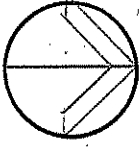


TMC9336

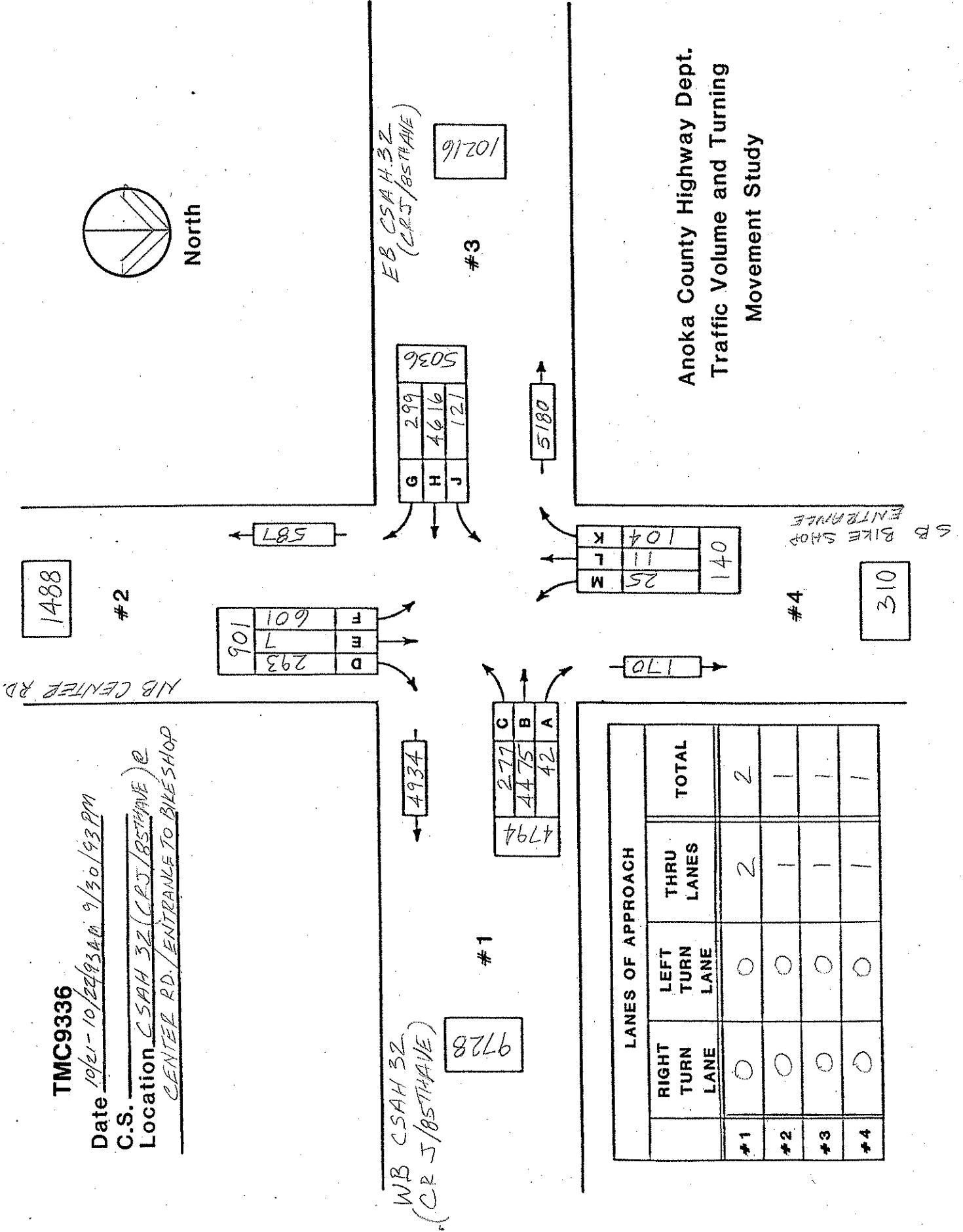
Date 10/21-10/24/93 AM 9/30/93 PM

C.S. Location CSAH 32 (CRJ/85TH AVE) @ CENTER RD./ENTRANCE TO BIKESHOP



North

Anoka County Highway Dept.
Traffic Volume and Turning
Movement Study



	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	1	1
#4	0	0	1	1

9728

WB CSAH 32
(CRJ/85TH AVE)

#1

4794	C	277
	B	4475
	A	42

4934

901	D	293
	E	7
	F	601

1488

#2

NB CENTER RD.

