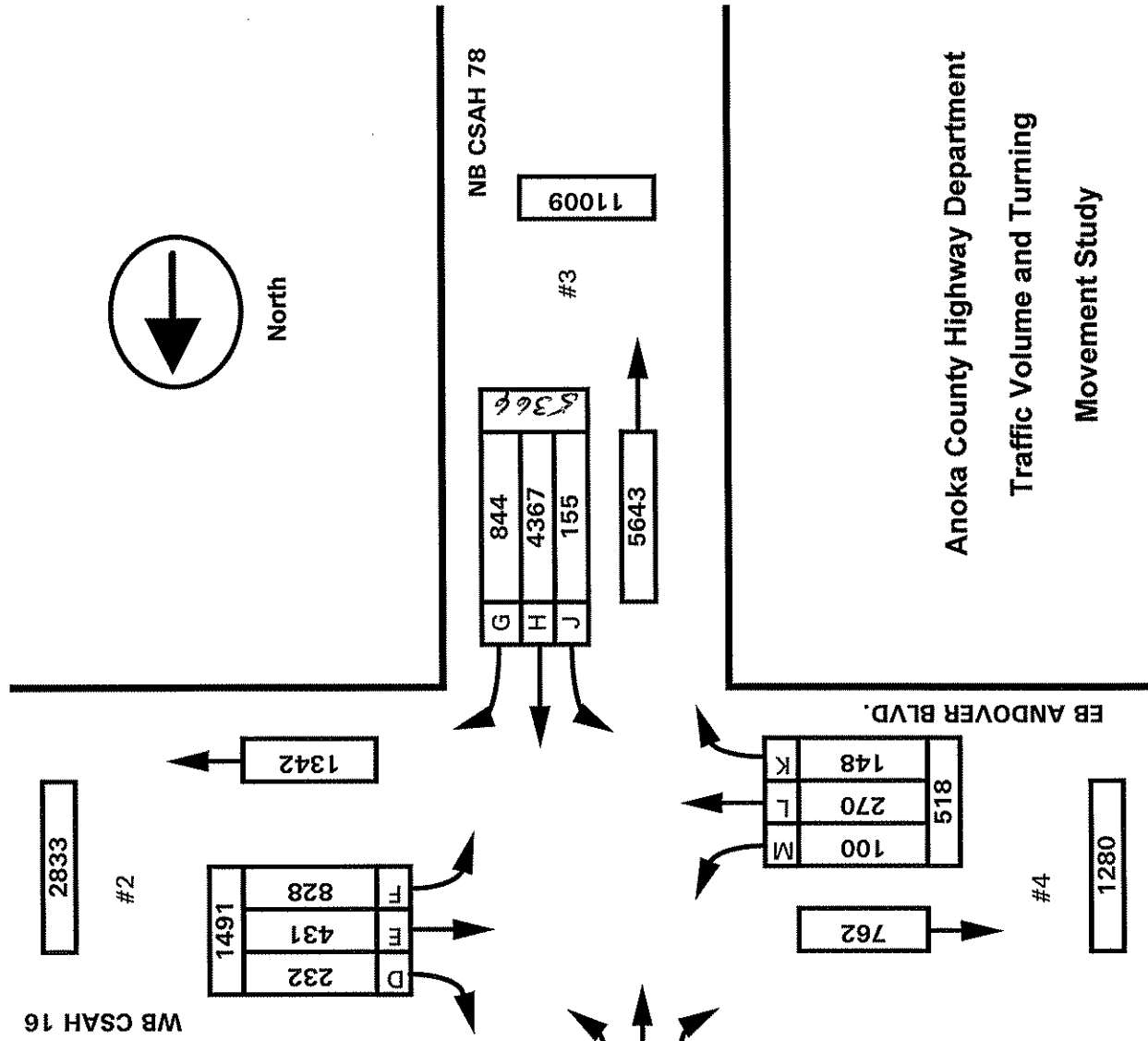


Date: 6/7/95AM 6/8/95PM

Count Number: TMC9506

Location: CSAH 78 (HANSON BLVD)

@ CSAH 16 (ANDOVER BLVD)



