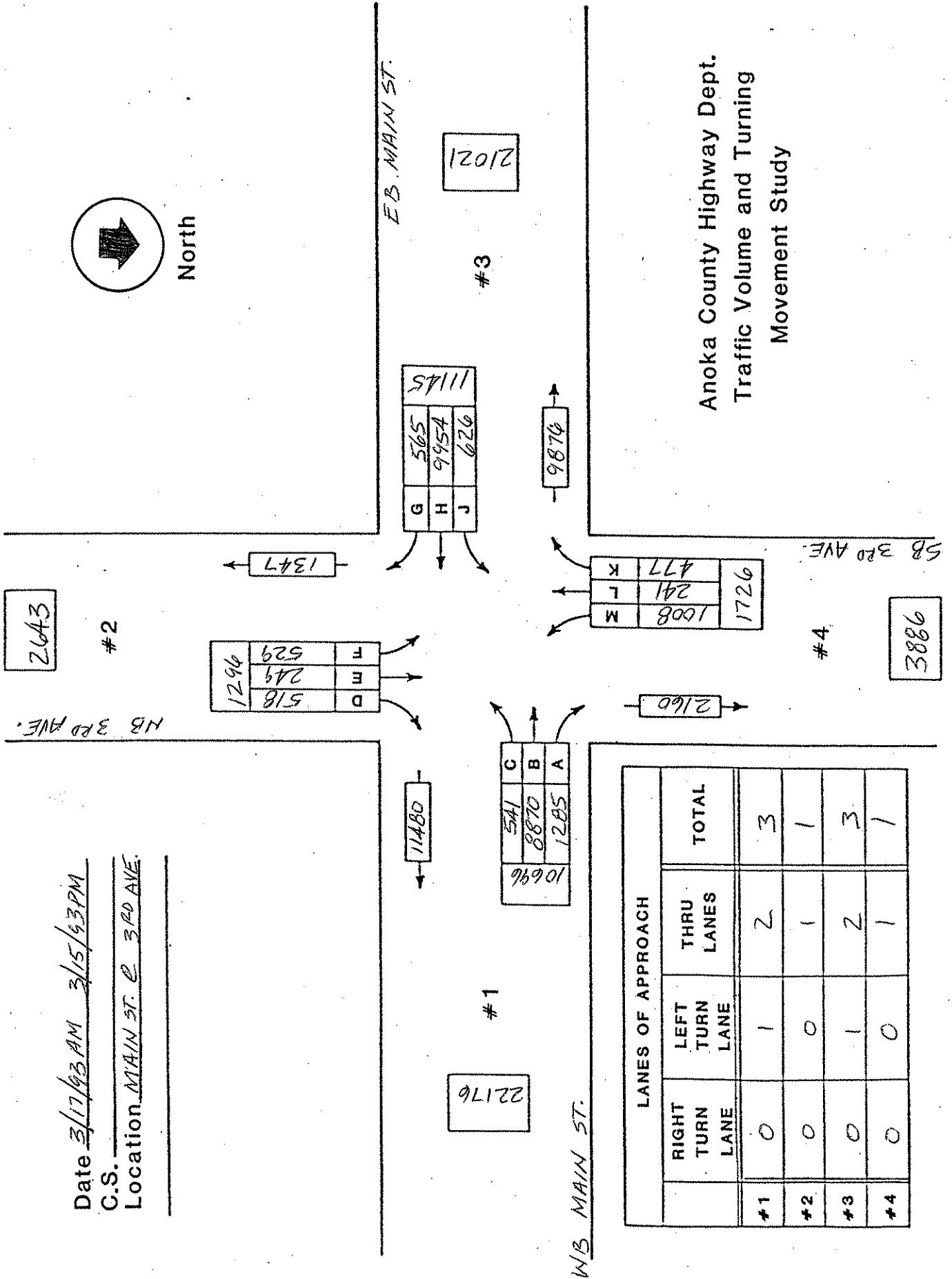


Date 3/17/63 AM 3/15/63 PM
 C.S. _____
 Location MAIN ST. @ 3RD AVE.



North



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

Anoka County Highway Dept.
 Traffic Volume and Turning
 Movement Study

DATE 3/17/93AM 3/15/93PM
 C.S. ANOKA COUNTY HIGHWAY DEPART.
 LOCATION MAIN STREET @ 3RD AVE TRAFFIC ENGINEERING SECTION
 H.V. or PETS H.V. TRAFFIC VOLUME AND TURNING MOVEMENT STUDY

