

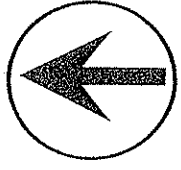
Date : 03/30/10

Count Number : TMC1004

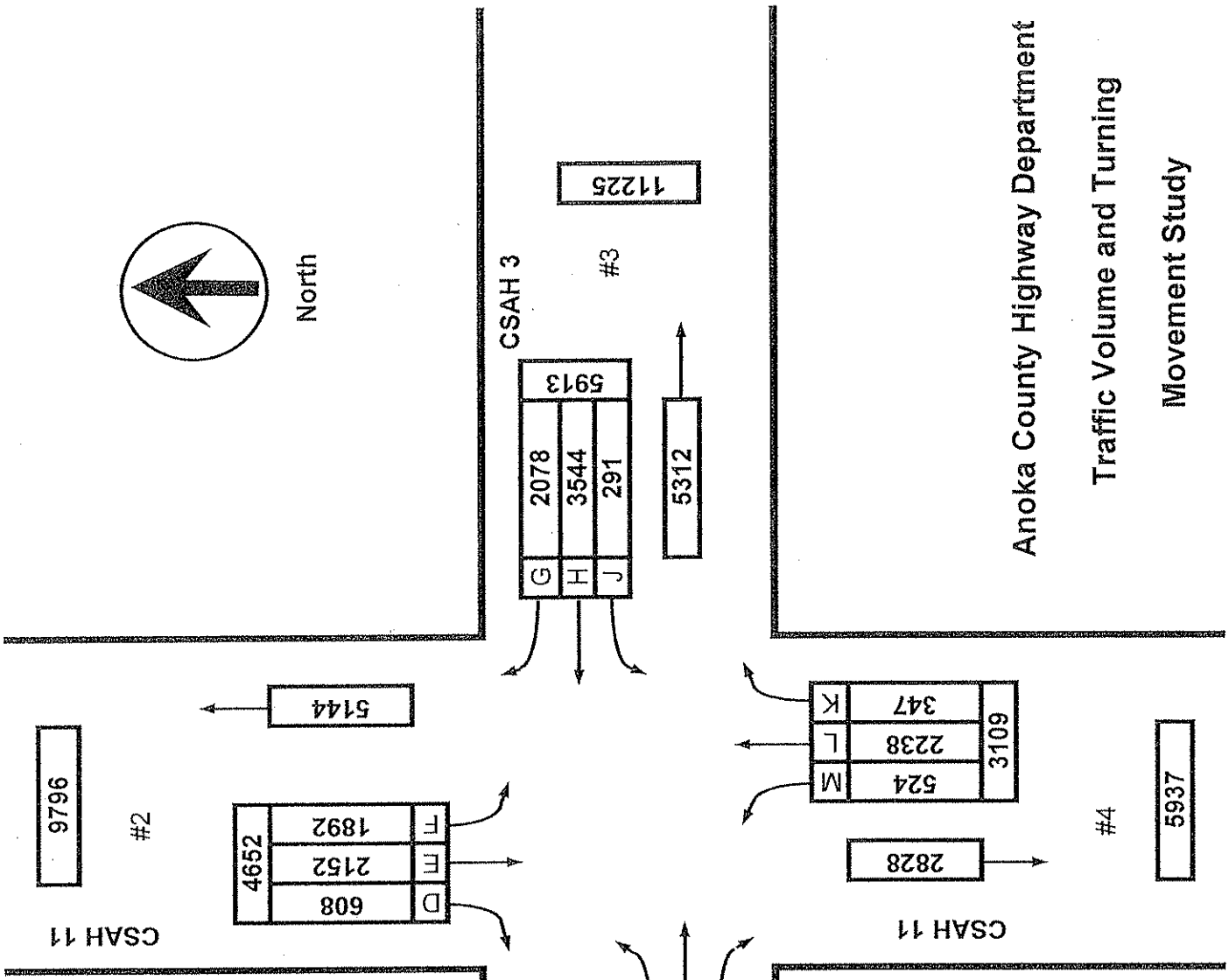
Location : CSAH 3 (Coon Rapids Blvd.)