Anoka County Highway Department
Traffic Volume and Turning
Movement Study

M	100	518
L	270	
K	148	

G	844	5366
H	4367	
J	155	

D	232	1491
M	431	
T	828	

A	176	5071
B	4667	
C	228	

Counter : TDC HT
Counted by ANN/LAURIE
RAINY/COLD

Vehicle group 1

Date 06/08/95	CSAH 78 (HANSON BLVD) Southbound			CSAH 16 (ANDOVER BLVD) Westbound			CSAH 78 (HANSON BLVD) Northbound			CSAH 16 (ANDOVER BLVD) Eastbound			Vehicle Total	
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Total
Hr Total	10	11	636	6	1	7	30	92	6	22	118	2	0	939
06:00	0	2	131	2	0	2	6	21	1	6	17	0	0	195
06:15	3	1	162	0	0	0	6	22	2	7	21	1	0	221
06:30	2	3	173	1	0	0	8	28	1	6	44	0	0	267
06:45	5	5	170	3	1	5	10	21	2	3	36	1	0	256
Hr Total	10	11	636	6	1	7	30	92	6	22	118	2	0	939
07:00	8	1	135	6	3	3	5	21	4	9	30	2	0	219
07:15	1	2	156	4	2	1	10	26	3	9	53	1	1	272
07:30	3	4	127	3	0	5	12	26	6	11	50	0	0	243
07:45	2	2	132	6	1	1	11	21	4	4	55	1	0	240
Hr Total	14	9	550	19	6	10	38	94	17	33	188	4	1	974
08:00	8	3	126	6	1	2	5	13	7	14	55	2	0	230
08:15	5	4	86	4	2	2	4	12	2	11	30	2	1	164
08:30	1	0	60	2	3	3	10	16	3	12	31	1	0	140
08:45	4	1	87	1	3	4	4	17	9	14	33	1	0	166
Hr Total	18	8	359	13	7	11	23	58	21	51	149	6	1	700
09:00	2	2	64	4	3	1	4	16	3	5	37	2	0	141
09:15	5	3	55	6	5	3	9	17	4	9	33	1	1	138
09:30	0	0	73	9	2	5	8	16	5	12	25	1	1	155
09:45	6	3	71	6	4	3	6	18	0	12	27	1	0	150
Hr Total	13	8	263	25	14	12	27	67	12	38	122	5	2	584
10:00	3	2	65	4	4	3	6	19	5	17	34	3	1	160
10:15	5	1	58	5	4	5	5	18	3	11	31	2	0	138
10:30	5	2	64	8	0	7	7	13	2	9	26	0	0	142
10:45	1	2	54	2	2	4	5	16	3	10	31	2	0	133
Hr Total	14	7	241	19	10	19	23	66	13	47	122	7	1	573
11:00	0	2	55	7	1	6	7	8	2	12	48	1	0	156
11:15	6	2	70	4	1	2	5	14	4	12	35	0	0	149
11:30	3	5	53	9	3	5	6	14	4	13	41	0	0	151
11:45	4	2	64	4	0	2	4	8	2	10	42	0	0	142
Hr Total	13	11	242	24	5	15	22	44	12	47	166	1	0	598
12:00	2	0	43	3	1	2	14	10	4	17	56	2	0	154
12:15	4	1	45	1	1	4	2	15	5	8	53	3	0	139
12:30	4	3	54	5	3	5	6	23	3	11	46	2	0	167
12:45	4	2	50	5	1	2	10	11	5	13	37	3	0	147
Hr Total	14	6	192	14	6	13	32	59	17	49	192	10	3	607

