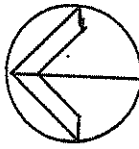


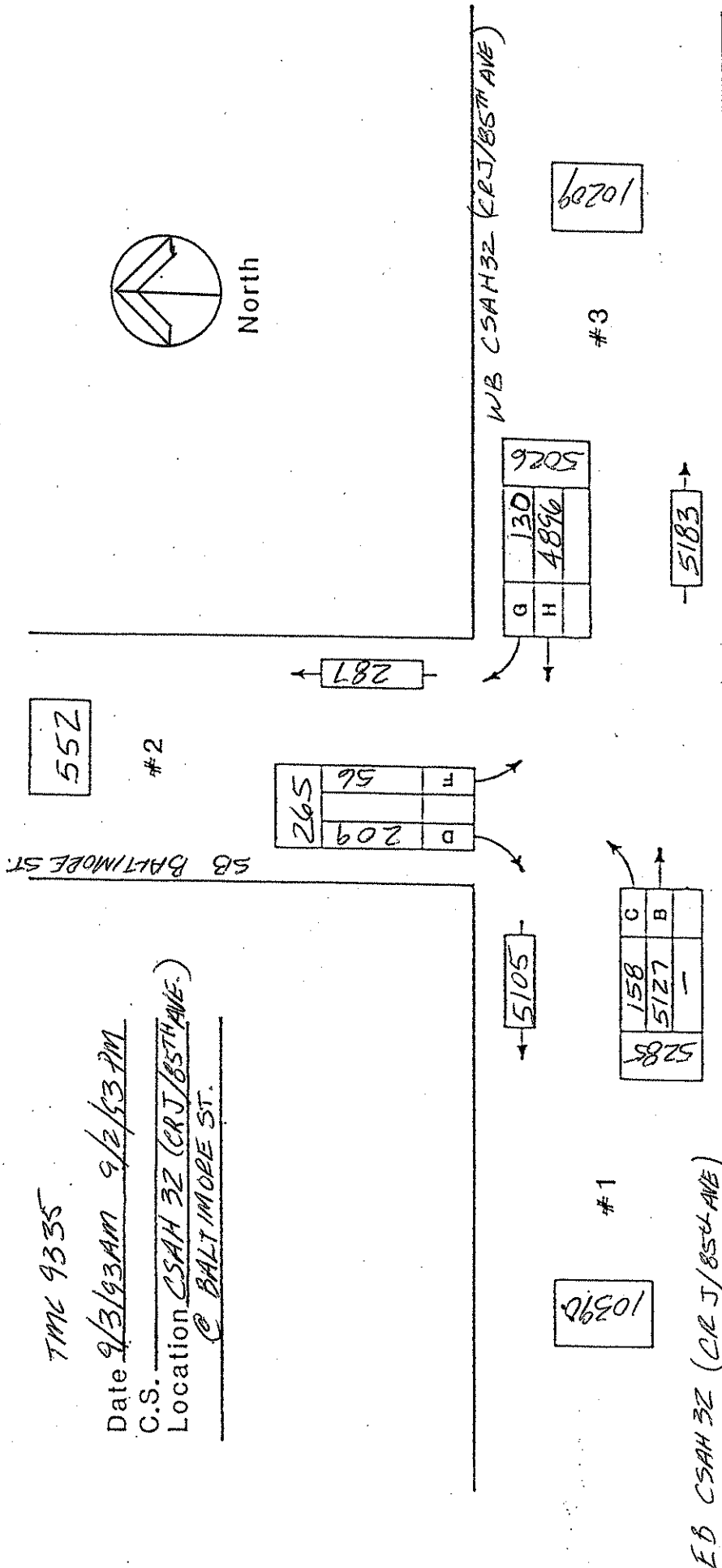
TMC 9335

Date 9/3/93 AM 9/2/93 PM

C.S. Location CSAH 32 (CRJ/85TH AVE.)
@ BALTIMORE ST.



