

Collection Period : 6 AM - 7 PM

EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	1	2	3	6
#2	1	2	1	4
#3	1	2	3	6
#4	1	2	1	4

Date : 10/30/18

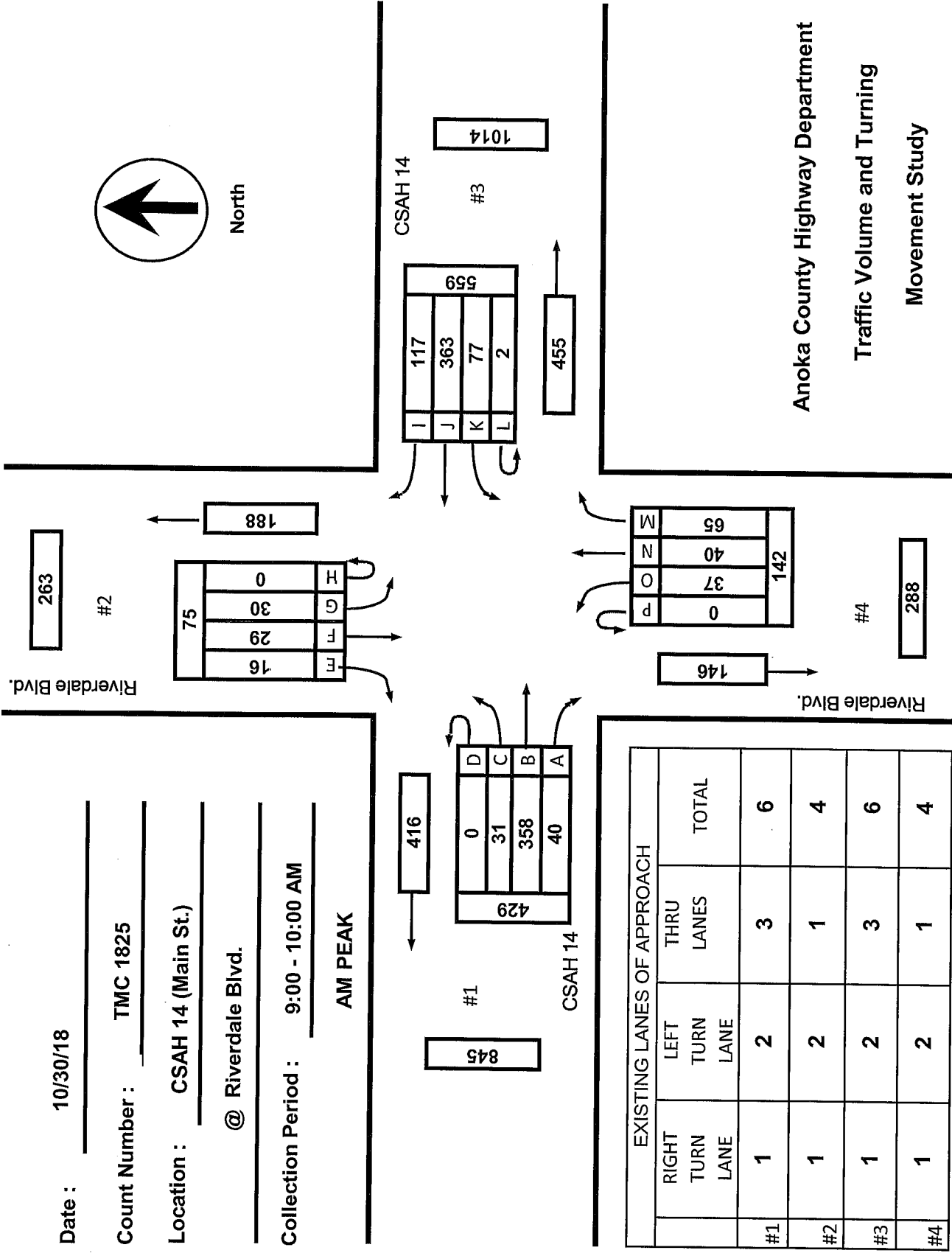
Count Number : TMC 1825

Location : CSAH 14 (Main St.)

@ Riverdale Blvd.