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

Site Code : (0601
Start Date: 06/08/95
File I.D. : TMC9506}00
Page : 2

Counter : TDC JET
Counted by ANN/LAURIE
RAINY/COLD

Vehicle group 1

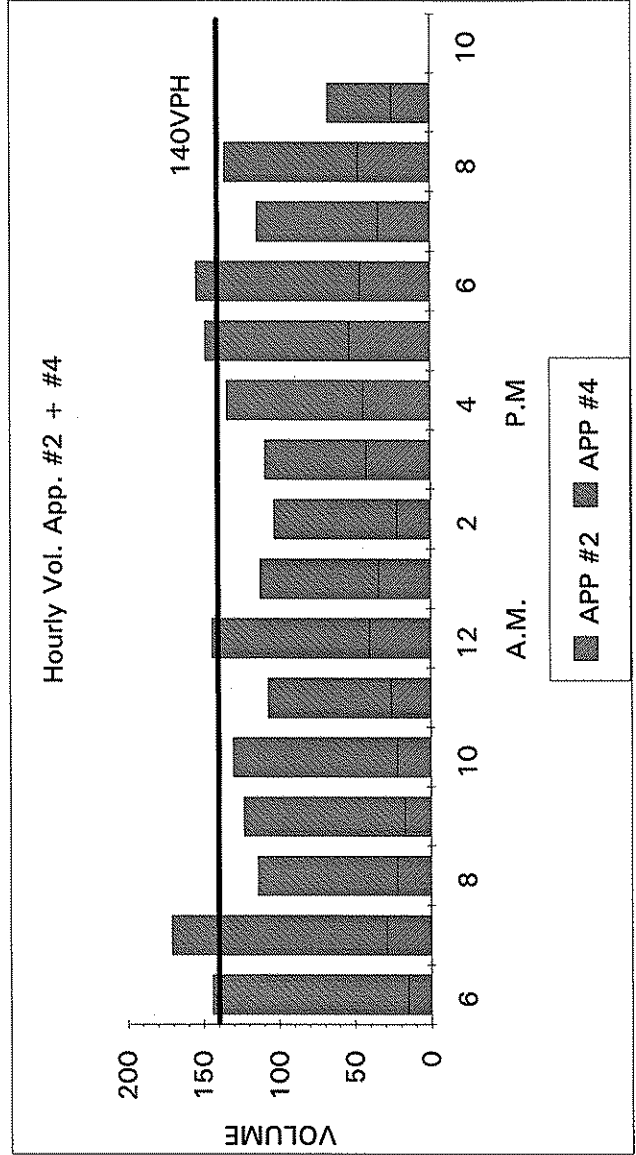
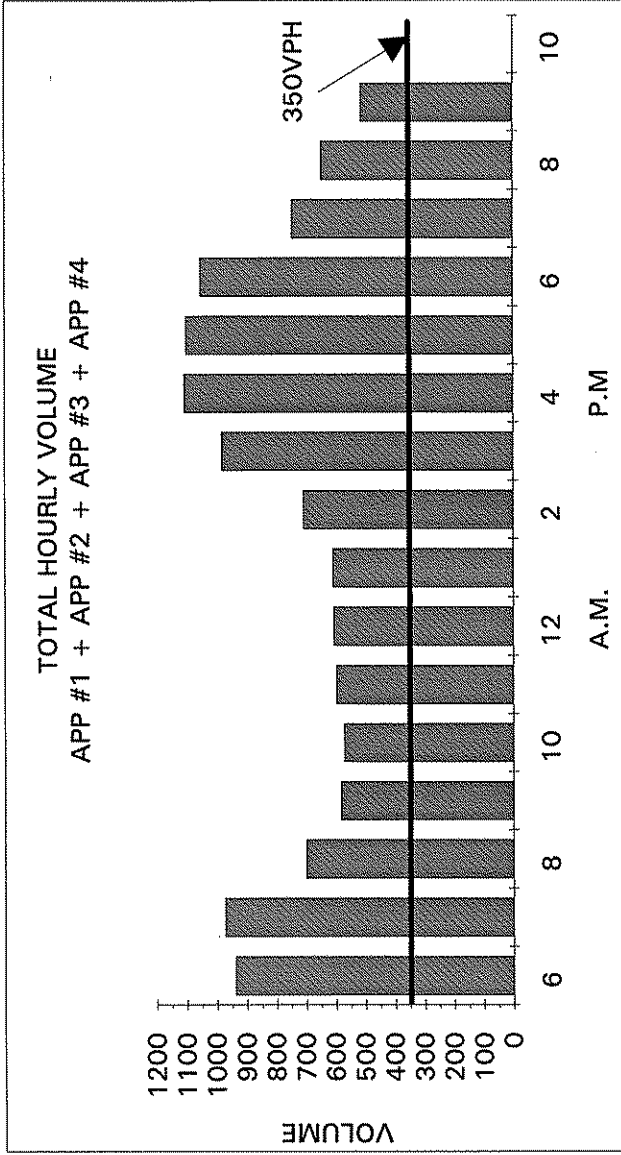
Date 06/08/95	CSAH 78 (HANSON BLVD) Southbound				CSAH 16 (ANDOVER BLVD) Westbound				CSAH 78 (HANSON BLVD) Northbound				CSAH 16 (ANDOVER BLVD) Eastbound				Vehicle Total	
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Total	Other
13:00	4	2	53	2	0	3	10	3	4	54	1	0	4	4	4	4	146	7
13:15	2	2	62	3	2	8	6	10	11	48	0	0	1	2	3	3	148	14
13:30	2	1	67	3	2	4	17	4	9	52	3	0	0	4	1	8	166	8
13:45	6	0	52	1	1	3	12	6	10	56	3	2	2	4	5	15	151	15
Hr Total	14	5	234	9	5	18	45	23	34	210	7	2	7	14	13	611	44	44
14:00	4	2	65	3	3	6	6	8	12	68	3	0	3	2	1	15	173	15
14:15	10	1	66	1	2	8	12	6	14	65	2	0	2	3	0	18	180	18
14:30	3	1	67	3	3	13	6	11	15	80	6	0	1	3	2	200	17	17
14:45	5	3	54	2	2	5	14	6	7	63	3	0	3	1	1	156	13	13
Hr Total	22	7	252	9	10	32	38	31	48	276	14	0	9	9	4	709	63	63
15:00	3	0	62	4	0	6	8	6	11	83	2	0	1	2	2	183	9	9
15:15	2	3	69	3	1	7	1	7	20	131	4	2	0	4	4	248	12	12
15:30	5	3	67	2	4	10	14	12	23	115	4	3	4	6	5	255	24	24