North



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

Anoka County Highway Dept.
 Traffic Volume and Turning
 Movement Study

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

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

Site Code : 93350101
 Start Date: 09/02/93
 File I.D. : TMC93351
 Page : 1

Vehicle group 1

Date	SB BALTIMORE ST. Southbound			WB CSAH 32 (CRJ/85TH AVE) Westbound				Northbound				EB CSAH 32 (CRJ/85TH AVE) 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	0	1	2	0	29	0	0	0	0	0	0	0	21	0	52	2
06:15	0	3	0	0	2	0	44	0	0	0	0	0	2	0	39	0	86	4
06:30	0	2	0	0	6	1	61	0	0	0	0	0	0	0	33	0	97	6
06:45	0	3	0	0	0	2	80	0	0	0	0	0	3	0	36	1	122	3
Hr Total	0	9	0	1	10	3	214	0	0	0	0	0	5	0	129	1	357	15
07:00	0	4	0	3	0	1	54	0	0	0	0	0	1	0	39	0	101	1
07:15	0	1	0	1	1	4	56	0	0	0	0	0	4	0	46	1	109	5
07:30	0	3	0	1	5	1	80	0	0	0	0	0	6	0	54	0	139	11
07:45	0	2	0	0	8	1	110	0	0	0	0	0	2	0	57	0	170	10
Hr Total	0	10	0	5	14	7	300	0	0	0	0	0	13	0	196	1	519	27
08:00	0	1	0	0	3	1	69	0	0	0	0	0	4	0	69	3	143	7
08:15	1	0	0	2	7	1	74	0	0	0	0	0	7	0	56	1	134	15
08:30	1	2	1	2	8	1	54	0	0	0	0	0	7	0	44	1	105	16
08:45	0	3	0	0	4	1	58	0	0	0	0	0	4	0	47	2	111	8
Hr Total	2	6	1	4	22	4	255	0	0	0	0	0	22	0	216	7	493	46
09:00	0	1	0	1	5	2	86	0	0	0	0	0	8	0	52	3	145	13
09:15	0	2	0	0	5	1	56	0	0	0	0	0	5	0	54	2	115	10
09:30	0	2	0	0	3	3	91	0	0	0	0	0	5	0	49	0	145	8
09:45	0	3	0	0	5	0	78	0	0	0	0	0	5	0	72	2	155	10
Hr Total	0	8	0	1	18	6	311	0	0	0	0	0	23	0	227	7	560	41
10:00	0	1	0	1	3	1	77	0	0	0	0	0	5	0	49	0	129	8
10:15	0	4	1	2	4	4	73	0	0	0	0	0	8	0	55	2	141	12
10:30	0	6	0	0	6	0	76	0	0	0	0	0	4	0	47	2	131	10
10:45	0	5	0	2	3	1	65	0	0	0	0	0	5	1	73	0	147	8
Hr Total	0	16	1	5	16	6	291	0	0	0	0	0	22	1	224	4	548	38
11:00	0	2	0	4	4	1	100	0	0	0	0	0	6	0	65	1	173	10
11:15	0	3	0	0	6	1	90	0	0	0	0	0	10	0	76	1	171	10
11:30	0	5	0	1	5	3	98	0	0	0	0	0	9	0	68	1	176	14
11:45	0	3	0	1	6	2	93	1	0	0	0	0	6	0	94	6	200	13
Hr Total	0	13	0	6	21	7	381	1	0	0	0	0	31	0	303	9	720	52
12:00	0	3	0	0	3	2	104	0	0	0	0	0	8	0	108	2	219	13
12:15	0	3	0	0	5	2	92	0	0	0	0	0	4	0	125	3	225	9
12:30	0	4	0	0	8	2	97	0	0	0	0	0	7	0	90	3	196	13
12:45	0	5	0	0	5	5	108	0	0	0	0	0	9	0	65	2	185	13
Hr Total	0	15	0	0	21	11	401	0	0	0	0	0	28	0	388	10	825	49

