

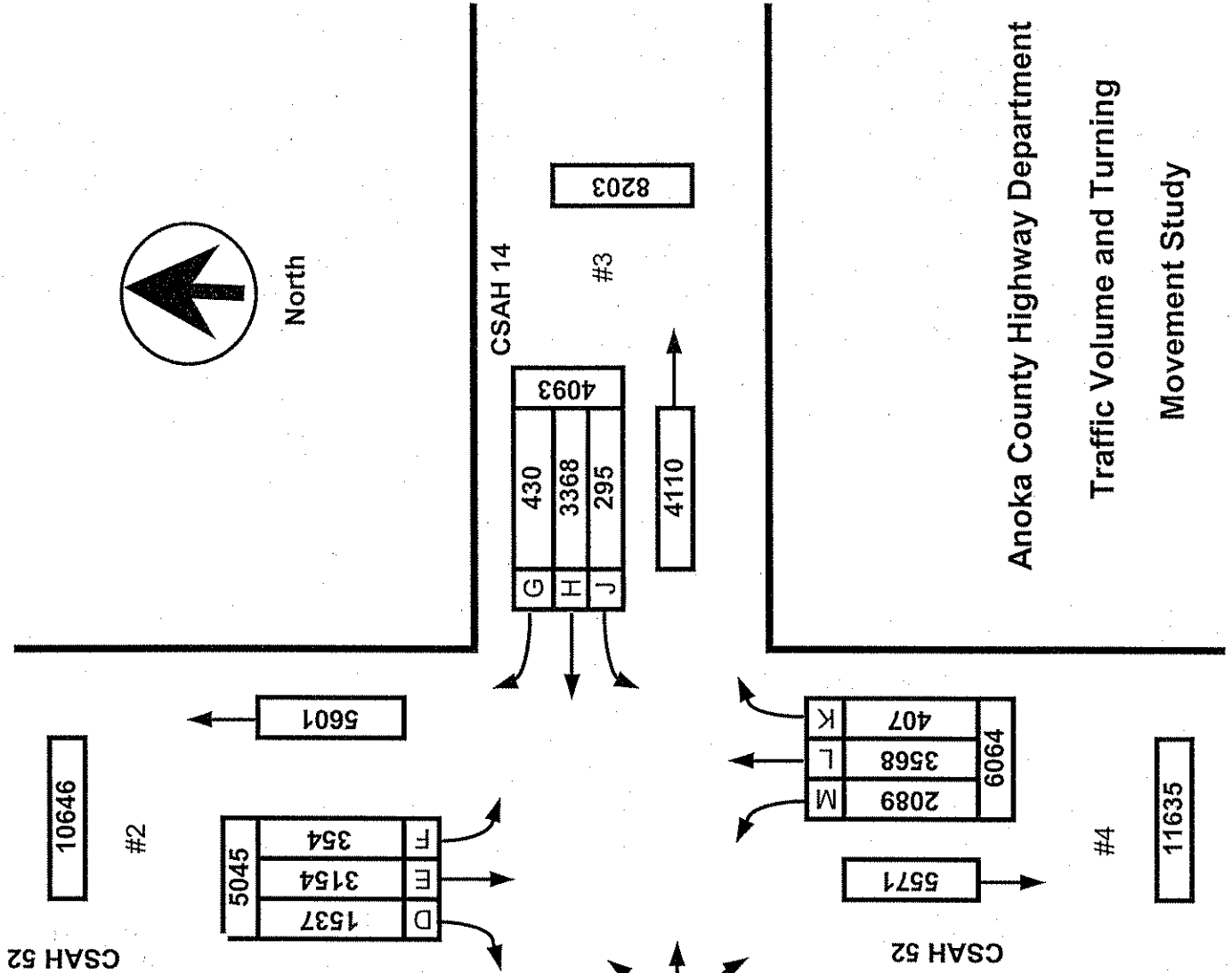
Date : 5/17/05

Count Number : TMC0506

Location : CSAH 52 (Radisson Rd.)
 @ CSAH 14 (Main St.)



