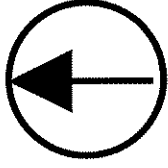
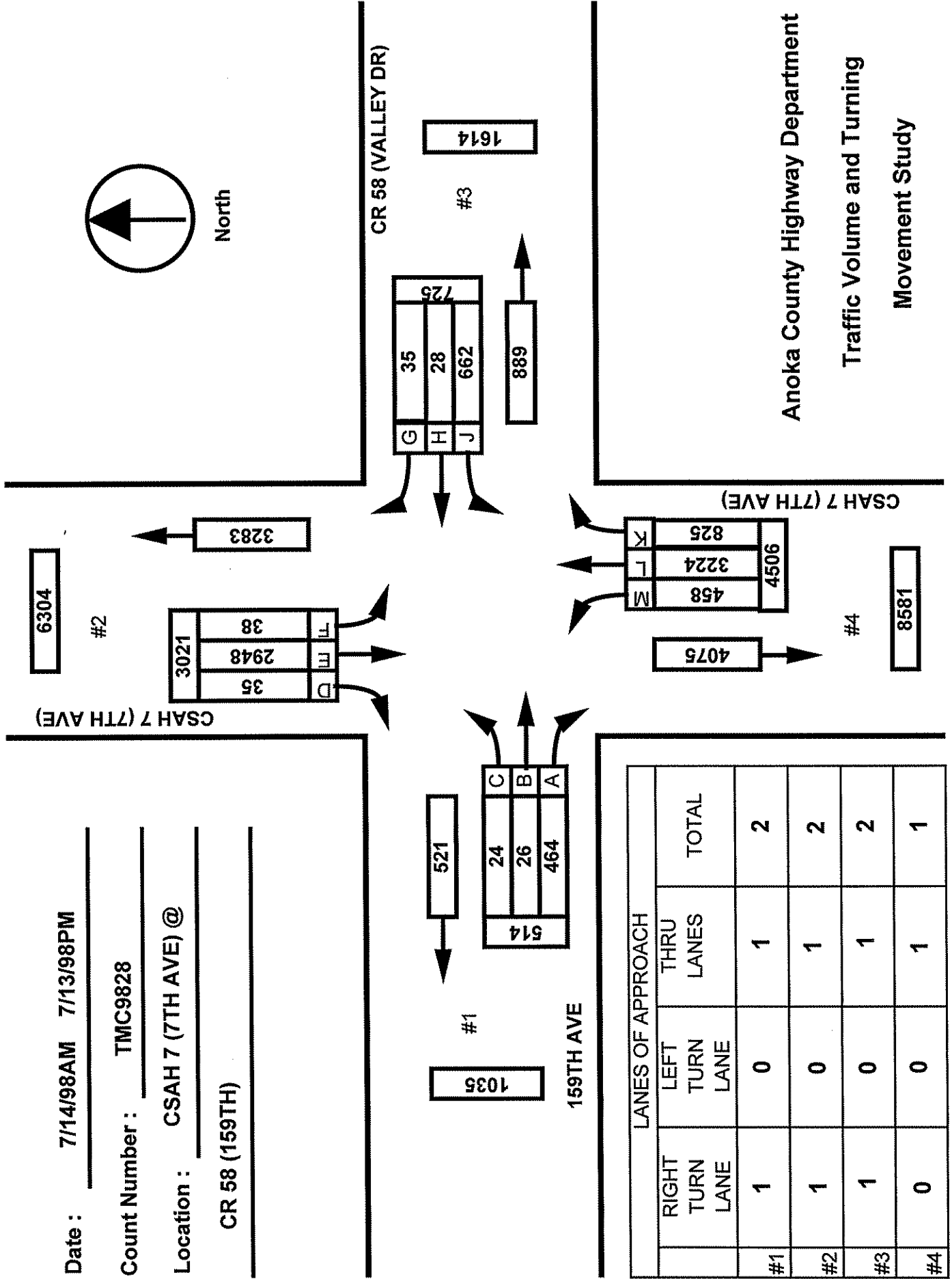


Date: 7/14/98AM 7/13/98PM
 Count Number: TMC9828
 Location: CSAH 7 (7TH AVE) @
CR 58 (159TH)



North



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Weather :
 Counted by: Sarah and Vallie
 Board # :
 Character :

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 Horsham, PA.

