

Date : 07/5/06
 Count Number : TMC0613
 Location : CSAH 18 (Crosstown Blvd.)
 @ CSAH 17 (Lexington Ave.)

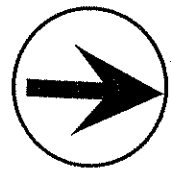
CSAH 17

5580

#2

D	1298
E	1447
F	0
2745	

2835



North

5157

#1

2825

CSAH 18

2332		
C	1265	
B	0	
A	1067	

CSAH 17

2514

#4

M	1527
L	1570
K	0
3097	

0

G	0
H	0
J	0
0	

#3

0

LANES OF APPROACH

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

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

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

File Name : TMC0613
 Site Code : 06130202
 Start Date : 07/05/2006
 Page No : 1

Weather: Warm & Sunny
 Counter: DB-400
 Counted by: Jordan/Tom

Groups Printed- Unshifted

Start Time	CASH 17 Southbound					Westbound				App. Total	CSAH 17 Northbound					CSAH 18 Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy		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	1.0	1.0			
06:00	0	44	11	0	55	0	0	0	0	0	4	6	0	2	10	22	0	56	3	78	5	143	148
06:15	0	47	14	1	61	0	0	0	0	0	4	5	0	1	9	33	0	48	4	81	6	151	157
06:30	0	65	11	1	76	0	0	0	0	0	5	18	0	3	23	33	0	68	3	101	7	200	207
06:45	0	60	18	3	78	0	0	0	0	0	2	22	0	3	24	33	0	40	2	73	8	175	183
Total	0	216	54	5	270	0	0	0	0	0	15	51	0	9	66	121	0	212	12	333	26	669	695
07:00	0	48	10	5	58	0	0	0	0	0	9	10	0	3	19	35	0	40	1	75	9	152	161
07:15	0	43	11	4	54	0	0	0	0	0	10	19	0	2	29	35	0	61	5	96	11	179	190
07:30	0	44	12	3	56	0	0	0	0	0	10	17	0	2	27	33	0	51	1	84	6	167	173
07:45	0	37	11	1	48	0	0	0	0	0	4	15	0	1	19	27	0	45	11	72	13	139	152
Total	0	172	44	13	216	0	0	0	0	0	33	61	0	6	94	130	0	197	18	327	39	637	676
08:00	0	42	10	4	52	0	0	0	0	0	6	14	0	0	20	24	0	26	2	50	6	122	128
08:15	0	28	12	1	40	0	0	0	0	0	4	10	0	1	14	16	0	30	7	46	9	100	109
08:30	0	19	15	4	34	0	0	0	0	0	14	11	0	1	25	16	0	24	0	40	5	99	104
08:45	0	21	5	1	26	0	0	0	0	0	7	8	0	0	15	12	0	22	2	34	3	75	78
Total	0	110	42	10	152	0	0	0	0	0	31	43	0	2	74	68	0	102	11	170	23	396	419
09:00	0	17	13	1	30	0	0	0	0	0	6	14	0	2	20	17	0	16	1	33	4	83	87
09:15	0	21	8	2	29	0	0	0	0	0	6	18	0	2	24	20	0	17	4	37	8	90	98
09:30	0	20	9	7	29	0	0	0	0	0	4	15	0	2	19	20	0	22	3	42	12	90	102
09:45	0	11	17	7	28	0	0	0	0	0	11	17	0	1	28	17	0	10	1	27	9	83	92
Total	0	69	47	17	116	0	0	0	0	0	27	64	0	7	91	74	0	65	9	139	33	346	379
10:00	0	15	8	0	23	0	0	0	0	0	15	13	0	6	28	14	0	6	2	20	8	71	79
10:15	0	17	11	1	28	0	0	0	0	0	7	17	0	3	24	15	0	19	6	34	10	86	96
10:30	0	16	17	1	33	0	0	0	0	0	11	15	0	2	26	21	0	7	6	28	9	87	96
10:45	0	17	10	2	27	0	0	0	0	0	10	15	0	2	25	15	0	10	5	25	9	77	86
Total	0	65	46	4	111	0	0	0	0	0	43	60	0	13	103	65	0	42	19	107	36	321	357
11:00	0	16	14	1	30	0	0	0	0	0	7	21	0	2	28	20	0	15	4	35	7	93	100
11:15	0	13	15	2	28	0	0	0	0	0	8	18	0	1	26	8	0	9	1	17	4	71	75
11:30	0	17	9	1	26	0	0	0	0	0	9	15	0	0	24	10	0	9	1	19	2	69	71