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

Site Code : 93350101
 Start Date: 09/02/93
 File I.D. : TMC93351
 Page : 2

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

Vehicle group 1

Date	SB BALTIMORE ST. Southbound				WB CSAH 32 (CRJ/85TH AVE) Westbound				Northbound				EB CSAH 32 (CRJ/85TH AVE) Eastbound				Vehicle Total	Other Total	
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left			
09/02/93																			
13:00	0	6	0	1	5	1	81	0	0	0	0	0	6	0	119	4	212	11	
13:15	0	2	0	3	2	2	84	0	0	0	0	0	5	0	95	5	191	7	
13:30	0	1	0	0	4	1	79	0	0	0	0	0	4	0	96	3	180	8	
13:45	0	6	0	2	2	2	87	0	0	0	0	0	7	0	98	3	198	9	
Hr Total	0	15	0	6	13	6	331	0	0	0	0	0	22	0	408	15	781	35	
14:00	0	3	9	1	3	1	48	0	0	0	0	0	5	1	63	2	128	8	
14:15	1	5	0	0	4	1	65	0	0	0	0	0	5	2	80	2	155	10	
14:30	0	7	0	0	8	2	72	0	0	0	0	0	7	0	92	4	177	15	
14:45	0	1	0	0	6	1	78	0	0	0	0	0	3	0	82	1	163	9	
Hr Total	1	16	9	1	21	5	263	0	0	0	0	0	20	3	317	9	623	42	
15:00	0	3	0	0	4	1	72	1	0	0	0	0	10	1	99	3	180	14	
15:15	0	6	0	2	7	0	99	1	0	0	0	0	11	0	139	2	249	18	
15:30	0	8	0	2	3	5	97	0	0	0	0	0	5	0	106	6	224	8	
15:45	0	8	0	1	4	8	95	0	0	0	0	0	9	0	111	5	228	13	
Hr Total	0	25	0	5	18	14	363	2	0	0	0	0	35	1	455	16	881	53	
16:00	0	3	0	1	5	2	104	0	0	0	0	0	7	0	133	3	246	12	
16:15	0	4	0	1	3	8	91	0	0	0	0	0	6	0	138	6	248	9	
16:30	1	3	0	0	5	3	102	0	0	0	0	0	6	0	152	8	268	12	
16:45	0	2	0	0	4	2	113	0	0	0	0	0	4	0	140	10	267	8	
Hr Total	1	12	0	2	17	15	410	0	0	0	0	0	23	0	563	27	1029	41	
17:00	0	3	0	2	7	4	113	1	0	0	0	0	2	0	138	10	271	9	
17:15	0	7	0	0	5	7	106	0	0	0	0	0	4	0	161	7	288	9	
17:30	0	8	0	1	4	5	111	0	0	0	0	0	8	0	130	3	258	12	
17:45	0	8	0	2	1	2	79	0	0	0	0	0	5	0	113	6	210	6	
Hr Total	0	26	0	5	17	18	409	1	0	0	0	0	19	0	542	26	1027	36	
18:00	0	3	0	0	2	6	87	0	0	0	0	0	0	0	100	3	199	2	
18:15	0	4	0	1	3	2	104	0	0	0	0	0	3	0	94	4	209	6	
18:30	0	3	0	2	3	4	100	0	0	0	0	0	2	0	90	1	200	5	
18:45	0	2	0	2	2	1	90	0	0	0	0	0	2	0	86	1	182	4	
Hr Total	0	12	0	5	10	13	381	0	0	0	0	0	7	0	370	9	790	17	
19:00	0	5	0	2	1	0	82	0	0	0	0	0	1	0	84	1	174	2	
19:15	0	4	0	0	2	1	81	0	0	0	0	0	0	0	67	3	156	2	
19:30	0	2	0	0	0	5	61	0	0	0	0	0	2	0	83	2	153	2	
19:45	0	5	0	1	0	1	71	0	0	0	0	0	1	0	73	4	155	2	
Hr Total	0	16	0	3	3	7	295	0	0	0	0	0	4	0	307	10	638	7	

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

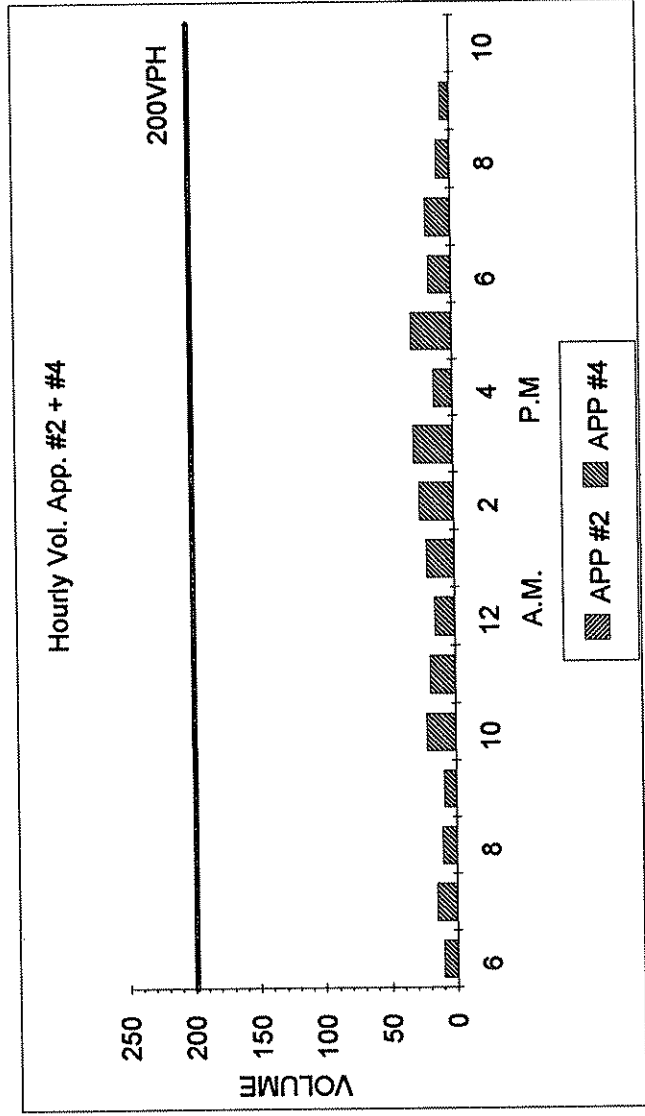
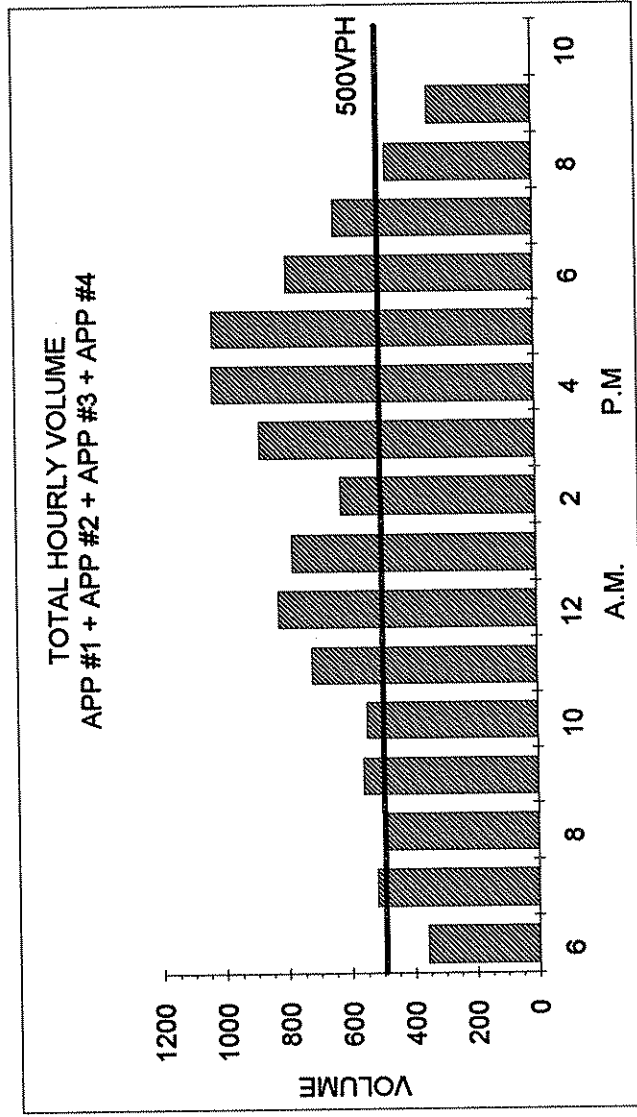
ANOKA COUNTY HIGHWAY DEPARTMENT
 TRAFFIC ENGINEERING SECTION
 TRAFFIC VOLUME AND
 TURNING MOVEMENT STUDY