@ CSAH 11 (Foley Blvd.)

Collection Period : 6-9 AM, 2-7 PM



North



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Date : 03/30/10

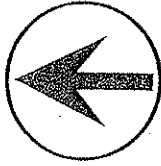
Count Number : TMC1004

Location : CSAH 3 (Coon Rapids Blvd.)

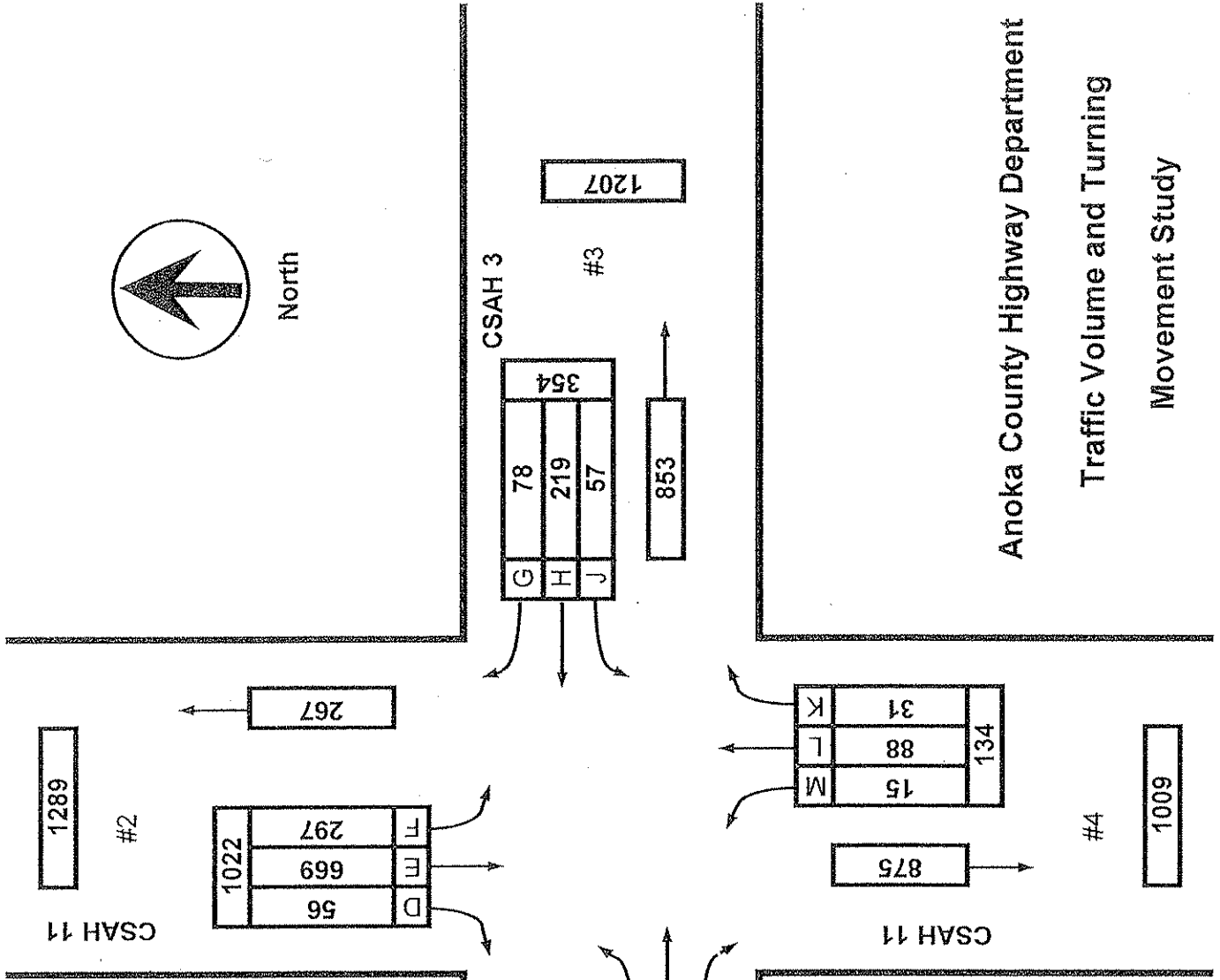
@ CSAH 11 (Foley Blvd.)