Collection Period : 9:00 - 10:00 AM

AM PEAK



Anoka County Highway Department
Traffic Volume and Turning
Movement Study

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

Date : 10/30/18

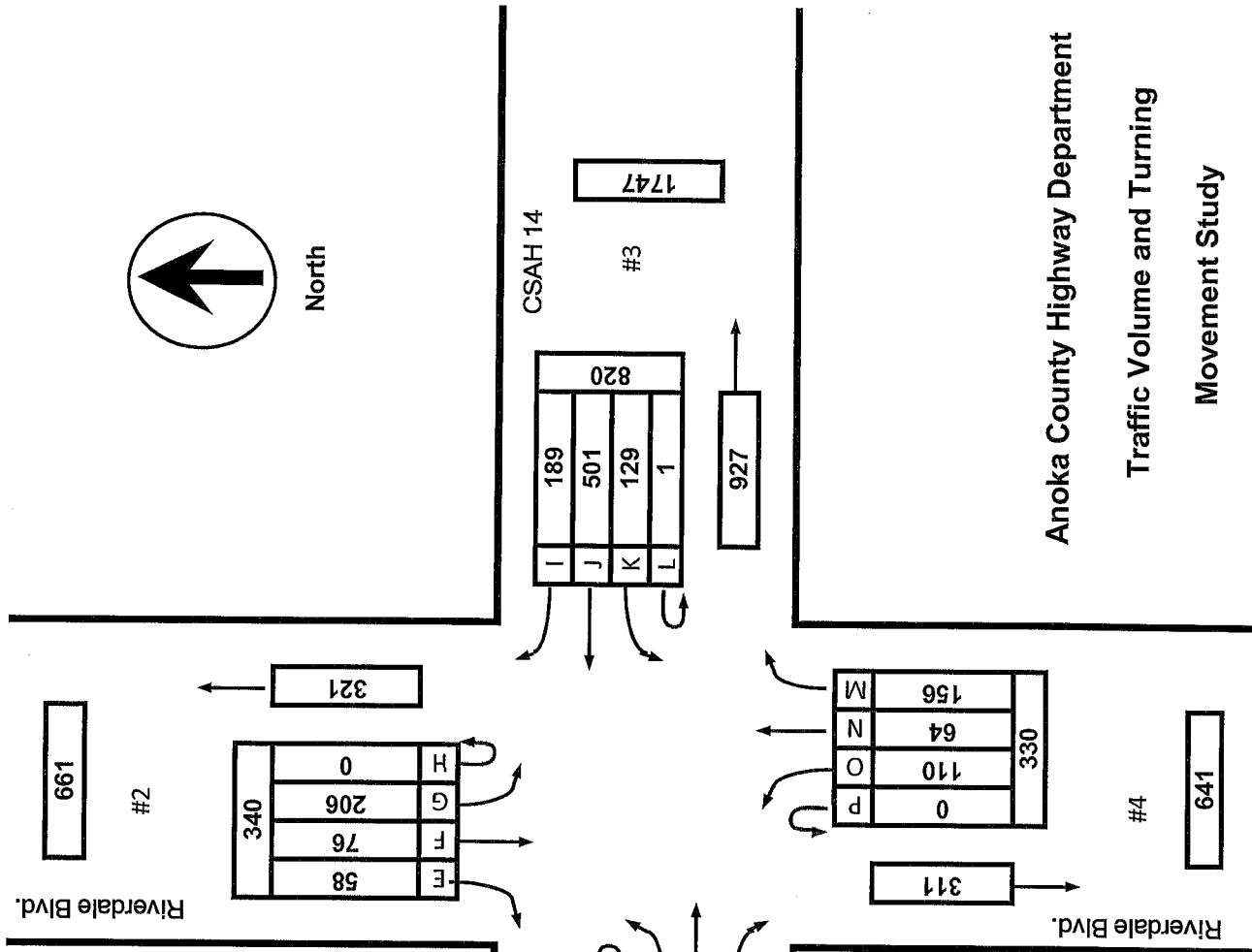
Count Number : TMC 1825

Location : CSAH 14 (Main St.)

@ Riverdale Blvd.

Collection Period : 11:45 AM - 12:45 PM

MID PEAK



EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	1	2	3	6
#2	1	2	1	4
#3	1	2	3	6
#4	1	2	1	4

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

Date : 10/30/18

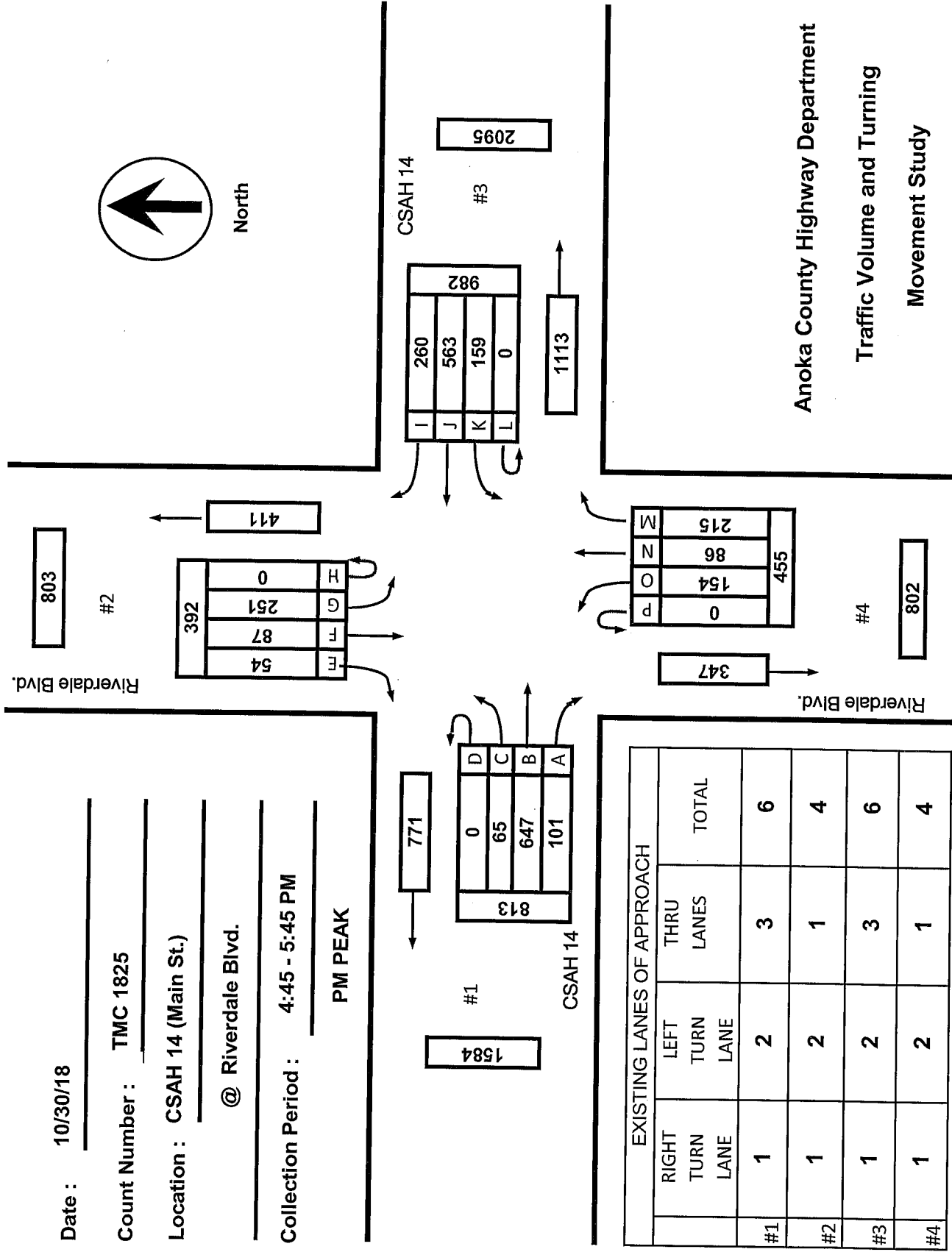
Count Number : TMC 1825

Location : CSAH 14 (Main St.)

