



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

SIGNAL WARRANTS ANALYSIS

LOCATION: TH-55 AT CSAH-92/DOGWOOD ST.

COUNTY: DAKOTA

REF. POINT: 166.410

DATE: 2/2/1995

OPERATOR: DR

Speed	Approach Description	Lanes
50	Major App1: TH-55 EB, W OF CSAH-92 /DOGWOOD ST.	2
50	Major App3: TH-55 WB, E OF CSAH-92/DOGWOOD ST.	2
55	Minor App2: CSAH-92/DOGWOOD ST. NB, S OF TH-55	2
40	Minor App4: CO.RD.92/DOGWOOD ST. SB, N OF TH-55	2

0.70 FACTOR USED? YES

POPULATION < 10,000? NO

EXISTING SIGNAL ? NO

HOUR	420/630			140/70		140/70		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	24	85	109	/	7	2	/	/	/
1:00 - 2:00	24	51	75	/	3	0	/	/	/
2:00 - 3:00	13	22	35	/	7	0	/	/	/
3:00 - 4:00	39	24	63	/	4	2	/	/	/
4:00 - 5:00	155	32	187	/	4	0	/	/	/
5:00 - 6:00	585	33	618	X/	8	7	/	/	/
6:00 - 7:00	1073	93	1166	X/X	15	11	/	/	/
7:00 - 8:00	1057	236	1293	X/X	52	39	/	/	/
8:00 - 9:00	493	198	691	X/X	33	29	/	/	/
9:00 - 10:00	294	186	480	X/	27	19	/	/	/
10:00 - 11:00	230	141	371	/	21	10	/	/	/
11:00 - 12:00	252	186	438	X/	34	19	/	/	/
12:00 - 13:00	281	222	503	X/	33	11	/	/	/
13:00 - 14:00	282	242	524	X/	31	12	/	/	/
14:00 - 15:00	331	355	686	X/X	63	23	/	/	/
15:00 - 16:00	330	667	997	X/X	81	67	/X	/	/X
16:00 - 17:00	303	948	1251	X/X	115	38	/X	/	/X
17:00 - 18:00	239	910	1149	X/X	107	29	/X	/	/X
18:00 - 19:00	229	461	690	X/X	80	14	/X	/	/X
19:00 - 20:00	177	264	441	X/	38	23	/	/	/
20:00 - 21:00	132	228	360	/	34	22	/	/	/
21:00 - 22:00	124	186	310	/	26	14	/	/	/
22:00 - 23:00	99	127	226	/	26	7	/	/	/
23:00 - 24:00	25	113	138	/	14	4	/	/	/

	Met (Hr)	Required (Hr)	
Warrant 1	0	8	Not satisfied
Warrant 2	4	8	Not satisfied
Warrant 6	5	8	Not satisfied
Warrant 8	1	8	Not satisfied
Warrant 9	3	4	Not satisfied
Warrant 11	1	1	Satisfied