587

5036	G	299
	H	4616
	J	121

10216

#3

EB CSAH 32
(CRJ/85TH AVE)

5180

140	M	25
	L	11
	K	104

SB BIKE SHOP ENTRANCE

#4

310

170

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

Site Code : 93360202
 Start Date: 10/22/93
 File I.D. : 9336CH2J
 Page : 1

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

Vehicle group 1

Date	ENTRANCES TO BIKE SHOP Southbound			ICSAH 32 (85TH AVE/CR J) Westbound			CENTER ROAD Northbound			ICSAH 32 (85TH AVE/CR J) Eastbound			Vehicle Total	Other Total				
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left						
10/22/93																		
06:00	0	0	0	0	1	0	25	1	0	0	0	0	1	1	17	0	44	2
06:15	0	0	0	0	2	0	24	0	0	0	0	1	0	1	29	0	55	2
06:30	0	0	0	0	0	0	54	3	0	0	0	0	2	1	19	0	77	2
06:45	0	0	0	0	1	3	81	4	0	2	0	4	6	7	43	0	144	7
Hr Total	0	0	0	0	4	3	184	8	0	2	0	5	9	10	108	0	320	13
07:00	0	0	0	0	0	0	62	8	0	0	0	2	4	3	38	0	113	4
07:15	0	0	0	0	2	0	39	2	0	0	0	2	6	4	48	1	96	8
07:30	0	0	0	0	1	0	91	3	3	6	0	2	5	12	57	1	172	9
07:45	0	0	0	0	9	0	100	3	0	1	0	3	6	9	72	0	188	15
Hr Total	0	0	0	0	12	0	292	16	3	7	0	9	21	28	215	2	569	36
08:00	0	0	0	0	5	0	77	6	1	6	0	4	6	8	78	0	179	12
08:15	0	0	0	0	7	0	61	6	1	3	0	2	11	6	54	0	132	19
08:30	0	0	0	0	8	0	73	5	0	2	0	8	7	4	43	1	136	15
08:45	1	1	0	0	5	1	85	7	2	6	0	17	6	5	39	1	162	14
Hr Total	1	1	0	0	25	1	296	24	4	17	0	31	30	23	214	2	609	60
09:00	0	0	0	0	6	0	65	2	2	3	0	10	7	3	57	2	142	15
09:15	0	0	0	0	7	3	53	8	1	4	0	7	6	2	42	3	122	14
09:30	0	0	0	0	5	1	58	5	0	1	0	5	4	6	46	0	122	9
09:45	0	1	0	1	7	2	70	7	1	6	0	8	4	3	55	1	154	12
Hr Total	0	1	0	1	25	6	246	22	4	14	0	30	21	14	200	6	540	50
10:00	0	0	2	1	8	0	45	2	3	5	1	12	4	5	47	0	120	15
10:15	0	1	0	0	6	1	72	2	1	4	0	13	3	5	40	2	140	10
10:30	0	1	0	0	2	1	73	4	0	6	0	10	8	5	40	0	140	10
10:45	0	0	0	0	9	0	90	6	1	1	0	10	5	2	61	3	173	13
Hr Total	0	2	2	1	25	2	280	14	5	16	1	45	20	17	188	5	573	50
11:00	0	2	0	0	5	0	66	5	2	5	0	13	6	11	66	3	171	13
11:15	0	2	0	0	4	0	71	2	2	7	0	12	7	4	68	2	168	13
11:30	0	1	0	0	1	0	79	5	1	5	0	12	2	3	63	1	169	13
11:45	0	2	0	0	8	0	92	7	2	4	3	9	8	6	59	1	183	13
Hr Total	0	7	0	0	18	0	308	19	7	21	3	46	23	24	256	7	691	48
12:00	0	2	0	1	5	1	95	8	0	6	0	12	3	5	59	2	191	13
12:15	0	3	0	0	4	0	88	2	1	8	0	9	9	6	65	7	188	13
12:30	0	3	0	0	5	2	76	4	1	3	0	14	8	12	52	2	168	13
12:45	1	4	1	0	4	2	89	5	2	5	0	15	7	3	107	3	234	13
Hr Total	1	12	1	1	18	5	348	19	4	22	0	50	27	26	283	14	781	50

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 : 93360202
 Start Date: 10/22/93
 File I.D. : 9336CH2
 Page : 2