@ Riverdale Blvd.

Collection Period : 4:45 - 5:45 PM

PM PEAK





File Name : TMC 1825
Site Code :
Start Date : 10/30/2018
Page No : 1

Groups Printed- Cars + - Trucks																							
Riversdale Blvd. Southbound						CSAH 14 Westbound						Riversdale Blvd. Northbound						CSAH 14 Eastbound					
Start Time	UTm	Left	Thru	Right	Peds	App. Total	UTm	Left	Thru	Right	Peds	App. Total	UTm	Left	Thru	Right	Peds	App. Total	Exch. Total	Inclu. Total	Int. Total		
06:00	0	1	0	0	0	1	0	0	51	2	0	53	0	1	49	3	0	53	0	114	114		
06:15	0	0	0	1	0	1	0	0	101	2	0	103	0	2	0	55	2	0	57	0	166		
06:30	0	0	0	2	0	2	1	1	118	8	0	128	0	1	0	4	0	5	1	66	166		
06:45	0	0	0	1	0	1	0	3	86	2	0	91	0	0	0	85	4	0	62	0	197		
Total	0	1	0	4	0	5	1	4	356	14	0	375	0	4	1	18	0	6	0	187	187		
07:00	0	2	0	1	0	3	0	5	84	3	0	92	0	2	0	3	0	23	0	664	664		
07:15	0	1	0	3	0	4	1	6	113	2	0	122	0	1	0	1	0	5	0	214	214		
07:30	0	0	0	1	0	1	0	1	154	4	0	159	0	2	0	1	0	2	0	233	233		
07:45	0	0	1	1	0	2	0	6	107	5	0	118	0	3	1	103	2	0	106	0	269		
Total	0	3	1	6	0	10	1	18	458	14	0	491	0	8	1	8	0	7	0	227	227		
08:00	0	1	2	2	0	5	0	3	101	3	0	107	0	4	1	8	0	17	0	943	943		
08:15	0	4	1	0	0	5	0	6	107	3	0	116	0	7	1	5	0	13	0	212	212		
08:30	0	2	1	4	0	7	0	14	101	14	0	129	0	3	2	4	0	13	0	201	201		
08:45	0	5	2	2	0	9	0	5	76	12	0	93	0	9	3	11	0	9	0	235	235		
Total	0	12	6	8	0	26	0	28	385	32	0	445	0	23	7	28	0	23	0	220	220		
09:00	0	8	3	2	0	13	1	16	89	18	2	124	0	7	6	10	1	58	0	868	868		
09:15	0	7	10	2	0	19	1	24	87	26	0	138	0	11	7	17	0	23	0	256	260		
09:30	0	6	10	6	0	22	0	18	97	40	0	155	0	10	10	24	0	35	0	306	306		
09:45	0	9	6	6	0	21	0	19	90	33	0	142	0	9	17	14	0	44	0	326	326		
Total	0	30	29	16	0	75	2	77	363	117	2	559	0	37	40	65	1	40	0	317	317		
10:00	0	18	7	4	0	29	1	16	81	43	0	141	0	22	11	24	0	142	0	1205	1209		
10:15	0	35	12	11	0	58	0	16	88	43	0	147	0	22	109	12	0	57	0	370	370		
10:30	0	33	14	13	0	60	0	20	123	51	0	194	0	13	110	12	0	43	0	380	380		
10:45	0	54	17	16	0	87	0	35	100	37	0	172	0	13	104	16	0	51	0	438	439		
Total	0	140	50	44	0	234	1	87	392	174	0	654	0	64	418	58	0	50	0	441	441		
11:00	0	39	14	10	0	63	0	23	95	40	0	158	0	27	24	34	0	201	1	1629	1630		
11:15	0	45	13	15	0	73	0	37	131	51	0	219	0	13	116	19	0	85	0	454	454		
11:30	0	42	18	7	0	67	0	32	138	45	0	215	0	15	113	16	0	69	0	506	506		
11:45	0	62	17	15	0	94	0	32	127	47	0	206	0	13	112	16	0	95	0	518	518		
Total	0	188	62	47	0	297	0	124	491	183	0	798	0	110	73	145	0	79	0	573	573		
																		328	2	61	2051		
																		0	628	0	2051		



