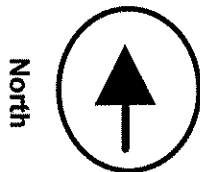


Date : 8/03/95 8/01/95

Count Number : TMC9510

Location : CSAH 51 (UNIVERSITY AVE) @
120TH AVE



SB CSAH 51 (UNIVERSITY AVE)

10372

#1

5416

4956		
4792	B	C
164	A	

LANES OF APPROACH

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

907

#4

471		
137	M	L
299	K	
436		

EB 120TH

NB CSAH 51 (UNIVERSITY AVE)

	G	
	H	5279
	J	307
5586		

#3

5091

10677

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

Counter : TDC EIGHT
 Counted by RANDY BETTINGER

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

Vehicle group 1

Site Code : 95100201
 Start Date: 08/03/95
 File I.D. : TMC9510
 Page : 1

Date	CSAH 51 (UNIVERSITY AVE) Southbound				120TH AVE Westbound				CSAH 51 (UNIVERSITY AVE) Northbound				120TH AVE Eastbound				Vehicle Total	Other Total			
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left					
06:00	1	1	59	0	0	0	0	0	0	0	0	0	0	17	0	0	6	0	2	85	1
06:15	1	0	90	0	0	0	0	0	1	0	0	0	0	36	0	0	2	0	1	129	2
06:30	1	0	107	0	0	0	0	0	1	0	0	0	0	39	2	0	5	0	1	154	2
06:45	1	0	112	0	0	0	0	0	0	0	0	0	0	35	3	0	8	0	2	160	1
Hr Total	4	1	368	0	0	0	0	0	2	0	0	0	0	127	5	0	21	0	6	528	6
07:00	3	2	101	0	0	0	0	0	0	0	0	0	0	25	1	0	14	0	1	144	3
07:15	7	1	126	0	0	0	0	0	0	0	0	0	0	26	2	0	9	0	3	167	7
07:30	1	1	117	0	0	0	0	0	2	0	0	0	0	43	1	0	8	0	1	171	3
07:45	2	1	120	0	0	0	0	0	1	0	0	0	0	52	3	0	7	0	0	183	3
Hr Total	13	5	464	0	0	0	0	0	3	0	0	0	0	146	7	0	38	0	5	665	16
08:00	3	4	86	0	0	0	0	0	0	0	0	0	0	32	0	1	6	0	2	130	4
08:15	3	3	62	0	0	0	0	0	2	0	0	0	0	42	0	0	6	0	3	116	5
08:30	1	1	52	0	0	0	0	0	1	0	0	0	0	44	2	0	6	0	3	108	2
08:45	2	0	63	0	0	0	0	0	3	0	0	0	0	42	3	0	2	0	4	114	5
Hr Total	9	8	263	0	0	0	0	0	6	0	0	0	0	160	5	1	20	0	12	468	16
09:00	0	0	47	0	0	0	0	0	1	0	0	0	0	39	1	0	3	0	0	90	1
09:15	4	4	47	0	0	0	0	0	2	0	0	0	0	37	0	0	1	0	1	90	6
09:30	1	3	65	0	0	0	0	0	2	0	0	0	0	38	2	0	2	0	0	110	3
09:45	3	3	46	0	0	0	0	0	1	0	0	0	0	53	2	0	6	0	2	112	4
Hr Total	8	10	205	0	0	0	0	0	6	0	0	0	0	167	5	0	12	0	3	402	14
10:00	2	1	58	0	0	0	0	0	3	0	0	0	0	44	0	0	7	0	1	116	5
10:15	1	2	74	0	0	0	0	0	2	0	0	0	0	40	1	0	6	0	1	124	3
10:30	6	2	62	0	0	0	0	0	4	0	0	0	0	48	1	0	3	0	2	118	10
10:45	1	3	64	0	0	0	0	0	1	0	0	0	0	47	1	0	9	0	3	127	2
Hr Total	10	8	258	0	0	0	0	0	10	0	0	0	0	179	3	0	25	0	11	485	20
11:00	1	2	63	0	0	0	0	0	4	0	0	0	0	65	4	0	3	0	5	142	5
11:15	6	2	66	0	0	0	0	0	4	0	0	0	0	66	3	1	4	0	4	145	11
11:30	1	2	73	0	0	0	0	0	4	0	0	0	0	61	4	0	3	0	2	145	5
11:45	3	9	73	0	0	0	0	0	4	0	0	0	0	58	4	2	5	0	1	150	9
Hr Total	11	15	275	0	0	0	0	0	16	0	0	0	0	250	15	3	15	0	12	582	30
12:00	2	4	62	0	0	0	0	0	2	0	0	0	0	76	2	0	7	0	1	152	4
12:15	2	1	78	0	0	0	0	0	2	0	0	0	0	77	7	0	6	0	3	172	4
12:30	2	3	78	0	0	0	0	0	1	0	0	0	0	59	1	0	6	0	1	148	3
12:45	2	1	67	0	0	0	0	0	0	0	0	0	0	54	4	0	9	0	0	135	6
Hr Total	8	9	285	0	0	0	0	0	9	0	0	0	0	266	14	0	28	0	5	507	17

