



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

SIGNAL WARRANTS ANALYSIS

LOCATION: TH-55 & S SHORE DR/CR 73

COUNTY: HENNEPIN

REF. POINT: 183.025

DATE: 3/23/1995

OPERATOR: DR

Speed	Approach Description	Lanes
50	Major App1: TH-55 EB, W OF S SHORE DR	4
50	Major App3: TH-55 WB, E OF S SHORE DR	4
40	Minor App2: CR 73 NB, S OF TH-55	3
40	Minor App4: S SHORE DR SB, N OF TH-55	3

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	75	1	76	/	2	69	/	/	/
1:00 - 2:00	48	1	49	/	1	40	/	/	/
2:00 - 3:00	29	0	29	/	1	34	/	/	/
3:00 - 4:00	44	0	44	/	1	29	/	/	/
4:00 - 5:00	60	0	60	/	5	52	/	/	/
5:00 - 6:00	190	2	192	/	6	267	/	X/X	/
6:00 - 7:00	995	16	1011	X/X	20	517	/	X/X	X/X
7:00 - 8:00	2582	69	2651	X/X	46	1257	/	X/X	X/X
8:00 - 9:00	1649	47	1696	X/X	49	857	/	X/X	X/X
9:00 - 10:00	744	39	783	X/X	30	528	/	X/X	X/X
10:00 - 11:00	651	68	719	X/X	34	516	/	X/X	X/X
11:00 - 12:00	660	130	790	X/X	25	575	/	X/X	X/X
12:00 - 13:00	674	150	824	X/X	38	697	/	X/X	X/X
13:00 - 14:00	684	82	766	X/X	29	629	/	X/X	X/X
14:00 - 15:00	733	82	815	X/X	24	742	/	X/X	X/X
15:00 - 16:00	1041	111	1152	X/X	22	1038	/	X/X	X/X
16:00 - 17:00	1409	209	1618	X/X	30	1498	/	X/X	X/X
17:00 - 18:00	1445	243	1688	X/X	32	1759	/	X/X	X/X
18:00 - 19:00	665	84	749	X/X	41	788	/	X/X	X/X
19:00 - 20:00	296	40	336	/	26	309	/	X/X	/
20:00 - 21:00	225	40	265	/	15	269	/	X/X	/
21:00 - 22:00	217	38	255	/	10	230	/	X/X	/
22:00 - 23:00	149	9	158	/	6	150	/	X/X	/
23:00 - 24:00	116	6	122	/	2	122	/	/X	/

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

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OPERATOR: DR

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

Speed	Approach Description	Lanes
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40	Minor App2: CR 73 NB, S OF TH-55	3
40	Minor App4: S SHORE DR SB, N OF TH-55	3