Site Code : 93350101
 Start Date: 09/02/93
 File I.D. : TMC93351
 Page : 3

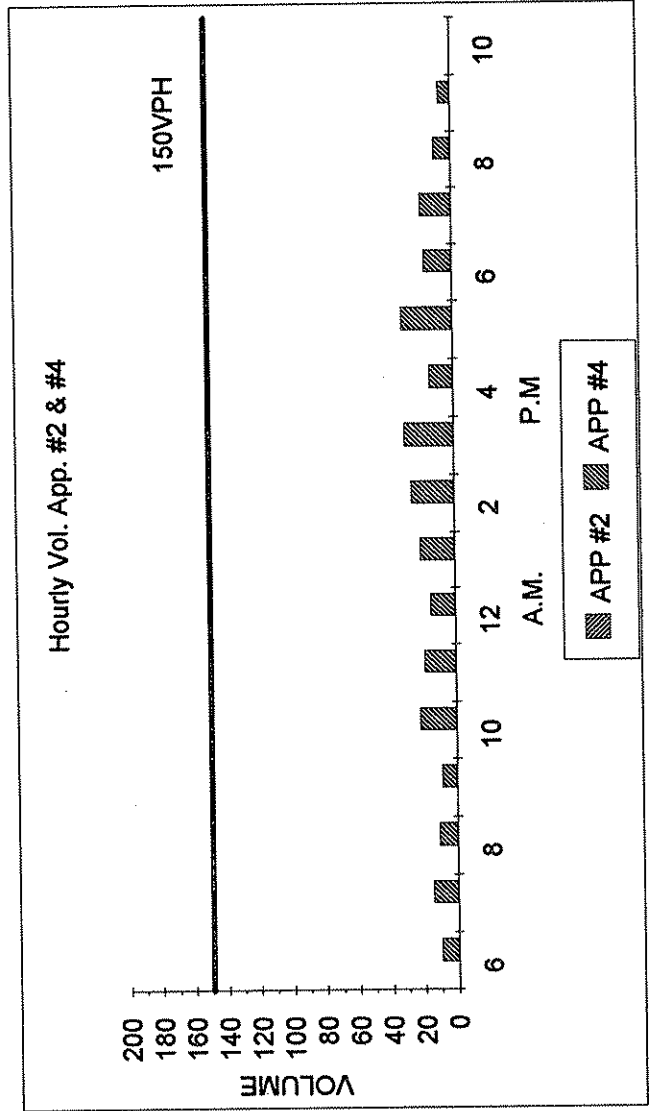
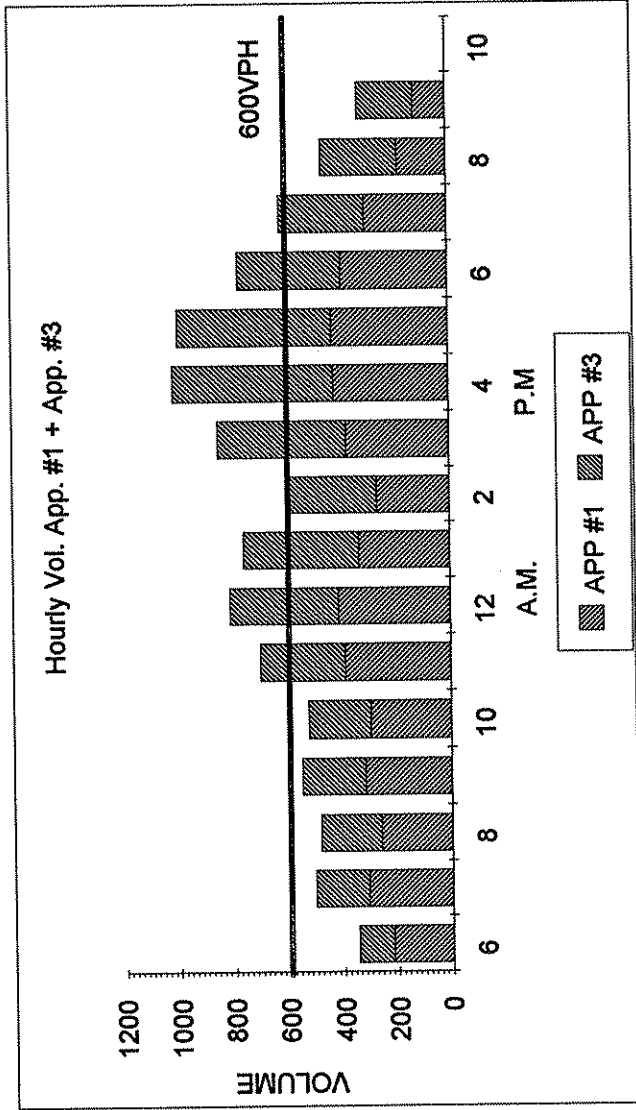
Vehicle group 1