Counter : TDC EIGHT
 Counted by RANDY BETTINGER

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

Site Code : 95100201
 Start Date: 08/03/95
 File I.D. : TMC9510)
 Page : 2

Vehicle group 1

Date	Hr	CSAH 51 (UNIVERSITY AVE) Southbound				CSAH 51 (UNIVERSITY AVE) Northbound				120TH AVE Eastbound				Vehicle Total	Other Total	
		Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left			
08/03/95	13:00	1	2	68	0	0	0	0	0	0	0	0	0	0	140	2
	13:15	3	2	50	0	0	0	0	2	0	66	1	0	8	128	5
	13:30	3	1	63	0	0	0	0	2	0	71	6	0	2	144	5
	13:45	1	2	60	0	0	0	0	2	0	70	3	0	3	138	3
	Hr Total	8	7	241	0	0	0	0	7	0	269	16	0	14	550	15
	14:00	2	5	78	0	0	0	0	2	0	71	4	0	3	162	4
	14:15	2	1	64	0	0	0	0	2	0	113	5	0	3	187	4
	14:30	2	1	66	0	0	0	0	3	0	76	5	0	2	153	5
	14:45	1	2	64	0	0	0	0	4	0	97	3	0	2	169	5
	Hr Total	7	9	272	0	0	0	0	11	0	357	17	0	10	671	18
	15:00	1	4	64	0	0	0	0	3	0	75	5	1	7	157	5
	15:15	0	3	63	0	0	0	0	0	0	93	6	1	3	171	1
	15:30	3	3	58	0	0	0	0	3	0	121	4	1	5	192	7
	15:45	1	4	86	0	0	0	0	1	0	120	5	0	2	218	2
	Hr Total	5	14	271	0	0	0	0	7	0	409	20	3	17	738	15
	16:00	3	3	87	0	0	0	0	1	0	149	8	0	3	254	4
	16:15	0	2	66	0	0	0	0	5	0	157	11	0	3	243	5
	16:30	2	5	99	0	0	0	0	1	0	130	15	0	4	256	3
	16:45	1	5	75	0	0	0	0	5	0	183	13	0	5	285	6
	Hr Total	6	15	327	0	0	0	0	12	0	619	47	0	15	1038	18
	17:00	0	5	77	0	0	0	0	1	0	198	8	0	5	298	1
	17:15	3	5	86	0	0	0	0	2	0	201	12	0	3	309	5
	17:30	1	5	110	0	0	0	0	0	0	168	12	0	7	308	1
	17:45	2	4	86	0	0	0	0	3	0	173	13	0	5	284	5
	Hr Total	6	19	359	0	0	0	0	6	0	740	45	0	20	1199	12
	18:00	1	8	79	0	0	0	0	1	0	129	6	0	8	234	2
	18:15	0	1	89	0	0	0	0	2	0	171	7	1	8	278	3
	18:30	0	3	78	0	0	0	0	1	0	124	8	0	8	223	1
	18:45	1	1	99	0	0	0	0	0	0	111	9	0	4	225	1
	Hr Total	2	13	345	0	0	0	0	4	0	535	30	1	28	960	7
	19:00	1	4	74	0	0	0	0	0	0	118	5	1	4	208	2
	19:15	0	1	105	0	0	0	0	2	0	88	6	0	2	202	2
	19:30	1	3	62	0	0	0	0	0	0	99	5	0	3	175	1
	19:45	1	2	51	0	0	0	0	0	0	95	7	0	2	159	1
	Hr Total	3	10	292	0	0	0	0	0	0	400	23	1	11	4	6