North



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Anoka County Highway Department
 Traffic Engineering
 Traffic Volume and Turning Movement Stud

File Name : TMC0506
 Site Code : 05060101
 Start Date : 05/17/2005
 Page No : 1

Weather: Rainy and Mild
 Counter: TDC-8
 Counted by: Ashley/Jena

Groups Printed- 1 - Unshifted

Start Time	CSAH 52 Southbound					CSAH 14 Westbound					CSAH 52 Northbound					CSAH 14 Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total			
	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0				
06:00	9	125	17	2	151	1	28	3	5	32	6	6	4	1	16	0	70	65	0	135	8	334	342
06:15	12	136	17	3	165	11	52	1	8	64	7	8	2	0	17	4	64	44	2	112	13	358	371
06:30	14	162	25	1	201	9	58	0	3	67	14	9	3	2	26	8	82	75	14	165	20	459	479
06:45	15	187	34	2	236	8	56	4	6	68	18	23	4	4	45	5	64	85	8	154	20	503	523
Total	50	610	93	8	753	29	194	8	22	231	45	46	13	7	104	17	280	269	24	566	61	1654	1715
07:00	8	176	39	3	223	8	56	4	5	68	24	17	7	2	48	1	86	65	7	152	17	491	508
07:15	14	163	49	4	226	8	75	5	6	88	11	13	7	2	31	11	54	63	5	128	17	473	490
07:30	10	200	38	4	248	15	61	11	13	87	23	22	6	8	51	9	77	59	14	145	39	531	570
07:45	9	146	40	10	195	10	80	1	6	91	18	16	3	4	37	19	78	66	9	163	29	486	515
Total	41	685	166	21	892	41	272	21	30	334	76	68	23	16	167	40	295	253	35	588	102	1981	2083
08:00	8	92	27	4	127	0	52	2	5	54	18	13	8	6	39	9	67	47	20	123	35	343	378
08:15	7	66	18	3	91	0	52	4	13	56	13	14	8	4	35	25	61	37	17	123	37	305	342
08:30	10	80	31	7	121	4	33	8	6	45	21	20	2	7	43	23	55	40	25	118	45	327	372
08:45	4	58	47	11	109	3	57	1	9	61	18	21	4	1	43	7	40	32	8	79	29	292	321
Total	29	296	123	25	448	7	194	15	33	216	70	68	22	18	160	64	223	156	70	443	146	1267	1413
09:00	4	50	19	4	73	5	37	4	7	46	25	15	7	12	47	17	47	34	9	98	32	264	296
09:15	5	45	29	6	79	3	36	3	5	42	17	18	8	5	43	16	39	30	12	85	28	249	277
09:30	6	42	20	7	68	7	36	3	6	46	18	16	4	5	38	8	37	21	5	66	23	218	241
09:45	4	35	13	6	52	1	46	9	6	56	21	21	5	6	47	22	43	27	17	92	35	247	282
Total	19	172	81	23	272	16	155	19	24	190	81	70	24	28	175	63	166	112	43	341	118	978	1096
10:00	7	39	20	10	66	3	47	3	3	53	23	31	1	2	55	14	38	20	10	72	25	246	271
10:15	5	25	26	5	56	4	39	3	12	46	14	30	5	9	49	16	44	25	10	85	36	236	272
10:30	5	43	18	4	66	4	42	5	10	51	26	10	2	5	38	17	29	26	10	72	29	227	256
10:45	2	29	27	11	58	6	39	3	6	48	16	28	3	2	47	10	47	28	11	85	30	238	268
Total	19	136	91	30	246	17	167	14	31	198	79	99	11	18	189	57	158	99	41	314	120	947	1067
11:00	6	20	16	7	42	3	42	6	6	51	39	25	7	6	71	17	54	28	8	99	27	263	290
