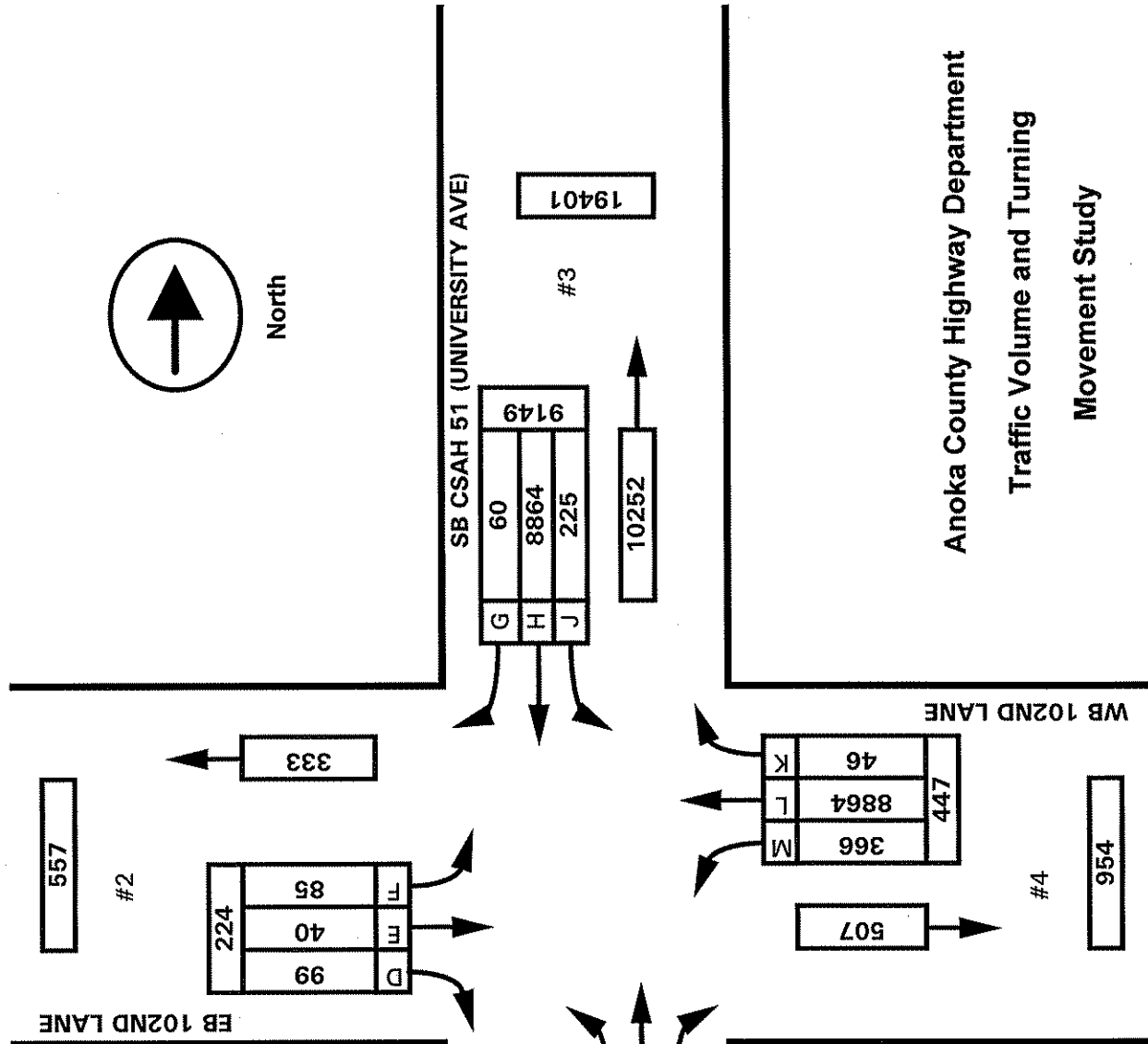


Date: 7/21/95 7/20/95

Count Number: TMC9519

Location: CSAH 51 (UNIVERSITY AVE) @

102ND LANE



Anoka County Highway Department  
Traffic Volume and Turning  
Movement Study

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

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC VOLUME AND

TURNING MOVEMENT STUDY

CLEAR

Counter WDC EIGHT

Counted by ANN/LAURIE

CLEAR

Site ( : 95190201  
 Start Date: 07/20/95  
 File I.D. : TMC9519}  
 Page : 1

Vehicle group 1

Date 07/20/95	CSAH 51 (UNIVERSITY AVE) Southbound				102ND LANE Westbound				CSAH 51 (UNIVERSITY AVE) Northbound				102ND LANE Eastbound				Vehicle Total	Other Total		
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left			Vehicle Total	Other Total
06:00	0	0	155	0	0	1	0	8	0	0	0	17	0	0	4	2	188	0		
06:15	0	1	197	0	0	0	0	9	2	0	20	0	0	0	1	228	2	2		
06:30	2	0	288	3	0	1	1	10	0	0	21	2	0	4	0	330	0	2		
06:45	4	2	297	0	0	0	0	7	1	1	26	0	0	4	0	337	0	5		
Hr Total	6	3	937	3	0	2	1	34	3	1	84	2	0	12	1	1083	0	9		
07:00	1	1	228	0	1	0	2	9	0	1	51	0	0	2	1	295	0	2		
07:15	3	1	251	7	1	0	0	16	1	5	39	2	0	6	2	329	0	5		
07:30	0	0	249	6	1	0	0	13	3	2	42	0	0	4	2	318	0	4		
07:45	3	0	232	4	0	0	2	6	3	1	47	2	0	1	0	295	0	6		
Hr Total	7	2	960	17	3	0	4	44	7	9	179	4	0	13	5	1237	0	17		