Vehicle group 1

Date	ENTRANCES TO BIKE SHOP Southbound				CSAH 32 (85TH AVE/CR J) Westbound				CENTER ROAD Northbound				CSAH 32 (85TH AVE/CR J) Eastbound				Vehicle Total	Other Total	
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left			
10/22/93																			
13:00	0	2	1	0	6	1	67	10	1	4	0	20	14	5	73	2	185	21	
13:15	0	2	0	3	3	0	59	8	0	2	0	10	2	4	63	2	153	5	
13:30	0	2	0	1	9	0	72	5	1	4	1	11	4	4	67	4	171	14	
13:45	2	4	2	0	3	0	68	2	0	8	0	11	2	4	55	7	161	7	
Hr Total	2	10	3	4	21	1	266	25	2	18	1	52	22	17	258	15	670	47	
14:00	0	2	0	0	5	0	56	5	0	6	0	12	8	10	67	2	160	13	
14:15	0	4	0	2	4	1	68	6	1	9	0	7	5	6	74	4	181	10	
14:30	0	4	0	1	5	0	73	4	0	6	0	10	6	2	93	4	197	11	
14:45	0	5	1	3	6	3	78	2	0	8	0	5	7	7	85	5	202	13	
Hr Total	0	15	1	6	20	4	275	17	1	29	0	34	26	25	319	15	740	47	
15:00	0	2	1	0	10	1	78	6	1	3	0	9	11	4	92	3	199	22	
15:15	0	4	0	0	6	1	74	5	2	6	0	15	14	6	109	4	224	22	
15:30	0	2	1	0	5	0	98	4	3	9	0	22	10	10	112	3	261	18	
15:45	0	0	0	0	3	3	97	5	0	8	0	24	12	12	127	4	280	15	
Hr Total	0	8	2	0	24	5	347	20	6	26	0	70	47	32	440	14	964	77	
16:00	0	4	0	2	6	1	95	6	2	9	0	20	7	6	117	3	263	15	
16:15	0	2	0	0	11	1	76	6	1	11	0	12	6	8	105	4	225	16	
16:30	0	7	0	0	10	3	86	7	0	11	1	21	6	12	109	0	257	16	
16:45	0	2	0	1	4	1	95	5	0	15	0	16	3	7	133	2	277	7	
Hr Total	0	15	0	3	31	6	352	24	3	46	1	69	22	33	464	9	1022	56	
17:00	0	3	0	0	4	0	100	6	1	9	0	19	5	7	145	4	293	16	
17:15	0	2	0	0	2	4	88	4	0	10	0	19	3	1	151	1	280	5	
17:30	0	2	0	2	2	1	87	2	0	7	0	14	4	2	137	7	261	6	
17:45	0	2	0	1	2	0	100	7	0	11	0	19	1	1	109	0	250	3	
Hr Total	0	9	0	3	10	5	375	19	1	37	0	71	13	11	542	12	1084	24	
18:00	0	1	0	0	2	1	82	5	1	8	0	11	2	5	95	4	212	5	
18:15	0	3	0	0	1	0	85	7	0	2	0	16	8	3	78	3	197	9	
18:30	0	4	0	1	4	1	97	2	1	2	0	5	3	3	84	3	202	8	
18:45	0	1	0	1	6	1	100	3	0	6	1	5	3	7	74	4	203	8	
Hr Total	0	9	0	2	13	3	364	17	2	18	1	37	16	18	331	14	814	31	
19:00	0	6	0	3	5	0	87	5	0	2	0	5	4	5	93	1	207	5	
19:15	0	3	1	0	2	0	73	4	0	5	0	6	3	2	97	2	193	5	
19:30	0	3	0	1	2	0	64	2	1	3	0	7	0	2	67	2	151	5	
19:45	0	2	0	0	7	1	52	3	0	2	0	5	1	0	62	1	128	5	
Hr Total	0	14	1	4	16	1	276	14	1	12	0	23	8	9	319	6	679	25	