11:45	0	19	23	4	42	0	0	0	0	0	13	5	0	4	18	15	0	15	3	30	11	90	101
Total	0	65	61	8	126	0	0	0	0	0	37	59	0	7	96	53	0	48	9	101	24	323	347
12:00	0	15	14	3	29	0	0	0	0	0	13	14	0	3	27	17	0	12	2	29	8	85	93
12:15	0	18	14	2	32	0	0	0	0	0	6	19	0	2	25	23	0	10	4	33	8	90	98
12:30	0	16	18	4	34	0	0	0	0	0	10	19	0	2	29	11	0	5	1	16	7	79	86
12:45	0	12	18	3	30	0	0	0	0	0	11	18	0	2	29	26	0	5	0	31	5	90	95
Total	0	61	64	12	125	0	0	0	0	0	40	70	0	9	110	77	0	32	7	109	28	344	372
13:00	0	18	13	0	31	0	0	0	0	0	16	31	0	4	47	19	0	21	3	40	7	118	125
13:15	0	13	20	2	33	0	0	0	0	0	20	21	0	3	41	28	0	15	3	43	8	117	125
13:30	0	20	9	4	29	0	0	0	0	0	11	22	0	3	33	12	0	12	1	24	8	86	94
13:45	0	45	43	6	88	0	0	0	0	0	32	37	0	5	69	31	0	20	6	51	17	208	225
Total	0	96	85	12	181	0	0	0	0	0	79	111	0	15	190	90	0	68	13	158	40	529	569
14:00	0	17	27	3	44	0	0	0	0	0	16	15	0	0	31	19	0	12	3	31	6	106	112
14:15	0	24	29	3	53	0	0	0	0	0	22	21	0	2	43	27	0	13	1	40	6	136	142
14:30	0	14	25	3	39	0	0	0	0	0	37	23	0	1	60	21	0	16	3	37	7	136	143
14:45	0	19	20	2	39	0	0	0	0	0	27	33	0	2	60	18	0	10	1	28	5	127	132
Total	0	74	101	11	175	0	0	0	0	0	102	92	0	5	194	85	0	51	8	136	24	505	529
15:00	0	33	32	3	65	0	0	0	0	0	51	33	0	2	84	17	0	13	3	30	8	179	187
15:15	0	22	22	0	44	0	0	0	0	0	45	46	0	5	91	20	0	14	3	34	8	169	177
15:30	0	20	33	0	53	0	0	0	0	0	76	48	0	4	124	31	0	8	0	39	4	216	220
15:45	0	23	29	2	52	0	0	0	0	0	58	63	0	3	121	23	0	8	3	31	8	204	212
Total	0	98	116	5	214	0	0	0	0	0	230	190	0	14	420	91	0	43	9	134	28	768	796
16:00	0	22	30	0	52	0	0	0	0	0	76	51	0	1	127	23	0	8	0	31	1	210	211
16:15	0	30	31	2	61	0	0	0	0	0	53	61	0	2	114	23	0	10	3	33	7	208	215
16:30	0	21	43	3	64	0	0	0	0	0	104	49	0	3	153	30	0	17	0	47	6	264	270
16:45	0	25	49	2	74	0	0	0	0	0	91	78	0	5	169	32	0	10	5	42	12	285	297
Total	0	98	153	7	251	0	0	0	0	0	324	239	0	11	563	108	0	45	8	153	26	967	993
17:00	0	25	48	3	73	0	0	0	0	0	90	76	0	4	166	25	0	6	4	31	11	270	281
17:15	0	18	40	5	58	0	0	0	0	0	73	50	0	1	123	25	0	13	1	38	7	219	226
17:30	0	13	32	0	45	0	0	0	0	0	61	46	0	1	107	23	0	11	1	34	2	186	188
17:45	0	16	47	2	63	0	0	0	0	0	47	31	0	1	78	29	0	18	3	47	6	188	194
Total	0	72	167	10	239	0	0	0	0	0	271	203	0	7	474	102	0	48	9	150	26	863	889
18:00	0	20	19	0	39	0	0	0	0	0	33	29	0	2	62	17	0	12</					

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

Study Name : TMC0613
Study Date : 07/14/06
Page No. : 1

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 17
Number of Lanes: 1
Approach Speed: 55
Total Approach Volume: 3,097

Southbound: CASH 17
Number of Lanes: 2
Approach Speed: 55
Total Approach Volume: 2,745

Minor Street Approaches

Eastbound: CSAH 18
Number of Lanes: 2
Total Approach Volume: 2,332

Westbound:
Number of Lanes: 2
Total Approach Volume: 0

Warrant Summary (Rural values apply.)