15:45	9	18	87	5	0	4	9	8	11	140	7	1	0	7	7	297	18	18
Hr Total	19	24	285	14	5	19	32	33	65	469	17	6	5	19	18	983	63	63
16:00	11	10	76	2	2	6	6	4	19	134	4	0	4	2	1	270	17	17
16:15	5	4	61	2	4	10	10	3	20	130	2	2	2	12	3	259	14	14
16:30	6	2	80	2	1	7	14	0	18	115	11	0	1	8	1	266	7	7
16:45	2	9	77	3	1	6	7	2	25	162	6	0	0	9	1	313	5	5
Hr Total	24	25	294	9	8	30	38	9	82	541	23	2	7	31	6	1108	43	43
17:00	0	7	70	3	1	10	14	3	22	130	3	0	1	12	2	279	4	4
17:15	1	4	71	4	1	6	11	2	26	151	2	0	3	7	2	288	4	4
17:30	2	4	73	6	2	8	7	3	19	135	7	0	2	8	2	278	7	7
17:45	0	2	72	7	0	12	4	0	14	120	1	0	5	8	1	256	0	0
Hr Total	3	17	286	20	4	36	36	8	81	536	13	0	11	35	7	1101	15	15
18:00	0	3	65	4	2	6	16	1	29	127	5	0	2	11	1	275	3	3
18:15	1	2	70	2	0	11	12	1	28	141	6	0	2	9	2	298	2	2
18:30	1	3	76	1	0	4	15	1	21	117	4	0	4	8	2	258	2	2
18:45	1	3	77	8	0	8	12	0	16	86	5	0	1	3	1	222	1	1
Hr Total	3	11	288	15	2	28	55	3	94	471	20	0	9	31	6	1053	8	8
19:00	1	5	63	3	0	11	12	0	15	75	1	0	2	8	3	198	1	1
19:15	1	2	59	2	0	6	12	0	14	84	4	0	1	5	2	193	1	1
19:30	0	2	60	9	0	6	17	0	10	73	2	0	4	3	1	190	0	0
19:45	0	1	50	0	1	2	5	1	11	85	2	1	0	5	0	165	3	3
Hr Total	2	10	232	14	1	28	45	1	50	317	9	1	7	21	6	746	5	5

