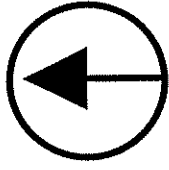


Date : 6/11/97 AM 6/12/97 PM

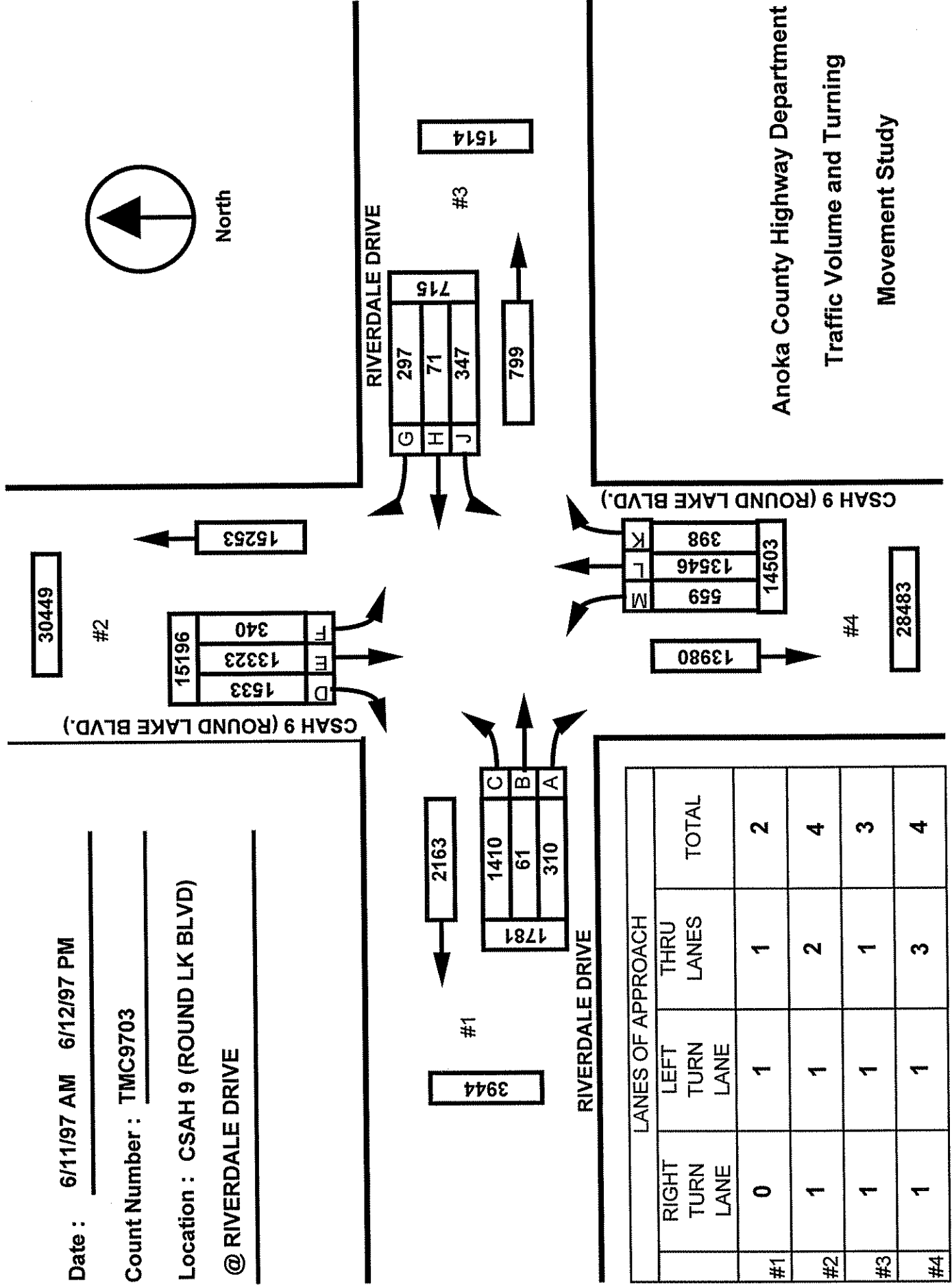
Count Number : TMC9703

Location : CSAH 9 (ROUND LK BLVD)