08:00	1	0	150	1	0	0	1	5	2	1	54	2	0	2	0	218	0	3		
08:15	3	0	153	4	0	2	3	9	3	4	57	2	0	0	0	235	0	7		
08:30	2	0	103	2	1	1	1	11	1	2	50	1	1	1	0	173	0	5		
08:45	3	0	120	3	1	0	2	2	2	6	73	0	1	1	2	210	0	7		
Hr Total	9	0	526	10	2	3	7	27	8	13	234	5	2	4	2	836	0	21		
09:00	0	0	110	1	0	1	0	4	0	4	57	2	0	0	0	179	0	0		
09:15	3	0	94	1	0	2	1	2	4	1	74	0	0	0	1	176	0	7		
09:30	1	0	115	4	0	0	0	2	2	0	75	1	0	0	0	198	0	3		
09:45	3	2	139	1	0	0	1	5	2	2	80	1	0	2	2	237	0	5		
Hr Total	7	2	458	7	0	3	2	13	8	7	286	4	0	2	4	790	0	15		
10:00	4	0	110	4	0	0	0	4	2	4	81	3	0	1	0	210	0	6		
10:15	0	2	99	3	0	1	0	4	1	8	100	1	0	2	0	221	0	1		
10:30	2	1	128	5	0	0	0	6	4	0	116	5	0	0	0	263	0	6		
10:45	1	1	145	1	0	0	0	5	1	2	115	1	0	2	0	272	0	2		
Hr Total	7	4	482	13	0	1	0	19	8	14	412	10	0	5	0	966	0	15		
11:00	5	2	124	5	1	0	1	5	0	4	125	2	0	0	0	269	0	6		
11:15	2	3	163	2	0	0	0	3	5	1	130	6	0	0	0	308	0	7		
11:30	3	3	121	4	0	1	0	5	2	4	135	2	0	0	0	276	0	5		
11:45	2	0	138	6	0	0	0	7	1	2	162	2	0	1	1	320	0	3		
Hr Total	12	8	546	17	1	1	1	20	8	11	552	12	0	1	1	1173	0	21		
12:00	3	0	119	4	0	1	0	5	2	3	143	1	0	4	1	284	0	5		
12:15	3	1	119	2	0	2	1	5	2	4	195	1	0	1	0	333	0	5		
12:30	2	1	146	5	0	0	1	5	3	1	168	2	1	3	1	334	0	6		
12:45	4	0	145	13	0	1	0	5	1	2	140	7	0	1	1	318	0	5		
Hr Total	12	2	529	24	0	4	2	20	8	10	646	11	1	9	3	1269	0	21		