Vehicle group 1

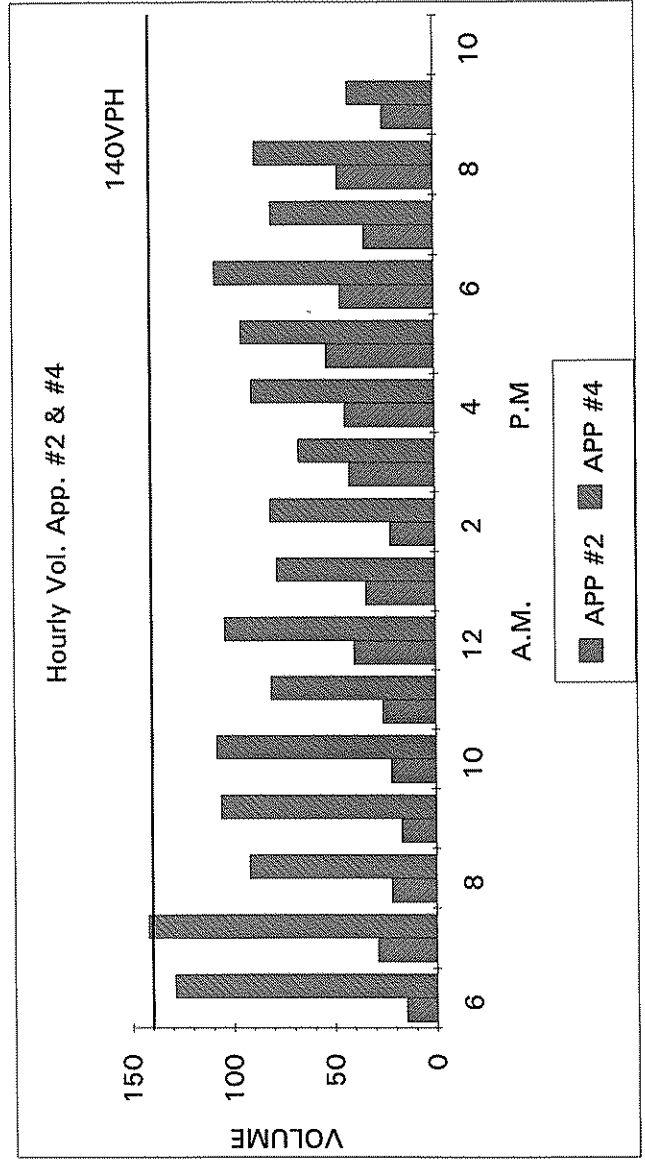
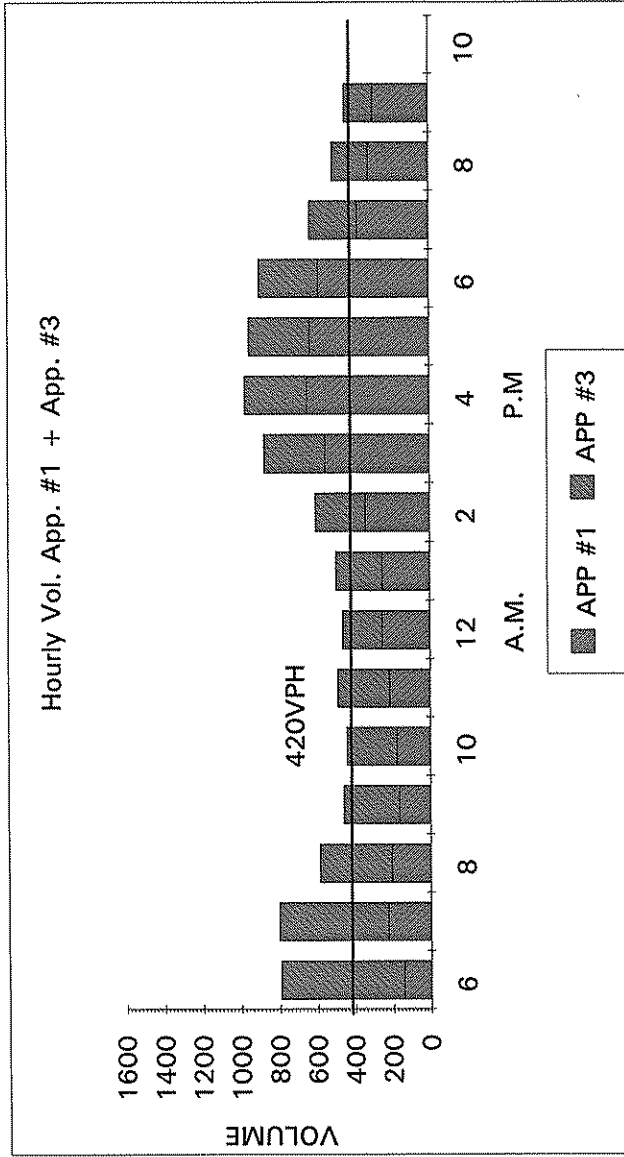
Date	CSAH 78 (HANSON BLVD) Southbound			CSAH 16 (ANDOVER BLVD) Westbound			CSAH 78 (HANSON BLVD) Northbound			CSAH 16 (ANDOVER BLVD) Eastbound			Vehicle					
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Total	Other	Total			
20:00	0	4	44	3	0	2	5	10	1	21	48	1	0	4	3	0	145	1
20:15	0	1	43	2	0	2	4	11	0	14	57	0	0	2	13	1	150	0
20:30	0	2	31	1	0	8	19	16	0	9	78	1	0	3	4	4	176	0
20:45	0	7	54	3	0	3	5	3	2	16	68	4	0	0	6	7	176	2
Hr Total	0	14	172	9	0	15	33	40	3	60	251	6	0	9	26	12	647	3
21:00	1	2	31	3	0	2	3	7	0	12	60	1	0	2	8	0	131	1
21:15	0	1	35	1	0	5	2	1	0	5	72	3	0	2	4	1	132	0
21:30	0	0	37	3	0	2	5	4	0	16	64	3	0	2	1	1	138	0
21:45	0	0	38	2	0	2	2	7	1	10	43	4	0	1	2	1	112	1
Hr Total	1	3	141	9	0	11	12	19	1	43	239	11	0	7	15	3	513	2