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

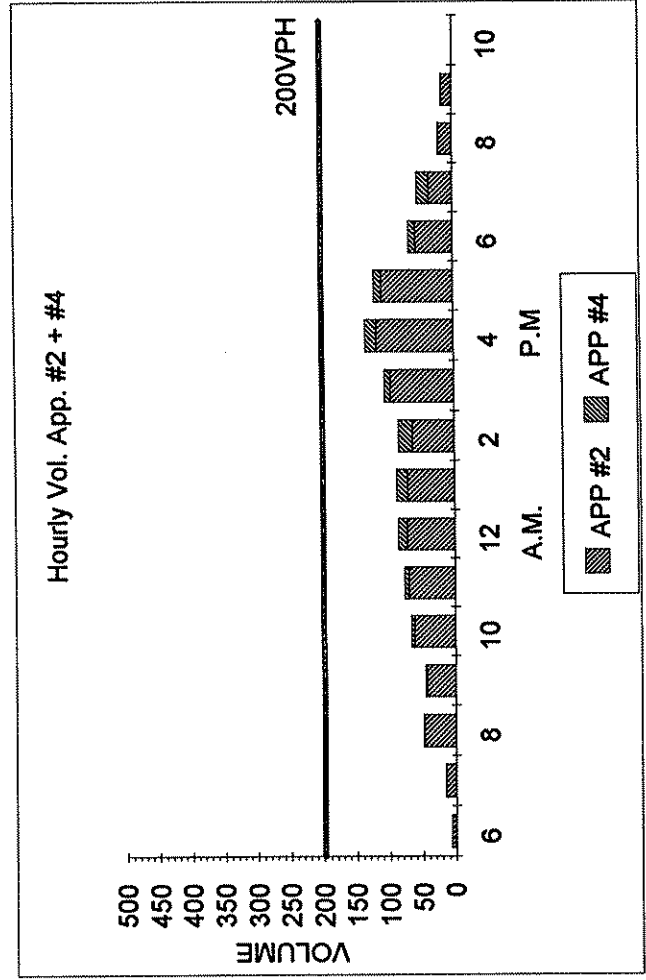
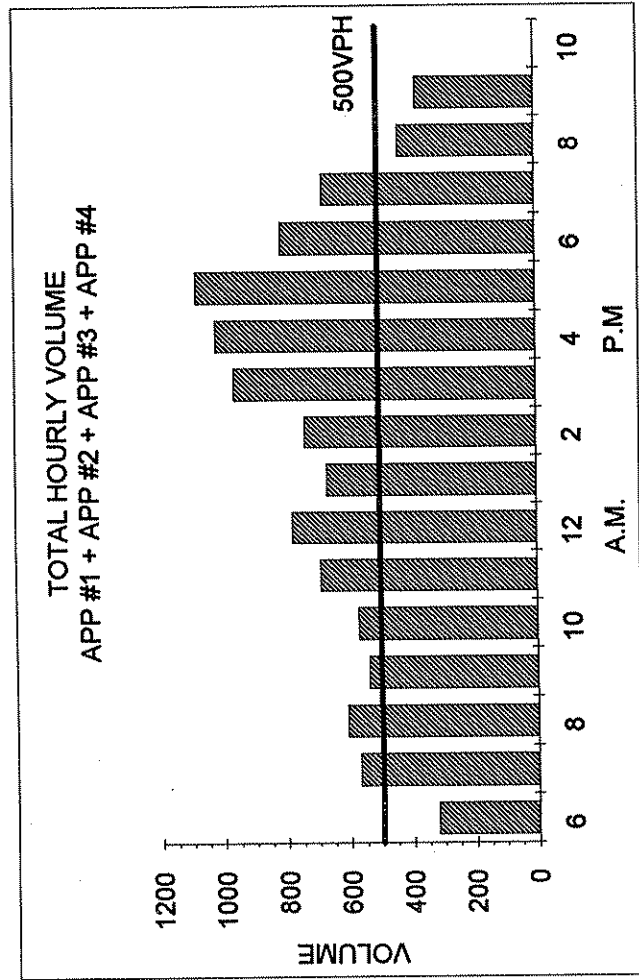
ANOKA COUNTY HIGHWAY DEPARTMENT
 TRAFFIC ENGINEERING SECTION
 TRAFFIC VOLUME AND
 TURNING MOVEMENT STUDY

