



# MINNESOTA DEPARTMENT OF TRANSPORTATION

## METRO DIVISION - TRAFFIC ENGINEERING

### SIGNAL WARRANTS ANALYSIS

LOCATION: TH-100 & BROOKLYN BLVD/CSAH 152

COUNTY: HENNEPIN

REF. POINT: 014.032

DATE: 10/14/1998

OPERATOR: DR

Speed	Approach Description	Lanes
35	Major App1: BROOKLYN BLVD/CSAH 152 EB, W OF TH-100 NI	3
35	Major App3: BROOKLYN BLVD/CSAH 152 WB, E OF TH-100 NI	2
40	Minor App2: TH-100 NB EXIT RAMP TO BORRKLYN BLVD	2
0	Minor App4: N/A	0

0.70 FACTOR USED? NO  
 POPULATION < 10,000? NO  
 EXISTING SIGNAL ? NO

HOUR				600/900		200/100		0/0		MET SAME HOURS
	MAJOR APP. 1	MAJOR APP. 3	TOTAL 1+3	WARRANT MET	MINOR APP. 2	MINOR APP. 4	WARRANT MET APP.2	WARRANT MET APP. 4		
0:00 - 1:00	74	57	131	/	54	0	/	/	/	
1:00 - 2:00	31	32	63	/	28	0	/	/	/	
2:00 - 3:00	29	22	51	/	20	0	/	/	/	
3:00 - 4:00	24	14	38	/	12	0	/	/	/	
4:00 - 5:00	29	35	64	/	21	0	/	/	/	
5:00 - 6:00	130	143	273	/	28	0	/	/	/	
6:00 - 7:00	357	278	635	X/	111	0	/X	/	/	
7:00 - 8:00	686	408	1094	X/X	179	0	/X	/	/X	
8:00 - 9:00	510	399	909	X/X	221	0	X/X	/	X/X	
9:00 - 10:00	334	393	727	X/	241	0	X/X	/	X/	
10:00 - 11:00	380	423	803	X/	276	0	X/X	/	X/	
11:00 - 12:00	465	516	981	X/X	326	0	X/X	/	X/X	
12:00 - 13:00	527	476	1003	X/X	349	0	X/X	/	X/X	
13:00 - 14:00	541	485	1026	X/X	312	0	X/X	/	X/X	
14:00 - 15:00	593	559	1152	X/X	376	0	X/X	/	X/X	
15:00 - 16:00	656	680	1336	X/X	431	0	X/X	/	X/X	
16:00 - 17:00	718	836	1554	X/X	410	0	X/X	/	X/X	
17:00 - 18:00	794	897	1691	X/X	424	0	X/X	/	X/X	
18:00 - 19:00	746	622	1368	X/X	373	0	X/X	/	X/X	
19:00 - 20:00	602	452	1054	X/X	271	0	X/X	/	X/X	
20:00 - 21:00	490	324	814	X/	201	0	X/X	/	X/	
21:00 - 22:00	391	290	681	X/	152	0	/X	/	/	
22:00 - 23:00	240	150	390	/	101	0	/X	/	/	
23:00 - 24:00	137	111	248	/	76	0	/	/	/	

	Met (Hr)	Required (Hr)	
Warrant 1	13	8	Satisfied
Warrant 2	11	8	Satisfied
Warrant 6	14	8	Satisfied, check accident record
Warrant 8	14	8	Satisfied
Warrant 9	10	4	Satisfied
Warrant 11	5	1	Satisfied

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35	Major App3: BROOKLYN BLVD/CSAH 152 WB, E OF TH-100 NI	2
40	Minor App2: TH-100 NB EXIT RAMP TO BORRRLYN BLVD	2
0	Minor App4: N/A	0