- Warrant 1 - Eight Hour Vehicular Volumes** Not Satisfied
 - Warrant 1A - Minimum Vehicular Volume** Not Satisfied
Required volumes reached for 2 hours, 8 are needed
 - Warrant 1B - Interruption of Continuous Traffic** Not Satisfied
Required volumes reached for 3 hours, 8 are needed
 - Warrant 1 A&B - Combination of Warrants** Not Satisfied
Required volumes reached for 3 hours, 8 are needed

- Warrant 2 - Four Hour Volumes** Not Satisfied
Number of hours (3) volumes exceed minimum < minimum required (4).

- Warrant 3 - Peak Hour** Not Satisfied
 - Warrant 3A - Peak Hour Delay** Not Satisfied
Approach volumes on minor street don't exceed minimums for any hour. Delay data not evaluated.
 - Warrant 3B - Peak Hour Volumes** Not Satisfied
Volumes do not exceed minimums for any hour.

- Warrant 4 - Pedestrian Volumes** Not Evaluated

- Warrant 5 - School Crossing** Not Evaluated

- Warrant 6 - Coordinated Signal System** Not Evaluated

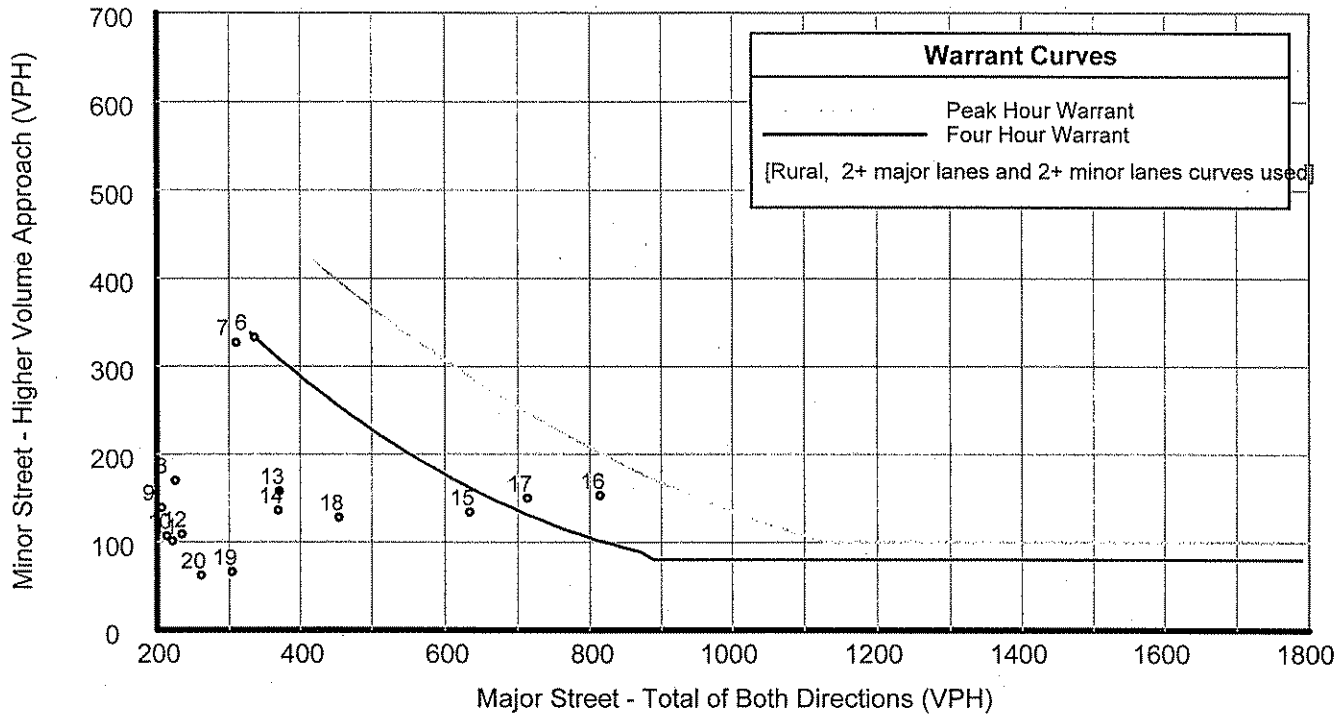
- Warrant 7 - Crash Experience** Not Evaluated