Counter : TDC EIGHT
 Counted by RANDY BRITTINGER

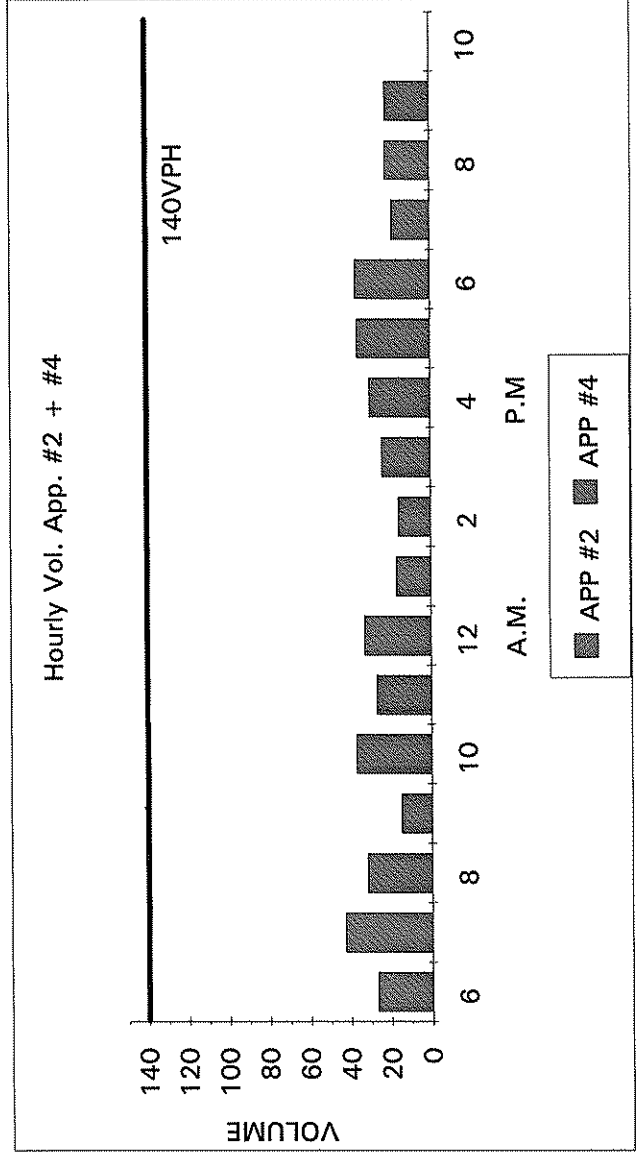
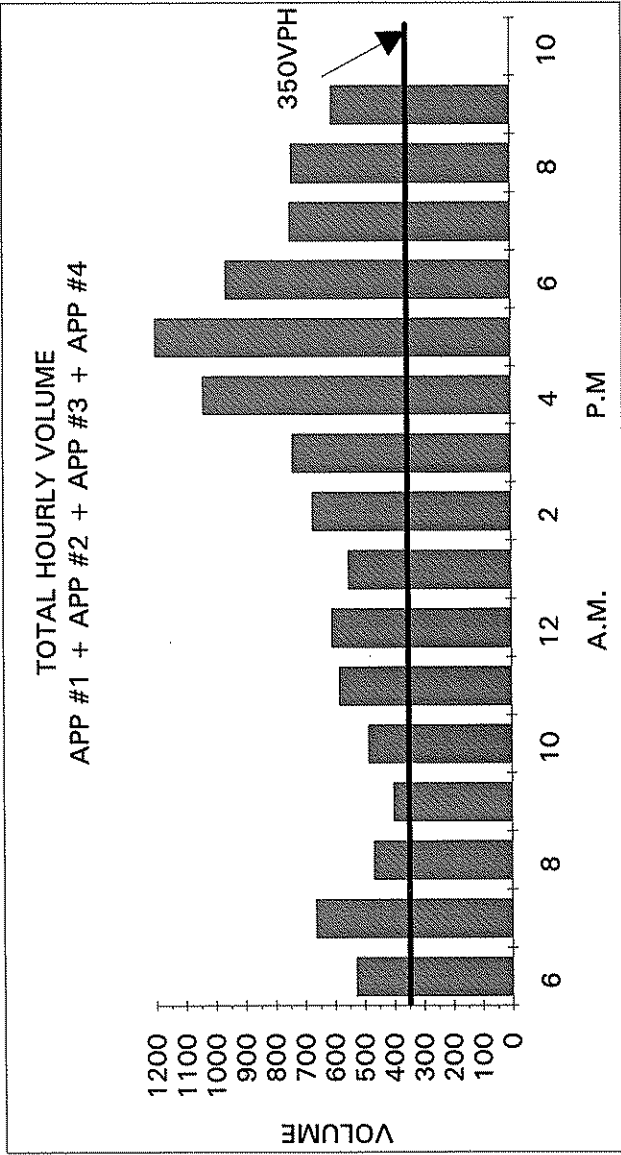
ANOKA COUNTY HIGHWAY DEPARTMENT
 TRAFFIC ENGINEERING SECTION
 TRAFFIC VOLUME AND
 TURNING MOVEMENT STUDY