@ RIVERDALE DRIVE



North



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Weather : Sunny, Clear 75
 Counted by: Marge and Janelle
 Board # :
 Ther :

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Study Name: TMC9703
 Site Code : 97030202
 Start Date: 06/12/97
 Page : 1

Vehicle group 1

Start Time	CSAH 9 (Round Lake Blv Southbound)				Riverdale Dr. Westbound				CSAH 9 (Round Lake Blv Northbound)				Riverdale Dr. Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
06/12/97																			
06:00	3	354	10	13	14	0	2	0	8	39	1	4	3	0	0	0	451	17	434
06:15	2	327	8	9	12	1	3	0	8	48	1	8	1	0	2	1	431	18	413
06:30	2	381	7	10	10	0	2	0	3	50	2	6	1	0	1	0	475	16	459
06:45	4	319	13	10	19	1	3	0	5	65	5	4	2	0	2	1	453	15	438
Hour	11	1381	38	42	55	2	10	0	24	202	9	22	7	0	5	2	1810	66	1744
07:00	0	368	2	7	8	1	2	0	10	57	1	3	1	1	0	0	461	10	451
07:15	2	325	1	4	22	0	3	0	2	86	3	5	3	0	2	1	459	10	449
07:30	3	389	8	6	13	0	4	0	1	92	5	5	1	0	1	0	528	11	517
07:45	5	295	14	6	10	1	0	0	2	97	3	4	3	0	1	1	442	11	431
Hour	10	1377	25	23	53	2	9	0	15	332	12	17	8	1	4	2	1890	42	1848
08:00	1	228	7	3	12	1	5	0	8	72	2	5	2	0	5	0	351	8	343
08:15	4	203	8	13	8	0	4	1	4	87	0	3	3	0	1	0	339	17	322
08:30	4	208	10	4	6	2	6	0	1	88	1	8	5	1	3	2	349	14	335
08:45	1	208	26	8	9	2	3	0	7	123	5	7	5	1	0	1	406	16	390
Hour	10	847	51	28	35	5	18	1	20	370	8	23	15	2	9	3	1445	55	1390
09:00	3	184	19	6	3	0	3	0	4	108	5	7	2	0	1	0	345	13	332
09:15	1	161	16	5	7	2	4	0	0	86	2	3	8	0	1	0	296	8	288
09:30	5	217	19	7	6	3	2	0	3	105	3	5	14	0	2	0	391	12	379
09:45	1	202	36	6	3	0	3	0	11	133	3	8	13	1	1	0	421	14	407
Hour	10	764	90	24	19	5	12	0	18	432	13	23	37	1	5	0	1453	47	1406
10:00	1	191	29	4	2	1	2	0	5	135	6	9	13	1	2	0	401	13	388
10:15	2	187	36	6	4	5	6	1	9	126	4	8	19	2	4	0	419	15	404
10:30	4	159	19	9	2	1	3	0	11	162	7	8	10	0	6	3	404	20	384
10:45	3	173	32	8	6	1	4	0	13	128	8	10	18	1	5	0	410	18	392
Hour	10	710	116	27	14	8	15	1	38	551	25	35	60	4	17	3	1634	66	1568
11:00	0	169	31	5	3	1	3	0	10	174	5	10	19	1	2	2	435	17	418
11:15	4	198	22	10	2	2	5	0	6	156	5	6	24	0	7	1	448	17	431
11:30	8	187	35	9	4	0	3	0	14	192	4	4	19	4	2	1	486	14	472
11:45	5	174	27	5	5	1	3	0	13	190	4	10	25	2	3	0	467	15	452
Hour	17	728	115	29	14	4	14	0	43	712	18	30	87	7	14	4	1836	63	1773
12:00	4	190	30	10	4	0	3	0	15	187	7	4	34	0	7	1	496	15	481
12:15	6	183	28	5	6	2	3	0	11	192	6	5	28	5	7	0	487	10	477
12:30	8	223	23	11	4	1	8	0	10	188	8	2	38	2	6	1	533	14	519
12:45	7	215	32	5	8	2	8	0	17	185	4	9	25	1	3	1	522	15	507
Hour	25	811	113	31	22	5	22	0	53	752	25	20	125	8	23	3	2038	54	1984