Study Name: TMC9828
 Site Code : 98280202
 Start Date: 07/14/98
 Page : 1

Vehicle group 1

Start Time	CSAH 7 (7TH AVE) Southbound				CR 58 (VALLEY DR) Westbound				CSAH 7 (7TH AVE) Northbound				159TH AVE. Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
07/14/98																			
06:00	0	162	0	1	28	0	0	0	3	13	2	3	0	0	9	0	221	4	217
06:15	1	165	0	2	27	0	0	0	2	11	2	0	0	0	10	0	220	2	218
06:30	0	131	1	1	20	0	0	0	2	17	3	2	0	0	15	0	192	3	189
06:45	0	95	0	1	20	0	1	1	4	47	2	6	0	0	14	1	192	9	183
Hour	1	553	1	5	95	0	1	1	11	88	9	11	0	0	48	1	825	18	807
07:00	2	115	0	4	16	0	0	0	2	23	7	5	0	0	16	0	190	9	181
07:15	0	143	0	2	30	0	0	2	2	24	5	1	0	0	15	0	224	5	219
07:30	2	102	1	5	23	0	0	0	5	24	3	2	0	0	7	1	175	8	167
07:45	1	54	0	2	16	0	0	0	6	23	2	3	0	0	15	1	123	6	117
Hour	5	414	1	13	85	0	0	2	15	94	17	11	0	0	53	2	712	28	684
08:00	0	62	1	4	20	1	0	3	3	30	7	8	1	0	11	0	151	15	136
08:15	0	48	0	3	14	1	0	0	1	22	6	5	1	0	5	0	106	8	98
08:30	0	59	0	1	15	0	0	1	0	16	2	7	0	0	16	1	118	10	108
08:45	0	48	0	6	10	0	1	0	5	20	2	4	0	0	9	0	105	10	95
Hour	0	217	1	14	59	2	1	4	9	88	17	24	2	0	41	1	480	43	437
09:00	0	39	0	4	11	0	0	2	0	20	10	2	0	0	10	0	98	8	90
09:15	0	45	0	2	3	0	1	1	6	17	8	1	1	1	4	0	90	4	86
09:30	0	34	0	1	11	1	0	0	4	16	6	5	0	0	6	0	84	6	78
09:45	0	28	0	1	7	2	1	0	0	16	9	5	0	1	5	0	75	6	69
Hour	0	146	0	8	32	3	2	3	10	69	33	13	1	2	25	0	347	24	323
10:00	0	37	1	5	6	0	0	0	2	24	7	1	0	0	3	0	86	6	80
10:15	0	34	0	1	9	0	1	0	10	22	8	2	0	0	5	0	92	3	89
10:30	0	38	2	0	10	0	1	0	4	23	4	3	1	1	5	0	92	3	89
10:45	1	29	0	1	8	1	0	0	10	33	9	2	1	0	6	1	102	4	98
Hour	1	138	3	7	33	1	2	0	26	102	28	8	2	1	19	1	372	16	356
11:00	1	41	0	6	9	1	0	0	5	34	5	2	0	2	6	0	112	8	104
11:15	0	26	0	2	9	0	1	0	15	44	7	6	0	1	9	1	121	9	112
11:30	1	47	0	6	5	0	0	1	4	31	10	6	0	2	9	0	122	13	109
11:45	0	39	0	4	7	1	0	1	6	36	11	6	0	0	7	0	118	11	107
Hour	2	153	0	18	30	2	1	2	30	145	33	20	0	5	31	1	473	41	432
12:00	4	31	3	3	3	1	6	1	2	32	3	2	5	2	4	0	102	6	96
12:15	2	31	2	3	7	0	0	0	10	29	10	2	1	0	9	1	107	6	101
12:30	2	34	0	5	8	0	2	1	1	51	11	6	2	1	7	0	131	12	119
12:45	5	36	0	0	3	0	1	0	4	49	10	2	1	0	6	1	118	3	115
Hour	13	132	5	11	21	1	9	2	17	161	34	12	9	3	26	2	458	27	431