0.70 FACTOR USED? NO  
 POPULATION < 10,000? NO  
 EXISTING SIGNAL ? NO

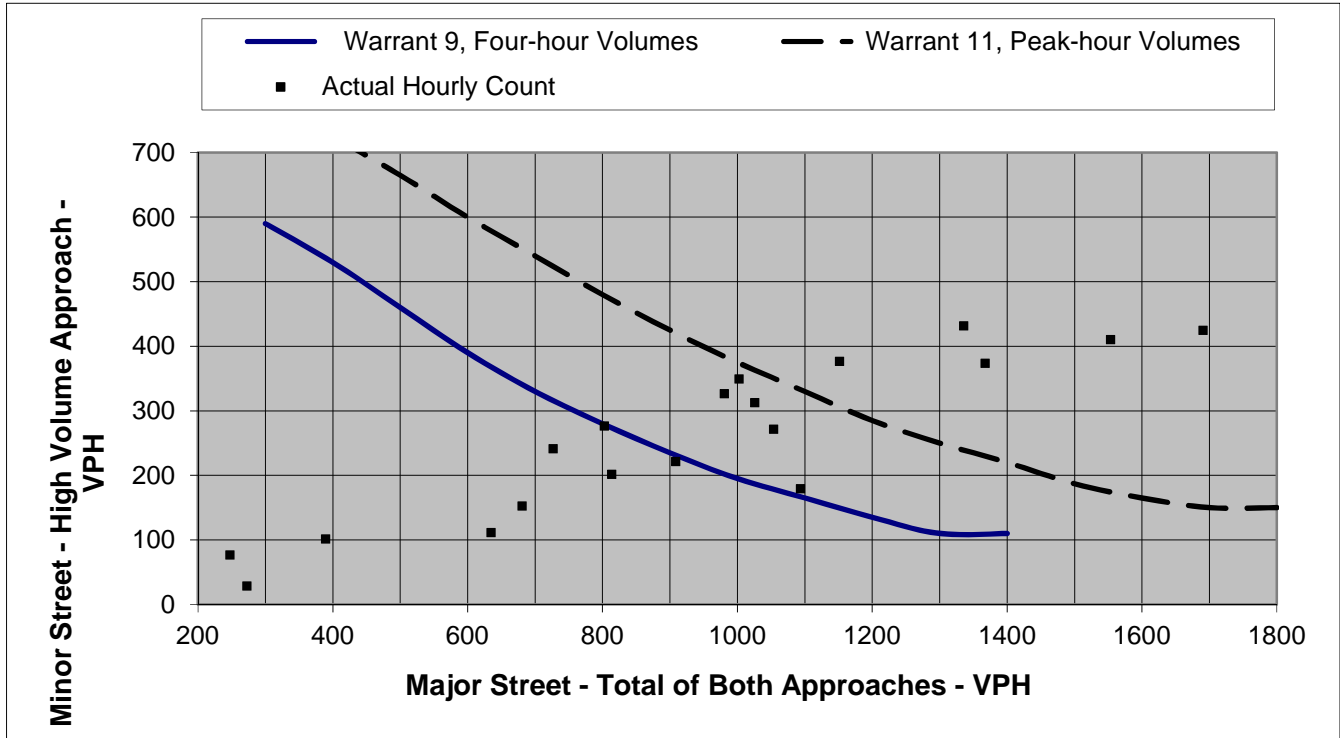


Figure 1. Four Hour and Peak Hour Warrant Analysis

Note: For data points outside the graph range, check the minor street volume against the lower thresholds

Major	Warrant Criteria		Actual Hourly Count	
	Warrant 9, F	Warrant 11, P	Major	Actual Hourly Count
200			131	54
300	590		63	28
400	530	725	51	20
500	460	665	38	12
600	390	600	64	21
700	330	540	273	28
800	280	480	635	111
900	235	425	1094	179
1000	195	375	909	221
1100	165	330	727	241
1200	135	285	803	276
1300	110	250	981	326
1400	110	220	1003	349
1500		187	1026	312
1600		165	1152	376
1700		150	1336	431
1800		150	1554	410
			1691	424
			1368	373
			1054	271
			814	201
			681	152
			390	101
			248	76