Site Code : 95100201
 Start Date: 08/03/95
 File I.D. : TMC9510}
 Page : 3

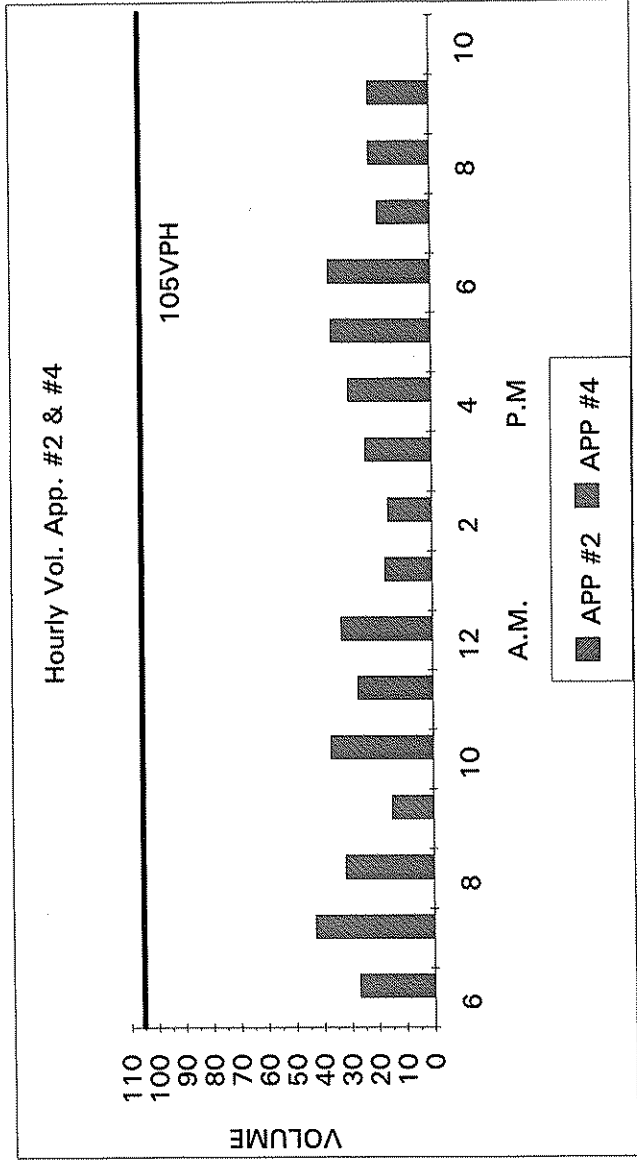
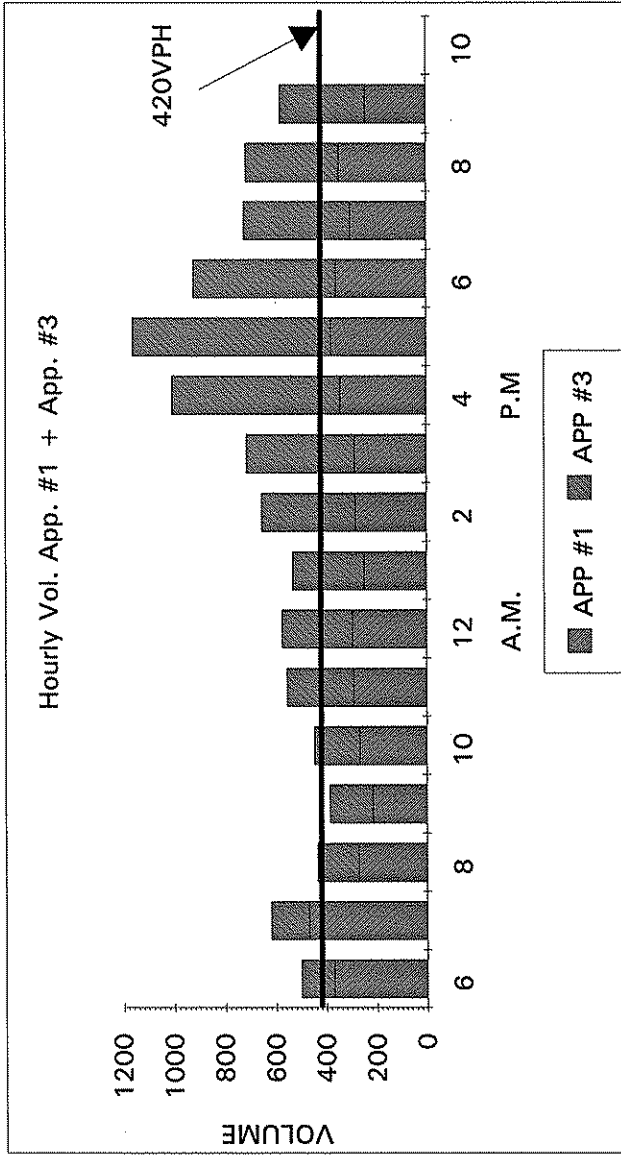
Vehicle group 1