Vehicle group 1

Date 07/20/95	CSAH 51 (UNIVERSITY AVE) Southbound				102ND LANE Westbound				CSAH 51 (UNIVERSITY AVE) Northbound				102ND LANE Eastbound				Vehicle Total	Other Total		
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left			Vehicle	Other
																			Total	Total
13:00	1	1	140	4	0	3	0	2	3	3	3	173	2	0	1	4	333	4		
13:15	3	0	121	16	0	1	0	3	1	1	1	173	6	2	3	0	326	4		
13:30	3	1	128	5	1	0	0	9	5	6	191	5	0	4	0	0	349	9		
13:45	4	3	127	3	0	0	2	9	1	4	191	3	0	0	2	2	344	5		
Hr Total	11	5	516	28	1	4	2	23	10	14	728	16	0	8	6	1352	22			
14:00	3	0	115	2	1	1	1	5	1	3	117	7	0	0	2	0	253	5		
14:15	4	0	100	3	0	0	0	8	4	1	156	7	0	1	1	1	278	8		
14:30	1	0	104	2	0	1	0	2	4	0	170	4	0	3	0	3	289	5		
14:45	1	2	120	2	0	0	0	1	2	7	157	4	0	1	2	2	297	3		
Hr Total	9	2	439	9	1	2	1	16	11	11	600	22	0	5	4	1117	21			
15:00	6	2	117	3	0	1	1	5	1	4	177	4	0	2	0	0	316	7		
15:15	3	3	119	3	0	0	1	5	5	3	209	6	0	2	0	2	353	8		
15:30	1	0	115	5	0	1	0	6	2	12	204	5	0	1	0	2	351	3		
15:45	1	1	137	7	0	2	0	4	4	6	278	9	0	1	0	1	446	5		
Hr Total	11	6	488	18	0	4	2	20	12	25	868	24	0	6	5	1466	23			
16:00	5	0	116	4	0	0	0	8	1	6	312	7	0	1	0	0	454	6		
16:15	3	1	144	4	0	0	0	8	0	9	304	5	0	2	1	0	478	3		
