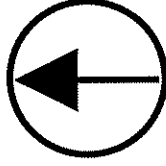


Date : 6/16/98AM 6/15/98PM

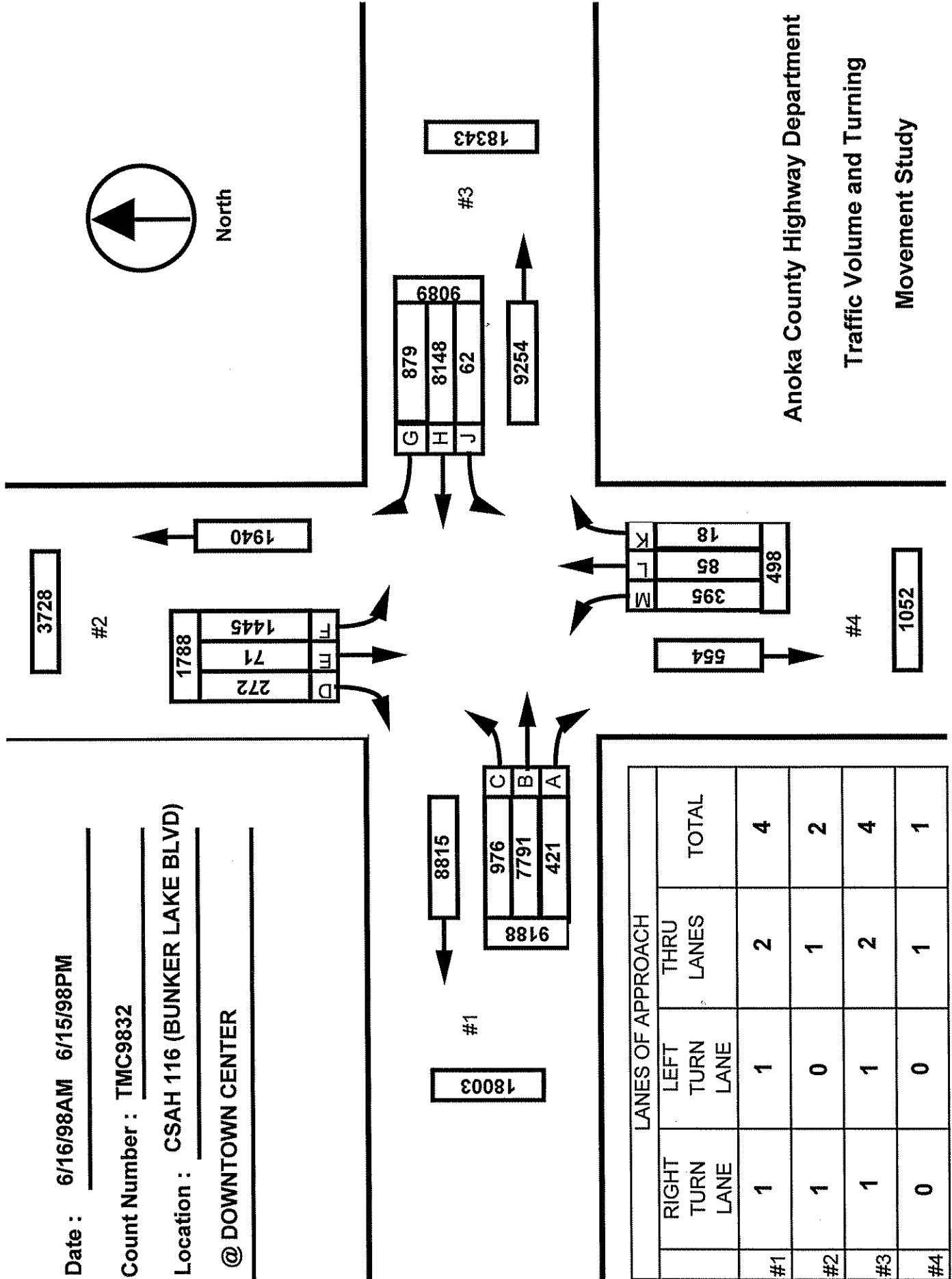
Count Number : TMC9832

Location : CSAH 116 (BUNKER LAKE BLVD)

@ DOWNTOWN CENTER



North



	LANES OF APPROACH			TOTAL
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	
#1	1	1	2	4
#2	1	0	1	2
#3	1	1	2	4
#4	0	0	1	1

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Weather :
 Counted by: Sarah and Vallie
 Board # :
 Cher :

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 Horsham, PA.