Date	CSAH 51 (UNIVERSITY AVE) Southbound			120TH AVE Westbound			CSAH 51 (UNIVERSITY AVE) Northbound			120TH AVE Eastbound			Vehicle Total	Other Total				
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left						
08/03/95	1	4	99	0	0	0	0	0	0	0	78	4	0	5	0	4	194	1
20:00	0	7	77	0	0	0	0	0	2	0	94	9	0	2	0	2	191	2
20:15	0	3	101	0	0	0	0	0	0	0	97	5	0	5	0	1	212	0
20:30	2	1	54	0	0	0	0	1	0	0	77	7	0	3	0	0	142	3
20:45	3	15	331	0	0	0	0	3	0	0	346	25	0	15	0	7	739	6
Hr Total	1	6	236	0	0	0	0	2	0	0	309	30	1	10	0	12	603	4
21:00	0	1	52	0	0	0	0	0	0	0	85	9	1	2	0	3	152	1
21:15	0	3	65	0	0	0	0	1	0	0	90	7	0	4	0	2	171	1
21:30	0	2	61	0	0	0	0	0	0	0	59	10	0	3	0	4	139	0
21:45	1	0	58	0	0	0	0	1	0	0	75	4	0	1	0	3	141	2
Hr Total	1	6	236	0	0	0	0	2	0	0	309	30	1	10	0	12	603	4
TOTAL	104	164	4792	0	0	0	0	106	0	0	5279	307	10	299	1	137	10979	220

