

Date : 6/12/02

Count Number : TMC0207

Location : CSAH 49 (Hodgson Rd.)

@ CR J

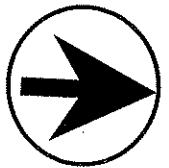
CSAH 49

9075

#2

D	1718	4597
E	2482	
F	397	

4478



North

CR J

G	416	3348
H	2089	
J	843	

#3

3504

6852

9831

#1

4915

CR J

4916	1619	C
	2203	B
	1094	A

CSAH 49

4419

#4

M	1108	4455
L	2443	
K	904	

8874

LANES OF APPROACH

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

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

Anoka County Highway Department
Traffic Engineering

Weather: Warm, Partly Cloudy Traffic Volume and Turning Movement Study
Counter TDC-8
Counted by: Melissa/Jessica

File Name : TMC 0207
Site Code : 02070101
Start Date : 06/12/2002
Page No : 2

Groups Printed- 1 - 1 - Unshifted

Start Time	CSAH 49 Southbound					CR J Westbound					CSAH 49 Northbound					CR J Eastbound					Exclu Total	Inclu. Total	Int. Total
	Left	Thru	Rig ht	Hea vy	App. Total	Left	Thru	Rig ht	Hea vy	App. Total	Left	Thru	Rig ht	Hea vy	App. Total	Left	Thru	Rig ht	Hea vy	App. Total			
Factor	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				
18:00	8	38	30	2	76	15	30	12	0	57	24	87	34	1	145	48	65	15	2	128	5	406	411
18:15	7	37	20	1	64	12	27	12	0	51	23	75	30	1	128	45	60	14	1	119	3	362	365
18:30	8	31	14	2	53	9	24	14	1	47	23	61	22	1	106	37	57	20	0	114	4	320	324
18:45	5	30	23	0	58	12	39	6	1	57	18	52	24	4	94	32	37	23	0	92	5	301	306
Total	28	136	87	5	251	48	120	44	2	212	88	275	110	7	473	162	219	72	3	453	17	1389	1406
19:00	9	26	29	0	64	7	25	4	2	36	18	50	11	2	79	37	33	15	1	85	5	264	269
19:15	2	32	22	0	56	15	27	10	1	52	20	33	17	0	70	28	29	20	0	77	1	255	256
19:30	6	20	30	0	56	5	14	4	0	23	19	37	14	0	70	24	35	15	3	74	3	223	226
19:45	8	22	25	1	55	8	19	7	1	34	22	32	5	0	59	25	33	18	0	76	2	224	226
Total	25	100	106	1	231	35	85	25	4	145	79	152	47	2	278	114	130	68	4	312	11	966	977
20:00	8	32	19	2	59	4	20	7	0	31	15	28	7	0	50	28	20	15	0	63	2	203	205
20:15	4	24	20	1	48	5	21	7	1	33	20	28	7	0	55	35	26	20	1	81	3	217	220
20:30	7	26	16	1	49	5	27	16	0	48	18	38	11	0	67	31	21	17	1	69	2	233	235
20:45	6	23	24	0	53	13	35	8	0	56	15	30	22	0	67	35	23	19	2	77	2	253	255
Total	25	105	79	4	209	27	103	38	1	168	68	124	47	0	239	129	90	71	4	290	9	906	915
21:00	11	29	22	0	62	6	18	6	0	30	17	36	12	1	65	24	35	24	0	83	1	240	241
21:15	6	27	23	0	56	4	15	10	0	29	12	35	11	0	58	20	17	6	0	43	0	186	186
21:30	5	17	18	1	40	6	23	3	0	32	15	28	11	0	54	23	19	11	0	53	1	179	180
21:45	5	20	20	0	45	5	20	5	0	30	15	25	11	0	51	25	20	12	0	57	0	183	183
Total	27	93	83	1	203	21	76	24	0	121	59	124	45	1	228	92	91	53	0	236	2	788	790
Grand Total	397	248	171	164	4597	843	208	416	95	3348	110	244	904	139	4455	161	220	109	171	4916	569	1731	1788
Approch %	8.6	54.0	37.4			25.2	62.4	12.4			24.9	54.8	20.3			32.9	44.8	22.3				6	5
Total %	2.3	14.3	9.9		26.5	4.9	12.1	2.4		19.3	6.4	14.1	5.2		25.7	9.3	12.7	6.3		28.4	3.2	96.8	

Major Street Approaches:

rthbound:

CSAH 49

Data File: C:\Program Files\PC-Warrants\TMC 0207.war
 Count Type: IMC. Channel: 0. Count Date: 6/12/ 2
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 4455