Study Conducted By: Andrea

Page No : 2

Groups Printed- Cars +- Trucks																																											
Riversdale Blvd.											CSAH 14																																
Southbound											Westbound											Northbound											Eastbound										
Start Time	UTm	Left	Thru	Right	Peds	App. Total	UTm	Left	Thru	Right	Peds	App. Total	UTm	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total																						
12:00	0	40	23	10	0	73	0	27	113	51	0	191	0	30	19	49	0	98	0	152	30	0	196																				
12:15	0	48	19	19	0	86	0	32	139	53	0	224	0	28	13	33	0	74	0	19	129	29	0	177																			
12:30	0	56	17	14	0	87	1	38	122	38	0	199	0	29	15	35	0	79	0	15	137	20	0	172																			
12:45	0	49	18	12	0	79	0	24	131	38	1	193	0	24	9	41	0	74	1	10	127	8	0	146																			
Total	0	193	77	55	0	325	1	121	505	180	1	807	0	111	56	158	0	325	1	58	545	87	0	691																			
13:00	0	42	15	17	0	74	0	28	108	51	0	187	0	36	10	41	0	87	1	18	128	24	1	171																			
13:15	0	48	21	10	0	79	0	31	113	53	0	197	0	24	14	35	0	73	0	12	131	21	0	164																			
13:30	0	59	26	13	1	98	0	22	111	49	0	182	0	22	15	39	0	76	0	13	130	23	0	166																			
13:45	0	50	15	13	0	78	0	20	98	49	1	167	0	24	12	32	0	68	0	11	155	19	0	185																			
Total	0	199	77	53	1	329	0	101	430	202	1	733	0	106	51	147	0	304	1	54	544	87	1	686																			
14:00	0	60	18	7	0	85	0	30	117	48	0	195	0	24	11	34	0	69	0	13	148	21	1	182																			
14:15	0	43	19	14	0	76	0	23	106	45	0	174	0	30	8	38	0	76	0	17	124	18	0	159																			
14:30	0	55	16	26	0	97	0	48	149	48	0	245	0	21	3	35	0	59	0	11	134	19	1	164																			
14:45	0	48	14	15	0	77	1	18	113	48	1	180	0	27	21	42	0	90	0	17	144	19	0	180																			
Total	0	206	67	62	0	335	1	119	485	189	1	794	0	102	43	149	0	294	0	58	550	77	2	685																			
15:00	0	51	11	13	0	75	0	23	117	47	0	187	0	31	26	24	0	81	0	23	193	20	0	236																			
15:15	0	44	22	7	0	73	0	25	135	43	0	203	0	33	12	30	0	75	0	21	144	24	1	189																			
15:30	0	58	27	18	0	103	0	42	136	58	0	236	0	22	13	35	0	70	0	18	171	28	1	217																			
15:45	0	58	10	16	0	84	1	36	129	49	0	215	0	29	17	48	0	94	0	17	158	18	0	193																			
Total	0	211	70	54	0	335	1	126	517	197	0	841	0	115	68	137	0	320	0	79	666	90	2	835																			
16:00	0	62	13	13	0	88	1	30	117	53	0	201	0	29	13	47	0	89	0	11	150	26	0	187																			
16:15	0	53	15	16	0	84	0	34	133	62	1	229	0	35	21	44	0	100	0	18	177	21	0	216																			
16:30	0	50	21	17	0	88	0	37	142	56	0	235	0	21	23	47	0	91	1	22	150	17	0	190																			
16:45	0	49	19	15	0	83	0	48	143	65	0	256	0	44	32	43	0	119	0	13	155	31	1	199																			
Total	0	214	68	61	0	343	1	149	535	236	1	921	0	129	89	181	0	399	1	64	632	95	1	792																			
17:00	0	69	29	13	0	111	0	36	150	63	0	249	0	37	25	64	0	126	0	16	162	24	0	202																			
17:15	0	68	23	14	1	105	0	30	130	67	0	227	0	33	8	50	0	91	0	14	195	22	0	231																			
17:30	0	65	16	12	0	93	0	45	140	65	0	250	0	40	21	58	0	119	0	22	135	24	0	181																			
17:45	1	60	17	12	0	90	2	38	150	67	0	257	0	33	16	48	0	97	0	18	135	12	1	165																			
Total	1	262	85	51	1	399	2	149	570	262	0	983	0	143	70	220	0	433	0	70	627	82	1	779																			
18:00	0	48	13	21	0	82	0	24	136	57	1	217	0	26	15	34	0	75	0	13	146	27	0	186																			
18:15	1	52	18	15	0	86	0	25	121	41	0	187	0	31	14	58	0	103	1	9	130	24	0	164																			
18:30	1	62	30	15	0	108	0	29	125	52	0	206	0	34	17	47	0	98	0	8	107	16	0	131																			
18:45	1	59	9	10	0	79	0	50	103	43	0	196	0	29	11	33	0	73	0	13	134	22	0	169																			
Total	3	221	70	61	0	355	0	128	485	193	1	806	0	120	57	172	0	349	1	43	517	89	0	650																			
											</																																



Anoka County Highway Department
Traffic Engineering Section
Traffic Volume and Turning Movement Study

Weather: Sunny & Cool
CountCAM 200
Study Conducted By: Andrea

File Name : TMC 1825
Site Code :
Start Date : 10/30/2018
Page No : 3

Groups Printed- Cars + - Trucks

	Riverdale Blvd. Southbound							CSAH 14 Westbound							Riverdale Blvd. Northbound							CSAH 14 Eastbound								
	UTrn	Left	Thru	Right	Peds	App. Total		UTrn	Left	Thru	Right	Peds	App. Total		UTrn	Left	Thru	Right	Peds	App. Total		UTrn	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
Grand Total	4	1880	662	522	2	3068		11	1231	5972	1993	7	9207		0	1073	592	1528	2	3193		7	598	6296	839	8	7740	19	23208	23227
Approch %	0.1	61.3	21.6	17				0.1	13.4	64.9	21.6				0	33.6	18.5	47.9				0.1	7.7	81.3	10.8					
Total %	0	8.1	2.9	2.2		13.2		0	5.3	25.7	8.6		39.7		0	4.6	2.6	6.6		13.8		0	2.6	27.1	3.6		33.4	0.1	99.9	
Cars +	4	1852	661	517		3036		10	1213	5796	1962		8988		0	1070	590	1512		3174		7	590	6098	830		7533	0	0	22731
% Cars +	100	98.5	99.8	99	100	98.9		90.9	98.5	97.1	98.4	100	97.5		0	99.7	99.7	99	100	99.3		100	98.7	96.9	98.9	100	97.2	0	0	97.9
Trucks	0	28	1	5	0	34		1	18	176	31	0	226		0	3	2	16	0	21		0	8	198	9	0	215	0	0	496
% Trucks	0	1.5	0.2	1	0	1.1		9.1	1.5	2.9	1.6	0	2.5		0	0.3	0.3	1	0	0.7		0	1.3	3.1	1.1	0	2.8	0	0	2.1