FILE NO. TMC9306

VOLUME & MOVEMENT

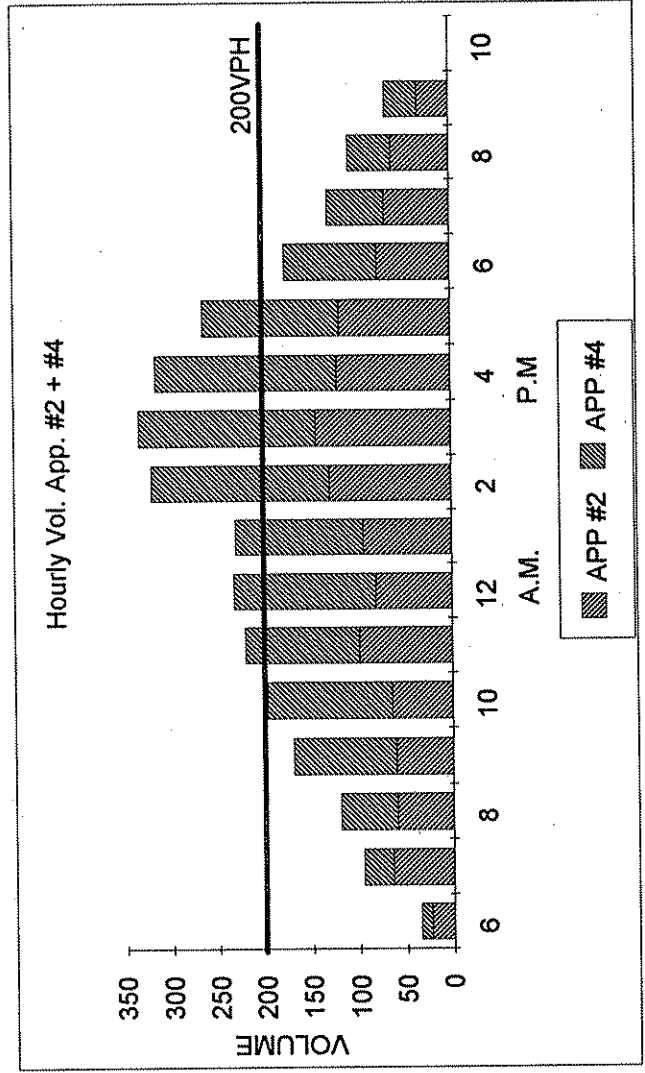
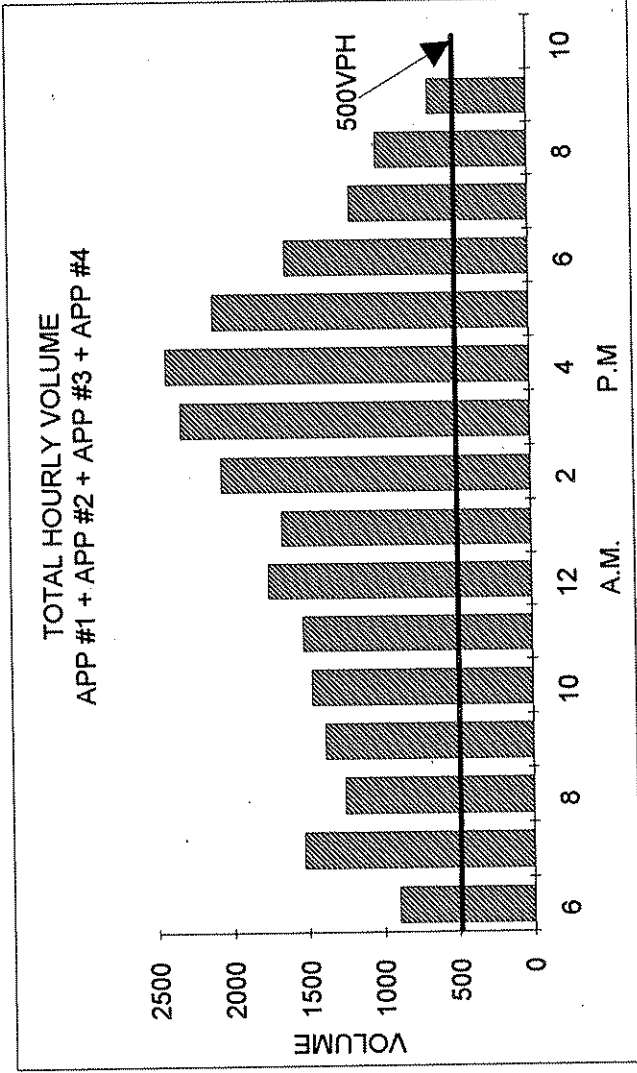
#	RIGHT L. TURN	LEFT TURN L.	THRU L. LANES	TOTAL	DESCRIPTION	# RT. TURN	THRU	LT. TURN	SUB		TOTAL	TOTAL	TOTAL	TOTAL
									TOTAL	OPPOSING				
1	0	1	2	3	WESTBOUND MAIN STREET	1	1285	8870	541	10696	11480	22176		
2	0	0	1	1	NORTHBOUND 3RD AVE	2	518	249	529	1296	1347	2643		
3	0	1	2	3	EASTBOUND MAIN STREET	3	565	9954	626	11145	9876	21021		
4	0	0	1	1	SOUTHBOUND 3RD AVE	4	477	241	1088	1726	2160	3886		