Site Code : 93360202
 Start Date: 10/22/93
 File I.D. : 9336CH21
 Page : 3

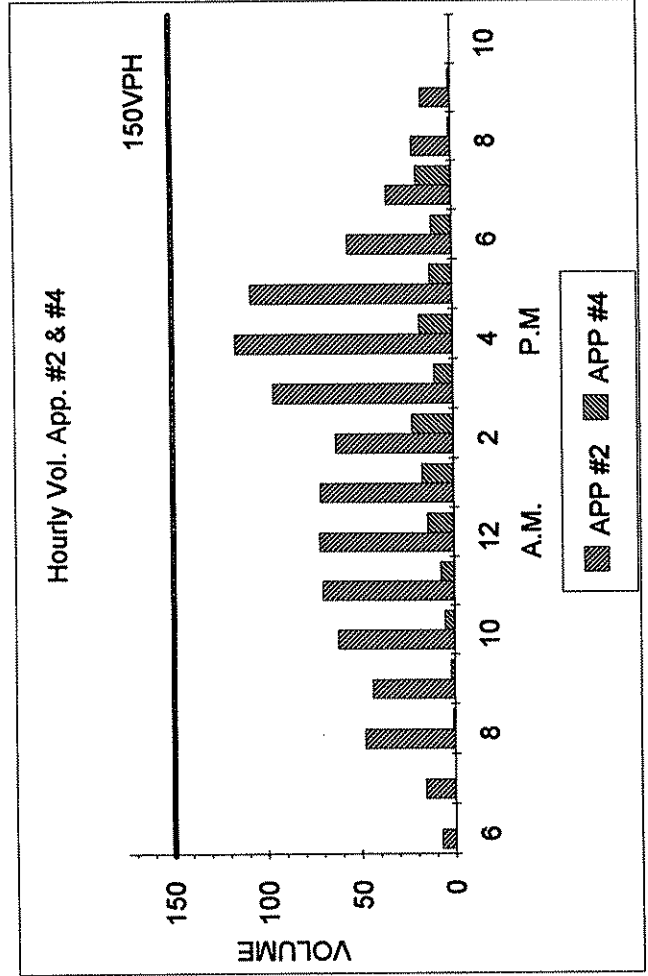
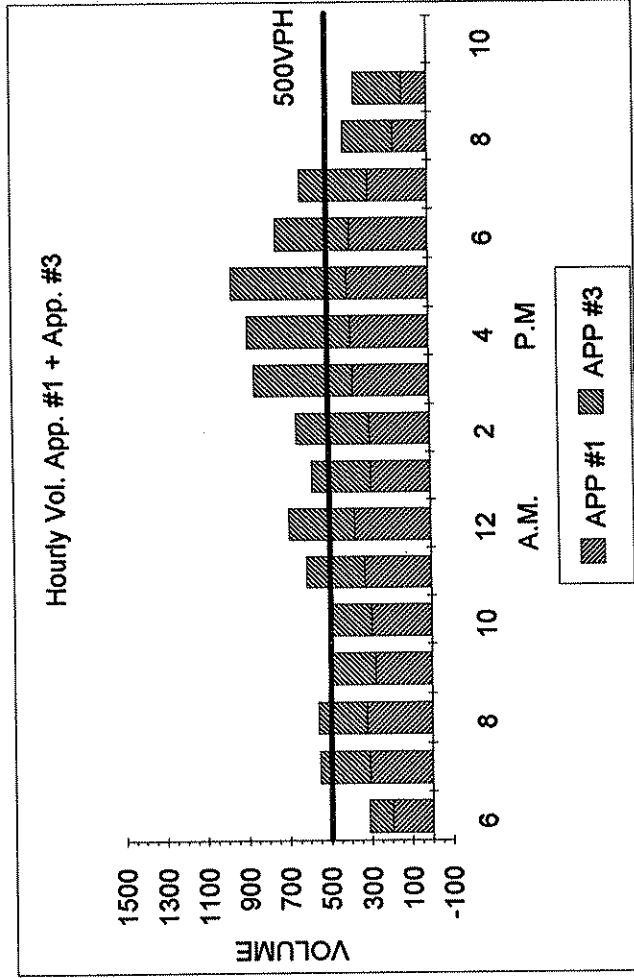
Vehicle group 1

Date	ENTRANCES TO BIKE SHOP Southbound				CSAH 32 (85TH AVE/CR J) Westbound				CENTER ROAD Northbound				CSAH 32 (85TH AVE/CR J) Eastbound				Vehicle Total	Other Total
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left		
10/22/93																		
20:00	0	1	0	0	1	0	49	4	1	3	0	1	5	3	52	0	113	7
20:15	0	0	0	0	0	0	35	4	0	1	0	3	1	2	70	0	115	1
20:30	0	0	0	0	0	0	31	5	1	0	0	9	2	1	51	0	97	3
20:45	0	0	0	0	1	0	34	3	0	0	0	4	1	0	71	0	112	2
Hr Total	0	1	0	0	2	0	149	16	2	4	0	17	9	6	244	0	437	13
21:00	0	0	0	0	0	0	33	0	0	1	0	7	2	3	77	0	121	2
21:15	0	0	0	0	0	0	33	0	0	0	0	1	1	2	74	0	110	1
21:30	0	0	1	0	0	0	26	1	0	1	0	2	0	1	47	0	79	0
21:45	0	0	0	0	1	0	25	2	0	2	0	2	0	0	37	0	68	1
Hr Total	0	0	1	0	1	0	117	3	0	4	0	12	3	6	235	0	378	4
TOTAL	4	104	11	25	265	42	4475	277	45	293	7	601	317	299	4616	121	10871	631