Date	SB BALTIMORE ST. Southbound			WB CSAH 32 (CRJ/85TH AVE) Westbound				NB CSAH 32 (CRJ/85TH AVE) Northbound				EB CSAH 32 (CRJ/85TH AVE) Eastbound				Vehicle Total	Other Total	
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru			Left
09/02/93																		
20:00	0	3	0	1	0	1	56	0	0	0	0	0	0	0	79	2	142	0
20:15	1	3	0	2	0	0	44	0	0	0	0	0	1	0	71	0	120	2
20:30	0	0	0	0	0	3	35	0	0	0	0	0	3	0	62	1	101	3
20:45	0	1	0	0	2	0	41	0	0	0	0	0	0	0	66	0	108	2
Hr Total	1	7	0	3	2	4	176	0	0	0	0	0	4	0	278	3	471	7
21:00	0	1	0	0	1	1	27	0	0	0	0	0	0	0	61	0	90	1
21:15	0	1	0	3	0	1	34	0	0	0	0	0	0	0	58	2	99	0
21:30	0	0	0	1	1	1	26	0	0	0	0	0	1	0	44	1	73	2
21:45	0	1	0	0	1	0	28	0	0	0	0	0	0	0	41	1	71	1
Hr Total	0	3	0	4	3	3	115	0	0	0	0	0	1	0	204	4	333	4
TOTAL	5	209	11	56	226	129	4896	4	0	0	0	0	279	5	5127	158	10595	510