Weather :Sunny, Clear 75
 Counted by:Marge and Janelle
 Board # :
 Ther :

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Study Name: TMC9703
 Site Code : 97030202
 Start Date: 06/12/97
 Page : 3

Vehicle group 1

Start Time	CSAH 9 (Round Lake Blv Southbound)				Riverdale Dr. Westbound				CSAH 9 (Round Lake Blv Northbound)				Riverdale Dr. Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
20:00	10	178	19	1	6	3	7	1	9	239	6	3	33	0	8	0	523	5	518
20:15	10	126	25	3	1	0	3	0	7	255	10	2	30	0	7	0	479	5	474
20:30	10	196	31	4	4	0	11	1	12	226	4	3	27	1	4	2	536	10	526
20:45	4	153	20	1	4	1	6	0	8	237	8	1	34	1	4	0	482	2	480
Hour	34	653	95	9	15	4	27	2	36	957	28	9	124	2	23	2	2020	22	1998
21:00	8	160	12	0	6	2	3	0	17	241	13	0	24	1	6	0	493	0	493
21:15	5	151	12	2	2	1	2	0	10	218	3	4	24	1	5	1	441	7	434
21:30	2	111	7	0	3	1	1	0	8	201	5	0	14	1	1	0	355	0	355
21:45	7	131	8	1	7	0	4	0	6	156	8	0	22	2	1	0	353	1	352
Hour	22	553	39	3	18	4	10	0	41	816	29	4	84	5	13	1	1642	8	1634
Total	340	13323	1533	332	347	71	297	4	559	13546	398	340	1410	61	310	26	32897	702	32195
% Apr.	2.1	85.7	9.8	2.1	48.2	9.8	41.3	0.5	3.7	91.2	2.6	2.2	78.0	3.3	17.1	1.4	-	-	-
% Int.	1.0	40.4	4.6	1.0	1.0	0.2	0.9	-	1.6	41.1	1.2	1.0	4.2	0.1	0.9	-	-	-	-

Weather : Sunny, Clear 75
 Counted by: Marge and Janelle
 Board # :
 Ther :

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Study Name: TMC9703
 Site Code : 97030202
 Start Date: 06/12/97
 Page : 2

Vehicle group 1

Start Time	CSAH 9 (Round Lake Blv Southbound)				Riverdale Dr. Westbound				CSAH 9 (Round Lake Blv Northbound)				Riverdale Dr. Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
13:00	4	180	32	3	7	1	3	0	7	189	3	9	20	0	6	1	465	13	452
13:15	6	201	28	6	7	0	6	0	9	196	3	6	28	1	7	0	504	12	492
13:30	7	173	32	7	2	0	2	0	9	229	1	11	31	3	16	0	523	18	505
13:45	3	198	28	5	3	1	3	0	7	193	1	8	39	1	7	1	498	14	484
Hour	20	752	120	21	19	2	14	0	32	807	8	34	118	5	36	2	1990	57	1933
14:00	5	154	22	7	5	2	3	0	7	200	5	4	29	1	6	0	450	11	439
14:15	5	182	19	6	2	1	2	0	7	192	2	7	17	1	6	0	449	13	436
14:30	4	197	26	7	2	4	0	0	5	193	1	5	25	2	2	0	473	12	461
14:45	7	204	22	5	2	0	2	0	5	184	6	7	18	5	5	0	472	12	460
Hour	21	737	89	25	11	7	7	0	24	769	14	23	89	9	19	0	1844	48	1796
15:00	3	196	32	8	2	0	1	0	7	297	3	6	19	0	3	1	578	15	563
15:15	6	184	23	6	4	0	8	0	8	455	4	16	38	0	11	0	763	22	741
15:30	4	171	25	7	3	0	4	0	15	335	4	6	28	0	9	0	611	13	598
15:45	10	182	34	2	4	1	9	0	8	385	28	8	38	1	5	2	717	12	705
Hour	23	733	114	23	13	1	22	0	38	1472	39	36	123	1	28	3	2669	62	2607
16:00	9	214	26	4	1	4	8	0	7	395	12	7	26	0	4	0	717	11	706
16:15	1	184	18	1	4	2	4	0	18	359	9	5	36	2	9	0	652	6	646
16:30	7	205	30	3	5	0	9	0	13	379	7	4	25	0	7	0	694	7	687
16:45	6	219	38	4	5	1	6	0	3	433	5	3	30	0	5	0	758	7	751
Hour	23	822	112	12	15	7	27	0	41	1566	33	19	117	2	25	0	2821	31	2790
17:00	7	199	35	2	2	1	4	0	11	400	8	3	27	1	6	0	706	5	701
17:15	11	217	33	3	5	1	11	0	11	381	17	4	44	0	5	0	743	7	736
17:30	10	229	33	5	2	4	6	0	11	409	9	4	48	3	8	0	781	9	772
17:45	4	212	35	4	9	1	15	0	8	362	15	10	41	1	5	0	722	14	708
Hour	32	857	136	14	18	7	36	0	41	1552	49	21	160	5	24	0	2952	35	2917
18:00	8	199	40	0	8	0	7	0	14	353	14	5	36	0	4	0	688	5	683
18:15	9	210	31	3	4	3	6	0	17	329	16	2	27	2	7	0	666	5	661
18:30	12	212	28	5	2	1	2	0	9	293	12	4	39	0	12	0	631	9	622
18:45	5	234	42	7	5	1	11	0	11	297	8	2	32	1	11	0	667	9	658
Hour	34	855	141	15	19	5	26	0	51	1272	50	13	134	3	34	0	2652	28	2624
19:00	9	183	43	3	2	0	6	0	11	263	8	3	37	3	6	1	578	7	571
19:15	7	178	38	2	2	2	7	0	6	244	2	4	29	0	10	0	531	6	525
19:30	13	175	37	1	1	1	4	0	8	236	13	1	24	2	11	0	527	2	525
19:45	9	207	21	0	2	0	11	0	19	241	15	3	32	1	4	0	565	3	562
Hour	38	743	139	6	7	3	28	0	44	984	38	11	122	6	31	1	2201	18	2183