	Riverdale Blvd. Southbound						CSAH 14 Westbound						Riverdale Blvd. Northbound						CSAH 14 Eastbound					
Start Time	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	Int. Total			
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																								
Peak Hour for Entire Intersection Begins at 09:00																								
09:00	0	8	3	2	13	1	16	89	18	124	0	7	6	10	23	0	1	80	15	96	256			
09:15	0	7	10	2	19	1	24	87	26	138	0	11	7	17	35	0	8	98	8	114	306			
09:30	0	6	10	6	22	0	18	97	40	155	0	10	10	24	44	0	5	90	10	105	326			
09:45	0	9	6	6	21	0	19	90	33	142	0	9	17	14	40	0	17	90	7	114	317			
Total Volume	0	30	29	16	75	2	77	363	117	559	0	37	40	65	142	0	31	358	40	429	1205			
% App. Total	0	40	38.7	21.3		0.4	13.8	64.9	20.9		0	26.1	28.2	45.8		0	7.2	83.4	9.3					
PHF	.000	.833	.725	.667	.852	.500	.802	.936	.731	.902	.000	.841	.588	.677	.807	.000	.456	.913	.667	.941	.924			

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 11:45	11:45	0	62	17	15	94	0	32	127	47	206	0	23	17	39	79	1	20	146	27	194	573
	12:00	0	40	23	10	73	0	27	113	51	191	0	30	19	49	98	0	14	152	30	196	558
	12:15	0	48	19	19	86	0	32	139	53	224	0	28	13	33	74	0	19	129	29	177	561
	12:30	0	56	17	14	87	1	38	122	38	199	0	29	15	35	79	0	15	137	20	172	537
Total Volume		0	206	76	58	340	1	129	501	189	820	0	110	64	156	330	1	68	564	106	739	2229
% App. Total		0	60.6	22.4	17.1		0.1	15.7	61.1	23		0	33.3	19.4	47.3		0.1	9.2	76.3	14.3		
PHF		.000	.831	.826	.763	.904	.250	.849	.901	.892	.915	.000	.917	.842	.796	.842	.250	.850	.928	.883	.943	.973



File Name : TMC 1825
Site Code :
Start Date : 10/30/2018
Page No : 4

Rivertdale Blvd. Southbound						CSAH 14 Westbound						Rivertdale Blvd. Northbound						CSAH 14 Eastbound					
Start Time	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 14:00 to 18:45 - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 16:45																							
16:45	0	49	19	15	83	0	48	143	65	256	0	44	32	43	119	0	13	155	31	199	657		
17:00	0	69	29	13	111	0	36	150	63	249	0	37	25	64	126	0	16	162	24	202	688		
17:15	0	68	23	14	105	0	30	130	67	227	0	33	8	50	91	0	14	195	22	231	654		
17:30	0	65	16	12	93	0	45	140	65	250	0	40	21	58	119	0	22	135	24	181	643		
Total Volume	0	251	87	54	392	0	159	563	260	982	0	154	86	215	455	0	65	647	101	813	2642		
% App. Total	0	64	22.2	13.8		0	16.2	57.3	26.5		0	33.8	18.9	47.3		0	8	79.6	12.4				
PHF	.000	.909	.750	.900	.883	.000	.828	.938	.970	.959	.000	.875	.672	.840	.903	.000	.739	.829	.815		.880	960	



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Sunny & Cool
 CountCAM 200
 Study Conducted By: Andrea