Weather :
 Counted by: Sarah and Vallie
 Board # :
 Cher :

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 Horsham, PA.

Study Name: TMC9828
 Site Code : 98280202
 Start Date: 07/14/98
 Page : 2

Vehicle group 1

Start Time	CSAH 7 (7TH AVE)				CR 58 (VALLEY DR)				CSAH 7 (7TH AVE)				159TH AVE.				Intvl	Exclu	Inclu
	Southbound				Westbound				Northbound				Eastbound						
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total	Total	Total
13:00	0	30	0	2	11	0	0	1	4	38	7	4	0	1	5	0	103	7	96
13:15	0	39	1	6	10	0	0	0	9	43	6	5	0	0	8	0	127	11	116
13:30	1	44	0	2	8	5	1	1	3	36	6	0	0	1	4	0	112	3	109
13:45	0	44	0	4	8	0	0	0	5	47	13	2	0	0	10	0	133	6	127
Hour	1	157	1	14	37	5	1	2	21	164	32	11	0	2	27	0	475	27	448
14:00	0	40	1	2	5	2	0	1	13	46	9	0	0	1	7	0	127	3	124
14:15	0	52	1	2	8	0	0	0	5	31	14	0	0	0	7	0	120	2	118
14:30	0	45	0	2	13	0	1	1	10	33	21	1	0	1	3	0	131	4	127
14:45	0	41	0	1	13	0	0	1	10	66	10	5	0	0	1	0	148	7	141
Hour	0	178	2	7	39	2	1	3	38	176	54	6	0	2	18	0	526	16	510
15:00	2	27	0	3	5	1	2	2	6	92	22	2	0	1	6	0	171	7	164
15:15	0	25	7	7	6	0	1	0	7	99	21	4	0	0	5	0	182	11	171
15:30	0	29	0	1	16	0	0	1	9	112	34	4	1	0	6	0	213	6	207
15:45	0	41	0	2	7	0	0	0	13	105	26	3	1	1	3	0	202	5	197
Hour	2	122	7	13	34	1	3	3	35	408	103	13	2	2	20	0	768	29	739
16:00	1	38	0	1	6	0	1	1	12	120	27	5	1	1	6	0	220	7	213
16:15	0	31	1	0	8	1	1	1	8	91	25	1	0	0	6	0	174	2	172
16:30	1	43	0	2	9	0	2	0	10	108	32	3	1	0	1	0	212	5	207
16:45	2	36	4	2	12	1	2	0	12	141	42	5	0	0	9	0	268	7	261
Hour	4	148	5	5	35	2	6	2	42	460	126	14	2	1	22	0	874	21	853
17:00	0	29	0	3	10	0	1	0	11	124	36	2	0	1	9	0	226	5	221
17:15	0	49	1	1	10	0	1	0	21	107	29	5	0	0	7	1	232	7	225
17:30	1	34	0	2	7	0	0	0	13	109	30	5	0	0	7	0	208	7	201
17:45	0	41	0	1	17	1	0	2	14	86	26	1	0	0	5	0	194	4	190
Hour	1	153	1	7	44	1	2	2	59	426	121	13	0	1	28	1	860	23	837
18:00	0	41	0	1	7	0	1	1	7	91	27	4	0	1	6	0	187	6	181
18:15	2	42	1	1	9	1	0	0	10	70	18	4	0	0	9	0	167	5	162
18:30	1	56	2	0	8	0	1	1	10	64	16	1	0	0	11	0	171	2	169
18:45	0	31	2	0	6	0	0	0	5	62	18	1	1	0	6	0	132	1	131
Hour	3	170	5	2	30	1	2	2	32	287	79	10	1	1	32	0	657	14	643
19:00	0	28	0	1	17	0	1	1	5	43	13	1	0	1	11	0	122	3	119
19:15	0	32	0	1	7	1	0	0	9	60	16	1	0	0	4	0	131	2	129
19:30	0	14	1	0	8	1	0	0	8	58	11	0	1	2	9	0	113	0	113
19:45	0	24	0	1	6	1	0	0	12	46	16	2	1	0	7	0	116	3	113
Hour	0	98	1	3	38	3	1	1	34	207	56	4	2	3	31	0	482	8	474