TMC9335 STOP WARRANT STUDY



TMC9335 SIGNAL WARRANT 1 STUDY



TMC9335 SIGNAL WARRANT 2 STUDY

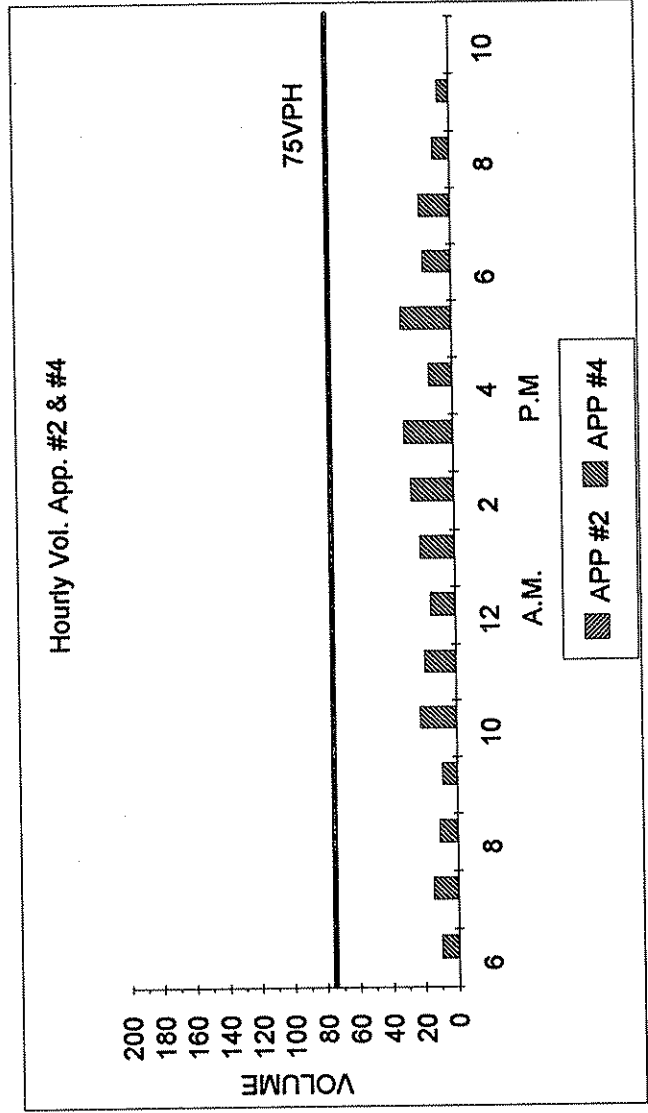
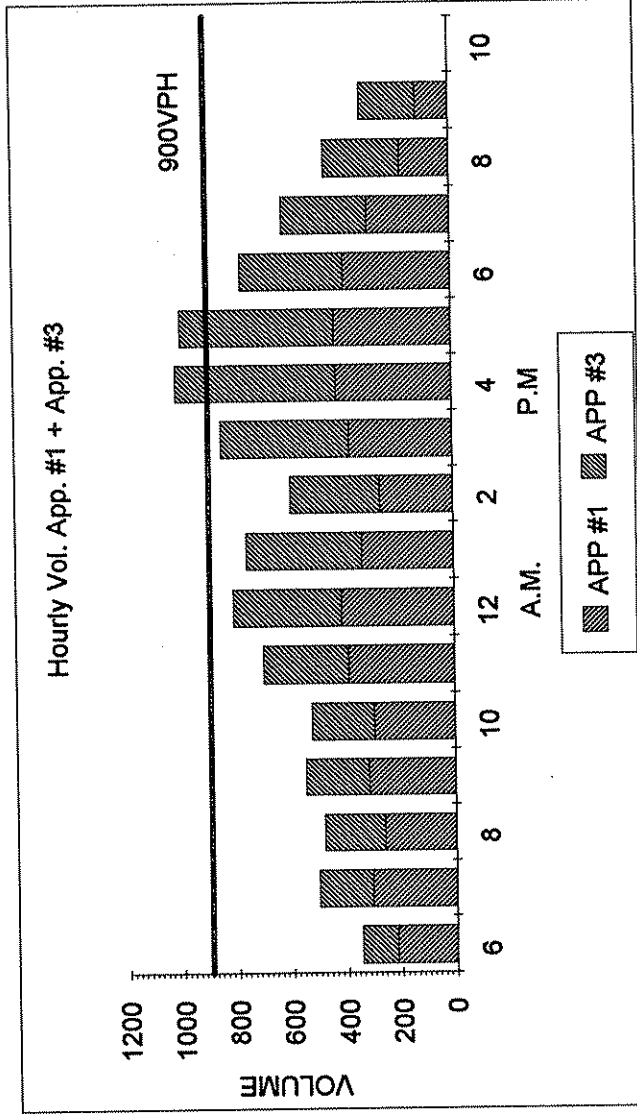
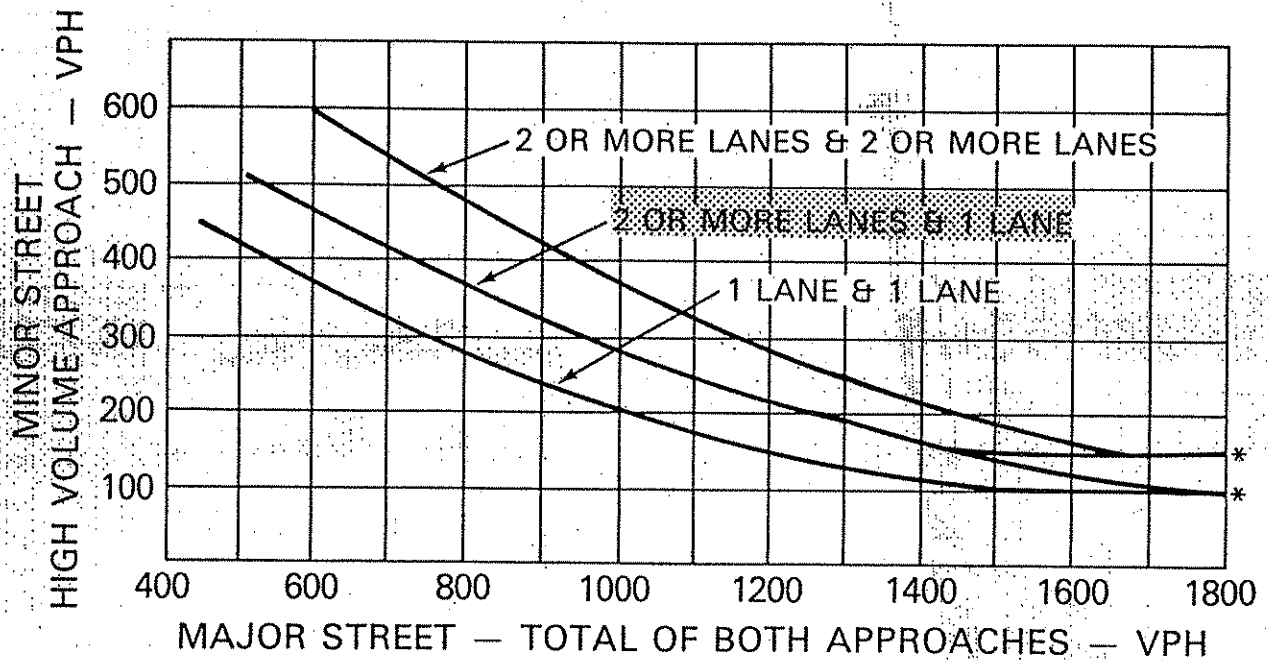