Collection Period : AM PEAK

Hour : 7:00 AM-8:00 AM



North



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

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

1009

Date : 03/30/10

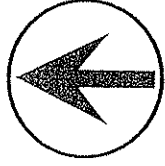
Count Number : TMC1004

Location : CSAH 3 (Coon Rapids Blvd.)

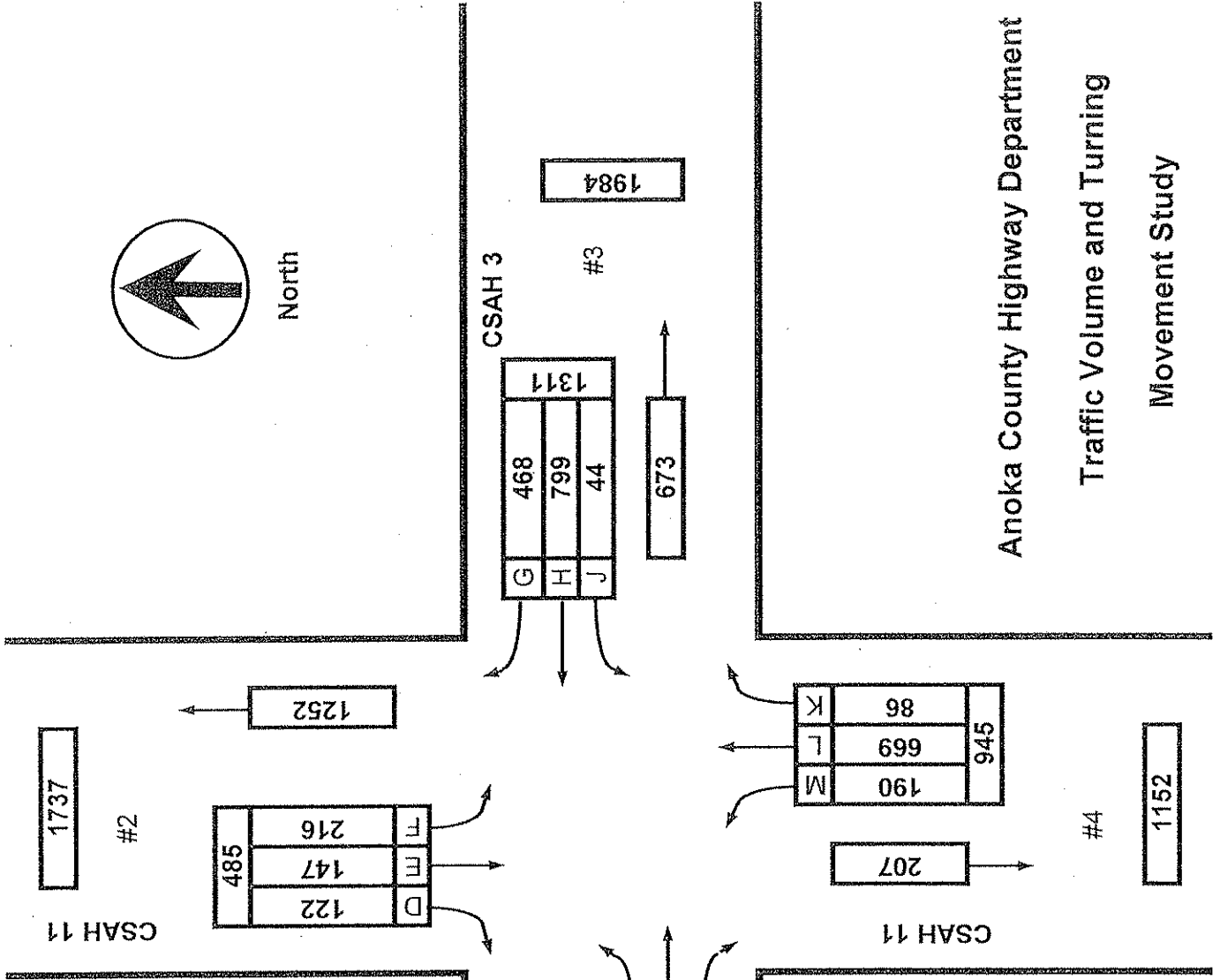
@ CSAH 11 (Foley Blvd.)