TIME INTERVALS	WESTBOUND APPROACH # 1				EASTBOUND APPROACH # 3				NORTHBOUND APPROACH # 2				SOUTHBOUND APPROACH # 4										
	LT	TH	RT	TOTAL	LT	TH	RT	TOTAL	LT	TH	RT	TOTAL	LT	TH	RT	TOTAL							
6:00 - 6:15	1	1	96	0	1	2	47	1	50	0	1	1	0	0	1	1	2	4					
6:15 - 6:30	1	2	110	4	5	3	76	2	81	0	0	1	4	0	1	0	0	1	6:00 to 6:00 to				
6:30 - 6:45	3	5	129	2	5	4	118	3	125	7:00	0	3	1	3	7:00	0	2	0	1	3:00			
6:45 - 7:00	4	6	114	5	9	3	130	1	134	390	0	3	2	4	9	23	0	1	0	3	4		
7:00 - 7:15	4	19	145	7	3	5	131	6	142		0	3	2	4	9		0	1	0	0	1		
7:15 - 7:30	2	17	146	18	7	12	128	15	155	7:00 to	0	4	1	5	10	7:00 to	0	2	1	3	6:00 to 6:00 to		
7:30 - 7:45	12	17	123	25	23	15	138	26	179	8:00	1	17	7	6	30	8:00	0	5	2	0	7:00 to 7:8:00		
7:45 - 8:00	17	17	156	33	206	11	35	184	17	236	712	1	8	3	15	64	1	10	5	3	18	32	
8:00 - 8:15	2	3	91	30	124	3	14	105	6	125		0	2	1	4	7	1	1	2	4	7		
8:15 - 8:30	5	5	104	17	126	5	13	97	10	120	8:00 to	1	6	4	4	14	8:00 to	0	10	2	5	17	8:00 to
8:30 - 8:45	17	9	129	31	169	12	13	126	7	146	9:00	2	7	3	8	18	9:00	1	8	4	5	17	9:00
8:45 - 9:00	12	8	142	31	181	7	12	117	15	144	535	1	9	9	2	20	59	1	9	6	5	20	61
9:00 - 9:15	4	8	116	21	145	7	12	147	10	169		0	6	2	7	15	0	15	5	5	25		
9:15 - 9:30	5	6	130	24	160	8	11	129	7	147	9:00 to	0	3	5	2	10	9:00 to	1	22	5	8	35	9:00 to
9:30 - 9:45	3	9	133	22	164	5	9	118	9	136	10:00	0	11	2	6	19	10:00	1	13	1	10	24	10:00
9:45 - 10:00	5	9	118	24	151	6	7	133	3	143	595	0	4	5	7	16	60	1	19	3	4	26	110
10:00 - 10:15	5	12	120	25	157	8	5	104	8	117		1	5	0	4	9		0	15	1	2	18	
10:15 - 10:30	7	5	134	20	159	7	11	141	10	162	10:00 to	0	6	9	6	21	10:00 to	1	25	3	7	35	10:00 to
10:30 - 10:45	6	5	113	31	149	4	14	170	12	196	11:00	0	6	0	11	17	11:00	0	27	5	10	42	11:00
10:45 - 11:00	5	15	138	31	184	3	7	134	8	149	624	0	4	3	10	17	64	0	24	4	11	39	134
11:00 - 11:15	7	11	135	25	171	8	10	141	3	154		0	8	3	9	20		1	22	5	7	34	
11:15 - 11:30	5	7	145	20	172	8	8	145	11	164	11:00 to	2	9	9	7	25	11:00 to	0	13	4	13	30	11:00 to
11:30 - 11:45	10	6	168	18	192	6	14	119	9	142	12:00	2	12	5	11	28	12:00	0	13	6	7	26	12:00
11:45 - 12:00	6	10	120	20	150	5	16	139	6	161	621	0	10	7	9	26	99	1	22	4	6	32	122
12:00 - 12:15	4	10	144	23	177	4	12	164	17	193		0	4	2	4	10		1	22	4	15	41	
12:15 - 12:30	6	13	151	38	202	9	14	173	14	201	12:00 to	1	11	5	11	27	12:00 to	2	26	2	5	33	12:00 to
12:30 - 12:45	4	4	149	28	181	7	16	183	9	208	1:00	0	4	8	10	22	1:00	1	24	11	5	40	1:00
12:45 - 1:00	7	9	134	33	176	6	14	157	11	182	784	1	6	8	8	22	81	0	19	5	14	38	152
1:00 - 1:15	4	9	138	31	178	5	9	148	13	170		1	7	12	12	31		1	22	6	11	39	
1:15 - 1:30	7	9	132	27	168	6	10	147	6	177	1:00 to	0	11	2	6	19	1:00 to	1	24	4	8	36	1:00 to
1:30 - 1:45	5	8	138	22	168	6	9	147	20	177	2:00	0	3	3	7	13	2:00	0	14	4	6	24	2:00
1:45 - 2:00	8	14	142	24	180	7	18	158	10	186	734	0	15	4	12	31	94	0	23	8	7	38	137
2:00 - 2:15	7	11	199	48	258	11	12	164	7	183		3	10	6	18	34		4	37	6	12	55	