FIGURE 4-5. PEAK HOUR VOLUME WARRANT



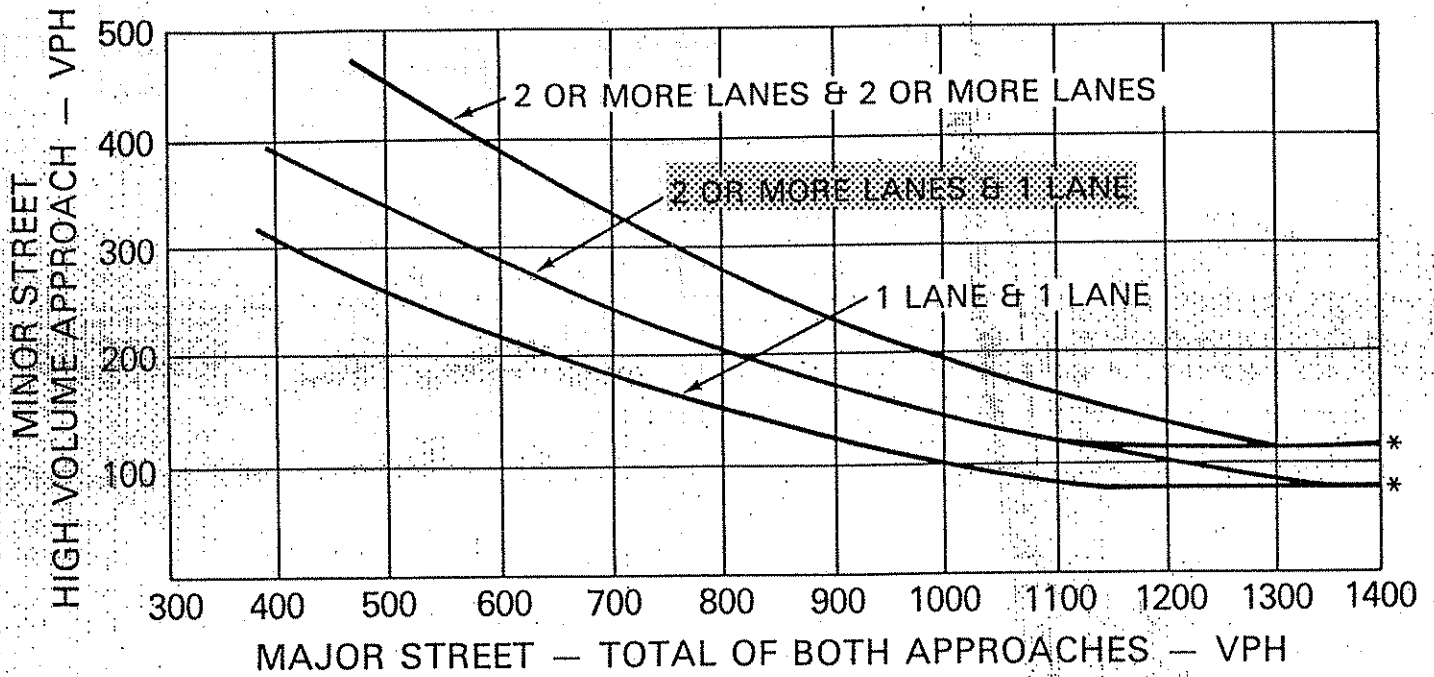
*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

● = 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	347	10
7-8 am	504	15
8-9 am	482	11
9-10 am	551	9
10-11 am	526	22
11-12 pm	701	19
12-1 pm	810	15
1-2 pm	760	21
2-3 pm	597	26
3-4 pm	851	30
4-5 pm	1015	14
5-6 pm	996	31
6-7 pm	773	17
7-8 pm	619	19
8-9 pm	461	10
9-10 pm	326	7

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	347	10
7-8 am	504	15
8-9 am	482	11
9-10 am	551	9
10-11 am	526	22
11-12 pm	701	19
12-1 pm	810	15
1-2 pm	760	21
2-3 pm	597	26
3-4 pm	851	30
4-5 pm	1015	14
5-6 pm	996	31
6-7 pm	773	17
7-8 pm	619	19
8-9 pm	461	10
9-10 pm	326	7

TMC9335 CSAH 32 (CR J/85 TH AVE) @ BALTIMORE ST.



