



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

SIGNAL WARRANTS ANALYSIS

LOCATION: TH-5 AT POST RD EAST RAMPS

COUNTY: HENNEPIN

REF. POINT: 062.489

DATE: 9/30/1998

OPERATOR: DR

Speed	Approach Description	Lanes
35	Major App1: POST RD EB, W OF TH-5 NB RAMP	1
35	Major App3: POST RD WB, E OF TH-5 NB RAMP	1
55	Minor App2: TH-5 NB, S OF POST RD	2
0	Minor App4: N/A	0

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

HOUR	500/750			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	144	3	147	/	35	0	/	/	/
1:00 - 2:00	42	1	43	/	11	0	/	/	/
2:00 - 3:00	36	2	38	/	22	0	/	/	/
3:00 - 4:00	32	1	33	/	29	0	/	/	/
4:00 - 5:00	33	1	34	/	74	0	/	/	/
5:00 - 6:00	56	2	58	/	238	0	X/X	/	/
6:00 - 7:00	134	3	137	/	607	0	X/X	/	/
7:00 - 8:00	145	4	149	/	176	0	/X	/	/
8:00 - 9:00	227	14	241	/	152	0	/X	/	/
9:00 - 10:00	206	15	221	/	130	0	/X	/	/
10:00 - 11:00	283	19	302	/	130	0	/X	/	/
11:00 - 12:00	279	32	311	/	128	0	/X	/	/
12:00 - 13:00	318	44	362	/	138	0	/X	/	/
13:00 - 14:00	353	59	412	/	153	0	/X	/	/
14:00 - 15:00	406	39	445	/	342	0	X/X	/	/
15:00 - 16:00	538	29	567	X/	187	0	/X	/	/
16:00 - 17:00	399	29	428	/	136	0	/X	/	/
17:00 - 18:00	353	29	382	/	105	0	/X	/	/
18:00 - 19:00	282	36	318	/	134	0	/X	/	/
19:00 - 20:00	313	31	344	/	93	0	/	/	/
20:00 - 21:00	276	28	304	/	107	0	/X	/	/
21:00 - 22:00	294	29	323	/	135	0	/X	/	/
22:00 - 23:00	278	15	293	/	203	0	X/X	/	/
23:00 - 24:00	297	9	306	/	64	0	/	/	/

	Met (Hr)	Required (Hr)	
Warrant 1	0	8	Not satisfied
Warrant 2	0	8	Not satisfied
Warrant 6	2	8	Not satisfied
Warrant 8	0	8	Not satisfied
Warrant 9	2	4	Not satisfied
Warrant 11	1	1	Satisfied

LOCATION: TH-5 AT POST RD EAST RAMP

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35	Major App3: POST RD WB, E OF TH-5 NB RAMP	1
55	Minor App2: TH-5 NB, S OF POST RD	2
0	Minor App4: N/A	0