Collection Period : PM PEAK

Hour : 4:30 PM-5:30 PM



North



	EXISTING LANES OF APPROACH			TOTAL
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	
#1	1	1	2	4
#2	1	1	2	4
#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 Section

Traffic Volume and Turning Movement Study

File Name : TMC1004
 Site Code : 10040202
 Start Date : 3/30/2010
 Page No : 1

Weather: Cloudy and Warm
 Counter: DB-400
 Counted by: Josie/Terri

Groups Printed- Unshifted

Start Time	CSAH 11 Southbound					CSAH 3 Westbound					CSAH 11 Northbound					CSAH 3 Eastbound					Encl. Total	Incl. 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			
06:00	40	83	5	1	128	5	12	3	5	20	1	17	6	0	24	16	53	15	1	84	7	256	263
06:15	53	102	5	1	160	6	30	11	7	47	2	14	8	3	24	27	96	16	3	139	14	370	384
06:30	75	142	8	2	225	7	16	13	3	36	2	8	5	4	15	25	124	30	1	179	10	455	465
06:45	70	149	3	0	222	8	24	13	4	45	4	22	3	3	29	21	144	42	3	207	10	503	513
Total	238	476	21	4	735	26	82	40	19	148	9	61	22	10	92	89	417	103	8	609	41	1584	1625
07:00	71	190	8	3	269	16	22	17	11	55	2	21	8	2	31	27	113	40	4	180	20	535	555
07:15	59	169	19	1	247	14	60	23	7	97	5	25	5	3	35	24	133	46	5	203	16	582	598
07:30	88	153	14	5	255	9	64	21	2	94	7	22	9	1	38	28	133	26	2	187	10	574	584
07:45	79	157	15	8	251	18	73	17	7	108	1	20	9	0	30	22	146	37	4	205	19	594	613
Total	297	669	56	17	1022	57	219	78	27	354	15	88	31	6	134	101	525	149	15	775	65	2285	2350
08:00	65	108	10	2	183	13	53	43	12	109	10	29	8	2	47	29	101	20	3	150	19	489	508
08:15	60	88	8	1	156	4	48	35	4	87	7	30	4	3	41	26	83	14	2	123	10	407	417
08:30	70	45	13	6	128	7	56	42	3	105	6	32	7	1	45	19	80	4	3	103	13	381	394
08:45	61	51	21	11	133	9	78	33	11	120	1	24	9	1	34	22	88	11	4	121	27	408	435
Total	256	292	52	20	600	33	235	153	30	421	24	115	28	7	167	96	352	49	12	497	69	1685	1754
*** BREAK ***																							
14:00	49	26	16	4	91	9	106	69	4	184	3	34	7	2	44	35	130	2	6	167	16	486	502
14:15	52	24	13	3	89	7	119	89	7	215	4	41	7	3	52	14	102	2	2	118	15	474	489
14:30	61	35	23	12	119	5	115	88	3	208	7	37	9	2	53	27	99	2	2	128	19	508	527
14:45	68	36	20	3	124	6	118	68	4	192	5	43	7	4	55	27	86	4	6	117	17	488	505
Total	230	121	72	22	423	27	458	314	18	799	19	155	30	11	204	103	417	10	16	530	67	1956	2023
15:00	44	38	19	7	101	9	128	106	9	243	5	72	15	3	92	33	79	2	1	114	20	550	570
15:15	48	40	25	4	113	12	144	80	4	236	9	44	13	7	66	35	110	5	2	150	17	565	582
15:30	58	42	17	3	117	13	158	111	8	282	31	121	24	4	176	35	95	6	4	136	19	711	730
15:45	67	40	27	4	134	13	157	81	6	251	12	104	13	1	129	33	86	10	3	129	14	643	657
Total	217	160	88	18	465	47	587	378	27	1012	57	341	65	15	463	136	370	23	10	529	70	2469	2539
16:00	51	37	34	3	122	6	150	115	5	271	49	157	20	1	226	30	103	4	2	137	11	756	767
16:15	54	44	29	3	127	9	201	101	3	311	29	112	17	2	158	22	91	5	0	118	8	714	722
16:30	44	46	32	2	122	14	184	150	9	348	51	188	31	5	270	30	67	4	2	101	18	841	859
16:45	73	25	28	2	126	8	184	100	6	292	40	141	13	1	194	27	104	3	1	134	10	746	756
Total	222	152	123	10	497	37	719	466	23	1222	169	598	81	9	848	109	365	16	5	490	47	3057	3104
17:00	57	30	26	5	113	10	233	118	7	361	43	176	22	4	241	16	95	5	0	116	16	831	847
17:15	42	46	36	1	124	12	198	100	5	310	56	164	20	4	240	42	105	4	2	151	12	825	837
17:30	65	44	33	3	142	11	196	90	5	297	32	153	11	3	196	23	63	8	1	94	12	729	741
17:45	45	42	25	1	112	15	177	73	3	265	30	100	11	3	141	25	79	7	1	111	8	629	637
Total	209	162	120	10	491	48	804	381	20	1233	161	593	64	14	818	106	342	24	4	472	48	3014	3062
18:00	48	39	24	2	111	2	136	65	2	203	42	122	11	3	175	27	77	2	1	106	8	595	603
18:15	71	19	11	1	101	10	120	65	5	195	9	46	5	1	60	21	73	4	2	98	9	454	463
18:30	54	35	20	0	109	1	102	83	1	186	12	86	7	1	105	27	65	2	1	94	3	494	497
18:45	50	27	21	0	98	3	82	55	1	140	7	33	3	1	43	13	70	3	1	86	3	367	370
Total	223	120	76	3	419	16	440	268	9	724	70	287	26	6	383	88	285	11	5	384	23	1910	1933
Grand Total	1892	2152	608	104	4652	291	3544	2078	173	5913	524	2238	347	78	3109	828	3073	385	75	4286	430	17960	18390
Apprch %	40.7	46.3	13.1			4.9	59.9	35.1			16.9	72	11.2			19.3	71.7	9					
Total %	10.5	12	3.4		25.9	1.6	19.7	11.6		32.9	2.9	12.5	1.9		17.3	4.6	17.1	2.1		23.9	2.3	97.7	