- Warrant 8 - Roadway Network** Not Evaluated

ANOKA COUNTY HIGHWAY PC-WARRANTS TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name : TMC0613
Study Date : 07/14/06
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	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
01:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
02:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
03:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
04:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
05:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
06:00	336	333	EB	420-No	140-Yes	Minor	630-No	70-Yes	Minor	504-No	112-Yes	Minor
07:00	310	327	EB	420-No	140-Yes	Minor	630-No	70-Yes	Minor	504-No	112-Yes	Minor
08:00	226	170	EB	420-No	140-Yes	Minor	630-No	70-Yes	Minor	504-No	112-Yes	Minor
09:00	207	139	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-Yes	Minor
10:00	214	107	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-No	---
11:00	222	101	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-No	---
12:00	235	109	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-No	---
13:00	371	158	EB	420-No	140-Yes	Minor	630-No	70-Yes	Minor	504-No	112-Yes	Minor
14:00	369	136	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-Yes	Minor
15:00	634	134	EB	420-Yes	140-No	Major	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
16:00	814	153	EB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
17:00	713	150	EB	420-Yes	140-Yes	Both	630-Yes	70-Yes	Both	504-Yes	112-Yes	Both
18:00	454	128	EB	420-Yes	140-No	Major	630-No	70-Yes	Minor	504-No	112-Yes	Minor
19:00	304	66	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
20:00	261	62	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
21:00	172	59	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
22:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
23:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---

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

Study Name : TMC0613
Study Date : 07/14/06
Page No. : 1

Multi-Way Stop Warrant Report

Major Street Approaches

Northbound: CSAH 17
Total Approach Volume: 3,097
Approach Speed: 55

Southbound: CASH 17
Total Approach Volume: 2,745
Approach Speed: 55

Minor Street Approaches

Eastbound: CSAH 18
Total Approach Volume: 2,332

Westbound: No East bound road
Total Approach Volume: 0

Warrant Summary

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

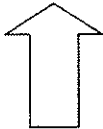
Criteria B - Crash Experience Not Evaluated

Criteria C - Minimum Volumes and Delays Not Satisfied
Delay data not evaluated
Required volumes reached for 6 hours, 8 are needed

Criteria D - 80% of Volumes, Delays, and Crashes Not Evaluated
Delay data not evaluated
Number of crashes (-1) is less than the minimum required (4).
Required volumes reached for 9 hours, 8 are needed

Analysis of 8-Hour Volume Warrants:

Time	Major Total	Minor Total	Crit C			Crit D		
			Major	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	336	333	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
07:00 - 08:00	310	327	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
08:00 - 09:00	226	170	210-Yes	140-Yes	Both	240-No	160-Yes	Minor
09:00 - 10:00	207	139	210-No	140-No	No	240-No	160-No	No
10:00 - 11:00	214	107	210-Yes	140-No	Major	240-No	160-No	No
11:00 - 12:00	222	101	210-Yes	140-No	Major	240-No	160-No	No
12:00 - 13:00	235	109	210-Yes	140-No	Major	240-No	160-No	No
13:00 - 14:00	371	158	210-Yes	140-Yes	Both	240-Yes	160-No	Major
14:00 - 15:00	369	136	210-Yes	140-No	Major	240-Yes	160-No	Major
15:00 - 16:00	634	134	210-Yes	140-No	Major	240-Yes	160-No	Major
16:00 - 17:00	814	153	210-Yes	140-Yes	Both	240-Yes	160-No	Major
17:00 - 18:00	713	150	210-Yes	140-Yes	Both	240-Yes	160-No	Major
18:00 - 19:00	454	128	210-Yes	140-No	Major	240-Yes	160-No	Major
19:00 - 20:00	304	66	210-Yes	140-No	Major	240-Yes	160-No	Major
20:00 - 21:00	261	62	210-Yes	140-No	Major	240-Yes	160-No	Major
21:00 - 22:00	172	59	210-No	140-No	No	240-No	160-No	No
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