File Name : TMC 1825
 Site Code :
 Start Date : 10/30/2018
 Page No : 1

Groups Printed- Trucks

Start Time	Riverdale Blvd. Southbound					CSAH 14 Westbound					Riverdale Blvd. Northbound					CSAH 14 Eastbound					Int. Total
	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	
06:00	0	1	0	0	1	0	0	1	0	1	0	0	0	1	1	0	0	5	0	5	8
06:15	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	6	0	6	9
06:30	0	0	0	0	0	1	0	1	1	3	0	0	0	0	0	0	1	3	0	4	7
06:45	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	4	0	4	8
Total	0	1	0	0	1	1	0	8	2	11	0	0	0	1	1	0	1	18	0	19	32
07:00	0	1	0	0	1	0	0	4	0	4	0	0	0	0	0	0	0	7	0	7	12
07:15	0	1	0	0	1	0	0	8	1	9	0	0	0	0	0	0	0	5	0	5	15
07:30	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	3	0	3	7
07:45	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	4	0	4	8
Total	0	2	0	0	2	0	0	20	1	21	0	0	0	0	0	0	0	19	0	19	42
08:00	0	0	0	0	0	0	0	3	1	4	0	0	0	1	1	0	0	6	1	7	12
08:15	0	1	0	0	1	0	0	6	0	6	0	0	0	0	0	0	0	3	0	3	10
08:30	0	1	0	0	1	0	0	3	2	5	0	0	0	0	0	0	0	2	0	2	8
08:45	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	5	0	5	7
Total	0	2	0	0	2	0	0	13	4	17	0	0	0	1	1	0	0	16	1	17	37
09:00	0	1	0	1	2	0	0	6	2	8	0	0	0	0	0	0	0	3	0	3	13
09:15	0	2	0	0	2	0	0	7	1	8	0	0	1	0	1	0	1	6	1	8	19
09:30	0	1	0	0	1	0	0	7	2	9	0	0	0	0	0	0	0	0	0	0	10
09:45	0	0	0	0	0	0	1	4	1	6	0	1	0	1	2	0	0	4	0	4	12
Total	0	4	0	1	5	0	1	24	6	31	0	1	1	1	3	0	1	13	1	15	54
10:00	0	1	0	0	1	0	1	2	1	4	0	0	0	0	0	0	1	4	1	6	11
10:15	0	2	0	0	2	0	1	1	1	3	0	0	0	1	1	0	0	6	0	6	12
10:30	0	0	0	0	0	0	0	7	1	8	0	0	0	0	0	0	1	5	0	6	14
10:45	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	0	0	5	1	6	11
Total	0	3	0	0	3	0	5	12	3	20	0	0	0	1	1	0	2	20	2	24	48
11:00	0	1	0	0	1	0	0	3	0	3	0	0	0	3	3	0	0	6	2	8	15
11:15	0	2	0	1	3	0	1	3	0	4	0	0	0	2	2	0	0	1	0	1	10
11:30	0	0	0	0	0	0	1	5	2	8	0	0	0	0	0	0	0	3	0	3	11
11:45	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	7	1	8	10
Total	0	4	0	1	5	0	2	12	2	16	0	0	0	5	5	0	0	17	3	20	46
12:00	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	6	0	6	10
12:15	0	1	0	0	1	0	1	1	1	3	0	0	0	0	0	0	0	1	0	1	5
12:30	0	0	0	0	0	0	0	5	1	6	0	1	0	1	2	0	0	7	0	7	15
12:45	0	0	0	1	1	0	0	6	1	7	0	1	0	0	1	0	0	2	0	2	11
Total	0	1	0	1	2	0	2	15	3	20	0	2	0	1	3	0	0	16	0	16	41
13:00	0	1	0	0	1	0	0	3	0	3	0	0	0	0	0	0	0	7	0	7	11
13:15	0	1	0	0	1	0	1	4	1	6	0	0	0	0	0	0	0	5	0	5	12
13:30	0	0	0	0	0	0	0	4	1	5	0	0	0	1	1	0	0	7	0	7	13
13:45	0	0	0	1	1	0	0	1	1	2	0	0	0	0	0	0	0	4	0	4	7
Total	0	2	0	1	3	0	1	12	3	16	0	0	0	1	1	0	0	23	0	23	43
14:00	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	1	7	0	8	12
14:15	0	2	0	0	2	0	0	4	0	4	0	0	1	1	2	0	0	1	0	1	9
14:30	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	1	0	1	3
14:45	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	4	0	4	7
Total	0	2	0	0	2	0	0	12	1	13	0	0	1	1	2	0	1	13	0	14	31
15:00	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	3	0	3	8



Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

Weather: Sunny & Cool
 CountCAM 200
 Study Conducted By: Andrea

File Name : TMC 1825
 Site Code :
 Start Date : 10/30/2018
 Page No : 2

Groups Printed- Trucks

Start Time	Riverdale Blvd. Southbound					CSAH 14 Westbound					Riverdale Blvd. Northbound					CSAH 14 Eastbound					Int. Total
	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	
15:15	0	1	0	0	1	0	1	4	0	5	0	0	0	0	0	0	0	2	0	2	8
15:30	0	0	1	0	1	0	0	1	1	2	0	0	0	0	0	0	0	5	0	5	8
15:45	0	0	0	0	0	0	1	3	1	5	0	0	0	0	0	0	1	3	0	4	9
Total	0	1	1	0	2	0	2	13	2	17	0	0	0	0	0	0	1	13	0	14	33
16:00	0	0	0	0	0	0	1	5	0	6	0	0	0	1	1	0	0	4	1	5	12
16:15	0	1	0	1	2	0	0	8	0	8	0	0	0	0	0	0	0	3	0	3	13
16:30	0	0	0	0	0	0	1	6	1	8	0	0	0	1	1	0	0	4	0	4	13
16:45	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	1	0	1	5
Total	0	1	0	1	2	0	2	23	1	26	0	0	0	2	2	0	0	12	1	13	43
17:00	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	0	1	5	0	6	10
17:15	0	2	0	0	2	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	5
17:30	0	0	0	0	0	0	0	3	0	3	0	0	0	1	1	0	0	5	1	6	10
17:45	0	0	0	0	0	0	0	1	1	2	0	0	0	1	1	0	1	2	0	3	6
Total	0	2	0	0	2	0	1	10	1	12	0	0	0	2	2	0	2	12	1	15	31
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	3	0	3	6
18:30	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	4
18:45	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	3	0	3	5
Total	0	3	0	0	3	0	2	2	2	6	0	0	0	0	0	0	0	6	0	6	15
Grand Total	0	28	1	5	34	1	18	176	31	226	0	3	2	16	21	0	8	198	9	215	496
Apprch %	0	82.4	2.9	14.7		0.4	8	77.9	13.7		0	14.3	9.5	76.2		0	3.7	92.1	4.2		
Total %	0	5.6	0.2	1	6.9	0.2	3.6	35.5	6.2	45.6	0	0.6	0.4	3.2	4.2	0	1.6	39.9	1.8	43.3	

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 1825

Study Date: 01/28/2019

Page No: 1

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 14

Number of Lanes : 2

Total Approach Volume: 7,740

Westbound: CSAH 14

Number of Lanes : 2

Total Approach Volume: 9,207

Minor Street Approaches

Northbound: Riverdale Blvd.

Number of Lanes : 1

Total Approach Volume: 3,193

Southbound: Riverdale Blvd.