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

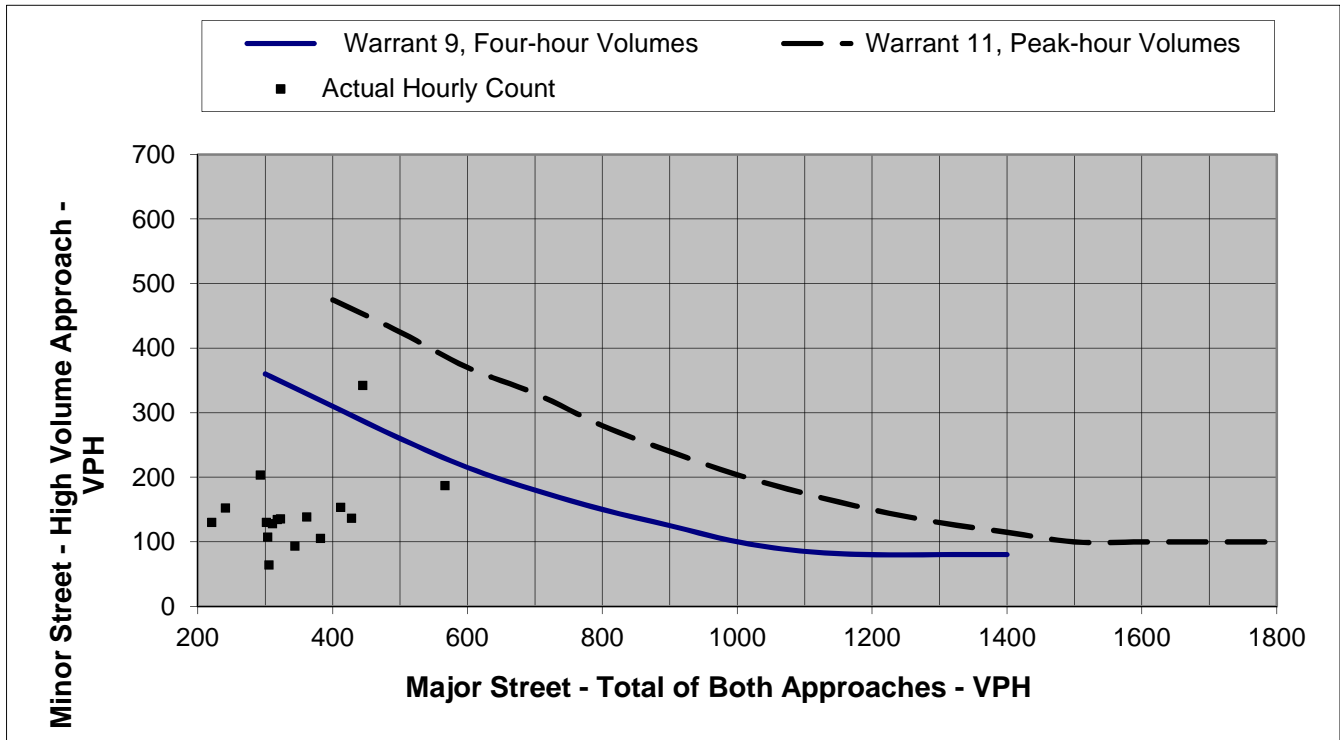


Figure 1. Four Hour and Peak Hour Warrant Analysis

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			147	35
300	360		43	11
400	310	475	38	22
500	260	425	33	29
600	215	370	34	74
700	180	330	58	238
800	150	280	137	607
900	125	240	149	176
1000	100	204	241	152
1100	85	175	221	130
1200	80	150	302	130
1300	80	130	311	128
1400	80	115	362	138
1500		100	412	153
1600		100	445	342
1700		100	567	187
1800		100	428	136
			382	105
			318	134
			344	93
			304	107
			323	135
			293	203
			306	64

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-5 AT POST RD EAST RAMPS

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REF. POINT: 062.489

DATE: 9/30/1998

OPERATOR: DR

Speed	Approach Description	Lanes
35	Major App1: POST RD EB, W OF TH-5 NB RAMP	1
35	Major App3: POST RD WB, E OF TH-5 NB RAMP	1
55	Minor App2: TH-5 NB, S OF POST RD	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	144	3	35	0	182	35	/
1:00 - 2:00	42	1	11	0	54	11	/
2:00 - 3:00	36	2	22	0	60	22	/
3:00 - 4:00	32	1	29	0	62	29	/
4:00 - 5:00	33	1	74	0	108	74	/
5:00 - 6:00	56	2	238	0	296	238	/X
6:00 - 7:00	134	3	607	0	744	607	X/X
7:00 - 8:00	145	4	176	0	325	176	/X
8:00 - 9:00	227	14	152	0	393	152	X/X
9:00 - 10:00	206	15	130	0	351	130	X/
10:00 - 11:00	283	19	130	0	432	130	X/
11:00 - 12:00	279	32	128	0	439	128	X/
12:00 - 13:00	318	44	138	0	500	138	X/
13:00 - 14:00	353	59	153	0	565	153	X/X
14:00 - 15:00	406	39	342	0	787	342	X/X
15:00 - 16:00	538	29	187	0	754	187	X/X
16:00 - 17:00	399	29	136	0	564	136	X/
17:00 - 18:00	353	29	105	0	487	105	X/
18:00 - 19:00	282	36	134	0	452	134	X/
19:00 - 20:00	313	31	93	0	437	93	X/
20:00 - 21:00	276	28	107	0	411	107	X/
21:00 - 22:00	294	29	135	0	458	135	X/
22:00 - 23:00	278	15	203	0	496	203	X/X
23:00 - 24:00	297	9	64	0	370	64	X/

Allway Stop Warrant: Met (Hr) 6 Required (Hr) 8 Not satisfied

REMARKS: _____