Southbound:

CSAH 49

Data File: C:\Program Files\PC-Warrants\TMC 0207.war
 Count Type: IMC. Channel: 0. Count Date: 6/12/ 2
 Number of Lanes: 2
 Approach Speed: 45
 Total Approach Traffic: 4597

Minor Street Approaches:

Eastbound:

CR J

Data File: C:\Program Files\PC-Warrants\TMC 0207.war
 Count Type: IMC. Channel: 0. Count Date: 6/12/ 2
 Number of Lanes: 2
 Approach Speed: 35
 Total Approach Traffic: 4916

Westbound:

CR J

Data File: C:\Program Files\PC-Warrants\TMC 0207.war
 Count Type: IMC. Channel: 0. Count Date: 6/12/ 2
 Number of Lanes: 1
 Approach Speed: 35
 Total Approach Traffic: 3348

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		105		52		84
1	0	0	W	18		105		52		84
2	0	0	W	19		105		52		84
3	0	0	W	20		105		52		84
4	0	0	W	21		105		52		84
5	0	0	W	22		105		52		84
6	680	316	W	6	--BOTH--	105	--BOTH--	52	--BOTH--	84
7	794	383	W	5	--BOTH--	105	--BOTH--	52	--BOTH--	84
8	531	255	E	11	--BOTH--	140	SIDE	70	--BOTH--	112
9	403	192	E	15	SIDE	140	SIDE	70	SIDE	112
10	361	181	E	16	SIDE	140	SIDE	70	SIDE	112
11	444	230	E	14	--BOTH--	140	SIDE	70	SIDE	112
12	452	258	E	10	--BOTH--	140	SIDE	70	SIDE	112
13	435	237	E	12	--BOTH--	140	SIDE	70	SIDE	112
14	465	286	E	9	--BOTH--	140	SIDE	70	SIDE	112
15	619	411	E	4	--BOTH--	140	SIDE	70	--BOTH--	112
16	828	519	E	2	--BOTH--	140	--BOTH--	70	--BOTH--	112
17	928	538	E	1	--BOTH--	140	--BOTH--	70	--BOTH--	112
18	724	453	E	3	--BOTH--	140	--BOTH--	70	--BOTH--	112
19	509	312	E	7	--BOTH--	140	SIDE	70	--BOTH--	112
20	448	290	E	8	--BOTH--	140	SIDE	70	SIDE	112
21	431	236	E	13	--BOTH--	140	SIDE	70	SIDE	112
22	0	0	W	23		105		52		84
23	0	0	W	24		105		52		84

Warrant Summary:

Rural values apply.

High-volume minor approach is wide enough for two lanes. Re-striping may be desirable.

Warrant 1 - Minimum Vehicular Volumes

SATISFIED for 14 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 5 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. At least one street has no major approaches. Peak hour total entering volume: 1743.

- 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

SATISFIED for 8 hours. Criteria--Main: 504; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

SATISFIED for 11 hours.