TMC9336 STOP WARRANT STUDY



TMC9336 SIGNAL WARRANT 1 STUDY



TMC9336 SIGNAL WARRANT 2 STUDY

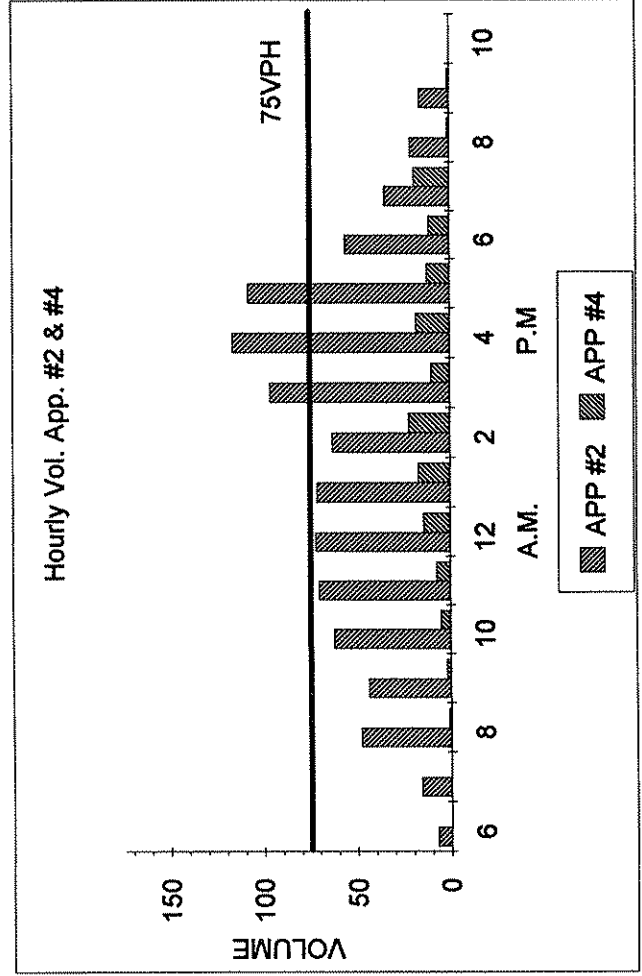
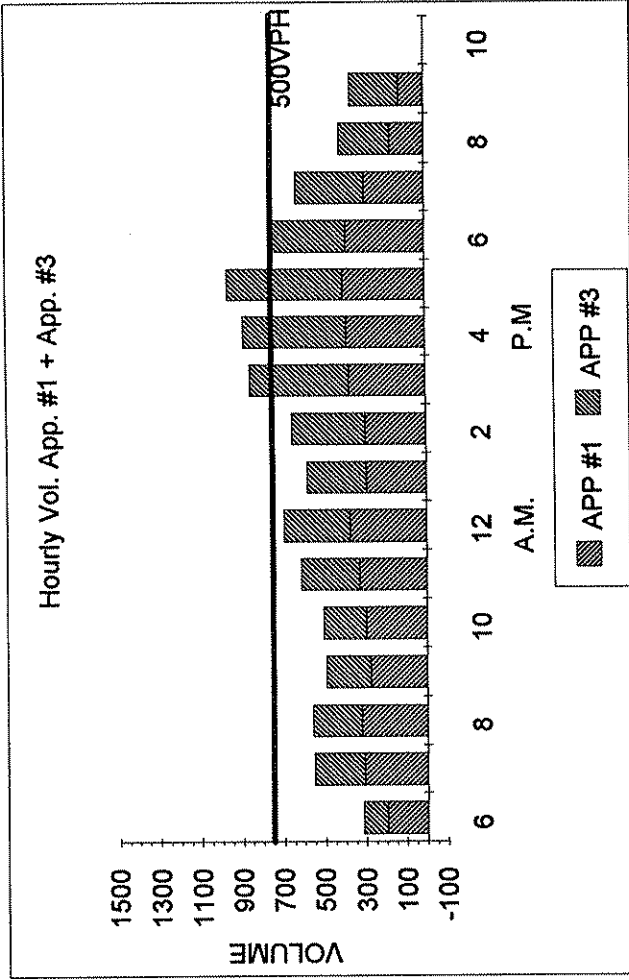
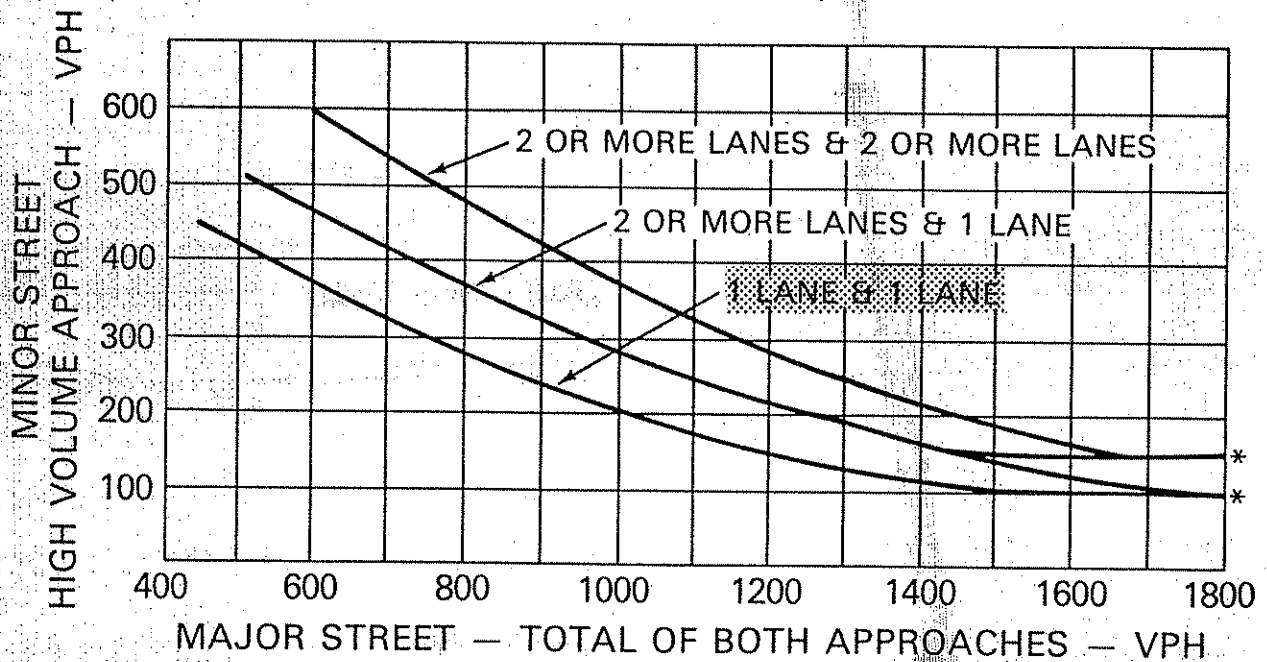