Number of Lanes : 1

Total Approach Volume: 3,068

Warrant Summary (Rural Values Apply)

Warrant 1 - Eight Hour Vehicular Volumes.....Satisfied

Warrant 1A - Minimum Vehicular Volume.....Satisfied

Required volumes reached for 10 hours, 8 are needed

Warrant 1B - Interruption of Continuous Traffic.....Satisfied

Required volumes reached for 11 hours, 8 are needed

Warrant 1C - Combination of Warrants.....Satisfied

Required 1A volumes reached for 11 hours, 8 are needed

Required 1B volumes reached for 11 hours, 8 are needed

Warrant 2 - Four Hour Volumes.....Satisfied

Number of hours (11) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

Warrant 3A - Peak Hour Delay.....Not Satisfied

Approach volumes on minor street don't exceed minimums for any hour. Delay data not evaluated.

Warrant 3B - Peak Hour Volumes.....Satisfied

Volumes exceed minimums for at least one hour.

Warrant 4 - Pedestrian Volumes.....Not Evaluated

Warrant 5 - School Crossing.....Not Evaluated

Warrant 6 - Coordinated Signal System.....Not Evaluated

Warrant 7 - Crash Experience.....Not Evaluated

Warrant 8 - Roadway Network.....Not Evaluated

Warrant 9 - Intersection Near a Grade Crossing.....Not Evaluated

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 1825**

Study Date: **01/28/2019**

Page No: **2**

Warrant 1A - Minimum Volumes

Description

Intended for sites where the volume of intersecting traffic is the principal reason for consideration of a signal installation.

Summary

10 hours meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **2 or more**
Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **420**

Veh/Hr Minor = **105**

Major Road CSAH 14						Minor Road Riverdale Blvd.		
Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met?
16:45 - 17:45	813	+	982	=	1795	455	392	Yes
15:45 - 16:45	786	+	880	=	1666	374	344	Yes
14:45 - 15:45	822	+	806	=	1628	316	328	Yes
11:45 - 12:45	739	+	820	=	1559	330	340	Yes
17:45 - 18:45	646	+	867	=	1513	373	366	Yes
13:45 - 14:45	690	+	781	=	1471	272	336	Yes
12:45 - 13:45	647	+	759	=	1406	310	330	Yes
10:45 - 11:45	566	+	764	=	1330	299	290	Yes
09:45 - 10:45	522	+	624	=	1146	191	168	Yes
08:45 - 09:45	410	+	510	=	920	125	63	Yes
07:00 - 08:00	425	+	491	=	916	17	10	No
07:15 - 08:15	398	+	506	=	904	25	12	No
08:30 - 09:30	395	+	484	=	879	90	48	No
06:45 - 07:45	414	+	464	=	878	16	9	No
07:30 - 08:30	360	+	500	=	860	36	13	No
07:45 - 08:45	344	+	470	=	814	42	19	No
08:15 - 09:15	348	+	462	=	810	68	34	No
06:30 - 07:30	370	+	433	=	803	18	10	No
08:00 - 09:00	339	+	445	=	784	58	26	No
06:15 - 07:15	322	+	414	=	736	21	7	No
06:00 - 07:00	261	+	375	=	636	23	5	No
05:45 - 06:45	172	+	284	=	456	17	4	No
18:45 - 19:45	169	+	196	=	365	73	79	No
05:30 - 06:30	110	+	156	=	266	12	2	No
05:15 - 06:15	53	+	53	=	106	7	1	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 1825**

Study Date: **01/28/2019**

Page No: **3**

Warrant 1B - Interruption of Continuous Traffic

Description

Intended for sites where the volume of the major street is so heavy that traffic on the minor street suffers excessive delay or hazard.

Summary

11 hours meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **2 or more**
Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **630**

Veh/Hr Minor = **53**

Major Road CSAH 14						Minor Road Riverdale Blvd.		Met?
Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	
17:00 - 18:00	779	+	983	=	1762	433	399	Yes
16:00 - 17:00	792	+	921	=	1713	399	343	Yes
15:00 - 16:00	835	+	841	=	1676	320	335	Yes
12:00 - 13:00	691	+	807	=	1498	325	325	Yes
14:00 - 15:00	685	+	794	=	1479	294	335	Yes
18:00 - 19:00	650	+	806	=	1456	349	355	Yes
11:00 - 12:00	628	+	798	=	1426	328	297	Yes
13:00 - 14:00	686	+	733	=	1419	304	329	Yes
10:00 - 11:00	540	+	654	=	1194	201	234	Yes
09:00 - 10:00	429	+	559	=	988	142	75	Yes
08:00 - 09:00	339	+	445	=	784	58	26	Yes
07:00 - 08:00	425	+	491	=	916	17	10	No
07:15 - 08:15	398	+	506	=	904	25	12	No
06:45 - 07:45	414	+	464	=	878	16	9	No
07:30 - 08:30	360	+	500	=	860	36	13	No
07:45 - 08:45	344	+	470	=	814	42	19	No
06:30 - 07:30	370	+	433	=	803	18	10	No
06:15 - 07:15	322	+	414	=	736	21	7	No
06:00 - 07:00	261	+	375	=	636	23	5	No
05:45 - 06:45	172	+	284	=	456	17	4	No
05:30 - 06:30	110	+	156	=	266	12	2	No
05:15 - 06:15	53	+	53	=	106	7	1	No
23:00 - 00:00	0	+	0	=	0	0	0	No
23:30 - 00:30	0	+	0	=	0	0	0	No
22:30 - 23:30	0		0		0	0	0	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 1825**

Study Date: **01/28/2019**

Page No: **4**

Warrant 1C Combination of Warrants

Description

Intended for sites where the traffic volumes don't meet individual warrants but where Warrants 1A and 1B are both met to 80% of their stated values.