WESTBOUND APPROACH # 1 EASTBOUND APPROACH # 3 NORTHBOUND APPROACH # 2 SOUTHBOUND APPROACH # 4

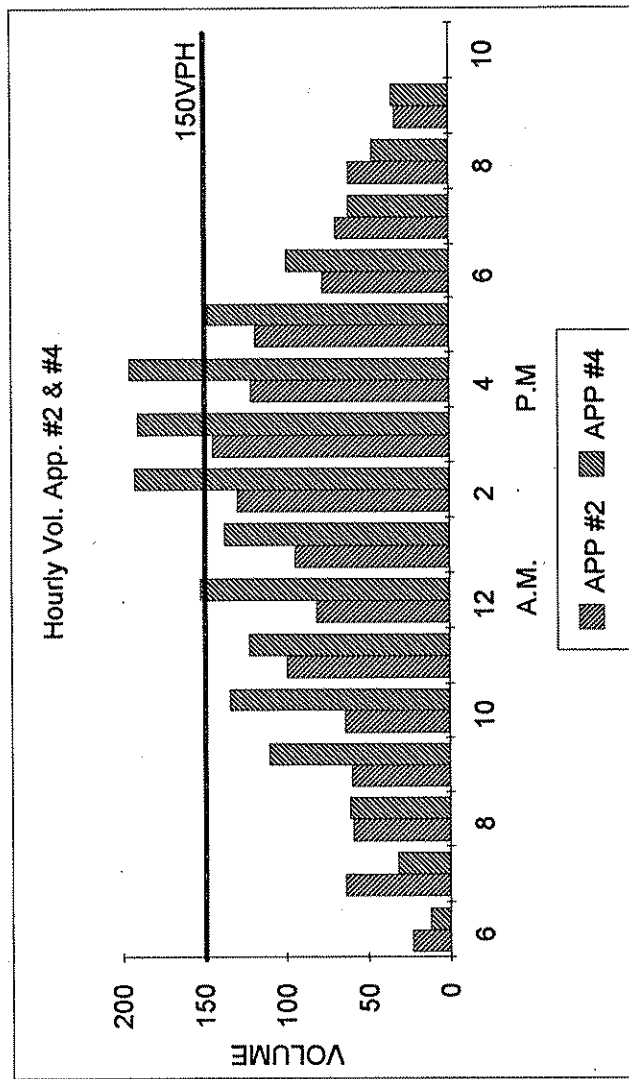
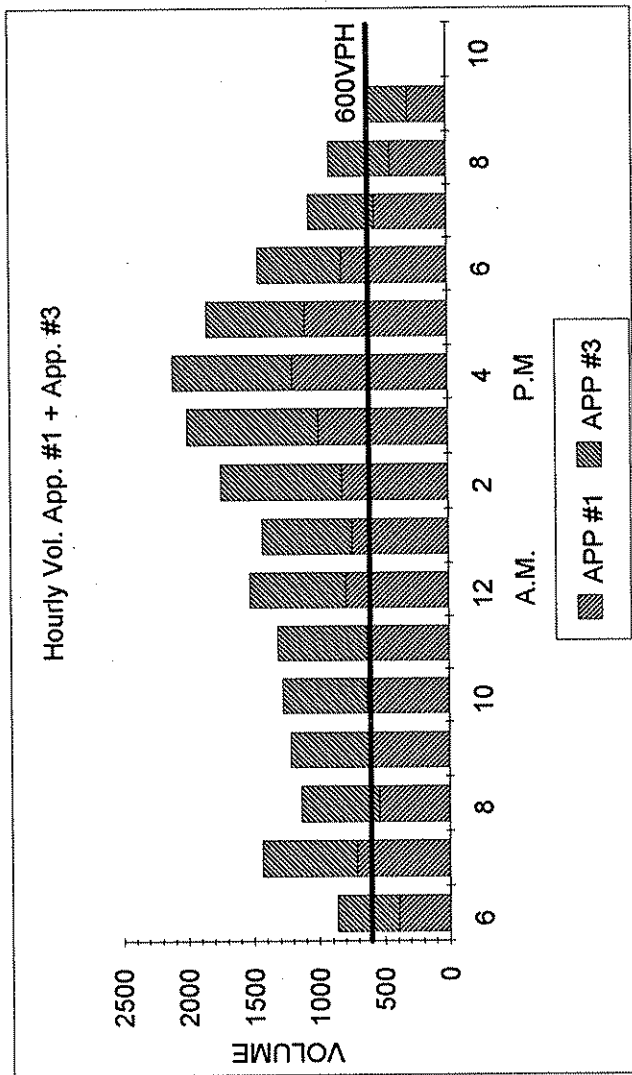
TIME INTERVALS	WESTBOUND APPROACH # 1			EASTBOUND APPROACH # 3			NORTHBOUND APPROACH # 2			SOUTHBOUND APPROACH # 4			
	H.V.	TO TO TO	TO TO TO	TO TO TO	TO TO TO	TO TO TO	TO TO TO	TO TO TO	TO TO TO	TO TO TO	TO TO TO	TO TO TO	
		15 MIN	HOURLY	15 MIN	HOURLY	15 MIN	HOURLY	15 MIN	HOURLY	15 MIN	HOURLY	15 MIN	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
		TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
2:15 - 2:30	6	12 178 29	219 2:00 to	10 10 184 11	205 2:00 to	0 5 6 6	17 2:00 to	1 24 5 14	43 2:00 to				
2:30 - 2:45	10	18 178 38	234 3:00	16 12 182 19	213 3:00	1 14 4 9	27 3:00	2 42 5 7	54 3:00				
2:45 - 3:00	11	12 169 38	219 930	11 13 180 16	209 810	3 22 11 18	51 129	1 29 5 6	40 192				
3:00 - 3:15	9	14 260 38	312	6 15 190 11	216	3 25 9 15	49	0 31 9 18	58				
3:15 - 3:30	7	11 195 30	236 3:00 to	4 12 223 9	244 3:00 to	0 7 12 13	32 3:00 to	0 43 8 11	62 3:00 to				
3:30 - 3:45	3	12 174 28	214 4:00	3 14 226 10	250 4:00	0 15 2 15	32 4:00	1 18 6 14	38 4:00				
3:45 - 4:00	11	6 205 32	243 1005	6 11 256 11	278 988	1 11 7 13	31 144	0 19 3 10	32 190				
4:00 - 4:15	3	9 197 29	235	4 25 266 6	297	0 10 8 12	30	0 30 8 13	51				
4:15 - 4:30	1	12 178 37	227 4:00 to	4 17 278 10	305 4:00 to	0 7 4 16	27 4:00 to	0 18 5 7	30 4:00 to				
4:30 - 4:45	3	8 199 34	241 5:00	1 12 263 5	280 5:00	0 11 7 13	31 5:00	0 33 8 34	75 5:00				
4:45 - 5:00	1	12 181 21	214 917	2 9 287 8	304 1186	0 14 5 14	33 121	0 14 6 19	39 195				
5:00 - 5:15	1	11 176 13	200	13 8 270 13	291	0 25 7 18	50	0 17 5 22	44				