16:30	1	1	128	3	0	0	2	6	2	8	322	11	0	1	0	0	482	3		
16:45	0	0	139	1	0	1	1	7	1	7	326	5	0	2	0	1	490	1		
Hr Total	9	2	527	12	0	1	3	29	4	30	1264	28	0	6	1	1904	13			
17:00	3	1	145	4	0	3	1	4	4	12	385	8	0	3	0	3	569	7		
17:15	0	1	165	0	0	2	0	7	5	12	413	7	0	2	0	0	609	5		
17:30	1	2	139	9	0	2	0	17	1	12	337	7	0	2	0	5	532	2		
17:45	0	0	164	4	0	1	2	11	3	7	327	6	0	1	1	1	525	3		
Hr Total	4	4	613	17	0	8	3	39	13	43	1462	28	0	8	1	2235	17			
18:00	1	2	152	4	0	2	0	6	3	4	283	12	0	2	2	2	471	4		
18:15	1	2	156	11	0	0	2	4	1	3	205	8	0	6	3	5	405	2		
18:30	1	1	165	3	0	2	0	7	2	3	168	1	0	1	0	2	353	3		
18:45	0	0	160	2	0	3	0	7	0	5	207	6	0	0	0	3	393	0		
Hr Total	3	5	633	20	0	7	2	24	6	15	863	27	0	9	5	1622	9			
19:00	0	3	145	2	0	0	0	5	2	2	177	3	0	2	1	3	343	2		
19:15	0	0	134	3	0	0	0	4	1	1	151	0	0	1	1	4	299	1		
19:30	1	3	109	2	0	0	0	9	3	4	162	7	0	1	1	2	300	4		
19:45	0	1	130	3	0	2	0	6	1	3	192	3	0	2	2	1	345	1		
Hr Total	1	7	518	10	0	2	0	24	7	10	682	13	0	6	5	10	1287	8		

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

Counter : JC EIGHT  
 Counted by ANN/LAURIE  
 CLEAR

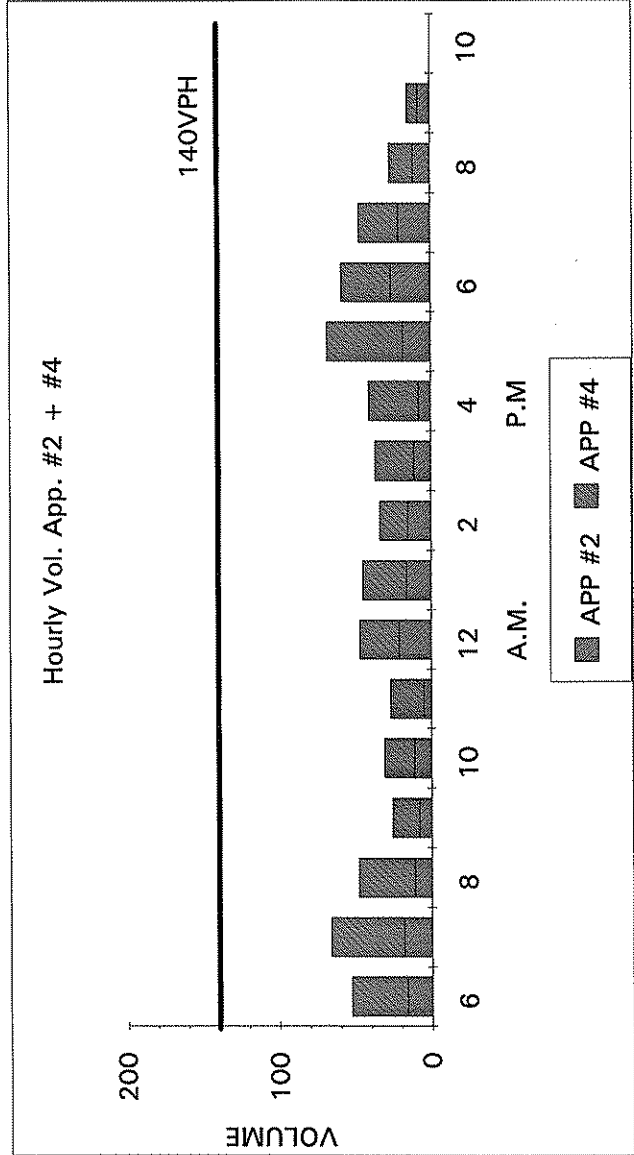
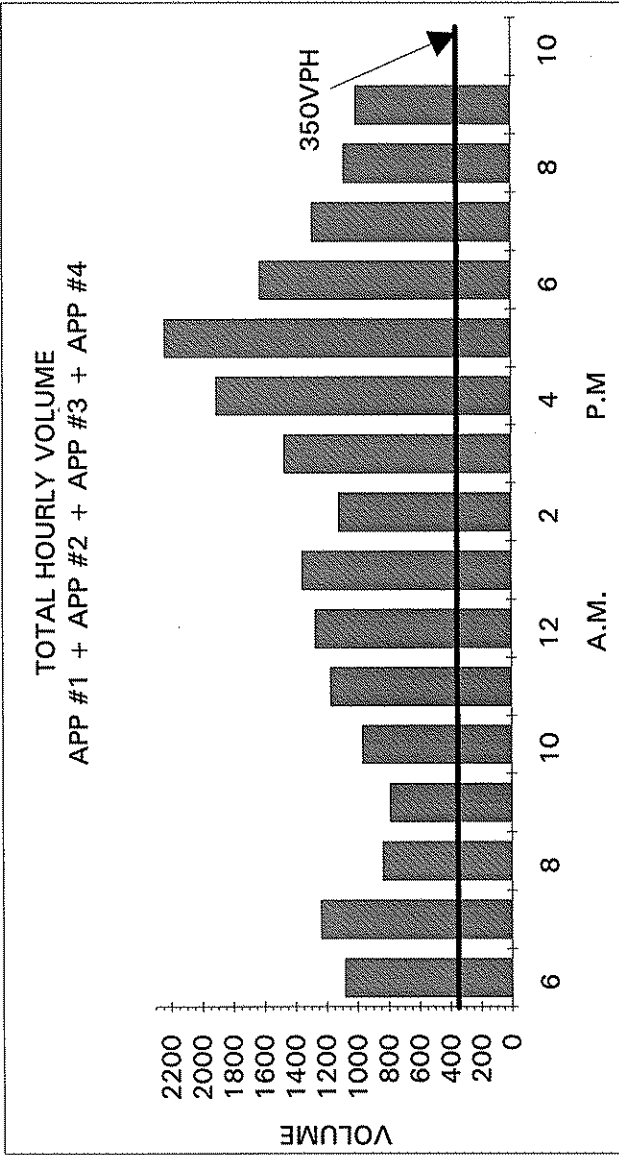
Site ( : 95190201  
 Start Date: 07/20/95  
 File I.D. : TMC9519}  
 Page : 3