Summary

11 hours meet 1A minimums.
11 hours meet 1B minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **2 or more**
Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70% applied
Warrant 1A 1B
Veh/Hr Major = **336 504**

Veh/Hr Minor = **84 42**

Major Road CSAH 14					Minor Road Riverdale Blvd.			
Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1A?
16:30 - 17:30	822	+	967	=	1789	427	387	Yes
15:30 - 16:30	813	+	881	=	1694	353	359	Yes
17:30 - 18:30	696	+	911	=	1607	394	351	Yes
14:30 - 15:30	769	+	815	=	1584	305	322	Yes
11:30 - 12:30	708	+	836	=	1544	346	320	Yes
12:30 - 13:30	653	+	776	=	1429	313	319	Yes
13:30 - 14:30	692	+	718	=	1410	289	337	Yes
10:30 - 11:30	558	+	743	=	1301	255	283	Yes
09:30 - 10:30	494	+	585	=	1079	184	130	Yes
08:30 - 09:30	395	+	484	=	879	90	48	Yes
18:30 - 19:30	300	+	402	=	702	171	187	Yes
07:00 - 08:00	425		491		916	17	10	No

Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	Met1B?
16:45 - 17:45	813	+	982	=	1795	455	392	Yes
15:45 - 16:45	786	+	880	=	1666	374	344	Yes
14:45 - 15:45	822	+	806	=	1628	316	328	Yes
11:45 - 12:45	739	+	820	=	1559	330	340	Yes
17:45 - 18:45	646	+	867	=	1513	373	366	Yes
13:45 - 14:45	690	+	781	=	1471	272	336	Yes
12:45 - 13:45	647	+	759	=	1406	310	330	Yes
10:45 - 11:45	566	+	764	=	1330	299	290	Yes
09:45 - 10:45	522	+	624	=	1146	191	168	Yes
08:45 - 09:45	410	+	510	=	920	125	63	Yes
07:45 - 08:45	344	+	470	=	814	42	19	Yes
07:00 - 08:00	425		491		916	17	10	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 1825**

Study Date: **01/28/2019**

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Warrant 2 - Four Hour Volumes

Description

Intended for sites where the volume of intersecting traffic during any four hours of the day is the principal reason for consideration of a signal installation.

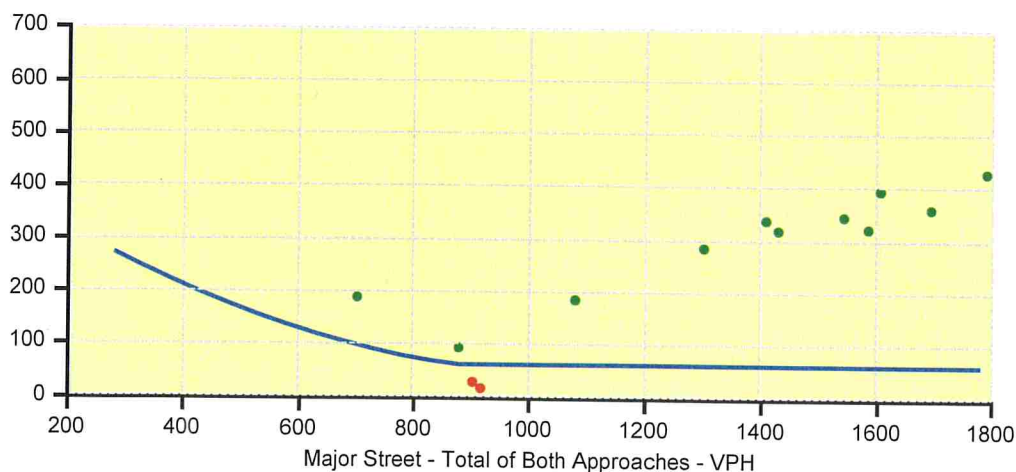
Summary

11 hours meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **2 or more**
Number of Minor Lanes = **1**

Major Road CSAH 14						Minor Road Riverdale Blvd.		Met?
Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	
16:30 - 17:30	822	+	967	=	1789	427	387	Yes
15:30 - 16:30	813	+	881	=	1694	353	359	Yes
17:30 - 18:30	696	+	911	=	1607	394	351	Yes
14:30 - 15:30	769	+	815	=	1584	305	322	Yes
11:30 - 12:30	708	+	836	=	1544	346	320	Yes
12:30 - 13:30	653	+	776	=	1429	313	319	Yes
13:30 - 14:30	692	+	718	=	1410	289	337	Yes
10:30 - 11:30	558	+	743	=	1301	255	283	Yes
09:30 - 10:30	494	+	585	=	1079	184	130	Yes
08:30 - 09:30	395	+	484	=	879	90	48	Yes
18:30 - 19:30	300	+	402	=	702	171	187	Yes
							10	No



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: **TMC 1825**

Study Date: **01/28/2019**

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Warrant 3B - Peak Hour Volumes

Description

Intended for sites where the volume of intersecting traffic during one hour of the day is the principal reason for consideration of a signal installation.

Summary

38 hours meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **2 or more**
Number of Minor Lanes = **1**

Major Road CSAH 14						Minor Road Riverdale Blvd.		Met?
Time	Major EB	+	Major WB	=	Total	Minor NB	Minor SB	
16:45 - 17:45	813	+	982	=	1795	455	392	Yes
16:30 - 17:30	822	+	967	=	1789	427	387	Yes
16:15 - 17:15	807	+	969	=	1776	436	366	Yes
17:00 - 18:00	779	+	983	=	1762	433	399	Yes
17:15 - 18:15	763	+	951	=	1714	382	370	Yes
16:00 - 17:00	792	+	921	=	1713	399	343	Yes
15:30 - 16:30	813	+	881	=	1694	353	359	Yes
15:00 - 16:00	835	+	841	=	1676	320	335	Yes
15:45 - 16:45	786	+	880	=	1666	374	344	Yes
15:15 - 16:15	786	+	855	=	1641	328	348	Yes
14:45 - 15:45	822	+	806	=	1628	316	328	Yes
							351	Yes