5:15 - 5:30	1	9 170 7	186 5:00 to	3 8 278 5	291 5:00 to	0 9 3 14	26 5:00 to	0 23 6 13	42 5:00 to				
5:30 - 5:45	4	3 160 18	181 6:00	3 6 256 6	268 6:00	0 10 3 12	25 6:00	1 26 6 10	42 6:00				
5:45 - 6:00	3	5 169 14	188 755	2 9 212 16	237 1087	0 7 5 5	17 118	0 11 3 5	19 147				
6:00 - 6:15	3	5 141 15	161	5 13 234 5	252	0 9 2 5	16	0 13 5 10	28				
6:15 - 6:30	2	9 147 6	162 6:00 to	2 11 165 13	189 6:00 to	0 7 2 8	17 6:00 to	0 14 6 10	30 6:00 to				
6:30 - 6:45	1	9 137 12	158 7:00	1 5 155 14	174 7:00	0 8 1 11	20 7:00	0 10 2 9	21 7:00				
6:45 - 7:00	0	12 131 16	159 640	2 4 171 15	190 805	0 6 0 18	24 77	0 12 3 5	20 99				
7:00 - 7:15	2	6 121 8	135	1 5 128 4	137	0 9 1 5	15	0 8 1 3	12				
7:15 - 7:30	1	7 113 11	131 7:00 to	2 2 150 7	159 7:00 to	0 8 0 8	16 7:00 to	0 10 5 1	16 7:00 to				
7:30 - 7:45	1	8 104 6	118 8:00	2 2 131 10	143 8:00	0 13 3 3	19 8:00	0 9 2 5	16 8:00				
7:45 - 8:00	0	6 110 4	120 504	1 2 107 4	113 552	0 10 4 5	19 69	0 10 5 2	17 61				
8:00 - 8:15	3	4 118 7	129	1 3 117 2	122	0 8 2 5	15	0 9 1 4	14				
8:15 - 8:30	1	6 90 8	104 8:00 to	1 4 107 4	115 8:00 to	0 3 1 4	8 8:00 to	0 7 2 6	15 8:00 to				
8:30 - 8:45	1	3 105 3	111 9:00	1 1 87 2	90 9:00	1 5 0 4	9 9:00	0 1 1 5	7 9:00				
8:45 - 9:00	2	10 109 6	125 469	0 2 96 6	104 431	0 10 3 16	29 61	0 7 0 4	11 47				
9:00 - 9:15	0	0 101 3	104	0 4 86 3	93	1 14 1 4	19	0 11 0 0	11				
9:15 - 9:30	0	1 72 3	76 9:00 to	1 2 73 3	78 9:00 to	0 7 0 2	9 9:00 to	0 8 0 2	10 9:00 to				
9:30 - 9:45	0	1 52 5	58 10:00	1 4 60 2	66 10:00	0 0 0 1	1 10:00	0 4 0 1	5 10:00				
9:45 - 10:00	0	1 48 8	57 295	0 2 49 3	54 291	0 2 1 1	4 33	0 5 1 3	9 35				