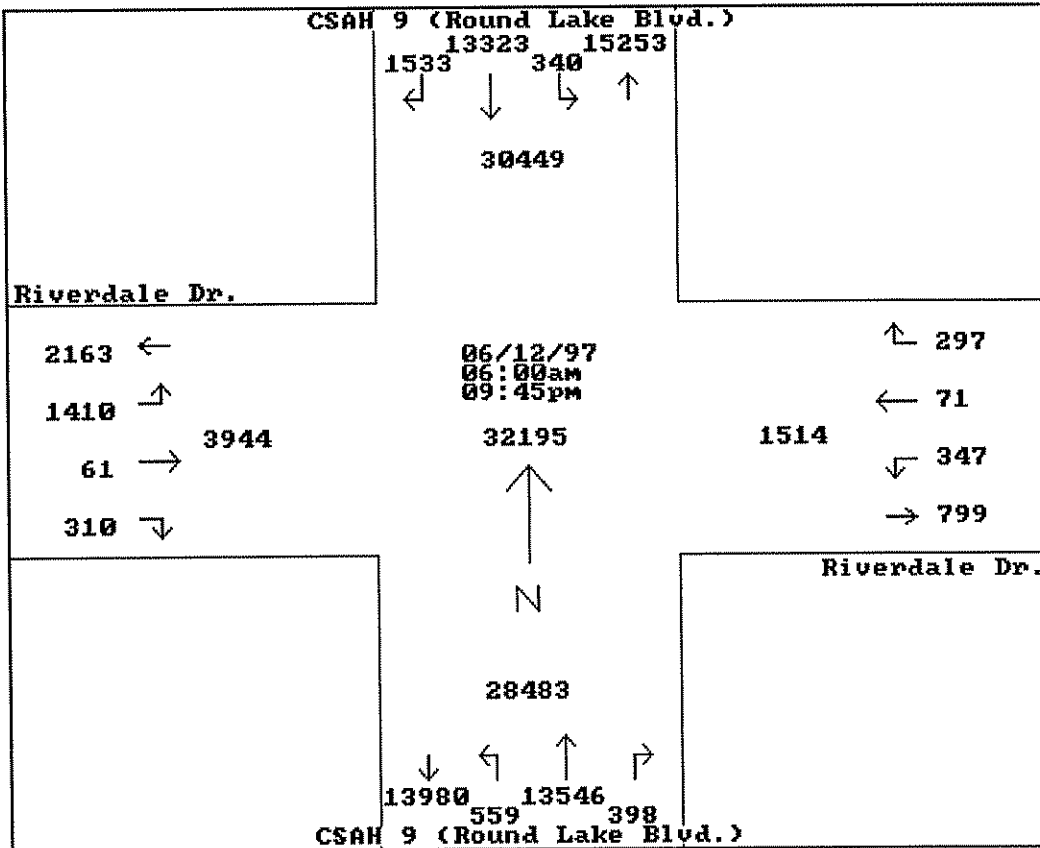
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Study Name: TMC9703
Site Code : 97030202
Start Date: 06/12/97

