



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

SIGNAL WARRANTS ANALYSIS

LOCATION: TH-3 AT RICH VALLEY BLVD

COUNTY: DAKOTA

REF. POINT: 039.079

DATE: 4/23/1996

OPERATOR: DR

Speed	Approach Description	Lanes
50	Major App1: TH-3 NB, S OF JCT OF CSAH 71/RICH VALLEY BL	2
50	Major App3: TH-3 SB, N OF JCT OF CSAH 71/RICH VALLEY BL	2
45	Minor App2: CSAH 71/RICH VALLEY BLVD EB, W OF JCT OF 1	2
45	Minor App4: CSAH 71/RICH VALLEY BLVD WB, E OF JCT OF 1	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	12	43	55	/	3	2	/	/	/
1:00 - 2:00	9	53	62	/	5	1	/	/	/
2:00 - 3:00	5	47	52	/	2	1	/	/	/
3:00 - 4:00	5	103	108	/	1	3	/	/	/
4:00 - 5:00	16	74	90	/	2	10	/	/	/
5:00 - 6:00	42	107	149	/	11	30	/	/	/
6:00 - 7:00	202	187	389	/	40	97	/	/X	/
7:00 - 8:00	441	230	671	X/X	81	130	/X	/X	/X
8:00 - 9:00	241	253	494	X/	36	53	/	/	/
9:00 - 10:00	165	142	307	/	28	34	/	/	/
10:00 - 11:00	129	122	251	/	25	27	/	/	/
11:00 - 12:00	138	147	285	/	27	24	/	/	/
12:00 - 13:00	143	125	268	/	32	32	/	/	/
13:00 - 14:00	144	110	254	/	24	29	/	/	/
14:00 - 15:00	150	122	272	/	39	38	/	/	/
15:00 - 16:00	203	133	336	/	179	30	X/X	/	/
16:00 - 17:00	195	239	434	X/	139	52	/X	/	/
17:00 - 18:00	187	265	452	X/	82	43	/X	/	/
18:00 - 19:00	159	138	297	/	59	36	/	/	/
19:00 - 20:00	115	100	215	/	32	31	/	/	/
20:00 - 21:00	93	97	190	/	28	20	/	/	/
21:00 - 22:00	56	101	157	/	21	13	/	/	/
22:00 - 23:00	43	79	122	/	15	8	/	/	/
23:00 - 24:00	19	65	84	/	12	2	/	/	/

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

LOCATION: TH-3 AT RICH VALLEY BLVD

COUNTY: DAKOTA

REF. POINT: 039.079

DATE: 4/23/1996

OPERATOR: DR

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

Speed	Approach Description	Lanes
50	Major App1: TH-3 NB, S OF JCT OF CSAH 71/RICH VALLEY BL	2
50	Major App3: TH-3 SB, N OF JCT OF CSAH 71/RICH VALLEY BL	2
45	Minor App2: CSAH 71/RICH VALLEY BLVD EB, W OF JCT OF 1	2
45	Minor App4: CSAH 71/RICH VALLEY BLVD WB, E OF JCT OF 1	2