TOTAL 184 176 4667 228 84 232 431 828 210 844 4367 155 19 148 270 100 12446 497

TMC9506 STOP WARRANT STUDY



TMC9506 SIGNAL WARRANT 1 STUDY



TMC9506 SIGNAL WARRANT 2 STUDY

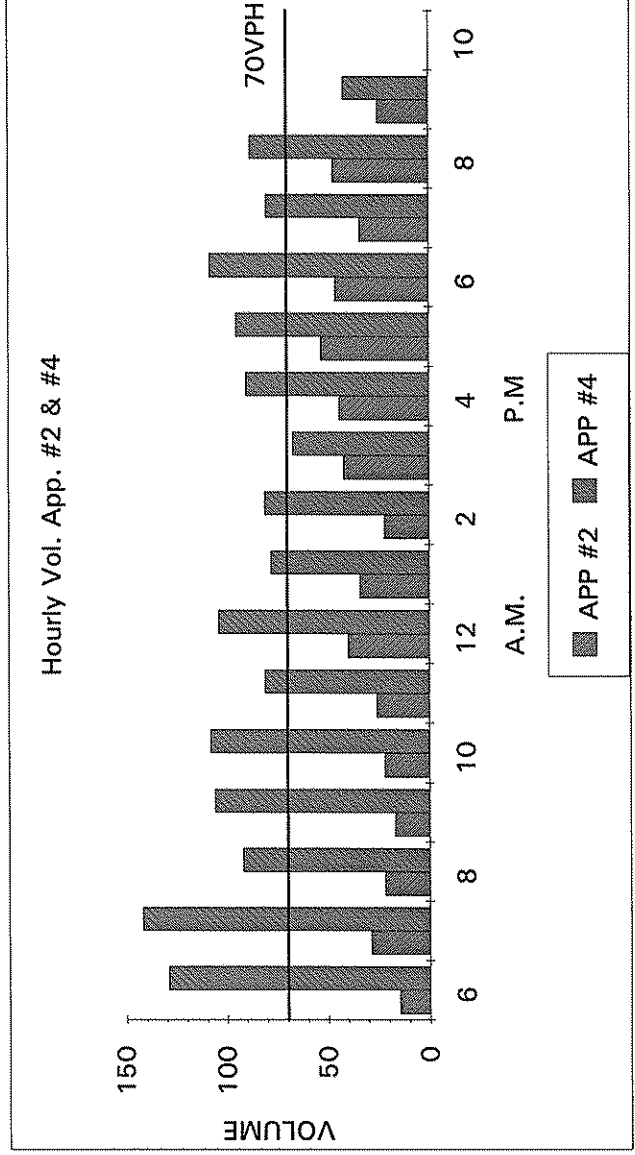
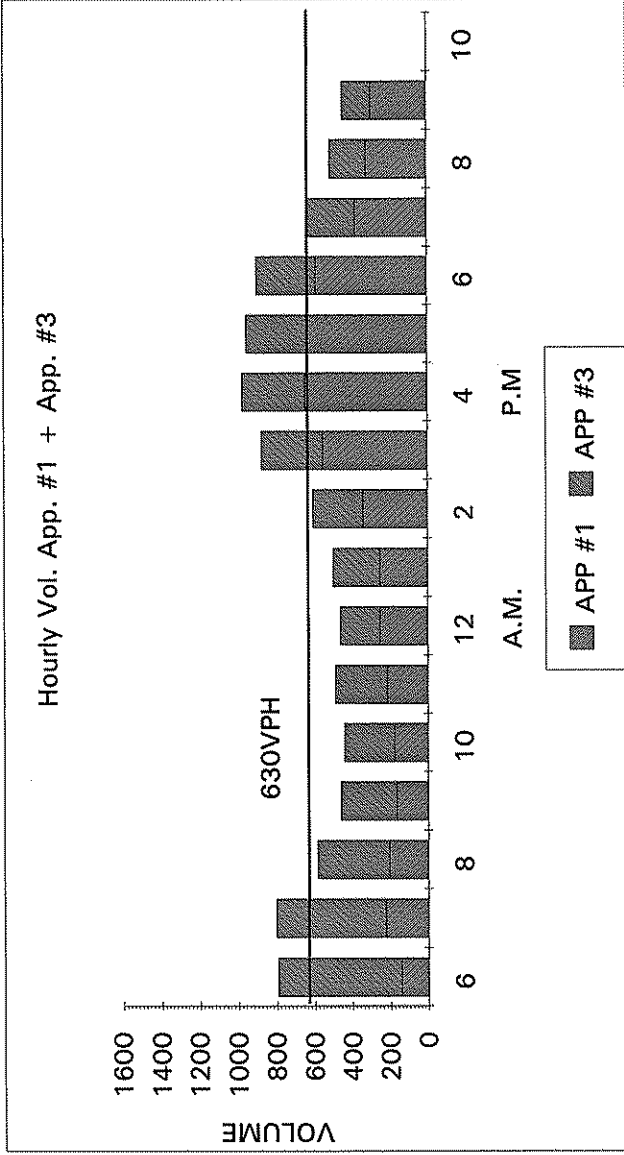
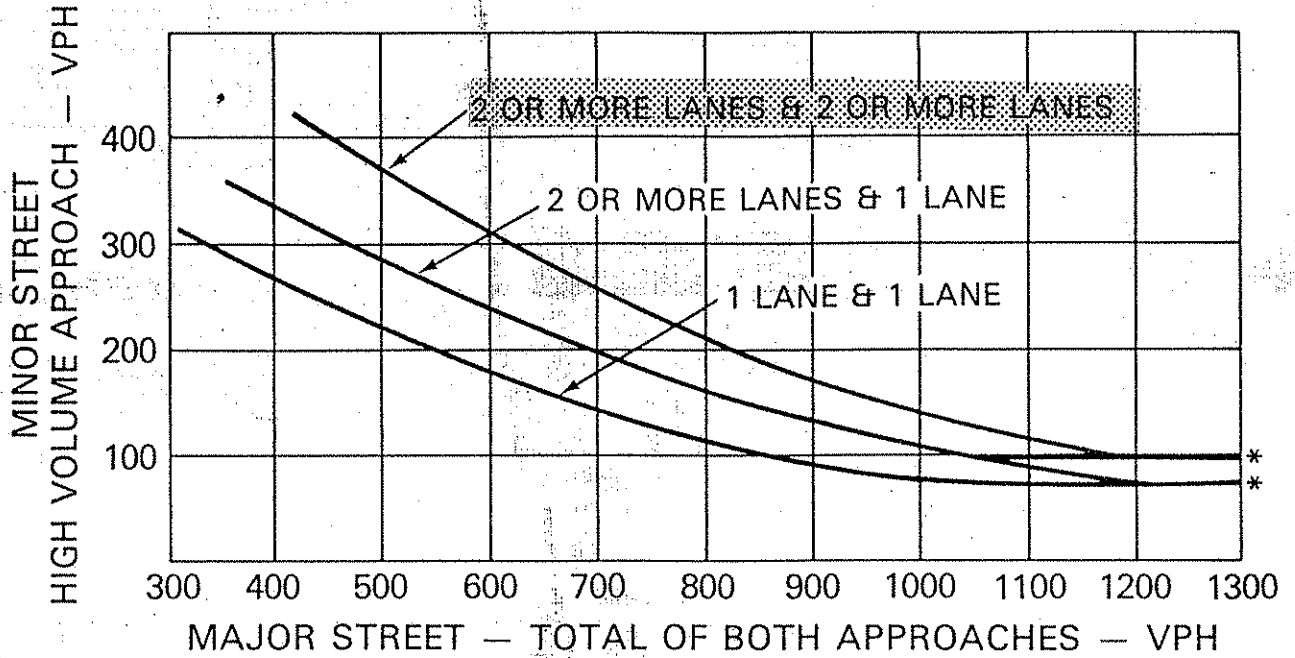