Study Name: TMC9832
 Site Code : 98320202
 Start Date: 06/16/98
 Page : 1

Vehicle group 1

Start Time	DOWNTOWN CENTER Southbound				CSAH 116 (BUNKER LAKE) Westbound				DOWNTOWN CENTER Northbound				CSAH 116 (BUNKER LAKE) Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
06/16/98																			
06:00	2	0	1	0	0	101	3	1	3	0	0	0	6	56	2	4	179	5	174
06:15	3	0	1	0	0	97	3	3	1	0	0	0	7	72	2	9	198	12	186
06:30	8	0	0	0	0	148	4	2	2	1	0	0	4	78	2	5	254	7	247
06:45	8	0	1	1	0	159	7	5	0	0	0	0	7	105	7	6	306	12	294
Hour	21	0	3	1	0	505	17	11	6	1	0	0	24	311	13	24	937	36	901
07:00	8	0	1	1	1	127	7	6	7	0	1	0	8	110	3	13	293	20	273
07:15	7	0	3	2	4	140	8	9	8	0	0	0	15	87	6	12	301	23	278
07:30	13	0	0	1	0	179	10	8	10	1	0	0	6	108	11	15	362	24	338
07:45	9	0	1	0	0	159	14	6	4	1	0	0	14	98	7	7	320	13	307
Hour	37	0	5	4	5	605	39	29	29	2	1	0	43	403	27	47	1276	80	1196
08:00	8	2	4	3	0	100	7	9	6	3	0	2	13	78	2	8	245	22	223
08:15	4	2	7	7	2	107	3	12	1	1	0	0	17	102	6	13	284	32	252
08:30	8	0	2	1	1	114	10	14	5	1	0	0	13	77	4	13	263	28	235
08:45	7	2	7	1	1	120	11	9	6	1	0	1	9	59	5	9	248	20	228
Hour	27	6	20	12	4	441	31	44	18	6	0	3	52	316	17	43	1040	102	938
09:00	13	1	5	3	0	88	14	11	6	2	1	2	15	98	7	16	282	32	250
09:15	20	1	4	0	3	103	9	10	3	2	0	1	18	81	5	10	270	21	249
09:30	15	0	2	2	0	84	18	3	3	0	0	0	11	99	4	8	249	13	236
09:45	17	2	9	4	2	116	18	12	5	3	0	0	14	89	3	9	303	25	278
Hour	65	4	20	9	5	391	59	36	17	7	1	3	58	367	19	43	1104	91	1013
10:00	14	2	6	1	2	112	9	10	5	0	0	1	16	86	10	6	280	18	262
10:15	20	2	2	0	1	113	12	10	3	3	0	0	21	89	8	12	296	22	274
10:30	19	0	7	2	1	108	11	10	4	2	0	0	12	99	3	7	285	19	266
10:45	27	1	4	1	1	113	16	15	6	1	0	0	15	96	4	5	305	21	284
Hour	80	5	19	4	5	446	48	45	18	6	0	1	64	370	25	30	1166	80	1086
11:00	23	1	14	9	1	119	15	11	6	2	0	0	20	114	5	10	350	30	320
11:15	20	1	11	0	0	119	23	15	3	0	0	0	15	96	6	10	319	25	294
11:30	28	0	7	1	3	127	32	14	8	6	0	0	14	102	6	10	358	25	333
11:45	17	2	9	0	1	93	16	4	4	1	0	0	20	105	7	15	294	19	275
Hour	88	4	41	10	5	458	86	44	21	9	0	0	69	417	24	45	1321	99	1222
12:00	34	1	8	0	0	156	14	9	1	2	0	0	21	105	6	8	365	17	348
12:15	29	1	3	0	1	125	10	12	5	3	1	0	26	91	1	11	319	23	296
12:30	17	0	9	0	0	107	13	5	4	0	0	0	25	136	4	10	330	15	315
12:45	29	2	7	2	0	111	11	9	5	3	2	0	24	108	15	7	335	18	317
Hour	109	4	27	2	1	499	48	35	15	8	3	0	96	440	26	36	1349	73	1276

Weather :
 Counted by: Sarah and Vallie
 Board # :
 cher :

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 Horsham, PA.