TMC9306 STOP WARRANT STUDY

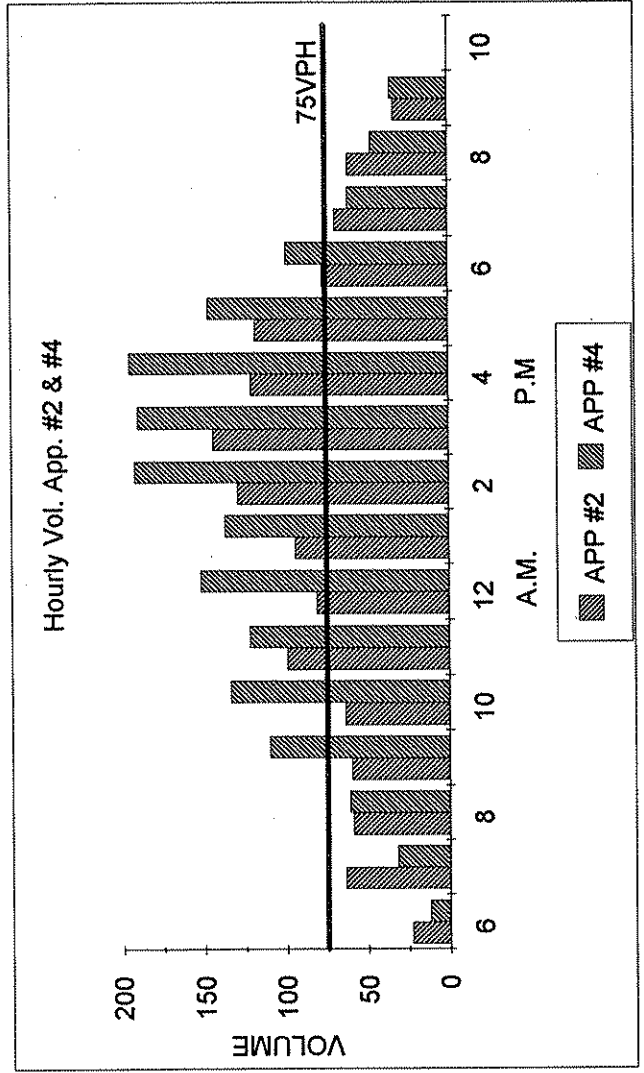
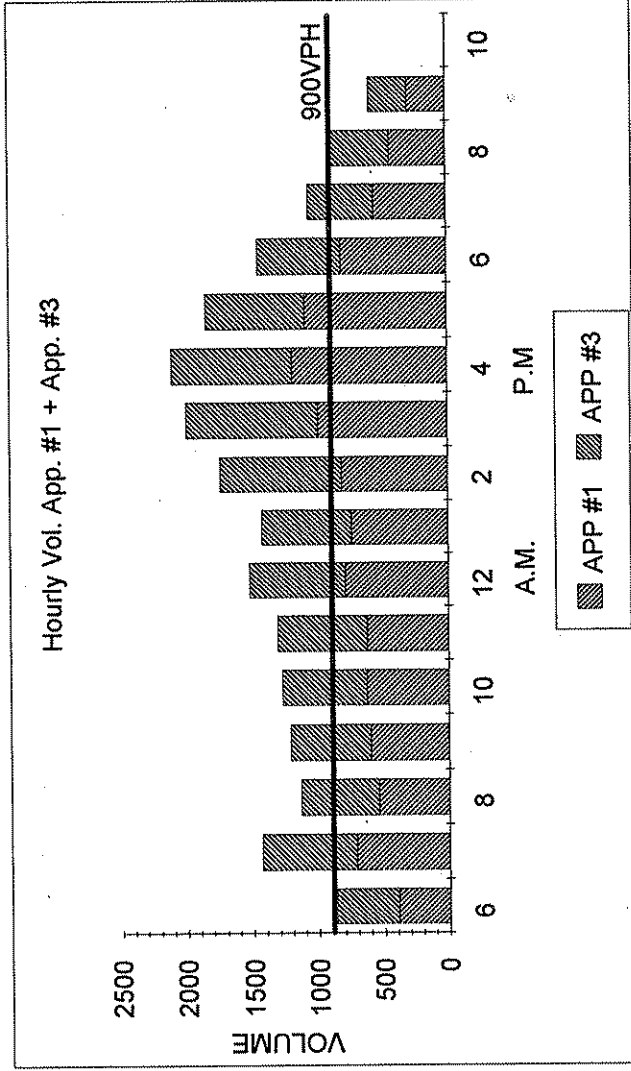