Weather :
 Counted by: Sarah and Vallie
 Board # :
 cher :

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Study Name: TMC9828
 Site Code : 98280202
 Start Date: 07/14/98
 Page : 3

Vehicle group 1

Start Time	CSAH 7 (7TH AVE) Southbound				CR 58 (VALLEY DR) Westbound				CSAH 7 (7TH AVE) Northbound				159TH AVE. Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
20:00	0	28	0	1	6	0	0	0	17	44	11	0	0	0	3	0	110	1	109
20:15	1	19	0	0	5	2	0	0	9	57	12	1	1	0	8	0	115	1	114
20:30	1	21	1	0	5	0	1	0	13	40	8	0	2	0	9	0	101	0	101
20:45	0	29	0	0	14	0	2	0	9	46	11	0	0	1	5	0	117	0	117
Hour	2	97	1	1	30	2	3	0	48	187	42	1	3	1	25	0	443	2	441
21:00	0	17	0	0	6	2	0	0	6	51	15	1	0	0	7	0	105	1	104
21:15	0	14	1	2	7	0	0	0	6	45	5	0	0	1	5	0	86	2	84
21:30	2	25	0	0	3	0	0	0	11	39	15	3	0	1	5	0	104	3	101
21:45	1	16	0	0	4	0	0	1	8	26	6	3	0	0	1	0	66	4	62
Hour	3	72	1	2	20	2	0	1	31	161	41	7	0	2	18	0	361	10	351
Total	38	2948	35	130	662	28	35	30	458	3223	825	178	24	26	464	9	9113	347	8766
% Apr.	1.2	93.5	1.1	4.1	87.6	3.7	4.6	3.9	9.7	68.8	17.6	3.8	4.5	4.9	88.7	1.7	-	-	-
% Int.	0.4	32.3	0.3	1.4	7.2	0.3	0.3	0.3	5.0	35.3	9.0	1.9	0.2	0.2	5.0	-	-	-	-

Major Street Approaches:

Northbound:

CSAH 7 (7TH AVE)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9828.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/14/98
 Number of Lanes: 2
 Approach Speed: 55
 Total Approach Traffic: 4506

Southbound:

CSAH 7 (7TH AVE)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9828.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/14/98
 Number of Lanes: 2
 Approach Speed: 55
 Total Approach Traffic: 3021

Minor Street Approaches:

Eastbound:

159TH AVE.