11:15	1	29	26	7	56	4	44	4	5	52	26	26	8	7	60	18	48	34	7	100	26	268	294
11:30	3	40	21	8	64	3	58	2	9	63	43	19	4	6	66	26	45	37	11	108	34	301	335
11:45	2	31	20	4	53	3	44	5	6	52	32	32	3	5	67	21	59	42	12	122	27	294	321
Total	12	120	83	26	215	13	188	17	26	218	140	102	22	24	264	82	206	141	38	429	114	1126	1240
12:00	2	33	24	4	59	5	36	3	2	44	29	30	2	7	61	11	59	34	8	104	21	268	289
12:15	3	34	18	6	55	3	52	4	4	59	19	34	8	10	61	22	30	34	7	86	27	261	288
12:30	4	28	21	8	53	2	42	5	4	49	32	28	7	4	67	22	45	33	9	100	25	269	294
12:45	2	33	26	11	61	11	44	1	5	56	34	44	3	9	81	23	51	34	6	108	31	306	337
Total	11	128	89	29	228	21	174	13	15	208	114	136	20	30	270	78	185	135	30	398	104	1104	1208
13:00	4	20	26	3	50	4	43	4	5	51	34	25	5	8	64	13	56	33	12	102	28	267	295
13:15	0	30	19	6	49	3	54	3	9	60	32	37	6	7	75	36	50	27	12	113	34	297	331
13:30	7	25	25	3	57	5	40	7	7	52	26	48	3	6	77	21	55	31	7	107	23	293	316
13:45	6	25	26	7	57	4	54	4	5	62	29	32	4	3	65	13	43	29	8	85	23	269	292
Total	17	100	96	19	213	16	191	18	26	225	121	142	18	24	281	83	204	120	39	407	108	1126	1234
14:00	4	28	18	3	50	6	54	6	2	66	24	34	9	2	67	22	48	26	8	96	15	279	294
14:15	5	30	10	2	45	6	50	6	10	62	34	53	12	4	99	32	46	35	7	113	23	319	342
14:30	7	26	19	2	52	2	60	5	5	67	35	49	13	5	97	32	39	17	5	88	17	304	321
14:45	4	25	31	7	60	1	60	12	6	73	44	73	12	8	129	35	61	30	9	126	30	388	418
Total	20	109	78	14	207	15	224	29	23	268	137	209	46	19	392	121	194	108	29	423	85	1290	1375
15:00	2	39	13	2	54	3	65	6	8	74	38	66	6	3	110	26	56	16	12	98	25	336	361
15:15	5	37	17	4	59	2	91	7	9	100	53	86	8	4	147	41	64	26	5	131	22	437	459
15:30	3	22	22	3	47	4	72	9	2	85	67	112	13	4	192	30	75	21	7	126	16	450	466
15:45	8	33	31	4	72	4	95	12	3	111	59	136	9	4	204	41	49	29	12	119	23	506	529
Total	18	131	83	13	232	13	323	34	22	370	217	400	36	15	653	138	244	92	36	474	86	1729	1815
16:00	0	33	19	3	52	5	74	21	3	100	79	156	11	1	246	41	70	35	8	146	15	544	559
16:15	9	39	26	6	74	9	83	18	3	110	71	167	9	2	247	52	63	33	9	148	20	579	599
16:30	4	29	27	0	60	8	97	14	1	119	82	168	15	4	265	47	55	30	4	132	9	576	585
16:45	9	31	35	4	75	6	86	14	2	106	88	184	16	8	288	34	55	27	7	116	21	585	606
Total	22	132	107	13	261	28	340	67	9	435	320	675	51	15	1046	174	243	125	28	542	65	2284	2349
17:00	7	41	48	1	96	4	61	19	2	84	73	222	6	4	301	47	71	28	6	146	13	627	640
17:15	3	43	23	0	69	9	100	10	5	119	65	175	10	2	250	44	63	34	6	141	13	579	592
17:30	10	37	19	3	66	5	80	14	5	99	65	144	16	0	225	39	74	36	2	149	10	5	