MAIN STREET @ 3RD AVE

TMC9306 SIGNAL WARRANT 1 STUDY

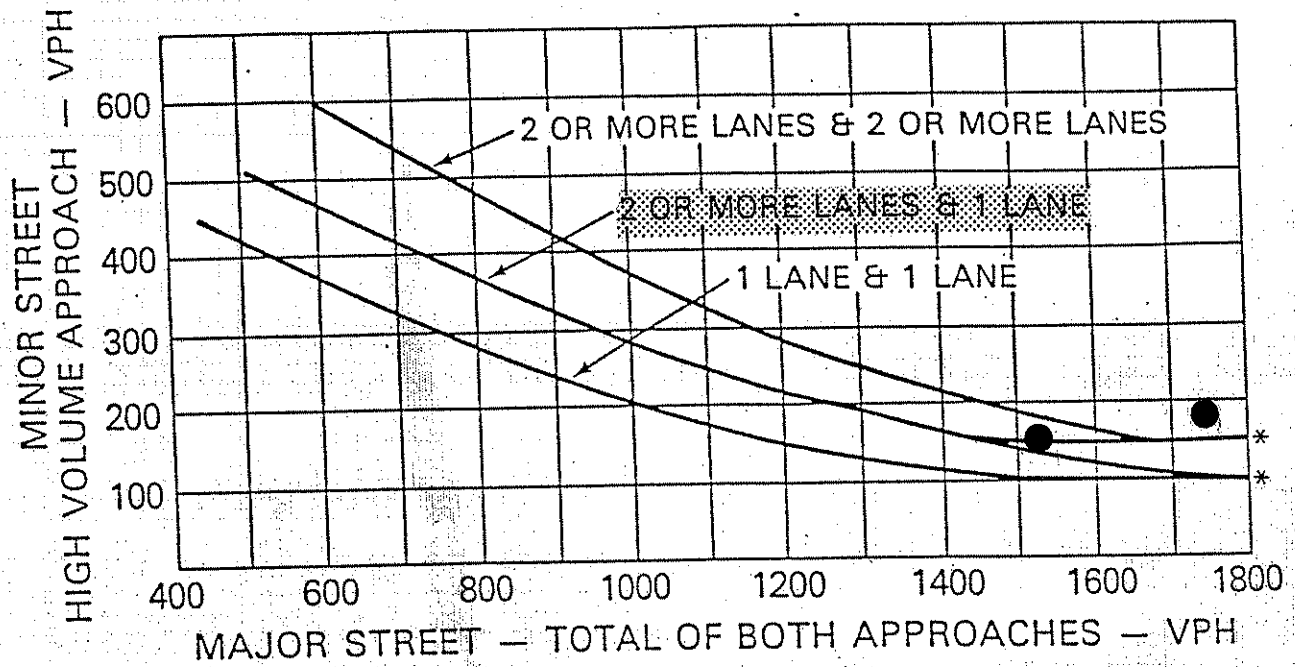


TMC9306 SIGNAL WARRANT 2 STUDY



MAIN STREET @ 3RD AVE

FIGURE 4-5. PEAK HOUR VOLUME WARRANT



*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

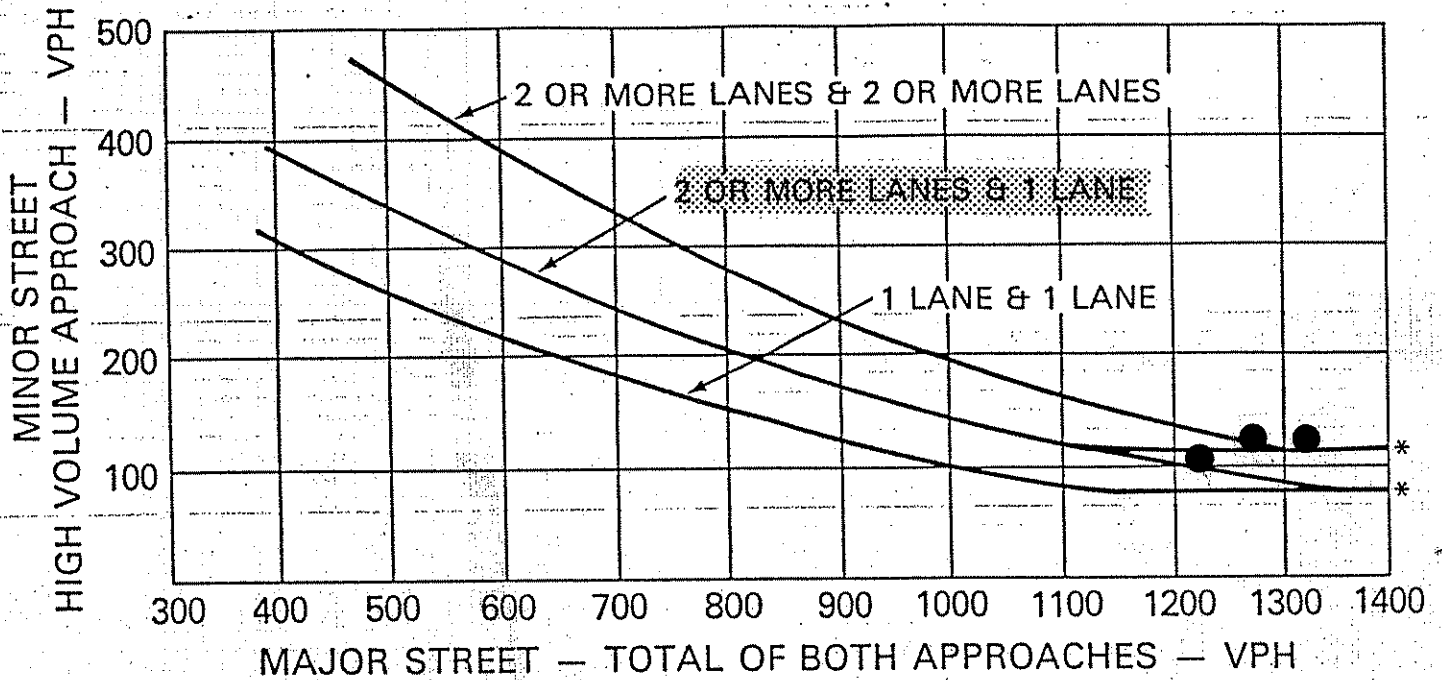
● = VOLUMES WHICH EXCEED THE THRESHOLD AND ARE REPRESENTED ON THE GRAPH.