FIGURE 4-5. PEAK HOUR VOLUME WARRANT



*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.

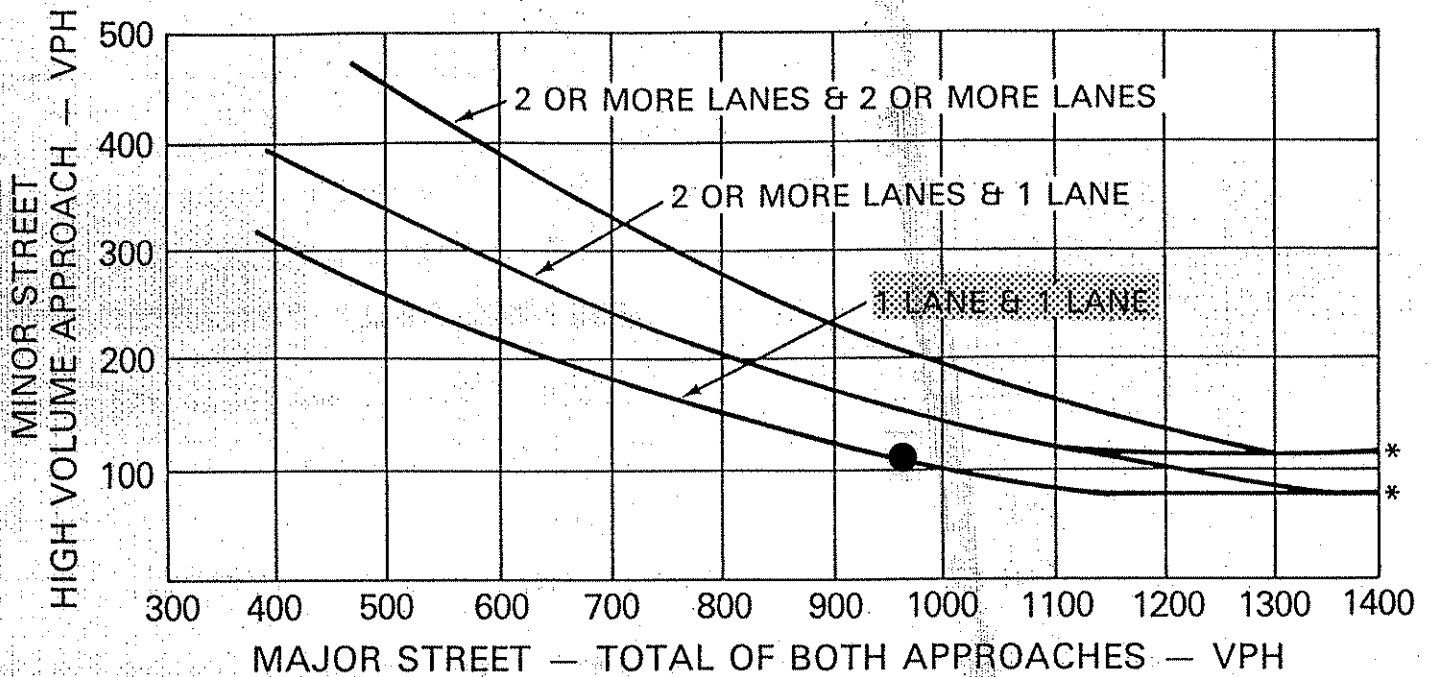
ä †

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	313	7
7-8 am	553	16
8-9 am	560	48
9-10 am	494	44
10-11 am	506	62
11-12 pm	614	70
12-1 pm	695	72
1-2 pm	582	71
2-3 pm	655	63
3-4 pm	858	96
4-5 pm	888	116
5-6 pm	964	108
6-7 pm	747	56
7-8 pm	625	35
8-9 pm	415	21
9-10 pm	361	16

†

TMC9336 CSAH 32 (CR J/85TH AVE) @ CENTER ROAD

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.