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POPULATION < 10,000? NO

EXISTING SIGNAL ? NO

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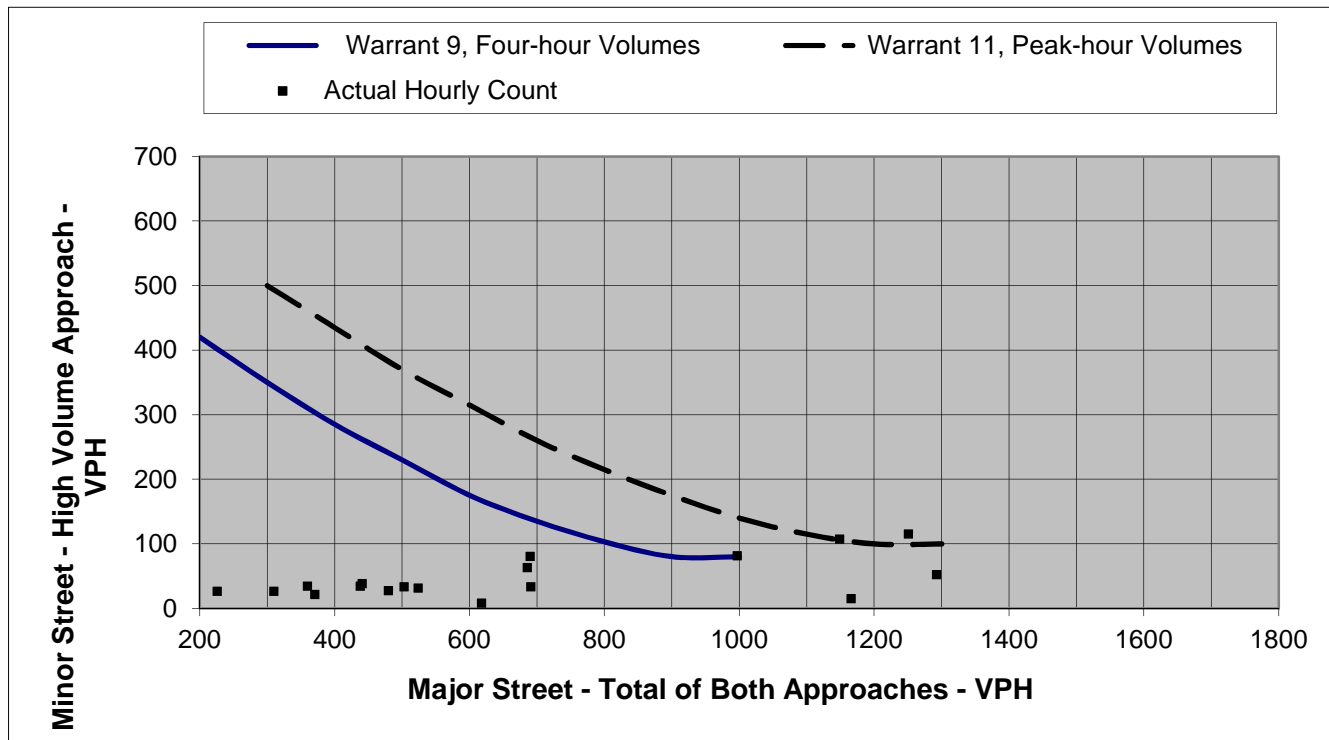


Figure 1. Four Hour and Peak Hour Warrant Analysis

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	420		109	7
300	350	500	75	3
400	285	435	35	7
500	230	370	63	4
600	175	315	187	4
700	135	260	618	8
800	103	215	1166	15
900	80	175	1293	52
1000	80	140	691	33
1100		115	480	27
1200		100	371	21
1300		100	438	34
1400			503	33
1500			524	31
1600			686	63
1700			997	81
1800			1251	115
			1149	107
			690	80
			441	38
			360	34
			310	26
			226	26
			138	14

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-55 AT CSAH-92/DOGWOOD ST.

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REF. POINT: 166.410

DATE: 2/2/1995

OPERATOR: DR

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50	Major App3: TH-55 WB, E OF CSAH-92/DOGWOOD ST.	2
55	Minor App2: CSAH-92/DOGWOOD ST. NB, S OF TH-55	2
40	Minor App4: CO.RD.92/DOGWOOD ST. SB, N OF TH-55	2

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	24	85	7	2	118	9	/
1:00 - 2:00	24	51	3	0	78	3	/
2:00 - 3:00	13	22	7	0	42	7	/
3:00 - 4:00	39	24	4	2	69	6	/
4:00 - 5:00	155	32	4	0	191	4	/
5:00 - 6:00	585	33	8	7	633	15	X/
6:00 - 7:00	1073	93	15	11	1192	26	X/
7:00 - 8:00	1057	236	52	39	1384	91	X/
8:00 - 9:00	493	198	33	29	753	62	X/
9:00 - 10:00	294	186	27	19	526	46	X/
10:00 - 11:00	230	141	21	10	402	31	X/
11:00 - 12:00	252	186	34	19	491	53	X/
12:00 - 13:00	281	222	33	11	547	44	X/
13:00 - 14:00	282	242	31	12	567	43	X/
14:00 - 15:00	331	355	63	23	772	86	X/
15:00 - 16:00	330	667	81	67	1145	148	X/X
16:00 - 17:00	303	948	115	38	1404	153	X/X
17:00 - 18:00	239	910	107	29	1285	136	X/
18:00 - 19:00	229	461	80	14	784	94	X/
19:00 - 20:00	177	264	38	23	502	61	X/
20:00 - 21:00	132	228	34	22	416	56	X/
21:00 - 22:00	124	186	26	14	350	40	X/
22:00 - 23:00	99	127	26	7	259	33	/
23:00 - 24:00	25	113	14	4	156	18	/

Allway Stop Warrant: Met (Hr) 2 Required (Hr) 8 Not satisfied

REMARKS: _____