TMC9510 STOP WARRANT STUDY



TMC9510 SIGNAL WARRANT 1 STUDY



TMC9510 SIGNAL WARRANT 2 STUDY

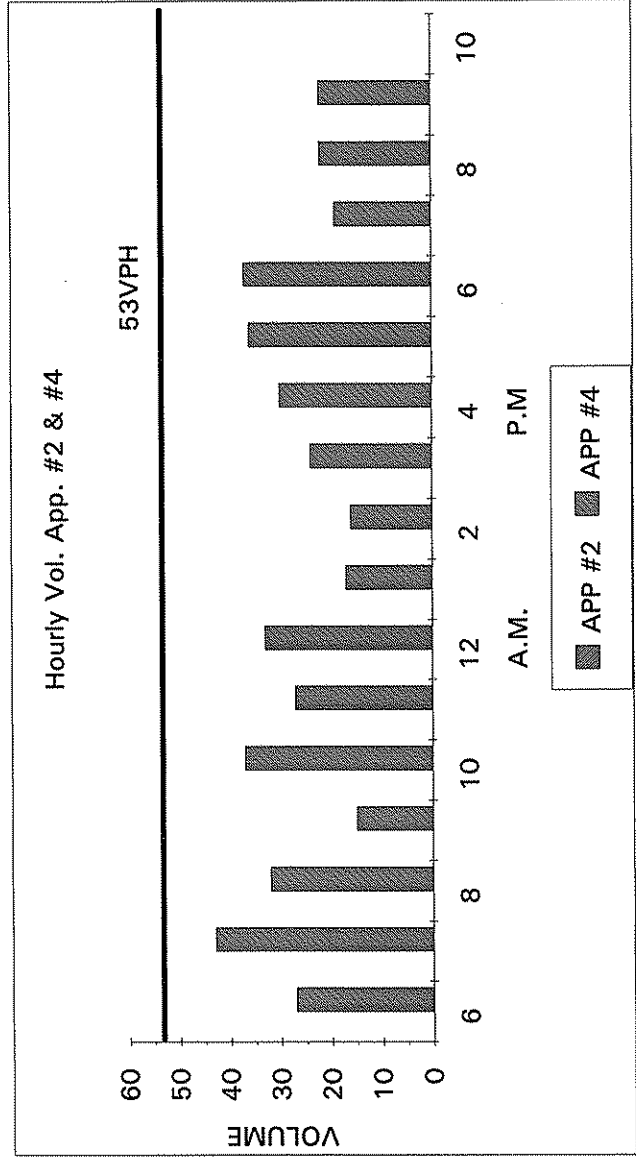
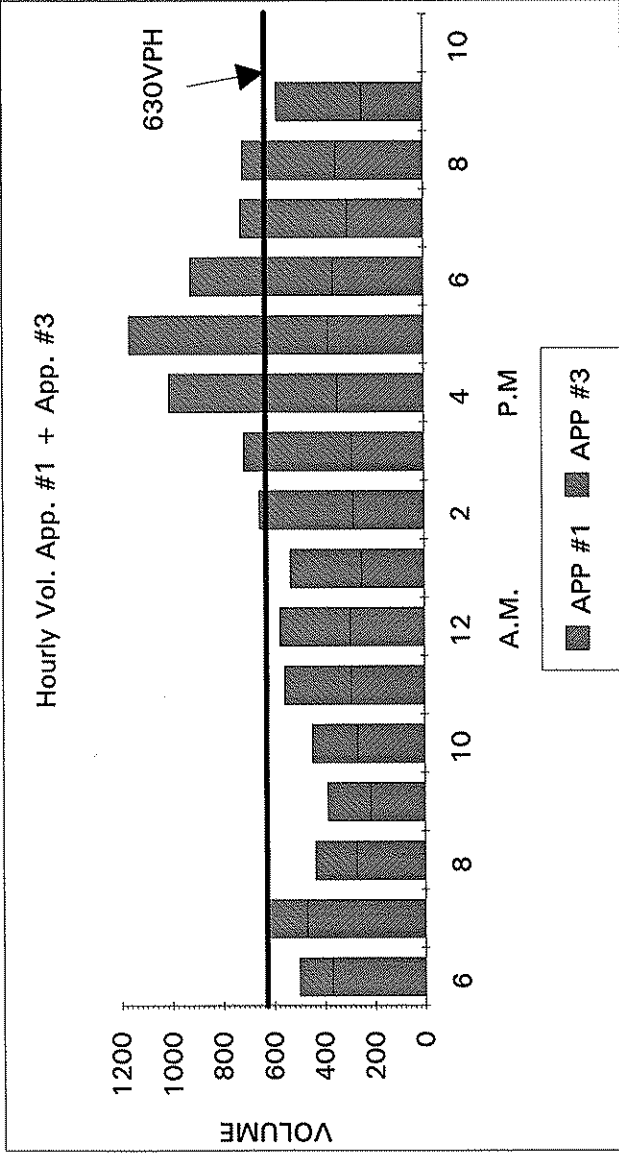
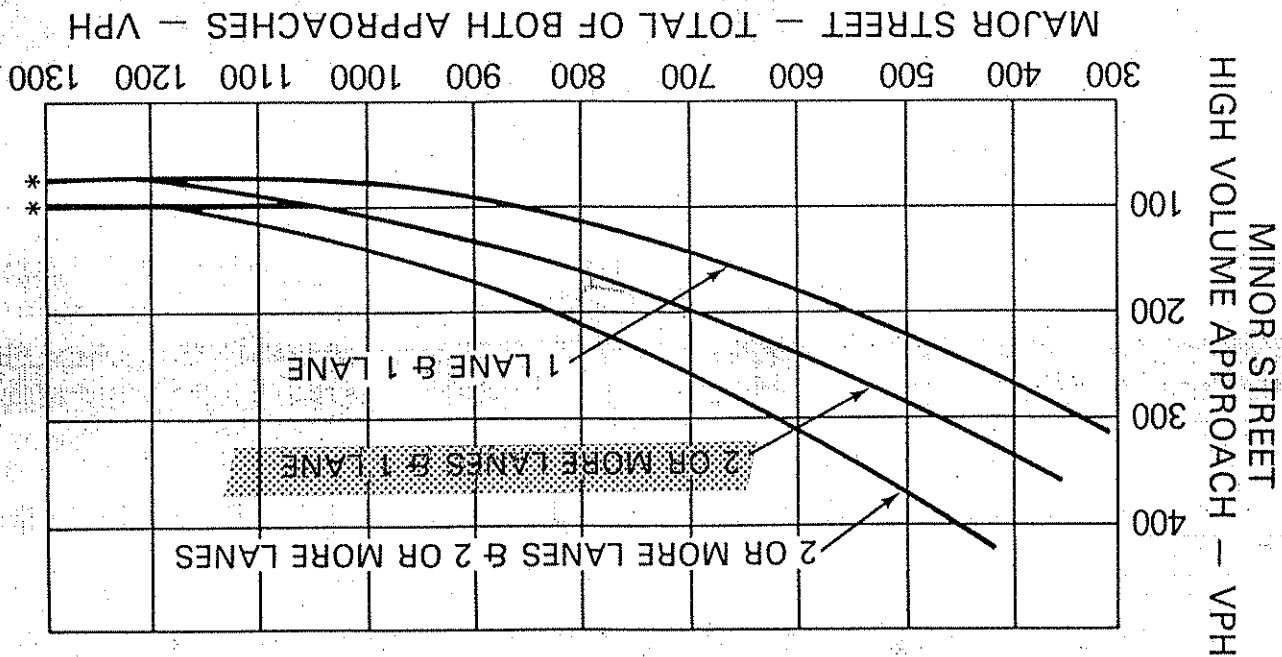


FIGURE 4-6. PEAK HOUR VOLUME WARRANT

(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 EXCEED THE THRESHOLD BUT CANNOT BE REPRESENTED ON THE GRAPH.