Weather :
Counted by:
Board # :
Other :

From North: CSAH 9 (Round Lake Blvd.)
From East: Riverdale Dr.
From South: CSAH 9 (Round Lake Blvd.)
From West: Riverdale Dr.



Major Street Approaches:

Northbound:

CSAH 9 (Round Lake Blvd.)
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9703.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/12/97
 Number of Lanes: 2
 Approach Speed: 45
 Total Approach Traffic: 14503

Southbound:

CSAH 9 (Round Lake Blvd.)
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9703.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/12/97
 Number of Lanes: 2
 Approach Speed: 45
 Total Approach Traffic: 15196

Minor Street Approaches:

Eastbound:

Riverdale Dr.
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9703.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/12/97
 Number of Lanes: 2
 Approach Speed: 0
 Total Approach Traffic: 1781

Westbound:

Riverdale Dr.
 Data File: C:\APPS\PETRA2\DATAFILE\TMC9703.PDF
 Count Type: IMC. Channel: 0. Count Date: 6/12/97
 Number of Lanes: 2
 Approach Speed: 0
 Total Approach Traffic: 715

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

Hour	Main	Side	Warrant 1	Warrant 2	Warrant 8
Begin	(Total)	Vol. Dir. Rank	Meets? Criteria	Meets? Criteria	Meets? Criteria
0	0	0 W 17	140	70	112
1	0	0 W 18	140	70	112
2	0	0 W 19	140	70	112
3	0	0 W 20	140	70	112
4	0	0 W 21	140	70	112
5	0	0 W 22	140	70	112
6	1665	67 W 13	MAIN 140	MAIN 70	MAIN 112
7	1771	64 W 14	MAIN 140	MAIN 70	MAIN 112
8	1306	58 W 15	MAIN 140	MAIN 70	MAIN 112
9	1327	43 E 16	MAIN 140	MAIN 70	MAIN 112
10	1450	81 E 12	MAIN 140	--BOTH-- 70	MAIN 112
11	1633	108 E 10	MAIN 140	--BOTH-- 70	MAIN 112
12	1779	156 E 5	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
13	1739	159 E 3	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
14	1654	117 E 9	MAIN 140	--BOTH-- 70	--BOTH-- 112
15	2419	152 E 6	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
16	2597	144 E 8	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
17	2667	189 E 1	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
18	2403	171 E 2	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
19	1986	159 E 4	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
20	1803	149 E 7	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
21	1500	102 E 11	MAIN 140	--BOTH-- 70	MAIN 112
22	0	0 W 23	140	70	112
23	0	0 W 24	140	70	112

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

SATISFIED for 8 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

SATISFIED for 12 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: 2917.

- 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 9 hours. Criteria--Main: 504; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

SATISFIED for 12 hours.