FIGURE 4-6. PEAK HOUR VOLUME WARRANT

(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.

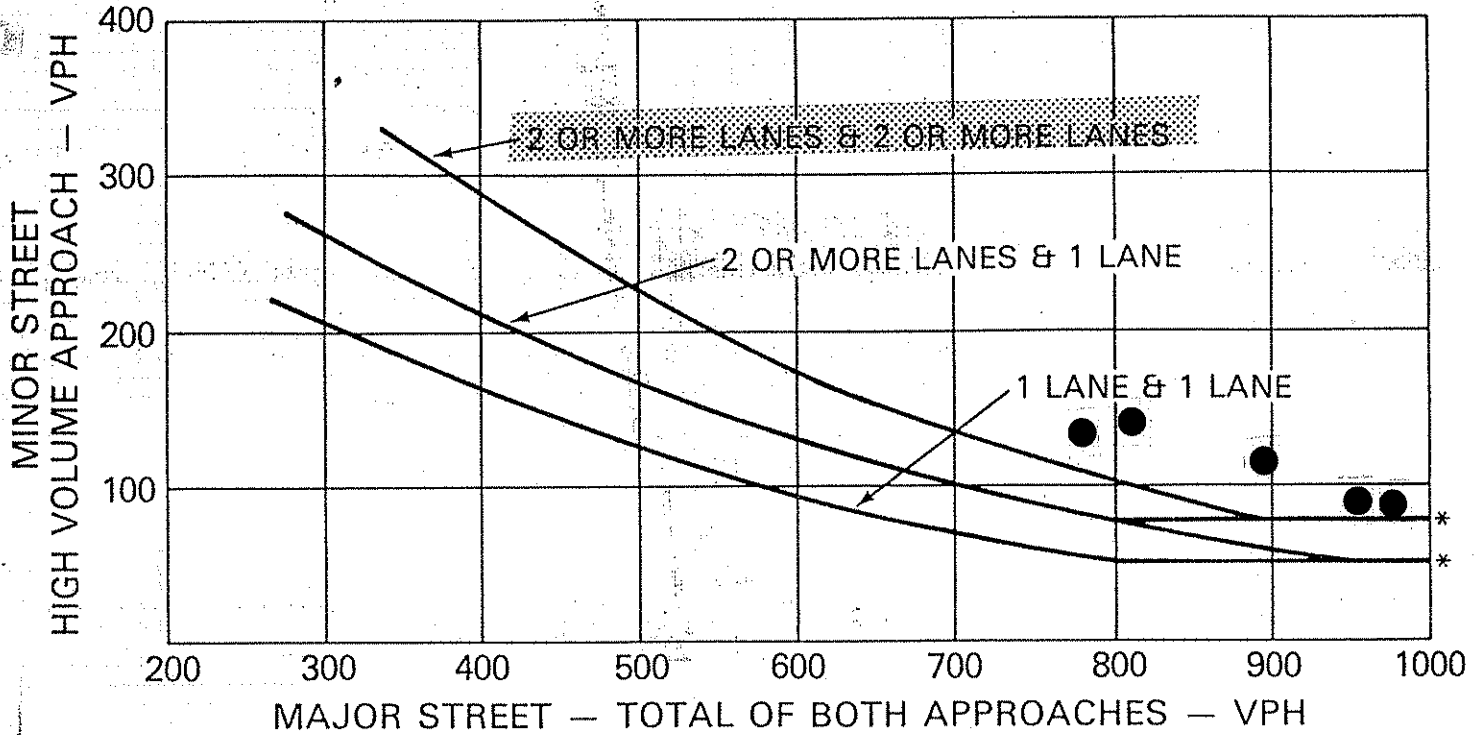
● = VOLUMES WHICH EXCEEDED THE THRESHOLD AND ARE REPRESENTED ON THE GRAPH.