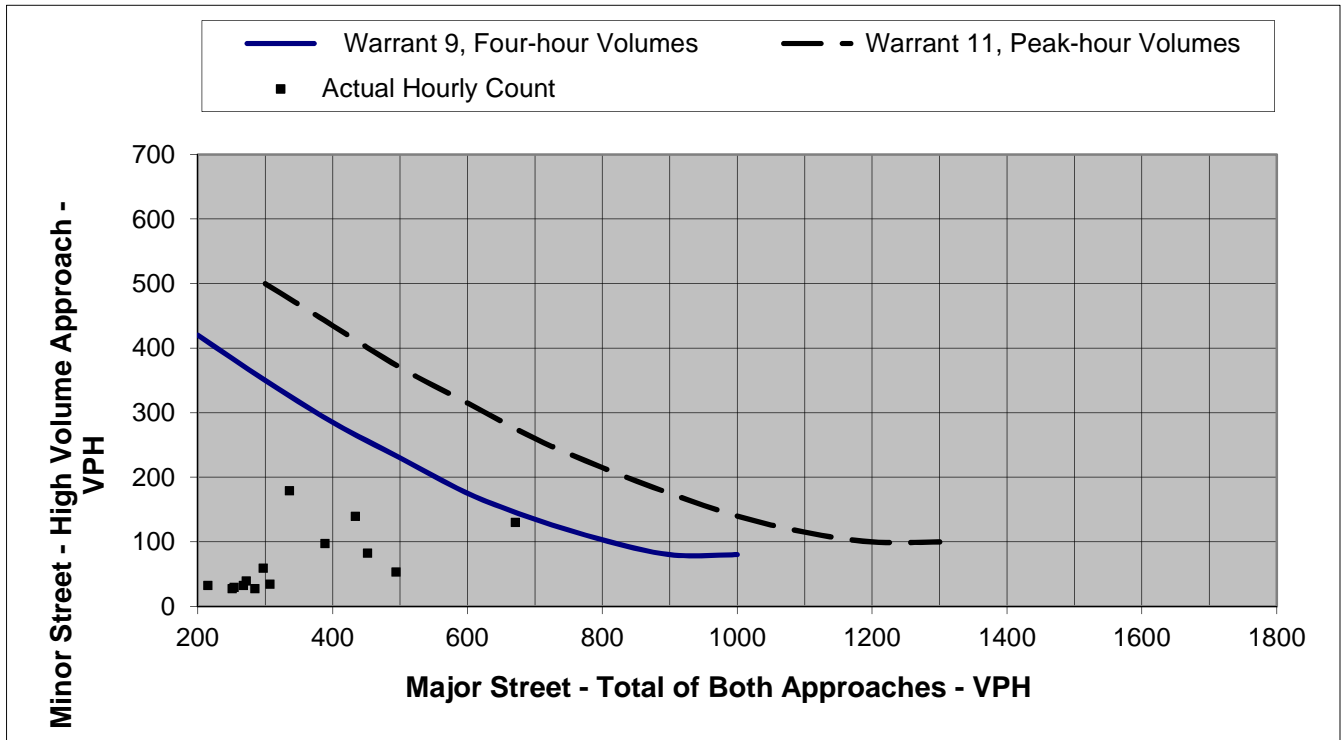


Figure 1. Four Hour and Peak Hour Warrant Analysis

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		55	3
300	350	500	62	5
400	285	435	52	2
500	230	370	108	3
600	175	315	90	10
700	135	260	149	30
800	103	215	389	97
900	80	175	671	130
1000	80	140	494	53
1100		115	307	34
1200		100	251	27
1300		100	285	27
1400			268	32
1500			254	29
1600			272	39
1700			336	179
1800			434	139
			452	82
			297	59
			215	32
			190	28
			157	21
			122	15
			84	12

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-3 AT RICH VALLEY BLVD

COUNTY: DAKOTA

REF. POINT: 039.079

DATE: 4/23/1996

OPERATOR: DR

Speed	Approach Description	Lanes
50	Major App1: TH-3 NB, S OF JCT OF CSAH 71/RICH VALLEY I	2
50	Major App3: TH-3 SB, N OF JCT OF CSAH 71/RICH VALLEY I	2
45	Minor App2: CSAH 71/RICH VALLEY BLVD EB, W OF JCT OF	2
45	Minor App4: CSAH 71/RICH VALLEY BLVD WB, E OF JCT OF	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	12	43	3	2	60	5	/
1:00 - 2:00	9	53	5	1	68	6	/
2:00 - 3:00	5	47	2	1	55	3	/
3:00 - 4:00	5	103	1	3	112	4	/
4:00 - 5:00	16	74	2	10	102	12	/
5:00 - 6:00	42	107	11	30	190	41	/
6:00 - 7:00	202	187	40	97	526	137	X/
7:00 - 8:00	441	230	81	130	882	211	X/X
8:00 - 9:00	241	253	36	53	583	89	X/
9:00 - 10:00	165	142	28	34	369	62	X/
10:00 - 11:00	129	122	25	27	303	52	/
11:00 - 12:00	138	147	27	24	336	51	/
12:00 - 13:00	143	125	32	32	332	64	/
13:00 - 14:00	144	110	24	29	307	53	/
14:00 - 15:00	150	122	39	38	349	77	/
15:00 - 16:00	203	133	179	30	545	209	X/X
16:00 - 17:00	195	239	139	52	625	191	X/X
17:00 - 18:00	187	265	82	43	577	125	X/
18:00 - 19:00	159	138	59	36	392	95	X/
19:00 - 20:00	115	100	32	31	278	63	/
20:00 - 21:00	93	97	28	20	238	48	/
21:00 - 22:00	56	101	21	13	191	34	/
22:00 - 23:00	43	79	15	8	145	23	/
23:00 - 24:00	19	65	12	2	98	14	/

Allway Stop Warrant: Met (Hr) 3 Required (Hr) 8 Not satisfied

REMARKS: _____