Study Name: TMC9832
 Site Code : 98320202
 Start Date: 06/16/98
 Page : 2

Vehicle group 1

Start Time	DOWNTOWN CENTER Southbound				CSAH 116 (BUNKER LAKE Westbound				DOWNTOWN CENTER Northbound				CSAH 116 (BUNKER LAKE Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
13:00	20	0	9	0	2	120	14	7	5	1	0	0	35	106	7	8	334	15	319
13:15	31	3	6	0	0	116	15	9	3	0	1	1	16	99	5	12	317	22	295
13:30	30	1	6	1	1	103	4	9	2	1	0	0	16	100	6	3	283	13	270
13:45	17	2	9	4	1	108	12	9	1	3	0	0	14	89	3	9	281	22	259
Hour	98	6	30	5	4	447	45	34	11	5	1	1	81	394	21	32	1215	72	1143
14:00	15	2	5	0	1	111	15	10	8	0	0	1	16	86	6	6	282	17	265
14:15	22	0	1	1	2	99	12	6	6	2	0	0	13	121	9	11	305	18	287
14:30	26	1	6	0	4	103	14	5	3	0	0	0	23	104	10	6	305	11	294
14:45	28	1	6	0	0	128	13	18	14	0	0	0	15	131	15	9	378	27	351
Hour	91	4	18	1	7	441	54	39	31	2	0	1	67	442	40	32	1270	73	1197
15:00	29	3	8	1	2	142	18	11	7	4	0	0	18	152	11	10	416	22	394
15:15	31	1	4	0	2	120	19	8	6	0	1	0	19	142	12	7	372	15	357
15:30	26	2	4	0	2	172	23	3	13	1	0	0	27	160	8	6	447	9	438
15:45	34	0	2	0	1	122	14	12	13	1	0	1	25	143	8	5	381	18	363
Hour	120	6	18	1	7	556	74	34	39	6	1	1	89	597	39	28	1616	64	1552
16:00	30	1	5	0	2	140	19	5	9	0	1	1	25	175	7	6	426	12	414
16:15	30	1	3	1	0	138	14	10	6	0	0	0	16	160	8	9	396	20	376
16:30	27	1	7	0	0	171	12	7	12	0	0	2	13	207	19	7	485	16	469
16:45	36	2	2	0	0	161	20	5	14	2	1	0	22	178	11	2	456	7	449
Hour	123	5	17	1	2	610	65	27	41	2	2	3	76	720	45	24	1763	55	1708
17:00	34	0	6	0	2	210	22	9	9	1	0	2	21	221	19	4	560	15	545
17:15	35	2	6	1	0	174	24	8	6	5	2	0	18	212	13	10	516	19	497
17:30	33	2	1	1	0	178	21	5	24	2	1	0	28	189	14	3	502	9	493
17:45	39	4	3	0	1	176	17	6	8	4	0	0	20	186	10	9	483	15	468
Hour	141	8	16	2	3	738	84	28	47	12	3	2	87	808	56	26	2061	58	2003
18:00	35	2	5	0	0	164	25	9	15	3	0	0	13	193	8	2	474	11	463
18:15	41	1	2	0	4	162	13	5	11	2	1	1	19	164	10	4	440	10	430
18:30	28	1	5	1	0	149	17	3	12	0	0	1	16	157	6	5	401	10	391
18:45	24	0	6	0	2	118	12	1	4	3	0	0	17	170	7	2	366	3	363
Hour	128	4	18	1	6	593	67	18	42	8	1	2	65	684	31	13	1681	34	1647
19:00	30	0	3	0	0	152	12	0	7	1	0	0	12	112	5	2	336	2	334
19:15	32	0	1	0	0	153	18	1	7	3	0	0	11	126	7	1	360	2	358
19:30	24	9	0	1	4	112	16	1	6	1	1	1	16	160	3	3	358	6	352
19:45	31	0	2	0	3	122	14	2	3	1	0	0	10	123	9	2	322	4	318
Hour	117	9	6	1	7	539	60	4	23	6	1	1	49	521	24	8	1376	14	1362

