



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

SIGNAL WARRANTS ANALYSIS

LOCATION: TH 5 AT TH 25
 COUNTY: CARVER
 REF. POINT: 026.233
 DATE: 3/31/1998
 OPERATOR: DR

Speed	Approach Description	Lanes
55	Major App1: TH 5 - TH 25 NB, S OF CENTRAL AVE	2
55	Major App3: TH 5 - TH 25 SB, N OF CENTRAL AVE	1
30	Minor App2: CENTRAL AVE NB, S OF TH 5 - TH 25	1
0	Minor App4: N/A	0

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

HOUR	420/630			105/52			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	4	32	36	/	8	0	/	/	/
1:00 - 2:00	6	36	42	/	10	0	/	/	/
2:00 - 3:00	3	27	30	/	7	0	/	/	/
3:00 - 4:00	8	13	21	/	31	0	/	/	/
4:00 - 5:00	13	20	33	/	63	0	/X	/	/
5:00 - 6:00	60	65	125	/	171	0	X/X	/	/
6:00 - 7:00	99	113	212	/	276	0	X/X	/	/
7:00 - 8:00	115	202	317	/	302	0	X/X	/	/
8:00 - 9:00	76	174	250	/	182	0	X/X	/	/
9:00 - 10:00	54	154	208	/	148	0	X/X	/	/
10:00 - 11:00	45	177	222	/	102	0	/X	/	/
11:00 - 12:00	55	167	222	/	102	0	/X	/	/
12:00 - 13:00	53	176	229	/	102	0	/X	/	/
13:00 - 14:00	66	182	248	/	127	0	X/X	/	/
14:00 - 15:00	71	246	317	/	133	0	X/X	/	/
15:00 - 16:00	62	346	408	/	147	0	X/X	/	/
16:00 - 17:00	72	464	536	X/	161	0	X/X	/	X/
17:00 - 18:00	70	435	505	X/	120	0	X/X	/	X/
18:00 - 19:00	49	213	262	/	95	0	/X	/	/
19:00 - 20:00	28	133	161	/	60	0	/X	/	/
20:00 - 21:00	21	107	128	/	48	0	/	/	/
21:00 - 22:00	13	99	112	/	42	0	/	/	/
22:00 - 23:00	14	64	78	/	43	0	/	/	/
23:00 - 24:00	3	55	58	/	17	0	/	/	/

	Met (Hr)	Required (Hr)	
Warrant 1	2	8	Not satisfied
Warrant 2	0	8	Not satisfied
Warrant 6	3	8	Not satisfied
Warrant 8	2	8	Not satisfied
Warrant 9	2	4	Not satisfied
Warrant 11	0	1	Not satisfied

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COUNTY: CARVER

REF. POINT: 026.233

DATE: 3/31/1998

OPERATOR: DR

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

Speed	Approach Description	Lanes
55	Major App1: TH 5 - TH 25 NB, S OF CENTRAL AVE	2
55	Major App3: TH 5 - TH 25 SB, N OF CENTRAL AVE	1
30	Minor App2: CENTRAL AVE NB, S OF TH 5 - TH 25	1
0	Minor App4: N/A	0