**ANOKA COUNTY HIGHWAY
PC-WARRANTS
TRAFFIC SIGNAL WARRANT ANALYSIS**

Study Name : TMC0506
Study Date : 05/23/05
Page No. : 1

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 14
Number of Lanes: 2
Approach Speed: 50
Total Approach Volume: 7,074

Westbound: CSAH 14
Number of Lanes: 2
Approach Speed: 55
Total Approach Volume: 4,093

Minor Street Approaches

Northbound: CSAH 52
Number of Lanes: 2

Total Approach Volume: 6,064

Southbound: CSAH 52
Number of Lanes: 2

Total Approach Volume: 5,045

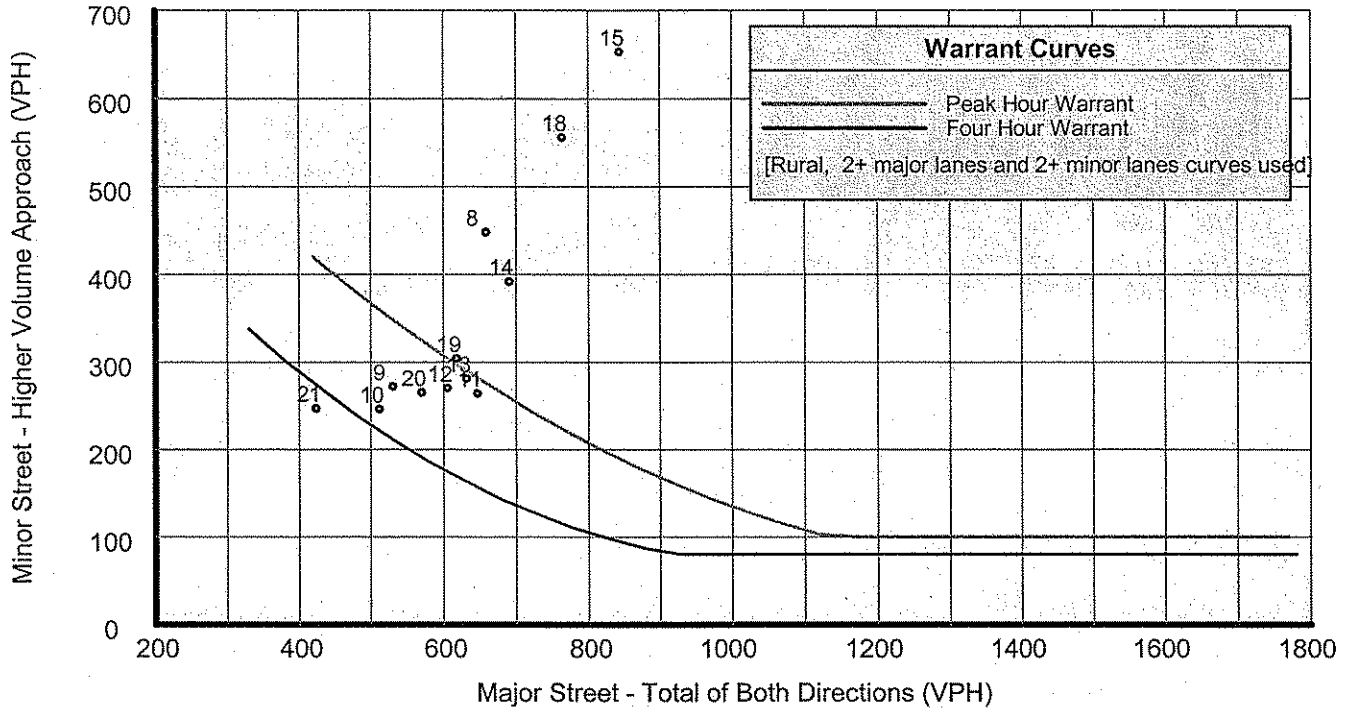
Warrant Summary (Rural values apply.)

Warrant 1 - Eight Hour Vehicular Volumes	Satisfied
Warrant 1A - Minimum Vehicular Volume Satisfied	
Required volumes reached for 16 hours, 8 are needed	
Warrant 1B - Interruption of Continuous Traffic Satisfied	
Required volumes reached for 10 hours, 8 are needed	
Warrant 1 A&B - Combination of Warrants Satisfied	
Required volumes reached for 15 hours, 8 are needed	
 Warrant 2 - Four Hour Volumes	 Satisfied
Number of hours (15) volumes exceed minimum >= minimum required (4).	
 Warrant 3 - Peak Hour	 Satisfied
Warrant 3A - Peak Hour Volumes Satisfied	
Volumes exceed minimums for at least one hour.	
Warrant 3B - Peak Hour Delay Satisfied	
Number of hours (58) volumes exceed minimum >= required (1). Delay data not evaluated.	
 Warrant 4 - Pedestrian Volumes*	 Not Evaluated
 Warrant 5 - School Crossing	 Not Evaluated
 Warrant 6 - Coordinated Signal System	 Not Evaluated
 Warrant 7 - Crash Experience	 Not Evaluated
 Warrant 8 - Roadway Network	 Not Evaluated