Weather :
 Counted by: Sarah and Vallie
 Board # :
 Cher :

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Study Name: TMC9832
 Site Code : 98320202
 Start Date: 06/16/98
 Page : 3

Vehicle group 1

Start Time	DOWNTOWN CENTER Southbound				CSAH 116 (BUNKER LAKE) Westbound				DOWNTOWN CENTER Northbound				CSAH 116 (BUNKER LAKE) Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
20:00	27	0	1	0	0	134	18	0	9	0	0	0	14	146	2	2	353	2	351
20:15	27	2	2	0	0	149	18	3	6	3	0	0	8	153	2	3	376	6	370
20:30	30	1	1	1	0	154	20	4	6	0	1	0	9	129	2	2	360	7	353
20:45	27	2	1	0	1	99	14	2	9	0	1	0	5	146	4	0	311	2	309
Hour	111	5	5	1	1	536	70	9	30	3	2	0	36	574	10	7	1400	17	1383
21:00	26	0	5	0	0	98	8	2	5	0	1	0	7	133	2	2	289	4	285
21:15	30	0	2	1	0	91	5	2	2	0	0	0	4	111	0	2	250	5	245
21:30	16	0	1	1	0	81	8	0	0	1	0	0	7	120	2	1	238	2	236
21:45	17	1	1	0	0	73	11	0	0	1	1	0	2	63	0	3	173	3	170
Hour	89	1	9	2	0	343	32	4	7	2	2	0	20	427	4	8	950	14	936
Total	1445	71	272	57	62	8148	879	441	395	85	18	18	976	7791	421	446	21525	962	20563
% Apr.	78.3	3.8	14.7	3.0	0.6	85.4	9.2	4.6	76.5	16.4	3.4	3.4	10.1	80.8	4.3	4.6	-	-	-
% Int.	6.7	0.3	1.2	0.2	0.2	37.8	4.0	2.0	1.8	0.3	-	-	4.5	36.1	1.9	2.0	-	-	-

or Street Approaches:

Eastbound:

CSAH 116 (BUNKER LAKE BLVD)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9832.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/16/98
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 9188

Westbound:

CSAH 116 (BUNKER LAKE BLVD)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9832.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/16/98
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 9089

Minor Street Approaches:

Northbound:

DOWNTOWN CENTER

Data File: C:\APPS\PETRA2\DATAFILE\TMC9832.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/16/98
 Number of Lanes: 1
 Approach Speed: 0
 Total Approach Traffic: 498

Southbound:

DOWNTOWN CENTER

Data File: C:\APPS\PETRA2\DATAFILE\TMC9832.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/16/98
 Number of Lanes: 2
 Approach Speed: 0
 Total Approach Traffic: 1788