Start Time	CSAH 11 Southbound					CSAH 3 Westbound					CSAH 11 Northbound					CSAH 3 Eastbound					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	
Peak Hour Analysis From 06:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	71	190	8		269	16	22	17		55	2	21	8		31	27	113	40		180	535
07:15	59	169	19		247	14	60	23		97	5	25	5		35	24	133	46		203	582
07:30	88	153	14		255	9	64	21		94	7	22	9		38	28	133	26		187	574
07:45	79	157	15		251	18	73	17		108	1	20	9		30	22	146	37		205	594
Total Volume	297	669	56		1022	57	219	78		354	15	88	31		134	101	525	149		775	2285
App. Total	29.1	65.5	5.5			16.1	61.9	22			11.2	85.7	23.1			13	67.7	19.2			
PHF	.844	.880	.737		.950	.792	.750	.848		.819	.536	.880	.861		.882	.902	.899	.810		.945	.962



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Cloudy and Warm
 Counter: DB-400
 Counted by: Josie/Terri

File Name : TMC1004
 Site Code : 10040202
 Start Date : 3/30/2010
 Page No : 2

Start Time	CSAH 11 Southbound				CSAH 3 Westbound				CSAH 11 Northbound				CSAH 3 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	44	46	32	122	14	184	150	348	51	188	31	270	30	67	4	101	841
16:45	73	25	28	126	8	184	100	292	40	141	13	194	27	104	3	134	746
17:00	57	30	26	113	10	233	118	361	43	176	22	241	16	95	5	116	831
17:15	42	46	36	124	12	198	100	310	56	164	20	240	42	105	4	151	825
Total Volume	216	147	122	485	44	799	468	1311	190	669	86	945	115	371	16	502	3243