Vehicle group 1

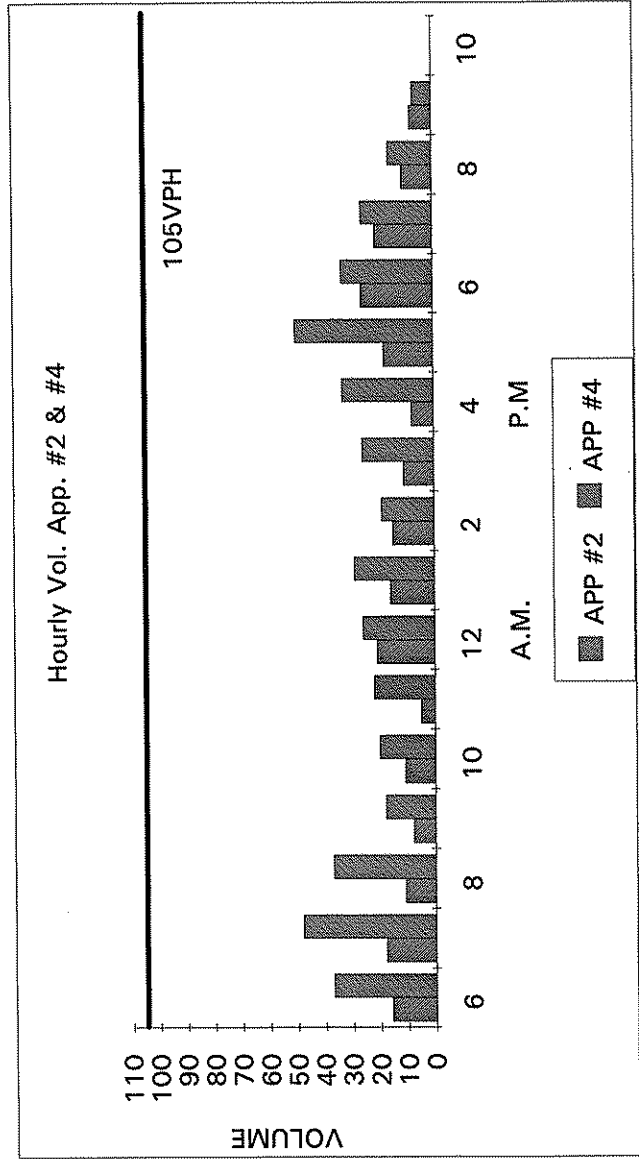
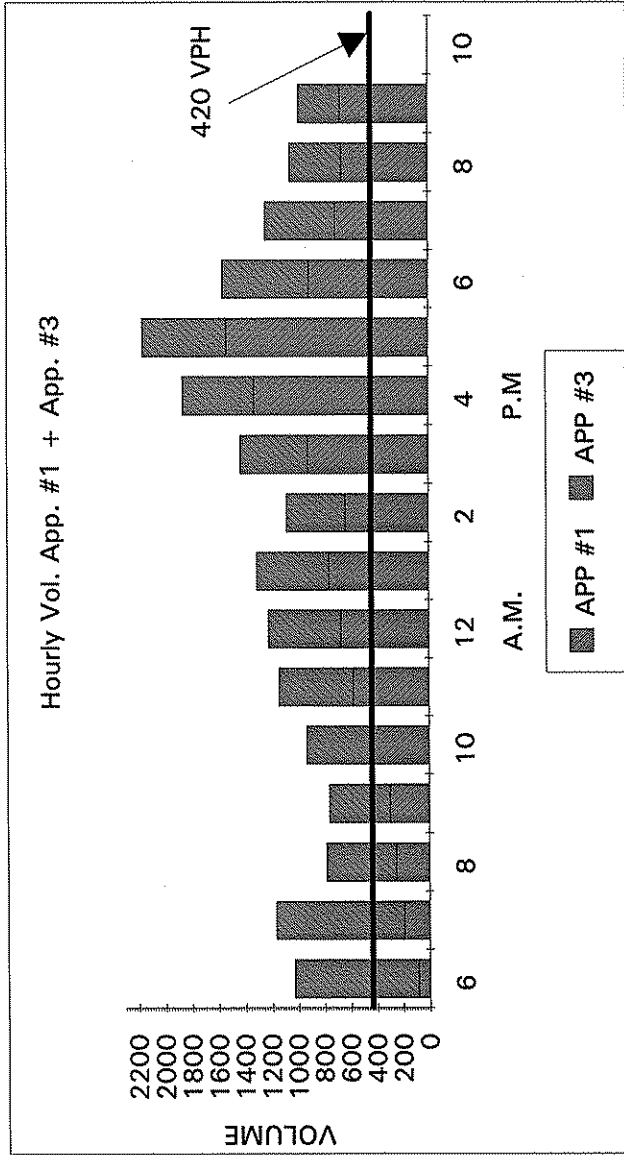
Date 07/20/95	CSAH 51 (UNIVERSITY AVE) Southbound			102ND LANE Westbound			CSAH 51 (UNIVERSITY AVE) Northbound			102ND LANE Eastbound			Vehicle Total	Other Total	
	Other Right	Thru Right	Left	Other Right	Thru Right	Left	Other Right	Thru Right	Left	Other Right	Thru Right	Left			
20:00	1	0	97	2	1	0	0	5	157	4	0	0	1	272	1
20:15	1	4	86	3	0	0	0	3	151	3	0	1	1	254	1
20:30	0	0	101	0	1	0	0	4	162	6	0	1	1	279	0
20:45	1	1	100	3	1	0	0	2	153	7	0	2	1	276	1
Hr Total	3	5	384	8	3	1	0	14	623	20	0	4	4	1081	3
21:00	0	0	84	5	1	0	0	5	184	0	0	1	2	283	0
21:15	0	0	84	4	0	2	1	6	168	3	0	0	2	271	2
21:30	0	0	64	1	0	1	0	1	164	6	0	0	1	238	0
21:45	0	3	76	2	0	1	1	3	122	3	0	0	0	211	0
Hr Total	0	3	308	12	1	4	2	15	638	12	0	1	4	1003	2