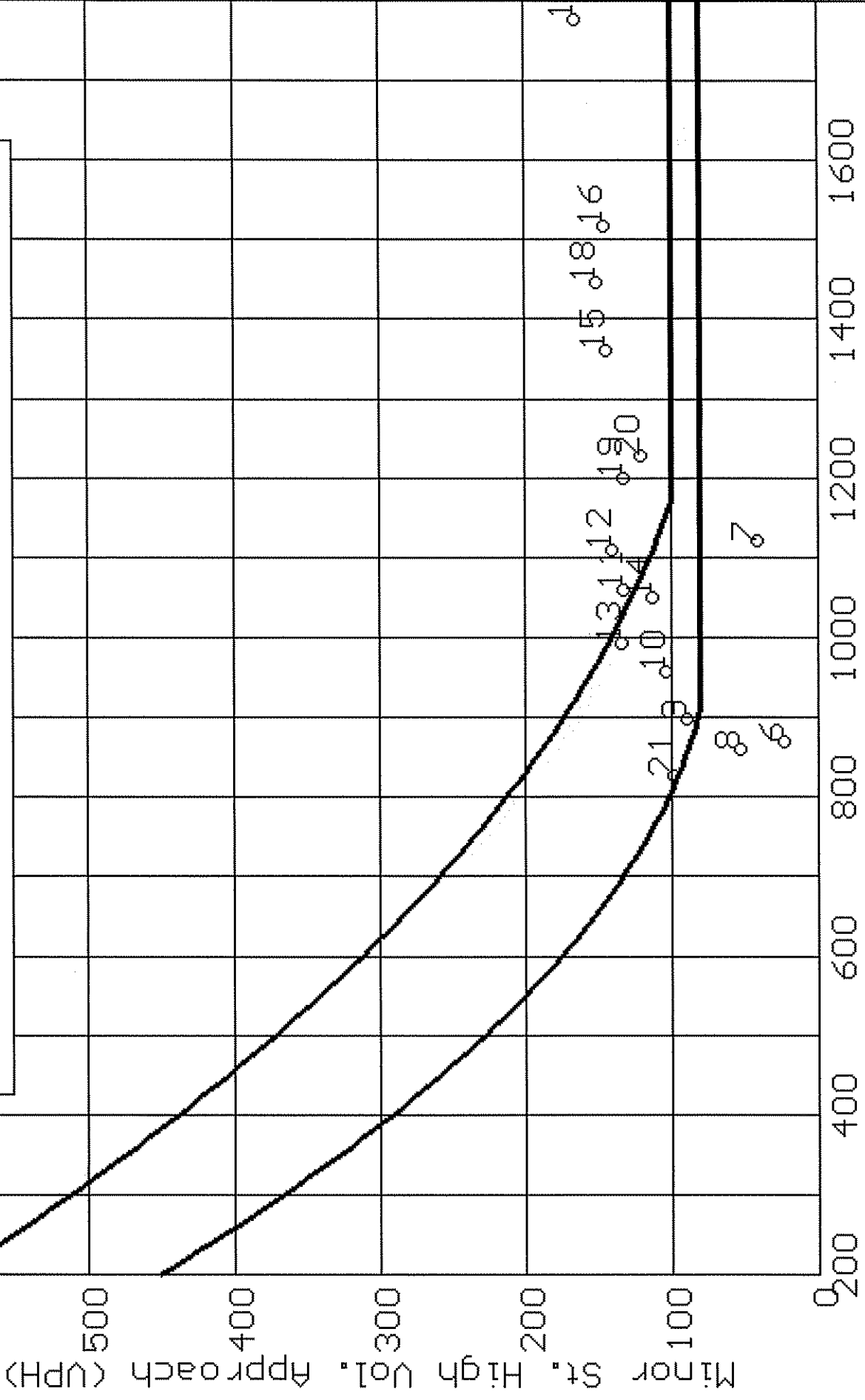
Analysis of 8-Hour Volume Warrants (Criteria refers to high volume side street for that hour):