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

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	795	129
7-8 am	803	142
8-9 am	586	92
9-10 am	461	106
10-11 am	443	108
11-12 pm	491	81
12-1 pm	463	104
1-2 pm	499	78
2-3 pm	606	81
3-4 pm	874	67
4-5 pm	974	90
5-6 pm	953	95
6-7 pm	899	108
7-8 pm	632	80
8-9 pm	512	88
9-10 pm	446	42

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	795	129
● 7-8 am	803	142
8-9 am	586	92
9-10 am	461	106
10-11 am	443	108
11-12 pm	491	81
12-1 pm	463	104
1-2 pm	499	78
2-3 pm	606	81
3-4 pm	874	67
● 4-5 pm	974	90
● 5-6 pm	953	95
● 6-7 pm	899	108
7-8 pm	632	80
8-9 pm	512	88
9-10 pm	446	42

←
NORTH

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

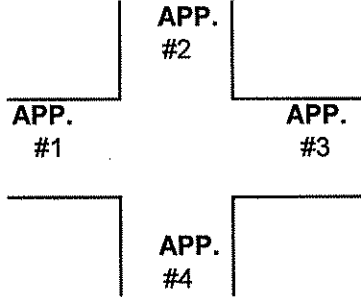
APP.#2=WB CSAH 16
(ANDOVER BLVD)

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

APP.#4=EB CSAH 16
(ANDOVER BLVD)

COUNT LOCATION: CSAH 78 (HANSON BLVD) @
CSAH 16 (ANDOVER BLVD)

DATE: 6/7/95



- 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						4		1
6:30-6:45						3		
6:45-7:00						6		
HOURLY TOTAL						HOURLY TOTAL		15
7:00-7:15						14		1
7:15-7:30						7		
7:30-7:45						9		
7:45-8:00						7		
HOURLY TOTAL						HOURLY TOTAL		38
8:00-8:15						15		1
8:15-8:30						8		
8:30-8:45						8	1	
8:45-9:00						14	1	
HOURLY TOTAL						HOURLY TOTAL		48
9:00-9:15						9		
9:15-9:30						16		
9:30-9:45						6		
9:45-10:00						11		
HOURLY TOTAL						HOURLY TOTAL		42
10:00-10:15						13		
10:15-10:30						12		
10:30-10:45						8		
10:45-11:00						5		
HOURLY TOTAL						HOURLY TOTAL		38
11:00-11:15						3		
11:15-11:30						11		
11:30-11:45						10		
11:45-12:00						7		
HOURLY TOTAL						HOURLY TOTAL		31
12:00-12:15						7		
12:15-12:30						10	1	
12:30-12:45						5		
12:45-1:00						12		
HOURLY TOTAL						HOURLY TOTAL		35
1:00-1:15						8		
1:15-1:30						17		
1:30-1:45						5		
1:45-2:00						17		
HOURLY TOTAL						HOURLY TOTAL		47

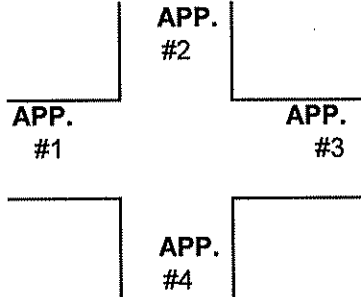


NORTH

COUNT LOCATION: CSAH 78 (HANSON BLVD) @
CSAH 16 (ANDOVER BLVD)

DATE: 6/7/95

APP. #1=SB CSAH 78
(HANSON BLVD)
APP. #2=WB CSAH 16
(ANDOVER BLVD)
APP. #3=NB CSAH 78
(HANSON BLVD)
APP. #4=EB CSAH 16
(ANDOVER 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
2:00-2:15PM						15		
2:15-2:30						15		3
2:30-2:45						16		1
2:45-3:00						13		
HOURLY TOTAL						HOURLY TOTAL		63
3:00-3:15						7		2
3:15-3:30						7		4
3:30-3:45						11		13
3:45-4:00						9		9
HOURLY TOTAL						HOURLY TOTAL		62
4:00-4:15						8		11
4:15-4:30						3		9
4:30-4:45						2		5
4:45-5:00						3		2
HOURLY TOTAL						HOURLY TOTAL		43
5:00-5:15						4		
5:15-5:30						5		
5:30-5:45						6		
5:45-6:00								
HOURLY TOTAL						HOURLY TOTAL		15
6:00-6:15						3		
6:15-6:30						2		
6:30-6:45						2		
6:45-7:00						1		
HOURLY TOTAL						HOURLY TOTAL		8
7:00-7:15						1		
7:15-7:30						1		
7:30-7:45								
7:45-8:00						3		
HOURLY TOTAL						HOURLY TOTAL		5
8:00-8:15						1		
8:15-8:30								
8:30-8:45								
8:45-9:00						11		
HOURLY TOTAL						HOURLY TOTAL		12
9:00-9:15						1		
9:15-9:30								
9:30-9:45								
9:45-10:00						1		
HOURLY TOTAL						HOURLY TOTAL		2