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ANOKA COUNTY HIGHWAY
PC-WARRANTS
TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name : TMC0506
 Study Date : 05/23/05
 Page No. : 2

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

Hour Begin	Major Total	Higher Minor		War-1A			War-1B			War-1A&B		
		Vol	Dir	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
01:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
02:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
03:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
04:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
05:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
06:00	797	753	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
07:00	922	892	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
08:00	659	448	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
09:00	531	272	SB	420-Yes	140-Yes	Both	630-No	70-Yes	Minor	504-Yes	112-Yes	Both
10:00	512	246	SB	420-Yes	140-Yes	Both	630-No	70-Yes	Minor	504-Yes	112-Yes	Both
11:00	647	264	NB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
12:00	606	270	NB	420-Yes	140-Yes	Both	630-No	70-Yes	Minor	504-Yes	112-Yes	Both
13:00	632	281	NB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
14:00	691	392	NB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
15:00	844	653	NB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
16:00	977	1,046	NB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
17:00	973	991	NB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
18:00	764	556	NB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
19:00	618	304	NB	420-Yes	140-Yes	Both	630-No	70-Yes	Minor	504-Yes	112-Yes	Both
20:00	570	265	NB	420-Yes	140-Yes	Both	630-No	70-Yes	Minor	504-Yes	112-Yes	Both
21:00	424	247	NB	420-Yes	140-Yes	Both	630-No	70-Yes	Minor	504-No	112-Yes	Minor
22:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
23:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---

**ANOKA COUNTY HIGHWAY
PC-WARRANTS
TRAFFIC SIGNAL WARRANT ANALYSIS**

Study Name : TMC0506
Study Date : 05/23/05

Multi-Way Stop Warrant Report

Major Street Approaches

Eastbound: CSAH 14
Total Approach Volume: 7,074
Approach Speed: 50

Westbound: CSAH 14
Total Approach Volume: 4,093
Approach Speed: 55

Minor Street Approaches

Northbound: CSAH 52
Total Approach Volume: 6,064

Southbound: CSAH 52
Total Approach Volume: 5,045

Warrant Summary

Criteria A - Interim Measure Not Evaluated
If traffic signals are justified, stop signs can be installed as an interim measure.

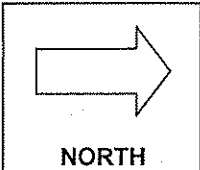
Criteria B - Crash Experience Not Evaluated
Number of crashes (0) is less than the minimum required (5).

Criteria C - Minimum Volumes and Delays Satisfied
Delay data not evaluated
Required volumes reached for 16 hours, 8 are needed

Criteria D - 80% of Volumes, Delays, and Crashes Not Evaluated
Delay data not evaluated
Required volumes reached for 0 hours, 8 are needed

Analysis of 8-Hour Volume Warrants:

Time	Major Crit		Crit C			Crit D		
	Total	Minor Total	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00 - 01:00	0	0	210-No	140-No	No	240-No	160-No	No
01:00 - 02:00	0	0	210-No	140-No	No	240-No	160-No	No
02:00 - 03:00	0	0	210-No	140-No	No	240-No	160-No	No
03:00 - 04:00	0	0	210-No	140-No	No	240-No	160-No	No
04:00 - 05:00	0	0	210-No	140-No	No	240-No	160-No	No
05:00 - 06:00	0	0	210-No	140-No	No	240-No	160-No	No
06:00 - 07:00	797	857	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
07:00 - 08:00	922	1,059	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
08:00 - 09:00	659	608	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
09:00 - 10:00	531	447	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
10:00 - 11:00	512	435	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
11:00 - 12:00	647	479	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
12:00 - 13:00	606	498	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
13:00 - 14:00	632	494	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
14:00 - 15:00	691	599	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
15:00 - 16:00	844	885	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
16:00 - 17:00	977	1,307	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
17:00 - 18:00	973	1,294	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
18:00 - 19:00	764	862	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
19:00 - 20:00	618	519	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
20:00 - 21:00	570	405	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
21:00 - 22:00	424	361	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
22:00 - 23:00	0	0	210-No	140-No	No	240-No	160-No	No
23:00 - 00:00	0	0	210-No	140-No	No	240-No	160-No	No



COUNT LOCATION:

CSAH 52 (Radisson Rd.) @

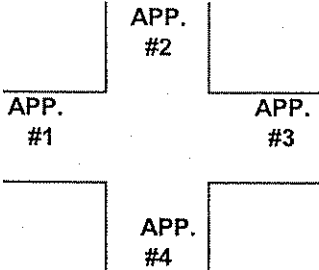
DATE:

05/19/2005

CSAH 14 (Main St.)