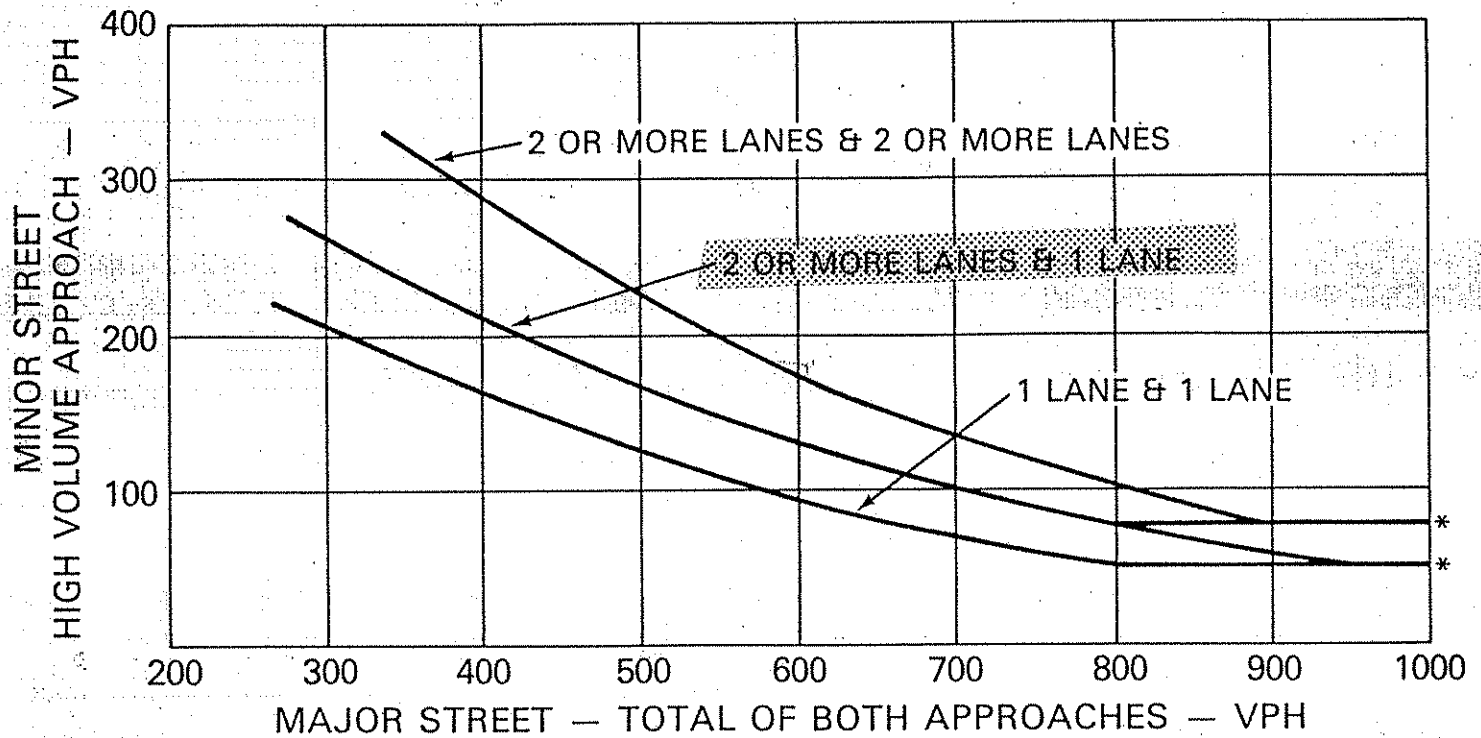
● = VOLUMES WHICH EXCEED THE THRESHOLD AND ARE REPRESENTED ON THE GRAPH.