ä †

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	313	7
7-8 am	553	16
8-9 am	560	48
9-10 am	494	44
10-11 am	506	62
11-12 pm	614	70
12-1 pm	695	72
1-2 pm	582	71
2-3 pm	655	63
3-4 pm	858	96
4-5 pm	888	116
5-6 pm	964	108
6-7 pm	747	56
7-8 pm	625	35
8-9 pm	415	21
9-10 pm	361	16

†

TMC9336 CSAH 32 (CR J/85TH AVE) @ CENTER ROAD

COUNT LOCATION:

TMC9336 CSAH 32 (CRJ/85TH AVE)
 CENTER RD./ENTRANCES TO BIKE SHOP

DATE:

10/21-10/22/93

NORTH

- APP. #1=EB CSAH 32 (CRJ/85TH AVE)
- APP. #2=ENTRANCE TO BIKE SHOP
- APP. #3=WB CSAH 32 (CRJ/85TH AVE)
- APP. #4=NB CENTER DR

APP. #1

APP. #2

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	2		
6:30-6:45	1	1	1		3	1		1
6:45-7:00						6		1
HOURLY TOTAL					4	HOURLY TOTAL		13
7:00-7:15	1	1			2	3		1
7:15-7:30			2	2	4	6		2
7:30-7:45	2		1		3	8		1
7:45-8:00	1	1			2	14		1
HOURLY TOTAL					11	HOURLY TOTAL		36
8:00-8:15				1	1	11		1
8:15-8:30						16		3
8:30-8:45			1	1	2	14		1
8:45-9:00						15		
HOURLY TOTAL					3	HOURLY TOTAL		61
9:00-9:15			1	1	2	15		
9:15-9:30						12		2
9:30-9:45						9		
9:45-10:00			1	1	2	11		
HOURLY TOTAL					4	HOURLY TOTAL		49
10:00-10:15		1			1	13		
10:15-10:30		1			1	8		
10:30-10:45		3			3	11		
10:45-11:00						15		
HOURLY TOTAL					5	HOURLY TOTAL		47
11:00-11:15						13		
11:15-11:30						12		1
11:30-11:45		1				3		
11:45-12:00						17		1
HOURLY TOTAL						HOURLY TOTAL		47
12:00-12:15						7		1
12:15-12:30		1			1	14		
12:30-12:45						13		1
12:45-1:00		3			3	12		2
HOURLY TOTAL					4	HOURLY TOTAL		50
1:00-1:15		1			1	20		1
1:15-1:30		1			1	4		1
1:30-1:45		3	1		4	10		4
1:45-2:00		1			1	6		
HOURLY TOTAL					7	HOURLY TOTAL		46

COUNT LOCATION:

TMC9336 CSAH 32 (CRJ/85TH AVE)
 CENTER RD/ENTRENCES TO BIKE SHOP

DATE:

9/30/93
 10/4/93

NORTH

- APP. #1=EB CSAH 32 (CRJ/85TH AVE)
- APP. #2=SB ENTRANCES TO BIKE SHOP
- APP. #3=WB CSAH 32 (CRJ/85TH AVE)
- APP. #4=NB CENTER DR

APP. #1

APP. #2

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		1			1	13		
2:15-2:30						9		1
2:30-2:45						9		2
2:45-3:00	2	2			4	13		
HOURLY TOTAL					5	HOURLY TOTAL		47
3:00-3:15		1			1	18		4
3:15-3:30				1	1	18		4
3:30-3:45			3	3	6	14		3
3:45-4:00						12		3
HOURLY TOTAL					8	HOURLY TOTAL		76
4:00-4:15						13		2
4:15-4:30		1	1		2	17		
4:30-4:45		1	1	1	3	13		3
4:45-5:00			2	1	3	6		1
HOURLY TOTAL					8	HOURLY TOTAL		55
5:00-5:15	1	1	6	5	13	9		
5:15-5:30			2	4	6	4		1
5:30-5:45			1	1	2	2	1	2
5:45-6:00			2	2	4	3		
HOURLY TOTAL					25	HOURLY TOTAL		22
6:00-6:15						3		2
6:15-6:30						5		3
6:30-6:45						6		2
6:45-7:00						5		4
HOURLY TOTAL						HOURLY TOTAL		30
7:00-7:15	1	1		1	3	7		2
7:15-7:30						5		1
7:30-7:45				1	1	3		
7:45-8:00			1	1	2	8		
HOURLY TOTAL					6	HOURLY TOTAL		26
8:00-8:15						5		2
8:15-8:30						1		
8:30-8:45						3		
8:45-9:00						1		1
HOURLY TOTAL						HOURLY TOTAL		13
9:00-9:15				2	2	1		1
9:15-9:30								1
9:30-9:45			1	1	2			
9:45-10:00						1		
HOURLY TOTAL					4	HOURLY TOTAL		4