NORTH

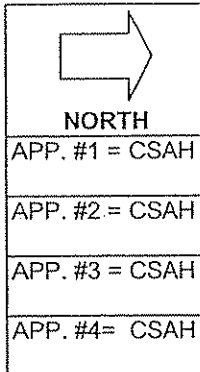
APP. #1 = CSAH 52
APP. #2 = CSAH 14
APP. #3 = CSAH 52
APP. #4 = CSAH 14



- 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.

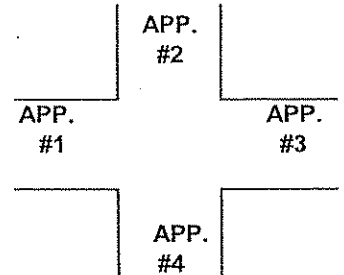
TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM		1			1	7		
6:15-6:30						13		1
6:30-6:45						18		1
6:45-7:00						18		2
HOURLY TOTAL					1	HOURLY TOTAL		60
7:00-7:15						9		6
7:15-7:30						14		3
7:30-7:45						36		4
7:45-8:00						24		5
HOURLY TOTAL						HOURLY TOTAL		101
8:00-8:15						31		3
8:15-8:30						35		1
8:30-8:45						37		9
8:45-9:00						22		5
HOURLY TOTAL						HOURLY TOTAL		143
9:00-9:15						28		4
9:15-9:30						28		
9:30-9:45						22		
9:45-10:00						33		1
HOURLY TOTAL						HOURLY TOTAL		116
10:00-10:15						24		
10:15-10:30						35		
10:30-10:45						30		
10:45-11:00						29		
HOURLY TOTAL						HOURLY TOTAL		118
11:00-11:15						27		
11:15-11:30						26		
11:30-11:45						34		
11:45-12:00						23		2
HOURLY TOTAL						HOURLY TOTAL		112
12:00-12:15						21	1	
12:15-12:30						26		1
12:30-12:45						20		1
12:45-1:00						29		2
HOURLY TOTAL						HOURLY TOTAL		101
1:00-1:15						27		1
1:15-1:30						31		1
1:30-1:45						21		
1:45-2:00						23		1
HOURLY TOTAL						HOURLY TOTAL		105
					TOTAL		TOTAL	856
					1			

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COUNT LOCATION: CSAH 52 (Radisson Rd.) @
CSAH 14 (Main St.)

DATE: 05/17/2005



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						15		
2:15-2:30						19	1	2
2:30-2:45						14	1	3
2:45-3:00						23		6
HOURLY TOTAL						HOURLY TOTAL		84
3:00-3:15						21		4
3:15-3:30				1	1	21		4
3:30-3:45						13		1
3:45-4:00						23		2
HOURLY TOTAL					1	HOURLY TOTAL		89
4:00-4:15						7		7
4:15-4:30						15		3
4:30-4:45						9		
4:45-5:00						20		1
HOURLY TOTAL						HOURLY TOTAL		62
5:00-5:15				1	1	11		1
5:15-5:30	1	1			2	13		1
5:30-5:45			1		1	8		1
5:45-6:00						4		
HOURLY TOTAL					4	HOURLY TOTAL		39
6:00-6:15						2		
6:15-6:30						8		
6:30-6:45						8		1
6:45-7:00						9		
HOURLY TOTAL						HOURLY TOTAL		28
7:00-7:15						5		
7:15-7:30						2		
7:30-7:45						5		
7:45-8:00	1				1	2		
HOURLY TOTAL					1	HOURLY TOTAL		14
8:00-8:15						1		
8:15-8:30							1	
8:30-8:45						4		1
8:45-9:00								
HOURLY TOTAL						HOURLY TOTAL		7
9:00-9:15						2		
9:15-9:30						1		
9:30-9:45								
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		3
TOTAL					7	TOTAL		1182

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