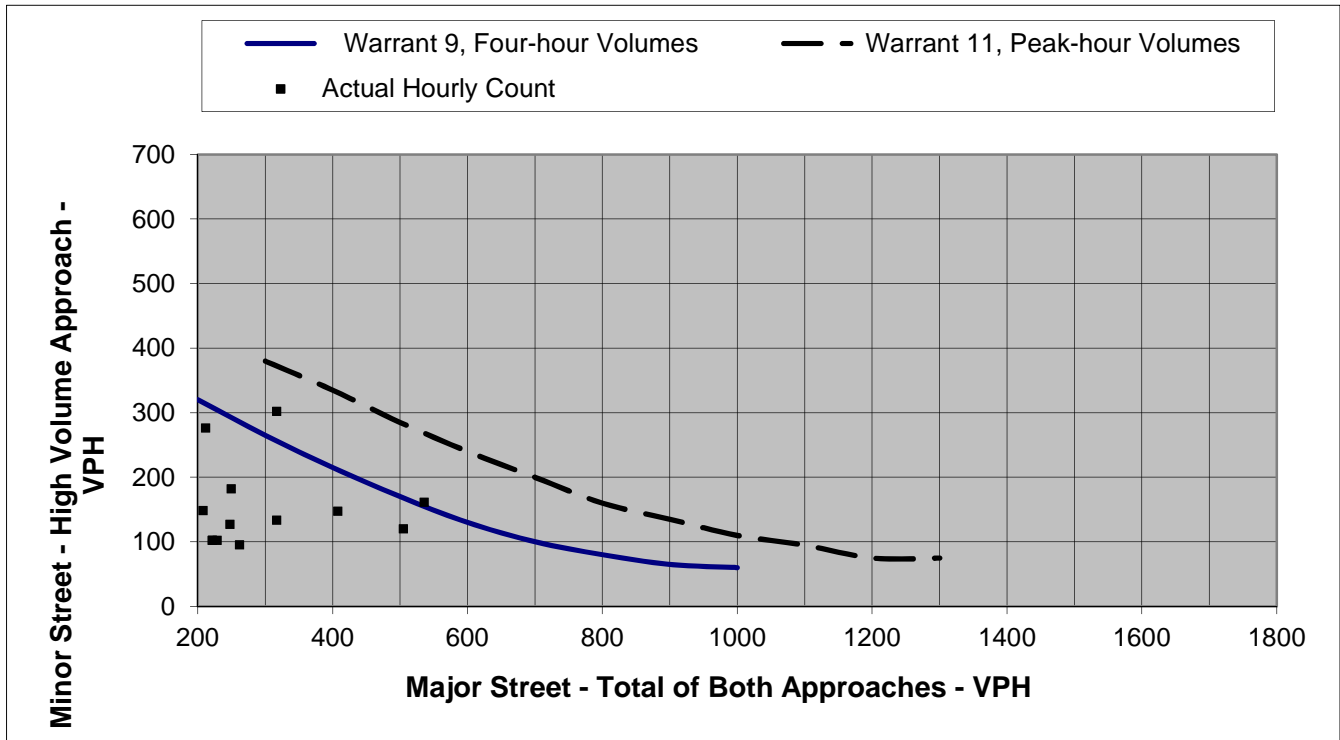


Figure 1. Four Hour and Peak Hour Warrant Analysis

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	320		36	8
300	265	380	42	10
400	215	335	30	7
500	170	285	21	31
600	130	240	33	63
700	100	200	125	171
800	80	160	212	276
900	65	135	317	302
1000	60	110	250	182
1100		95	208	148
1200		75	222	102
1300		75	222	102
1400			229	102
1500			248	127
1600			317	133
1700			408	147
1800			536	161
			505	120
			262	95
			161	60
			128	48
			112	42
			78	43
			58	17

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 TH 25

COUNTY: CARVER

REF. POINT: 026.233

DATE: 3/31/1998

OPERATOR: DR

Speed	Approach Description	Lanes
55	Major App1: TH 5 - TH 25 NB, S OF CENTRAL AVE	2
55	Major App3: TH 5 - TH 25 SB, N OF CENTRAL AVE	1
30	Minor App2: CENTRAL AVE NB, S OF TH 5 - TH 25	1
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	4	32	8	0	44	8	/
1:00 - 2:00	6	36	10	0	52	10	/
2:00 - 3:00	3	27	7	0	37	7	/
3:00 - 4:00	8	13	31	0	52	31	/
4:00 - 5:00	13	20	63	0	96	63	/
5:00 - 6:00	60	65	171	0	296	171	/X
6:00 - 7:00	99	113	276	0	488	276	X/X
7:00 - 8:00	115	202	302	0	619	302	X/X
8:00 - 9:00	76	174	182	0	432	182	X/X
9:00 - 10:00	54	154	148	0	356	148	X/X
10:00 - 11:00	45	177	102	0	324	102	/
11:00 - 12:00	55	167	102	0	324	102	/
12:00 - 13:00	53	176	102	0	331	102	/
13:00 - 14:00	66	182	127	0	375	127	X/
14:00 - 15:00	71	246	133	0	450	133	X/
15:00 - 16:00	62	346	147	0	555	147	X/X
16:00 - 17:00	72	464	161	0	697	161	X/X
17:00 - 18:00	70	435	120	0	625	120	X/
18:00 - 19:00	49	213	95	0	357	95	X/
19:00 - 20:00	28	133	60	0	221	60	/
20:00 - 21:00	21	107	48	0	176	48	/
21:00 - 22:00	13	99	42	0	154	42	/
22:00 - 23:00	14	64	43	0	121	43	/
23:00 - 24:00	3	55	17	0	75	17	/

Met (Hr) Required (Hr)

Allway Stop Warrant: 6 8 Not satisfied

REMARKS: _____