NORTH

APP.#1= CSAH 18
APP.#2= CSAH 17
APP.#3=
APP.#4= CSAH 17

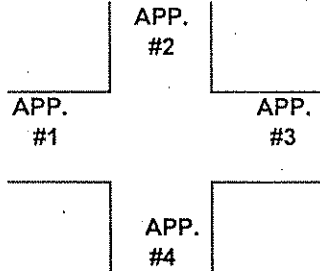
COUNT LOCATION:

CSAH 18 (Crosstown Blvd.)

DATE:

07/06/2006

@ CSAH 17 (Lexington Ave)

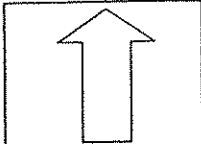


HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT

- 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						5		
6:15-6:30						6		
6:30-6:45						7		
6:45-7:00						6		
HOURLY TOTAL						HOURLY TOTAL		24
7:00-7:15						7		
7:15-7:30						9		1
7:30-7:45						5		
7:45-8:00						12	1	
HOURLY TOTAL						HOURLY TOTAL		33
8:00-8:15						6		
8:15-8:30						9		
8:30-8:45						5		
8:45-9:00						3		
HOURLY TOTAL						HOURLY TOTAL		23
9:00-9:15						4		
9:15-9:30						8		
9:30-9:45						12		
9:45-10:00						9		
HOURLY TOTAL						HOURLY TOTAL		33
10:00-10:15						8		
10:15-10:30						9		
10:30-10:45						9		
10:45-11:00						9		
HOURLY TOTAL						HOURLY TOTAL		35
11:00-11:15						6		1
11:15-11:30						3		1
11:30-11:45						1		
11:45-12:00						10		
HOURLY TOTAL						HOURLY TOTAL		22
12:00-12:15						8		
12:15-12:30						7		
12:30-12:45						7		
12:45-1:00						5		
HOURLY TOTAL						HOURLY TOTAL		27
1:00-1:15						7		
1:15-1:30						8		
1:30-1:45						7	1	
1:45-2:00						4	1	
HOURLY TOTAL						HOURLY TOTAL		28
TOTAL						TOTAL		225

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NORTH

APP.#1= CSAH 18
APP.#2= CSAH 17
APP.#3=
APP.#4= CSAH 17

COUNT LOCATION:

CSAH 18 (Crosstown Blvd.) , DATE: 07/05/2006

@ CSAH 17 (Lexington Ave)

APP. #1	APP. #2	APP. #3	APP. #4
---------	---------	---------	---------

- 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						10		
2:15-2:30						6		
2:30-2:45						6		
2:45-3:00						5		1
HOURLY TOTAL						HOURLY TOTAL		28
3:00-3:15						5		
3:15-3:30						8		
3:30-3:45						8		
3:45-4:00						4		
HOURLY TOTAL						HOURLY TOTAL		25
4:00-4:15						9		
4:15-4:30								
4:30-4:45						7		
4:45-5:00						6		
HOURLY TOTAL						HOURLY TOTAL		22
5:00-5:15						12		
5:15-5:30						9		1
5:30-5:45						7		
5:45-6:00						2		
HOURLY TOTAL						HOURLY TOTAL		31
6:00-6:15						6		
6:15-6:30						2		
6:30-6:45						4		
6:45-7:00						1		
HOURLY TOTAL						HOURLY TOTAL		13
7:00-7:15						2		
7:15-7:30						1		
7:30-7:45						1		
7:45-8:00						2		
HOURLY TOTAL						HOURLY TOTAL		6
8:00-8:15						4	1	
8:15-8:30						2		
8:30-8:45						1		
8:45-9:00								
HOURLY TOTAL						HOURLY TOTAL		8
9:00-9:15						1		
9:15-9:30								
9:30-9:45						1		1
9:45-10:00						2		
HOURLY TOTAL						HOURLY TOTAL		5
					TOTAL		TOTAL	363

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