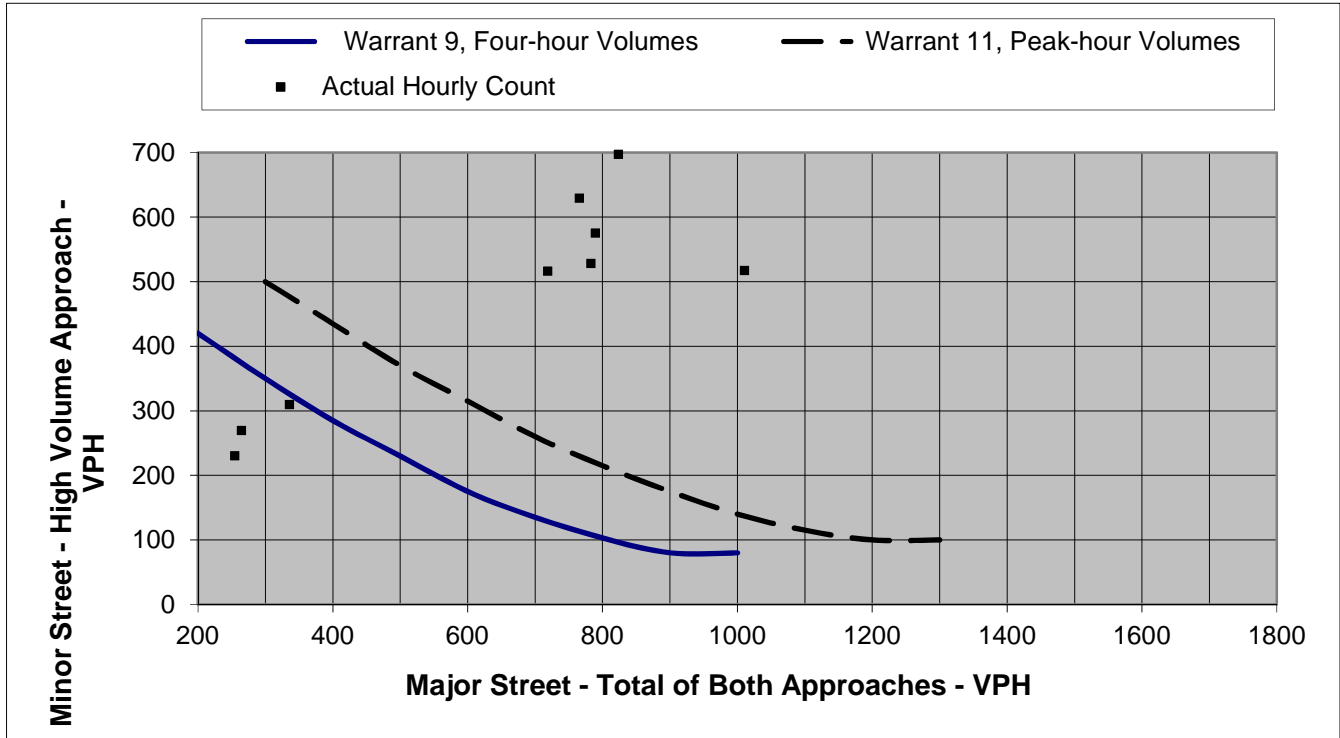


Figure 1. Four Hour and Peak Hour Warrant Analysis

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		76	69
300	350	500	49	40
400	285	435	29	34
500	230	370	44	29
600	175	315	60	52
700	135	260	192	267
800	103	215	1011	517
900	80	175	2651	1257
1000	80	140	1696	857
1100		115	783	528
1200		100	719	516
1300		100	790	575
1400			824	697
1500			766	629
1600			815	742
1700			1152	1038
1800			1618	1498
			1688	1759
			749	788
			336	309
			265	269
			255	230
			158	150
			122	122

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 & S SHORE DR/CR 73

COUNTY: HENNEPIN

REF. POINT: 183.025

DATE: 3/23/1995

OPERATOR: DR

Speed	Approach Description	Lanes
50	Major App1: TH-55 EB, W OF S SHORE DR	4
50	Major App3: TH-55 WB, E OF S SHORE DR	4
40	Minor App2: CR 73 NB, S OF TH-55	3
40	Minor App4: S SHORE DR SB, N OF TH-55	3

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	75	1	2	69	147	71	/
1:00 - 2:00	48	1	1	40	90	41	/
2:00 - 3:00	29	0	1	34	64	35	/
3:00 - 4:00	44	0	1	29	74	30	/
4:00 - 5:00	60	0	5	52	117	57	/
5:00 - 6:00	190	2	6	267	465	273	X/X
6:00 - 7:00	995	16	20	517	1548	537	X/X
7:00 - 8:00	2582	69	46	1257	3954	1303	X/X
8:00 - 9:00	1649	47	49	857	2602	906	X/X
9:00 - 10:00	744	39	30	528	1341	558	X/X
10:00 - 11:00	651	68	34	516	1269	550	X/X
11:00 - 12:00	660	130	25	575	1390	600	X/X
12:00 - 13:00	674	150	38	697	1559	735	X/X
13:00 - 14:00	684	82	29	629	1424	658	X/X
14:00 - 15:00	733	82	24	742	1581	766	X/X
15:00 - 16:00	1041	111	22	1038	2212	1060	X/X
16:00 - 17:00	1409	209	30	1498	3146	1528	X/X
17:00 - 18:00	1445	243	32	1759	3479	1791	X/X
18:00 - 19:00	665	84	41	788	1578	829	X/X
19:00 - 20:00	296	40	26	309	671	335	X/X
20:00 - 21:00	225	40	15	269	549	284	X/X
21:00 - 22:00	217	38	10	230	495	240	X/X
22:00 - 23:00	149	9	6	150	314	156	/X
23:00 - 24:00	116	6	2	122	246	124	/

Met (Hr) Required (Hr)

Allway Stop Warrant: **17** 8 **Satisfied**

REMARKS: _____