% App. Total	44.5	30.3	25.2		3.4	60.9	35.7		20.1	70.8	9.1		22.9	73.9	3.2		
PHF	.740	.799	.847	.962	.786	.857	.780	.908	.848	.890	.694	.875	.685	.883	.800	.831	.964

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

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 3
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Volume: 4,286

Westbound: CSAH 3
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Volume: 5,913

Minor Street Approaches

Northbound: CSAH 11
 Number of Lanes: 2
 Total Approach Volume: 3,109

Southbound: CSAH 11
 Number of Lanes: 2
 Total Approach Volume: 4,652

Warrant Summary (Rural values apply.)

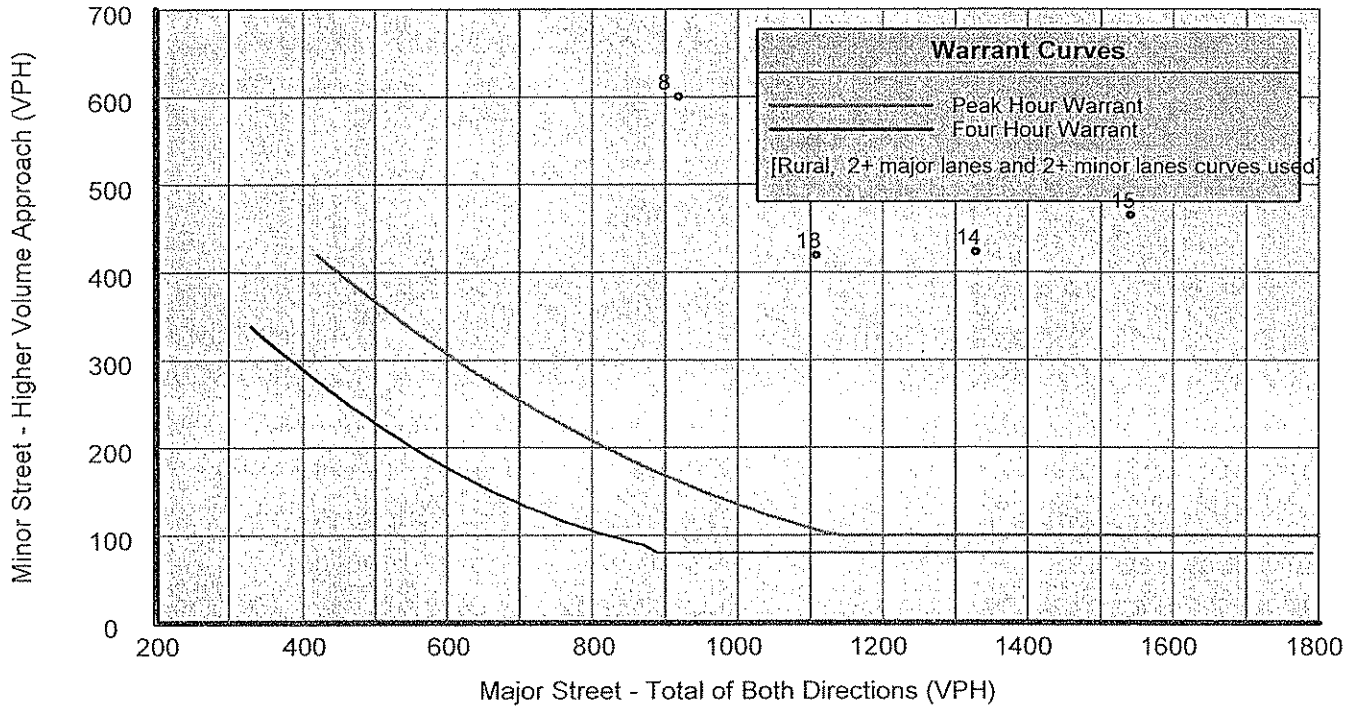
Warrant 1 - Eight Hour Vehicular Volumes	Satisfied
Warrant 1A - Minimum Vehicular Volume	Satisfied
Required volumes reached for 8 hours, 8 are needed	
Warrant 1B - Interruption of Continuous Traffic	Satisfied
Required volumes reached for 8 hours, 8 are needed	
Warrant 1 A&B - Combination of Warrants	Satisfied
Required volumes reached for 8 hours, 8 are needed	
Warrant 2 - Four Hour Volumes	Satisfied
Number of hours (8) volumes exceed minimum >= minimum required (4).	
Warrant 3 - Peak Hour	Satisfied
Warrant 3A - Peak Hour Delay	Satisfied
Number of hours (32) volumes exceed minimum >= required (1). Delay data not evaluated.	
Warrant 3B - Peak Hour Volumes	Satisfied
Volumes exceed minimums for at least one hour.	
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