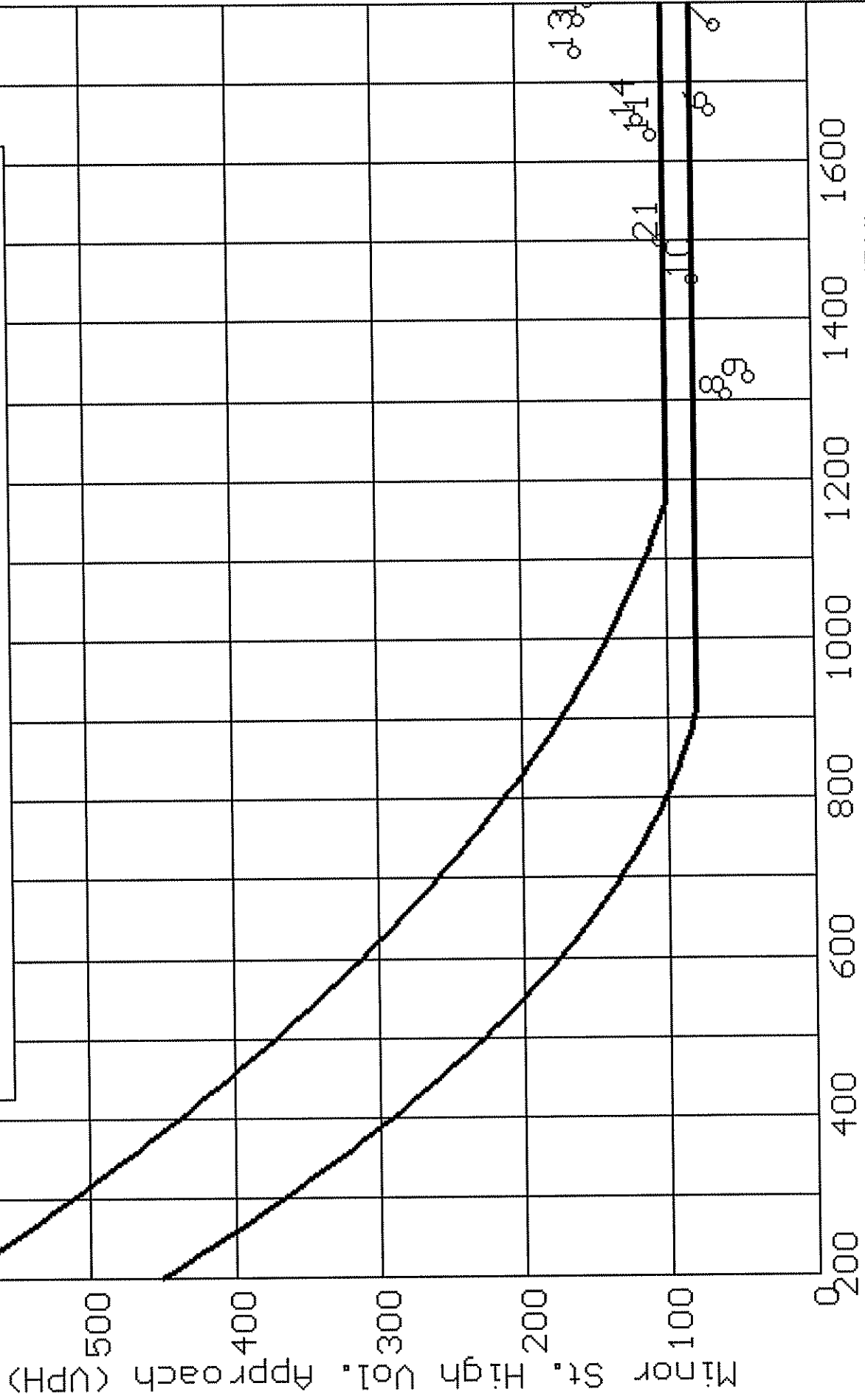
Warrant 10 - Peak Hour Delay

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 11 hours.



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

Major St. Total of Both Approaches (VPH)



NORTH

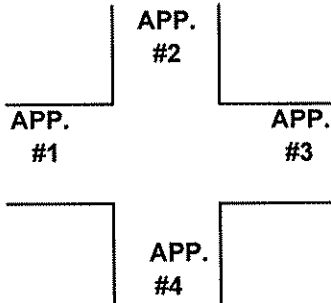
APP. #1=SB CSAH 9
(ROUND LAKE BLVD)
APP. #2 =WB
RIVERDALE DRIVE
APP. #3=NB CSAH 9
(ROUND LAKE BLVD)
APP. #4=EB
RIVERDALE DRIVE

COUNT LOCATION:

TMC 9703 CSAH 9 (ROUND LAKE
BLVD) @ RIVERDALE DRIVE

DATE:

6/12/97



- 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	1				1	16		1
6:15-6:30	1				1	12		4
6:30-6:45	1				1	14		1
6:45-7:00						13		1
HOURLY TOTAL					3	HOURLY TOTAL		62
7:00-7:15		1			1	10		
7:15-7:30	2	1		1	4	12	1	
7:30-7:45		1	1		2	7		2
7:45-8:00		3			3	10		
HOURLY TOTAL					10	HOURLY TOTAL		42
8:00-8:15						6		
8:15-8:30						14		1
8:30-8:45		2			2	14		
8:45-9:00						15		2
HOURLY TOTAL					2	HOURLY TOTAL		52
9:00-9:15	1				1	12		
9:15-9:30						9		
9:30-9:45						14	1	1
9:45-10:00						15		
HOURLY TOTAL					1	HOURLY TOTAL		52
10:00-10:15		4			4	13		
10:15-10:30	1				1	15	1	
10:30-10:45				2	2	21		
10:45-11:00		1		4	5	19		
HOURLY TOTAL					12	HOURLY TOTAL		69
11:00-11:15	2	1	1		4	14	1	
11:15-11:30		1			1	14	1	1
11:30-11:45		3				10		
11:45-12:00		2			2	15		
HOURLY TOTAL					7	HOURLY TOTAL		56
12:00-12:15		2			2	15		
12:15-12:30				1	1	11		
12:30-12:45						12	1	
12:45-1:00						13		
HOURLY TOTAL					3	HOURLY TOTAL		52
1:00-1:15		1		1	2	16		
1:15-1:30		1			1	11		1
1:30-1:45						15	1	
1:45-2:00		3		1	4	13		
HOURLY TOTAL					7	HOURLY TOTAL		57



NORTH

COUNT LOCATION: TMC 9703 CSAH 9 (ROUND LAKE BLVD) @ RIVERDALE DRIVE

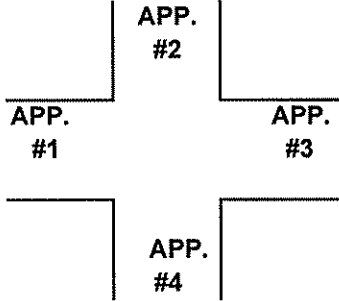
DATE: 6/12/97

APP. #1=SB CSAH 9
(ROUND LAKE BLVD)

APP. #2 =WB
RIVERDALE DRIVE

APP. #3=NB CSAH 9
(ROUND LAKE BLVD)

APP. #4=EB
RIVERDALE DRIVE



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
2:00-2:15PM						9		1
2:15-2:30				1	1	12		3
2:30-2:45	5				5	11		
2:45-3:00			2		2	11		2
HOURLY TOTAL					8	HOURLY TOTAL		49
3:00-3:15	2				2	13		1
3:15-3:30	2			1	3	19		
3:30-3:45	3	6			9	16		
3:45-4:00						4	3	1
HOURLY TOTAL					14	HOURLY TOTAL		57
4:00-4:15	3	4			7	11		
4:15-4:30		4	2	1	7	6		
4:30-4:45						6		1
4:45-5:00			1		1	6		1
HOURLY TOTAL					15	HOURLY TOTAL		31
5:00-5:15				1	1	4	1	
5:15-5:30		6			6	5		1
5:30-5:45		5		2	7	5		2
5:45-6:00						14		
HOURLY TOTAL					14	HOURLY TOTAL		32
6:00-6:15	1	2		2	5	6		
6:15-6:30	4	2	3	1	10	3		2
6:30-6:45						8	1	
6:45-7:00	1	5		1	7	7		2
HOURLY TOTAL					22	HOURLY TOTAL		29
7:00-7:15						6	1	
7:15-7:30		3			3	5		1
7:30-7:45						4		
7:45-8:00						4		
HOURLY TOTAL					3	HOURLY TOTAL		21
8:00-8:15		5			5	4		
8:15-8:30		1			1	5		
8:30-8:45	6	2			8	11		
8:45-9:00			2		2	1		
HOURLY TOTAL					16	HOURLY TOTAL		21
9:00-9:15		1		3	4			
9:15-9:30		1	4	2	7	5	1	
9:30-9:45								
9:45-10:00						1		
HOURLY TOTAL					11	HOURLY TOTAL		7