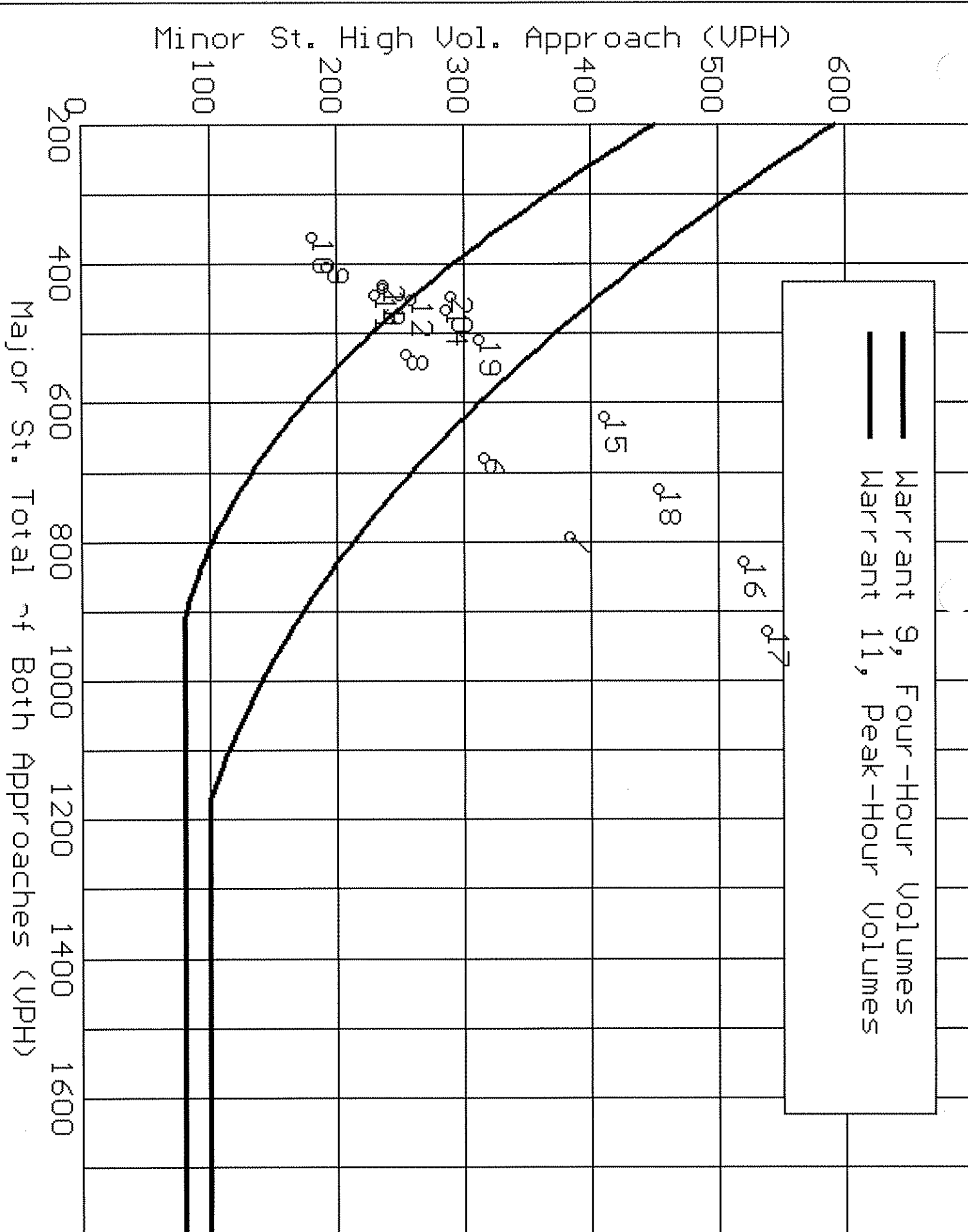
Warrant 10 - Peak Hour Delay

NOT APPLICABLE. Volume requirements satisfied, but side street peak hour delay not defined.

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

Warrant 11 - Peak Hour Volume

SATISFIED for 4 hours.



Multiway Stop Warrant Analysis
TMC 0207 CR J @ CSAH 49(Hodgson Rd.)
Speed Limit of Major Roadway..... 50

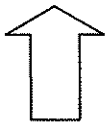
Minimum Traffic Volumes Multiway Stop Warrant Criteria:

- a) The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour (vph) for any 8 hours of an average day, AND:
- b) The combined vehicular and pedestrian volume from the minor street or highway must average at least 200 vph for the same 8 hours, with an average delay to minor street vehicular traffic of at least 30 seconds per vehicle during the maximum hour, BUT:
- c) When the 85-percentile approach speed of the major street traffic exceeds 40 miles per hour, the minimum volume warrant is 70% of the above requirements.

Hour	Total Vehicular Traffic Entering the Intersection	Vehicular Traffic Entering on First Minor Roadway	Vehicular Traffic Entering on Second Minor Roadway	Sum of Minor Approaches	Is Stop Warrant Met?
6 AM - 7 AM	1194	316	198	514	YES
7 AM - 8 AM	1497	383	320	703	YES
8 AM - 9 AM	1037	251	255	506	YES
9 AM - 10 AM	746	151	192	343	YES
10 AM - 11 AM	666	124	181	305	YES
11 AM - 12 PM	826	152	230	382	YES
12 PM - 13 PM	869	159	258	417	YES
1 PM - 2 PM	844	172	237	409	YES
2 PM - 3 PM	965	214	286	500	YES
3 PM - 4 PM	1248	218	411	629	YES
4 PM - 5 PM	1632	285	519	804	YES
5 PM - 6 PM	1743	277	538	815	YES
6 PM - 7 PM	1389	212	453	665	YES
7 PM - 8 PM	966	145	312	457	YES
8 PM - 9 PM	906	168	290	458	YES
9 PM - 10 PM	788	121	236	357	YES

TOTAL HOURS MET: 16

MULTIWAY STOP WARRANT IS MET



NORTH

COUNT LOCATION:

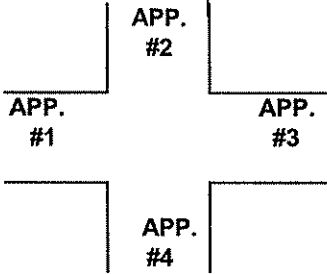
CSAH 49 (Hodgson Rd.) @

DATE:

6/12/02

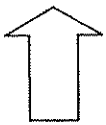
CR J

APP. #1 = CR J
APP. #2 = CSAH 49
APP. #3 = CR J
APP. #4 = CSAH 59



- 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						8		
2:15-2:30						15		
2:30-2:45	1		3		4	12		
2:45-3:00	2				2	5		
HOURLY TOTAL					6	HOURLY TOTAL		40
3:00-3:15	2				2	12		1
3:15-3:30	1	1	2		4	10		
3:30-3:45	2				2	14		
3:45-4:00			3		3	12		
HOURLY TOTAL					11	HOURLY TOTAL		49
4:00-4:15	1				1	7		
4:15-4:30			1		1	14	1	2
4:30-4:45				1	1	13		
4:45-5:00						11		
HOURLY TOTAL					3	HOURLY TOTAL		48
5:00-5:15				1	1	11		1
5:15-5:30						12		
5:30-5:45						3		1
5:45-6:00						5		
HOURLY TOTAL					1	HOURLY TOTAL		33
6:00-6:15						5		
6:15-6:30						3		
6:30-6:45				2	2	2		1
6:45-7:00						4		1
HOURLY TOTAL					2	HOURLY TOTAL		16
7:00-7:15			1		1	5		
7:15-7:30	1			1	2	1		
7:30-7:45		1		2	3	2		1
7:45-8:00				3	3	2		
HOURLY TOTAL					9	HOURLY TOTAL		11
8:00-8:15	1		1	1	3	2		
8:15-8:30						2		1
8:30-8:45	2				2	2		
8:45-9:00						2		
HOURLY TOTAL					5	HOURLY TOTAL		9
9:00-9:15						1		
9:15-9:30				1	1			
9:30-9:45				1	1	1		
9:45-10:00								
HOURLY TOTAL					2	HOURLY TOTAL		2



NORTH

COUNT LOCATION:

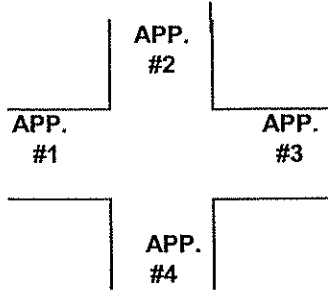
CSAH 49 (Hodgson Rd.) @

DATE:

6/12/02

CR J

APP. #1 = CR J
APP. #2 = CSAH 49
APP. #3 = CR J
APP. #4 = CSAH 59



- 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		1
6:15-6:30						7		
6:30-6:45	1				1	14		1
6:45-7:00				1	1	11	1	1
HOURLY TOTAL					2	HOURLY TOTAL		41
7:00-7:15	2				2	14		1
7:15-7:30	1				1	10		1
7:30-7:45				1	1	11		
7:45-8:00	1	1	1		3	12		2
HOURLY TOTAL					7	HOURLY TOTAL		51
8:00-8:15						15	1	1
8:15-8:30				3	3	9		1
8:30-8:45	1				1	14		
8:45-9:00			2		2	13		1
HOURLY TOTAL					6	HOURLY TOTAL		55
9:00-9:15						17		
9:15-9:30	1				1	10		
9:30-9:45	1	1		1	3	15		
9:45-10:00						11		
HOURLY TOTAL					4	HOURLY TOTAL		53
10:00-10:15	1				1	15		
10:15-10:30						8		
10:30-10:45	1				1	6		1
10:45-11:00						10		
HOURLY TOTAL					2	HOURLY TOTAL		40
11:00-11:15						9		
11:15-11:30	4				4	10		1
11:30-11:45	1				1	10		2
11:45-12:00						11		
HOURLY TOTAL					5	HOURLY TOTAL		43
12:00-12:15	2				2	9		
12:15-12:30		2			2	5		
12:30-12:45						10	1	1
12:45-1:00		2		2	4	10		
HOURLY TOTAL					8	HOURLY TOTAL		36
1:00-1:15						8		
1:15-1:30		2			2	11		
1:30-1:45						7		
1:45-2:00						7		1
HOURLY TOTAL					2	HOURLY TOTAL		34