NORTH

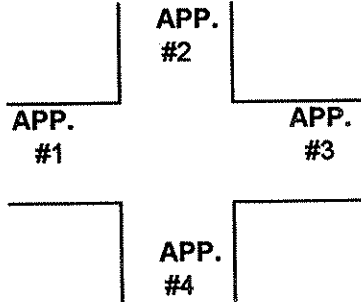
COUNT LOCATION:

CSAH 32 (CR J/85TH AVE) @
BALTIMORE ST

DATE:

9/3/93

APP. #1=
SB BALTIMORE ST.
APP. #2=WB CSAH 32
(CR J/85TH AVE)
APP. #3=
APP. #4=EB CSAH 32
(CR J/85TH AVE)



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						2		
6:15-6:30						3		1
6:30-6:45						6		
6:45-7:00						1		2
HOURLY TOTAL						HOURLY TOTAL		15
7:00-7:15								1
7:15-7:30						4		
7:30-7:45						11		
7:45-8:00						9		1
HOURLY TOTAL						HOURLY TOTAL		26
8:00-8:15						6		1
8:15-8:30						13		2
8:30-8:45						16		
8:45-9:00	1				1	8		
HOURLY TOTAL					1	HOURLY TOTAL		46
9:00-9:15						12		1
9:15-9:30						9		1
9:30-9:45						8		
9:45-10:00						9		
HOURLY TOTAL						HOURLY TOTAL		40
10:00-10:15	1			1	2	7		1
10:15-10:30						11		1
10:30-10:45						10		
10:45-11:00						8		
HOURLY TOTAL					2	HOURLY TOTAL		38
11:00-11:15						10		
11:15-11:30						16		
11:30-11:45						13	1	
11:45-12:00						12		
HOURLY TOTAL						HOURLY TOTAL		52
12:00-12:15						10	1	
12:15-12:30						9		
12:30-12:45						14	1	
12:45-1:00						13		1
HOURLY TOTAL						HOURLY TOTAL		49
1:00-1:15						11		
1:15-1:30	1				1	6		1
1:30-1:45						7		
1:45-2:00						9		
HOURLY TOTAL					1	HOURLY TOTAL		34



NORTH

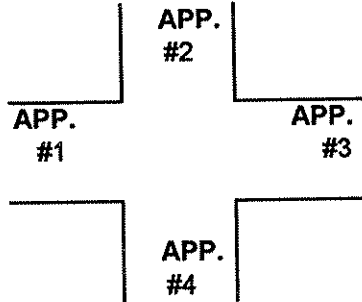
COUNT LOCATION:

CSAH 32 (CR J/85TH AVE) @
BALTIMORE ST.

DATE:

9/2/93

APP. #1=
SB BALTIMORE ST.
APP. #2=WB CSAH 32
(CR J/85TH AVE)
APP. #3=
APP. #4=EB CSAH 32
(CR J/85TH AVE)



- 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						7		
2:15-2:30						10		
2:30-2:45						15		1
2:45-3:00						7		1
HOURLY TOTAL						HOURLY TOTAL		41
3:00-3:15						13		1
3:15-3:30						18		1
3:30-3:45						8		
3:45-4:00						11		1
HOURLY TOTAL						HOURLY TOTAL		53
4:00-4:15						11		1
4:15-4:30						8		1
4:30-4:45						10	1	1
4:45-5:00	3				3	6	1	
HOURLY TOTAL					3	HOURLY TOTAL		40
5:00-5:15						10		
5:15-5:30	2				2	8		1
5:30-5:45						11		1
5:45-6:00						5		1
HOURLY TOTAL					2	HOURLY TOTAL		37
6:00-6:15						1		1
6:15-6:30						5		
6:30-6:45						3		3
6:45-7:00						3		1
HOURLY TOTAL						HOURLY TOTAL		17
7:00-7:15						2		
7:15-7:30						1	1	
7:30-7:45						2		
7:45-8:00	2	2			4	1		
HOURLY TOTAL					4	HOURLY TOTAL		7
8:00-8:15								
8:15-8:30						1	1	
8:30-8:45						2	1	
8:45-9:00						2		
HOURLY TOTAL						HOURLY TOTAL		7
9:00-9:15						1		
9:15-9:30								
9:30-9:45						2		
9:45-10:00						1		
HOURLY TOTAL						HOURLY TOTAL		4