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

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	864	23
7-8 am	1435	64
8-9 am	1135	61
9-10 am	1215	110
10-11 am	1273	134
11-12 pm	1306	122
● 12-1 pm	1520	152
● 1-2 pm	1428	137
● 2-3 pm	1740	192
★ 3-4 pm	1993	190
★ 4-5 pm	2103	195
★ 5-6 pm	1842	147
6-7 pm	1445	99
7-8 pm	1056	69
8-9 pm	900	61
9-10 pm	586	35

TMC9306 MAIN STREET @ 3 RD AVE

FIGURE 4-7. FOUR HOUR VOLUME WARRANT



*NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 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	864	23
7-8 am	1435	64
8-9 am	1135	61
● 9-10 am	1215	110
● 10-11 am	1273	134
● 11-12 pm	1306	122
★ 12-1 pm	1520	152
★ 1-2 pm	1428	137
★ 2-3 pm	1740	192
★ 3-4 pm	1993	190
★ 4-5 pm	2103	195
★ 5-6 pm	1842	147
★ 6-7 pm	1445	99
★ 7-8 pm	1056	69
★ 7-8 pm	900	61
★ 8-9 pm	586	35

TMC9306 MAIN STREET @ 3 RD AVE



NORTH

APP. #1= EB MAIN ST

APP. #2= SB 3rd AVE

APP. #3= WB MAIN ST

APP. #4= NB 3rd AVE

COUNT LOCATION: MAIN ST @ 3rd AVE

DATE: 3/17/93

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
6:00-6:15AM						1		1
6:15-6:30	1				1	3		3
6:30-6:45						5		3
6:45-7:00		2	4	1	7	8		6
HOURLY TOTAL					8	HOURLY TOTAL		30
7:00-7:15		2			2	3		3
7:15-7:30	2	1	1	2	6	7		2
7:30-7:45	1	3	5	4	13	9		23
7:45-8:00	5	4	9		18	9		21
HOURLY TOTAL					39	HOURLY TOTAL		77
8:00-8:15	2		4	1	7	6		
8:15-8:30	2	1	6	2	11	6		4
8:30-8:45	4	10	9	1	24	13		19
8:45-9:00		2	5	1	8	12		8
HOURLY TOTAL					50	HOURLY TOTAL		68
9:00-9:15	1	2	2	1	6	8		3
9:15-9:30	2	3	4	1	10	12		2
9:30-9:45	3	1	4		8	7		2
9:45-10:00		6	8	2	16	9		2
HOURLY TOTAL					40	HOURLY TOTAL		45
10:00-10:15	2	13	1	1	17	12	1	1
10:15-10:30	4	7	3		14	10	1	5
10:30-10:45		4	5	2	11	7		3
10:45-11:00	3	3	3	2	11	6	1	
HOURLY TOTAL					53	HOURLY TOTAL		47
11:00-11:15		2	4	1	7	13	1	2
11:15-11:30	6	11	4	4	25	12	1	3
11:30-11:45	10	6	4	13	33	13		5
11:45-12:00	11	18	12	16	57	9		3
HOURLY TOTAL					122	HOURLY TOTAL		62
12:00-12:15	14	19	10	10	53	6		2
12:15-12:30	20	17	13	12	62	14		4
12:30-12:45	17	13	15	14	59	9		3
12:45-1:00	5	13	13	10	41	10		4
HOURLY TOTAL					215	HOURLY TOTAL		52
1:00-1:15	4	8	14	17	43	9		2
1:15-1:30	5	4	8	5	22	11		3
1:30-1:45	5	5	3	2	15	8		6
1:45-2:00	3	5	4	1	13	13		2
HOURLY TOTAL					93	HOURLY TOTAL		54