Data File: C:\APPS\PETRA2\DATAFILE\TMC9828.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/14/98
 Number of Lanes: 1
 Approach Speed: 0
 Total Approach Traffic: 514

Westbound:

CR 58 (VALLEY DR)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9828.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/14/98
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 725

Analysis of 8-Hour Volume Warrants (Criteria refers to high volume side street for that hour):

Hour	Main	Side	Warrant 1	Warrant 2	Warrant 8
Begin	(Total)	Vol. Dir. Rank	Meets? Criteria	Meets? Criteria	Meets? Criteria
0	0	0 W 17	140	70	112
1	0	0 W 18	140	70	112
2	0	0 W 19	140	70	112
3	0	0 W 20	140	70	112
4	0	0 W 21	140	70	112
5	0	0 W 22	140	70	112
6	663	96 W 1	MAIN 140	--BOTH-- 70	MAIN 112
7	546	85 W 2	MAIN 140	SIDE 70	MAIN 112
8	332	62 W 3	140	70	112
9	258	37 W 11	140	70	112
10	298	36 W 12	140	70	112
11	363	36 E 13	105	52	84
12	362	38 E 9	105	52	84
13	376	43 W 5	140	70	112
14	448	42 W 7	MAIN 140	70	112
15	677	38 W 10	MAIN 140	MAIN 70	MAIN 112
16	785	43 W 6	MAIN 140	MAIN 70	MAIN 112
17	761	47 W 4	MAIN 140	MAIN 70	MAIN 112
18	576	34 E 15	MAIN 105	52	MAIN 84
19	396	42 W 8	140	70	112
20	377	35 W 14	140	70	112
21	309	22 W 16	140	70	112
22	0	0 W 23	140	70	112
23	0	0 W 24	140	70	112

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 0 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 1 hours. Criteria--Main St.: 630; Side St.: See Volume Summary.

Warrant 3 - Minimum Pedestrian Volumes

NOT SATISFIED. Ped volumes too low. Criteria--190 Peds in peak hour, 100 peds in 4th high hour.

Warrant 4 - School Crossing

NOT APPLICABLE. Gap data has not been defined.

Warrant 5 - Progressive Movement

NOT SATISFIED. Adjacent signals closer than 1000 feet and/or not part of coordinated system.

Warrant 6 - Accident Experience

NOT SATISFIED. 0 correctable accidents is fewer than required 5.

Correctable Accidents: 0; Right Angle Accidents: 0; Left Turn Accidents: 0; Other Accidents: 0.

Warrant 7 - Systems Warrant

NOT SATISFIED. Peak hour total entering volume 853 does not meet criteria of 1000

- Approaches which are part of the principal through traffic roadway network.
- Approaches which include rural or suburban highways outside, entering or traversing a city.
- Approaches which appear as a major route in an official transportation plan.

Warrant 8 - Combination of Warrants

NOT SATISFIED. Required values reached for 0 hours. Criteria--Main: 504; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

NOT SATISFIED. Required values reached for 0 hours.

Warrant 10 - Peak Hour Delay

NOT SATISFIED. Peak hour (1600 hours) volume not adequate.

Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 150.

Warrant 11 - Peak Hour Volume

NOT SATISFIED.

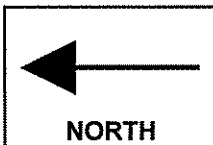
Minor St. High Vol. Approach (UPH)

Warrant 9, Four-Hour Volumes
Warrant 11, Peak-Hour Volumes

200 400 600 800 1000 1200 1400 1600

Major St. Total of Both Approaches (UPH)

910 1100 1300 1500 1700
18 15 17 6



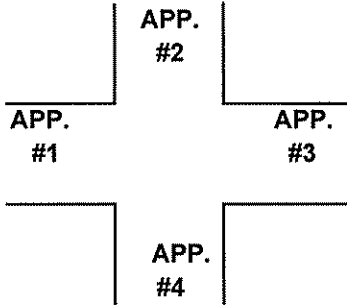
COUNT LOCATION:

CSAH 7 (7TH AVE) @
CR 58 (159TH)

DATE:

7/14/98

NORTH
APP. #1=SB CSAH 7 (7TH AVE)
APP. #2 =WB CR 58 (159TH)
APP. #3=NB CSAH 7 (7TH AVE)
APP. #4=EB CR 58 (159TH)