\*TOTAL\* 111 60 8864 225 8 46 35 366 115 242 10121 238 3 99 40 85 20421 237

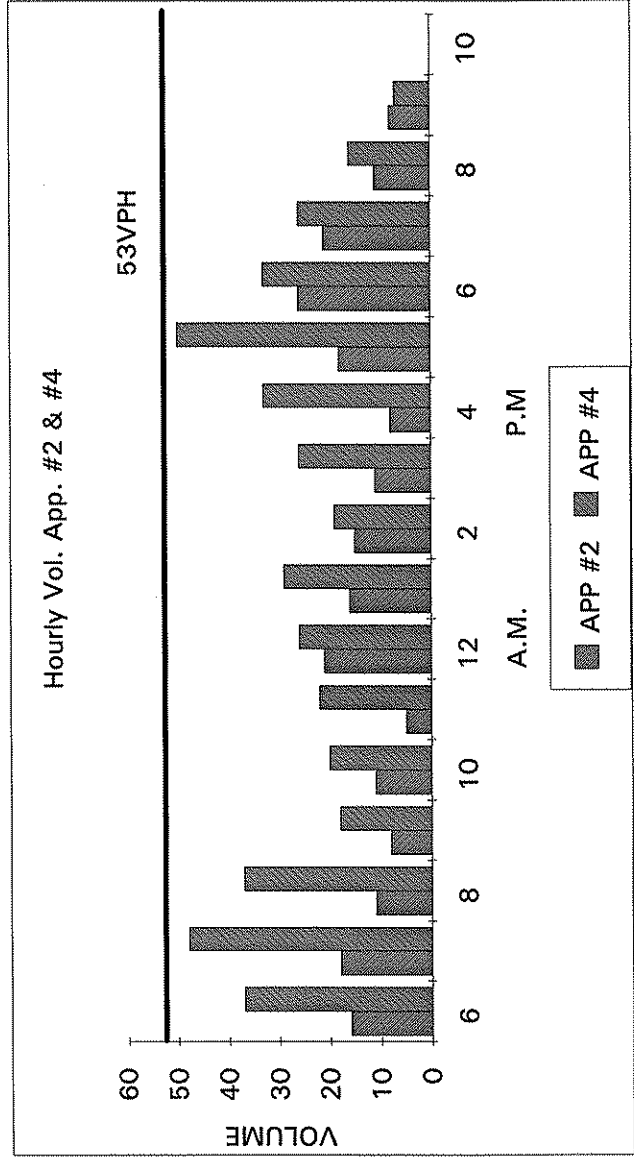
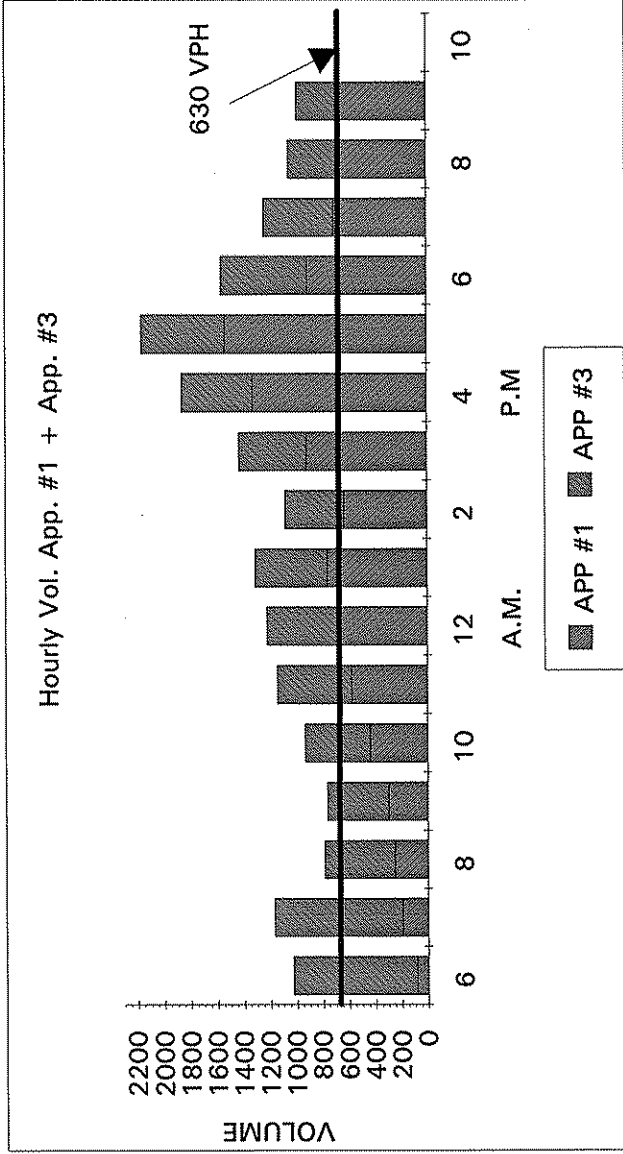
TMC 9519 STOP WARRANT STUDY