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	501	27
7-8 am	622	43
8-9 am	436	32
9-10 am	387	15
10-11 am	448	37
11-12 pm	555	27
12-1 pm	574	33
1-2 pm	533	17
2-3 pm	655	16
3-4 pm	714	24
4-5 pm	1008	30
5-6 pm	1163	36
6-7 pm	923	37
7-8 pm	725	19
8-9 pm	717	22
9-10 pm	581	22

TMC9510 CSAH 51 (UNIVERSITY AVE) @ 120TH AVE

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	501	27
7-8 am	622	43
8-9 am	436	32
9-10 am	387	15
10-11 am	448	37
11-12 pm	555	27
12-1 pm	574	33
1-2 pm	533	17
2-3 pm	655	16
3-4 pm	714	24
4-5 pm	1008	30
5-6 pm	1163	36
6-7 pm	923	37
7-8 pm	725	19
8-9 pm	717	22
9-10 pm	581	22

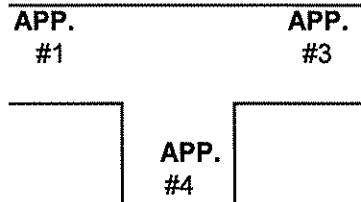
TMC9510 CSAH 51 (UNIVERSITY AVE) @ 120TH AVE



COUNT LOCATION: CSAH 51 (UNIVERSITY AVE) @
120TH AVE NW

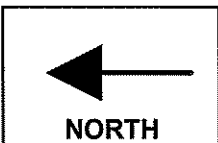
DATE: 8/3/95

APP. #1= SB CSAH 51
(UNIVERSITY AVE)
APP. #3= NB CSAH 51
(UNIVERSITY AVE)
APP. #4=
120TH 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.

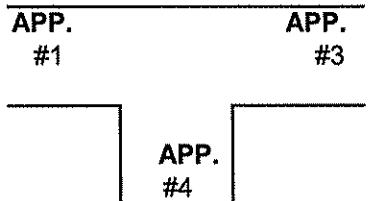
TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM						1		
6:15-6:30						1		1
6:30-6:45						2		
6:45-7:00						1		1
HOURLY TOTAL						HOURLY TOTAL		7
7:00-7:15								3
7:15-7:30						5		2
7:30-7:45								3
7:45-8:00						2		1
HOURLY TOTAL						HOURLY TOTAL		16
8:00-8:15						2		2
8:15-8:30						3		1
8:30-8:45						1		
8:45-9:00						5		
HOURLY TOTAL						HOURLY TOTAL		14
9:00-9:15						1		
9:15-9:30						3		3
9:30-9:45						2		1
9:45-10:00						3		1
HOURLY TOTAL						HOURLY TOTAL		14
10:00-10:15						5		
10:15-10:30						3		
10:30-10:45						8	2	
10:45-11:00						2		
HOURLY TOTAL						HOURLY TOTAL		20
11:00-11:15						5		
11:15-11:30						5		6
11:30-11:45						5		
11:45-12:00						6		2
HOURLY TOTAL						HOURLY TOTAL		29
12:00-12:15						4		
12:15-12:30						3		
12:30-12:45						2		1
12:45-1:00						5		1
HOURLY TOTAL						HOURLY TOTAL		16
1:00-1:15						1		1
1:15-1:30						4	1	
1:30-1:45						4		1
1:45-2:00						3		
HOURLY TOTAL						HOURLY TOTAL		15



COUNT LOCATION: CSAH 51 (UNIVERSITY AVE) @
120TH AVE NW

DATE: 8/1/95

APP. #1= SB CSAH 51
(UNIVERSITY AVE)
APP. #3= NB CSAH 51
(UNIVERSTIY AVE)
APP. #4=
120TH 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						4		
2:15-2:30						4		
2:30-2:45						4		1
2:45-3:00						3	1	1
HOURLY TOTAL						HOURLY TOTAL		18
3:00-3:15						3		2
3:15-3:30						1		
3:30-3:45				4	4	5	1	1
3:45-4:00						2		
HOURLY TOTAL					4	HOURLY TOTAL		15
4:00-4:15						4		
4:15-4:30						4		
4:30-4:45						2		1
4:45-5:00						5		1
HOURLY TOTAL						HOURLY TOTAL		17
5:00-5:15						1		
5:15-5:30						2		2
5:30-5:45							1	
5:45-6:00						3		1
HOURLY TOTAL						HOURLY TOTAL		10
6:00-6:15						2		
6:15-6:30						3		
6:30-6:45						1		
6:45-7:00						1		
HOURLY TOTAL						HOURLY TOTAL		7
7:00-7:15						2		
7:15-7:30						1		1
7:30-7:45								
7:45-8:00						1		
HOURLY TOTAL						HOURLY TOTAL		5
8:00-8:15								1
8:15-8:30						1		
8:30-8:45							1	
8:45-9:00						3		
HOURLY TOTAL						HOURLY TOTAL		6
9:00-9:15						1		
9:15-9:30						1	1	
9:30-9:45								
9:45-10:00						2		
HOURLY TOTAL						HOURLY TOTAL		5