- 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			2	3	1	
6:15-6:30						1		
6:30-6:45						3		
6:45-7:00						6	1	3
HOURLY TOTAL					2	HOURLY TOTAL		18
7:00-7:15						7	1	1
7:15-7:30		1			1	5		
7:30-7:45						4	3	1
7:45-8:00						4	2	
HOURLY TOTAL					1	HOURLY TOTAL		28
8:00-8:15						11	3	1
8:15-8:30						10		
8:30-8:45						11		
8:45-9:00						9	1	
HOURLY TOTAL						HOURLY TOTAL		46
9:00-9:15						6	1	
9:15-9:30						4		
9:30-9:45						4	2	
9:45-10:00						7		
HOURLY TOTAL						HOURLY TOTAL		24
10:00-10:15						6	1	
10:15-10:30						2	1	
10:30-10:45	1	1			2	3		
10:45-11:00							3	1
HOURLY TOTAL					2	HOURLY TOTAL		17
11:00-11:15						6	1	1
11:15-11:30						5	3	1
11:30-11:45						8	3	2
11:45-12:00						6	3	1
HOURLY TOTAL						HOURLY TOTAL		40
12:00-12:15						6		
12:15-12:30						5	1	
12:30-12:45						12		
12:45-1:00						3	1	
HOURLY TOTAL						HOURLY TOTAL		28
1:00-1:15			2		2	7		
1:15-1:30						10	1	
1:30-1:45			2		2	1	1	
1:45-2:00						5	1	
HOURLY TOTAL					4	HOURLY TOTAL		26

←
NORTH

APP. #1=SB CSAH 7
(7TH AVE)

APP. #2 =WB CR 58
(159TH)

APP. #3=NB CSAH 7
(7TH AVE)

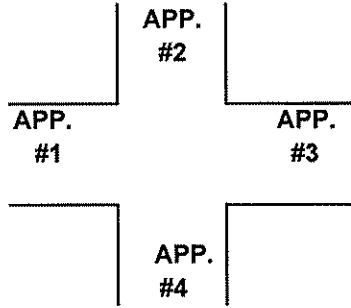
APP. #4=EB CR 58
(159TH)

COUNT LOCATION:

CSAH 7 (7TH AVE) @
CR 58 (159TH)

DATE:

7/13/98



- 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						3		
2:15-2:30				2	2		2	
2:30-2:45						4	1	
2:45-3:00						5	2	
HOURLY TOTAL					2	HOURLY TOTAL		17
3:00-3:15		1	1		2	6	1	
3:15-3:30						10	1	
3:30-3:45						5	1	
3:45-4:00						3	2	
HOURLY TOTAL					2	HOURLY TOTAL		29
4:00-4:15	1				1	6	2	
4:15-4:30						2		
4:30-4:45						5		
4:45-5:00						4	3	
HOURLY TOTAL					1	HOURLY TOTAL		22
5:00-5:15						3	2	1
5:15-5:30			1	2	3	3	4	
5:30-5:45		1			1	5	2	
5:45-6:00						2	2	
HOURLY TOTAL					4	HOURLY TOTAL		24
6:00-6:15						4	1	
6:15-6:30						4	1	
6:30-6:45				1	1	1	1	
6:45-7:00				1	1	1		
HOURLY TOTAL					2	HOURLY TOTAL		13
7:00-7:15						2	1	
7:15-7:30						2		
7:30-7:45								
7:45-8:00			3	3	6	1	2	
HOURLY TOTAL					6	HOURLY TOTAL		8
8:00-8:15								
8:15-8:30				1	1		1	
8:30-8:45			2		2			
8:45-9:00			1		1			
HOURLY TOTAL					4	HOURLY TOTAL		1
9:00-9:15							1	
9:15-9:30						1	1	
9:30-9:45	1				1	2	1	
9:45-10:00			2		2	2	1	
HOURLY TOTAL					3	HOURLY TOTAL		9