TMC 9519 SIGNAL WARRENT 1 STUDY

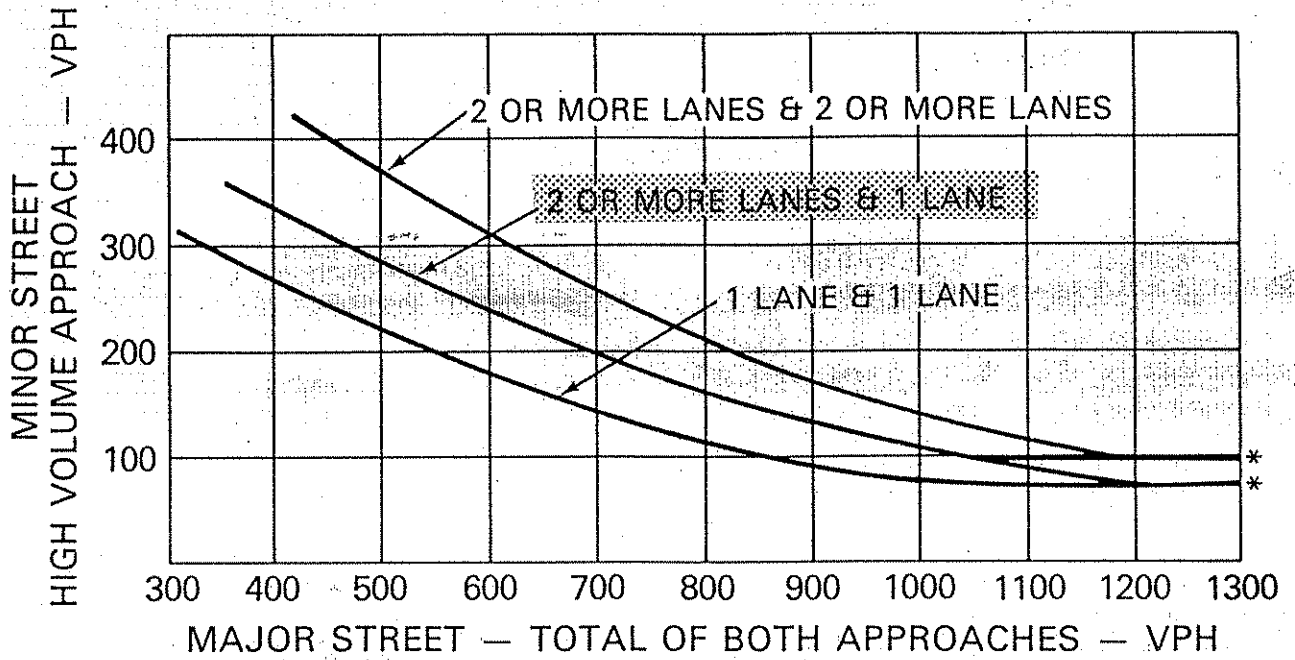


TMC9519 SIGNAL WARRENT 2 STUDY



# 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 AND ARE REPRESENTED ON THE GRAPH.

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

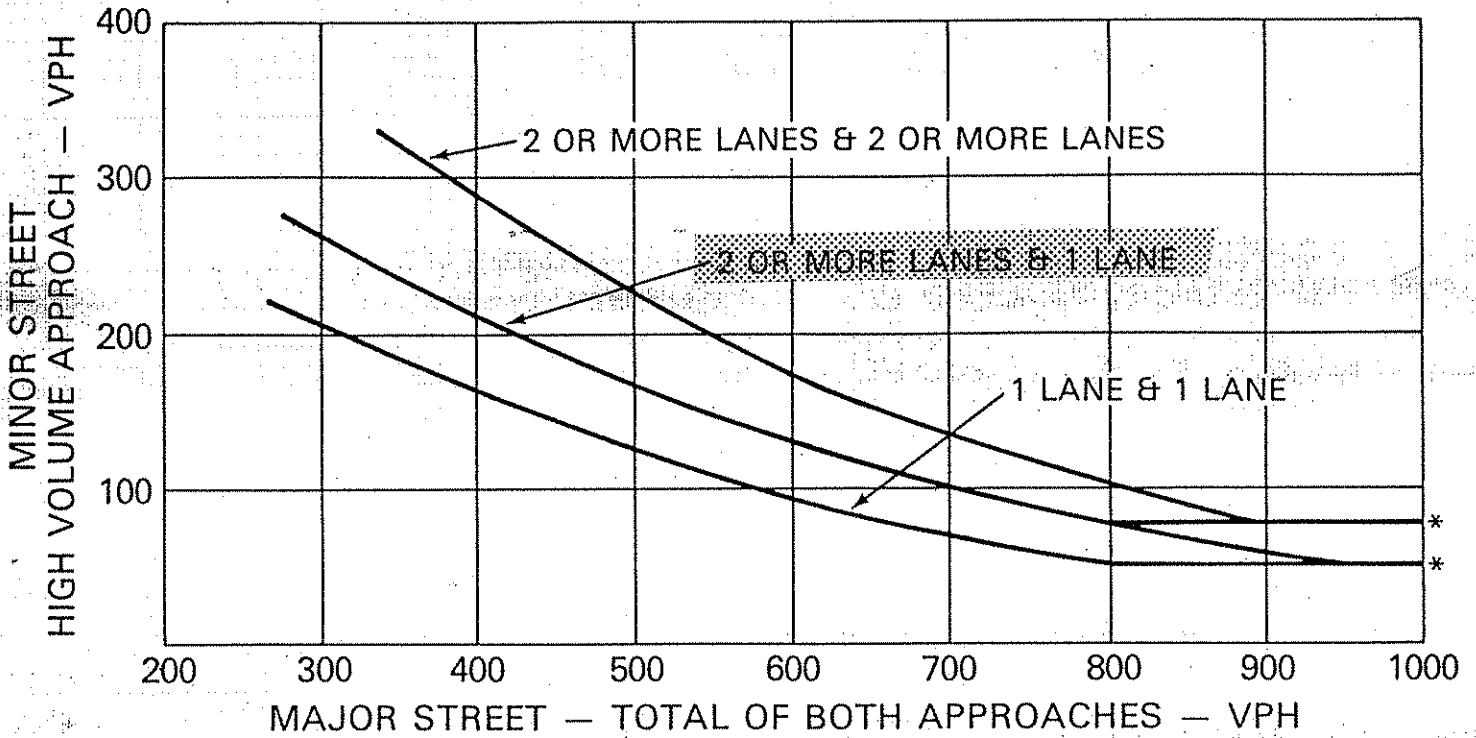
TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	1030	37
7-8 am	1171	48
8-9 am	788	37
9-10 am	764	18
10-11 am	935	20
11-12 pm	1146	22
12-1 pm	1222	26
1-2 pm	1307	29
2-3 pm	1083	19
3-4 pm	1429	26
4-5 pm	1863	33
5-6 pm	2167	50
6-7 pm	1563	33
7-8 pm	1240	26
8-9 pm	1054	16
9-10 pm	988	8