Four Hour Warrant

Major App	Minor App		
	1 & 1	2 & 1	2 & 2
300	360	440	590
400	310	390	530
500	260	340	460
600	215	290	390
700	180	245	330
800	150	205	280
900	125	170	235
1000	100	145	195
1100	85	120	165
1200	80	100	135
1300	80	83	110
1400	80	80	110

Peak Hour

Major App	1 & 1
400	475
500	425
600	370
700	330
800	280
900	240
1000	204
1100	175
1200	150
1300	130
1400	115
1500	100
1600	100
1700	100
1800	100

Four Hour Warrant Factored

Major App	Minor App		
	1 & 1	2 & 1	2 & 2
200	250	320	420
300	210	265	350
400	170	215	285
500	130	170	230
600	93	130	175
700	70	100	135
800	60	80	103
900	60	65	80
1000	60	60	80

Peak Hour

Major App	1 & 1
300	320
400	270
500	225
600	180
700	145
800	115
900	90
1000	75
1100	75
1200	75
1300	75



Warrant

Minor App

2 & 1	2 & 2
570	725
520	665
465	600
420	540
370	480
330	425
285	375
250	330
220	285
190	250
160	220
140	187
115	165
100	150
100	150

Warrant Factored

Minor App

2 & 1	2 & 2
380	500
335	435
285	370
240	315
200	260
160	215
135	175
110	140
95	115
75	100
75	100



# MINNESOTA DEPARTMENT OF TRANSPORTATION

## METRO DIVISION - TRAFFIC ENGINEERING

### ALL WAY STOP WARRANT

LOCATION: TH-100 & BROOKLYN BLVD/CSAH 152

COUNTY: HENNEPIN

REF. POINT: 014.032

DATE: 10/14/1998

OPERATOR: DR

Speed	Approach Description	Lanes
35	Major App1: BROOKLYN BLVD/CSAH 152 EB, W OF TH-100	3
35	Major App3: BROOKLYN BLVD/CSAH 152 WB, E OF TH-100	2
40	Minor App2: TH-100 NB EXIT RAMP TO BORRKLIN BLVD	2
0	Minor App4: N/A	0

0.70 FACTOR USED? Yes

HOUR	MAJOR APP. 1	MAJOR APP. 3	MINOR APP. 2	MINOR APP. 4	350	140	WARRANT MET
					TOTAL Σ (APP.1 to APP. 4)	MINOR TOTAL APP. 2 + APP. 4	
0:00 - 1:00	74	57	54	0	185	54	/
1:00 - 2:00	31	32	28	0	91	28	/
2:00 - 3:00	29	22	20	0	71	20	/
3:00 - 4:00	24	14	12	0	50	12	/
4:00 - 5:00	29	35	21	0	85	21	/
5:00 - 6:00	130	143	28	0	301	28	/
6:00 - 7:00	357	278	111	0	746	111	X/
7:00 - 8:00	686	408	179	0	1273	179	X/X
8:00 - 9:00	510	399	221	0	1130	221	X/X
9:00 - 10:00	334	393	241	0	968	241	X/X
10:00 - 11:00	380	423	276	0	1079	276	X/X
11:00 - 12:00	465	516	326	0	1307	326	X/X
12:00 - 13:00	527	476	349	0	1352	349	X/X
13:00 - 14:00	541	485	312	0	1338	312	X/X
14:00 - 15:00	593	559	376	0	1528	376	X/X
15:00 - 16:00	656	680	431	0	1767	431	X/X
16:00 - 17:00	718	836	410	0	1964	410	X/X
17:00 - 18:00	794	897	424	0	2115	424	X/X
18:00 - 19:00	746	622	373	0	1741	373	X/X
19:00 - 20:00	602	452	271	0	1325	271	X/X
20:00 - 21:00	490	324	201	0	1015	201	X/X
21:00 - 22:00	391	290	152	0	833	152	X/X
22:00 - 23:00	240	150	101	0	491	101	X/
23:00 - 24:00	137	111	76	0	324	76	/

Met (Hr) Required (Hr)

Allway Stop Warrant: **15** 8 **Satisfied**

REMARKS: \_\_\_\_\_

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