ANOKA COUNTY HIGHWAY PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

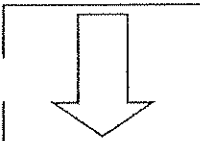
Signal Warrants - Summary

6



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	757	735	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
07:00	1,129	1,022	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
08:00	918	600	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
09:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
10:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
11:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
12:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
13:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
14:00	1,329	423	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
15:00	1,541	465	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
16:00	1,712	848	NB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
17:00	1,705	818	NB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
18:00	1,108	419	SB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
19:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
20:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
21:00	0	0	NB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
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	---



COUNT LOCATION:

CSAH 3 (Coon Rapids Blvd.)

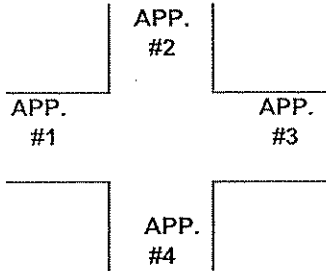
DATE:

3/30/2010

@ CSAH 11 (Foley Blvd.)

NORTH

APP. #1 = CSAH 3
APP. #2 = CSAH 11
APP. #3 = CSAH 3
APP. #4 = CSAH 11



- 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						5		4
6:15-6:30						6		6
6:30-6:45						6		4
6:45-7:00						2		8
HOURLY TOTAL						HOURLY TOTAL		41
7:00-7:15						4		14
7:15-7:30						9		8
7:30-7:45						4		5
7:45-8:00						9		10
HOURLY TOTAL						HOURLY TOTAL		63
8:00-8:15						10		8
8:15-8:30						10		3
8:30-8:45						5		4
8:45-9:00				1	1	22		5
HOURLY TOTAL					1	HOURLY TOTAL		67
				TOTAL	1		TOTAL	171

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
2:00-2:15PM				3	3	13		3
2:15-2:30						9		5
2:30-2:45						14		5
2:45-3:00						10		7
HOURLY TOTAL					3	HOURLY TOTAL		66
3:00-3:15						13		7
3:15-3:30						7		9
3:30-3:45	1			2	3	8		8
3:45-4:00						8		6
HOURLY TOTAL					3	HOURLY TOTAL		66
4:00-4:15			4		4	4		7
4:15-4:30						4		4
4:30-4:45	3		1		4	6		13
4:45-5:00				2	2	3		6
HOURLY TOTAL					10	HOURLY TOTAL		47
5:00-5:15						9		7
5:15-5:30				2	2	5		7
5:30-5:45						7		5
5:45-6:00						3		3
HOURLY TOTAL					2	HOURLY TOTAL		46
6:00-6:15						4		3
6:15-6:30						7		2
6:30-6:45								3
6:45-7:00						2		1
HOURLY TOTAL						HOURLY TOTAL		22
				TOTAL	18		TOTAL	247