Hour	Main (Total)	Side Vol.	Side Dir.	Side Rank	Warrant 1 Meets?	Warrant 1 Criteria	Warrant 2 Meets?	Warrant 2 Criteria	Warrant 8 Meets?	Warrant 8 Criteria
0	0	0	S	17		140		70		112
1	0	0	S	18		140		70		112
2	0	0	S	19		140		70		112
3	0	0	S	20		140		70		112
4	0	0	S	21		140		70		112
5	0	0	S	22		140		70		112
6	870	24	S	16	MAIN	140	MAIN	70	MAIN	112
7	1122	42	S	15	MAIN	140	MAIN	70	MAIN	112
8	861	53	S	14	MAIN	140	MAIN	70	MAIN	112
9	899	89	S	13	MAIN	140	--BOTH--	70	MAIN	112
10	958	104	S	11	MAIN	140	--BOTH--	70	MAIN	112
11	1059	133	S	7	MAIN	140	--BOTH--	70	--BOTH--	112
12	1110	140	S	5	--BOTH--	140	--BOTH--	70	--BOTH--	112
13	992	134	S	6	MAIN	140	--BOTH--	70	--BOTH--	112
14	1051	113	S	10	MAIN	140	--BOTH--	70	--BOTH--	112
15	1362	144	S	4	--BOTH--	140	--BOTH--	70	--BOTH--	112
16	1518	145	S	3	--BOTH--	140	--BOTH--	70	--BOTH--	112
17	1776	165	S	1	--BOTH--	140	--BOTH--	70	--BOTH--	112
18	1446	150	S	2	--BOTH--	140	--BOTH--	70	--BOTH--	112
19	1200	132	S	8	MAIN	140	--BOTH--	70	--BOTH--	112
20	1227	121	S	9	MAIN	140	--BOTH--	70	--BOTH--	112
21	826	99	S	12	MAIN	140	--BOTH--	70	MAIN	112
22	0	0	S	23		140		70		112
23	0	0	S	24		140		70		112

Warrant Summary:

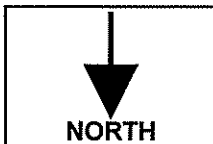
Rural values apply.

- Warrant 1 - Minimum Vehicular Volumes
NOT SATISFIED. Required values reached for 5 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.
- Warrant 2 - Interruption of Continuous Traffic
SATISFIED for 13 hours. Criteria--Main St.: 630; Side St.: See Volume Summary.
- Warrant 3 - Minimum Pedestrian Volumes
NOT SATISFIED. Ped volumes too low. Criteria--190 Peds in peak hour, 100 peds in 4th high hour.
- Warrant 4 - School Crossing
NOT APPLICABLE. Gap data has not been defined.
- Warrant 5 - Progressive Movement
NOT SATISFIED. Adjacent signals closer than 1000 feet and/or not part of coordinated system.
- Warrant 6 - Accident Experience
NOT SATISFIED. 0 correctable accidents is fewer than required 5.
Correctable Accidents: 0; Right Angle Accidents: 0; Left Turn Accidents: 0; Other Accidents: 0.
- Warrant 7 - Systems Warrant
NOT SATISFIED. At least one street has no major approaches. Peak hour total entering volume: 2003.
- Approaches which are part of the principal through traffic roadway network.
- Approaches which include rural or suburban highways outside, entering or traversing a city.
- Approaches which appear as a major route in an official transportation plan.
- Warrant 8 - Combination of Warrants
SATISFIED for 10 hours. Criteria--Main: 504; Side: See Volume Summary.
- Warrant 9 - Four Hour Volumes
SATISFIED for 13 hours.
- Warrant 10 - Peak Hour Delay
NOT APPLICABLE. Volume requirements satisfied, but side street peak hour delay not defined.
Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 150.
- Warrant 11 - Peak Hour Volume
SATISFIED for 8 hours.



— Warrant 9, Four-Hour Volumes
 — Warrant 11, Peak-Hour Volumes

Major St. Total of Both Approaches (UPH)



COUNT LOCATION:

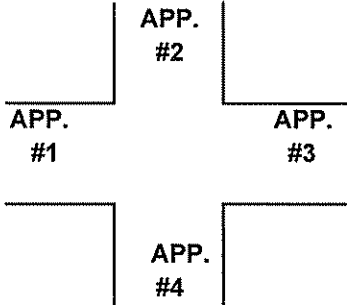
CSAH 116 (BUNKER LK BLVD)

DATE:

6/17/98

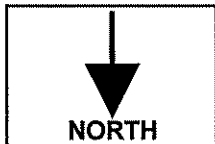
@ DOWNTOWN CTR

APP. #1=WB CSAH 116
(BUNKER LK BLVD)
APP. #2 =NB
(DOWNTOWN CTR)
APP. #3=EB CSAH 116
(BUNKER LK BLVD)
APP. #4=SB
(DOWNTOWN CTR)



HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT
A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.
B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.
C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM						4	1	
6:15-6:30						9	2	1
6:30-6:45						5		2
6:45-7:00						10	1	1
HOURLY TOTAL						HOURLY TOTAL		36
7:00-7:15			2		2	14	2	5
7:15-7:30			1		1	19	1	2
7:30-7:45			2		2	20	2	2
7:45-8:00						10	1	2
HOURLY TOTAL					5	HOURLY TOTAL		80
8:00-8:15						17		4
8:15-8:30						24		8
8:30-8:45						25	3	2
8:45-9:00						15	1	2
HOURLY TOTAL						HOURLY TOTAL		101
9:00-9:15						25	5	
9:15-9:30						18	1	
9:30-9:45			3		3	13		
9:45-10:00	3				3	22	3	
HOURLY TOTAL					6	HOURLY TOTAL		87
10:00-10:15						16	2	
10:15-10:30			2		2	18	3	1
10:30-10:45	3				3	16	2	1
10:45-11:00						16	2	4
HOURLY TOTAL					5	HOURLY TOTAL		81
11:00-11:15						16	3	11
11:15-11:30			2		2	15	5	3
11:30-11:45						17	2	4
11:45-12:00			1		1	16	1	
HOURLY TOTAL					3	HOURLY TOTAL		93
12:00-12:15			1		1	15		1
12:15-12:30	1				1	20	1	3
12:30-12:45						14		1
12:45-1:00	5	2	2		9	15	1	2
HOURLY TOTAL					11	HOURLY TOTAL		73
1:00-1:15						15	1	
1:15-1:30			2		2	18	4	
1:30-1:45	1				1	6	7	1
1:45-2:00	1		1		2	20	3	
HOURLY TOTAL					5	HOURLY TOTAL		75



COUNT LOCATION:

CSAH 116 (BUNKER LK BLVD)

DATE:

6/17/98

@ DOWNTOWN CTR

APP. #1=WB CSAH 116
(BUNKER LK BLVD)
APP. #2 =NB
(DOWNTOWN CTR)
APP. #3=EB CSAH 116
(BUNKER LK BLVD)
APP. #4=SB
(DOWNTOWN CTR)

APP. #1 APP. #3
APP. #2 APP. #4

HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT
A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.
B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.
C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM						4	1	
6:15-6:30						9	2	1
6:30-6:45						5		2
6:45-7:00						10	1	1
HOURLY TOTAL						HOURLY TOTAL		36
7:00-7:15			2		2	14	2	5
7:15-7:30			1		1	19	1	2
7:30-7:45			2		2	20	2	2
7:45-8:00						10	1	2
HOURLY TOTAL					5	HOURLY TOTAL		80
8:00-8:15						17		4
8:15-8:30						24		8
8:30-8:45						25	3	2
8:45-9:00						15	1	2
HOURLY TOTAL						HOURLY TOTAL		101
9:00-9:15						25	5	
9:15-9:30						18	1	
9:30-9:45			3		3	13		
9:45-10:00	3				3	22	3	
HOURLY TOTAL					6	HOURLY TOTAL		87
10:00-10:15						16	2	
10:15-10:30			2		2	18	3	1
10:30-10:45	3				3	16	2	1
10:45-11:00						16	2	4
HOURLY TOTAL					5	HOURLY TOTAL		81
11:00-11:15						16	3	11
11:15-11:30			2		2	15	5	3
11:30-11:45						17	2	4
11:45-12:00			1		1	16	1	
HOURLY TOTAL					3	HOURLY TOTAL		93
12:00-12:15			1		1	15		1
12:15-12:30	1				1	20	1	3
12:30-12:45						14		1
12:45-1:00	5	2	2		9	15	1	2
HOURLY TOTAL					11	HOURLY TOTAL		73
1:00-1:15						15	1	
1:15-1:30			2		2	18	4	
1:30-1:45	1				1	6	7	1
1:45-2:00	1		1		2	20	3	
HOURLY TOTAL					5	HOURLY TOTAL		75