TMC9519 CSAH 51 (UNIVERSITY AVE) @ 102ND LANE



# FIGURE 4-8. FOUR HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



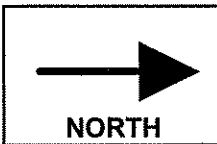
\*NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

● = 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	1030	37
7-8 am	1171	48
8-9 am	788	37
9-10 am	764	18
10-11 am	935	20
11-12 pm	1146	22
12-1 pm	1222	26
1-2 pm	1307	29
2-3 pm	1083	19
3-4 pm	1429	26
4-5 pm	1863	33
5-6 pm	2167	50
6-7 pm	1563	33
7-8 pm	1240	26
8-9 pm	1054	16
9-10 pm	988	8

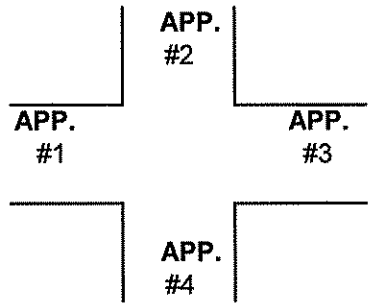
TMC9519 CSAH 51 (UNIVERSITY AVE) @ 102ND LANE



**COUNT LOCATION:** CSAH 51 (UNIVERSITY AVE) @  
102ND LANE

**DATE:** 7/20/95

APP.#1= NB CSAH 51  
UNIVERSITY AVE  
APP.#2=  
EB 102ND LANE  
APP.#3= CSAH 51  
UNIVERSITY AVE  
APP.#4=  
WB 102ND LANE



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.

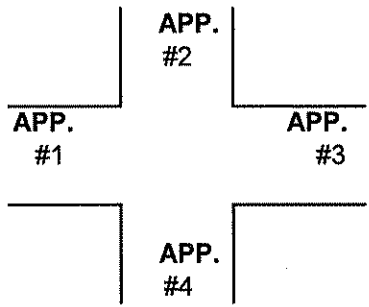
TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM								
6:15-6:30						1		1
6:30-6:45								2
6:45-7:00						3		1
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>8</b>
7:00-7:15						1		1
7:15-7:30						3		
7:30-7:45						2		2
7:45-8:00						6		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>15</b>
8:00-8:15						3		
8:15-8:30						4		1
8:30-8:45						6		
8:45-9:00						5		2
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>21</b>
9:00-9:15								
9:15-9:30						6		1
9:30-9:45						3		
9:45-10:00						4		1
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>15</b>
10:00-10:15						5		
10:15-10:30						1		
10:30-10:45						6		
10:45-11:00						1		1
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>14</b>
11:00-11:15						5		1
11:15-11:30						6		1
11:30-11:45						4		
11:45-12:00						3		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>20</b>
12:00-12:15						5		
12:15-12:30						5		
12:30-12:45						5		1
12:45-1:00						5		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>21</b>
1:00-1:15						2		2
1:15-1:30						4		
1:30-1:45						7		2
1:45-2:00						5		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>22</b>



**COUNT LOCATION:** CSAH 51 (UNIVERSITY AVE) @  
102ND LANE

**DATE:** 7/20/95

APP.#1= NB CSAH 51  
UNIVERSITY AVE  
APP. #2=  
EB 102ND LANE  
APP. #3= SB CSAH 51  
UNIVERSITY AVE  
APP. #4=  
WB 102ND 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						5		
2:15-2:30						6		1
2:30-2:45						3		2
2:45-3:00		1			1	2		
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>19</b>
3:00-3:15						7		1
3:15-3:30				3	3	7		1
3:30-3:45						2		1
3:45-4:00						4		1
<b>HOURLY TOTAL</b>					<b>3</b>	<b>HOURLY TOTAL</b>		<b>24</b>
4:00-4:15				3	3	5		1
4:15-4:30						1		1
4:30-4:45		1			1	1		2
4:45-5:00						1		
<b>HOURLY TOTAL</b>					<b>4</b>	<b>HOURLY TOTAL</b>		<b>12</b>
5:00-5:15	1	1			2	4		3
5:15-5:30						2		3
5:30-5:45						2		
5:45-6:00						3		
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>17</b>
6:00-6:15						2		2
6:15-6:30				2	2	1		
6:30-6:45		1			1	2		1
6:45-7:00				1	1			
<b>HOURLY TOTAL</b>					<b>4</b>	<b>HOURLY TOTAL</b>		<b>8</b>
7:00-7:15						1		1
7:15-7:30						1		
7:30-7:45				1	1	4		
7:45-8:00						1		
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>8</b>
8:00-8:15						1		
8:15-8:30						1		
8:30-8:45				1	1			
8:45-9:00							1	
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>3</b>
9:00-9:15								
9:15-9:30						2		
9:30-9:45								
9:45-10:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>2</b>