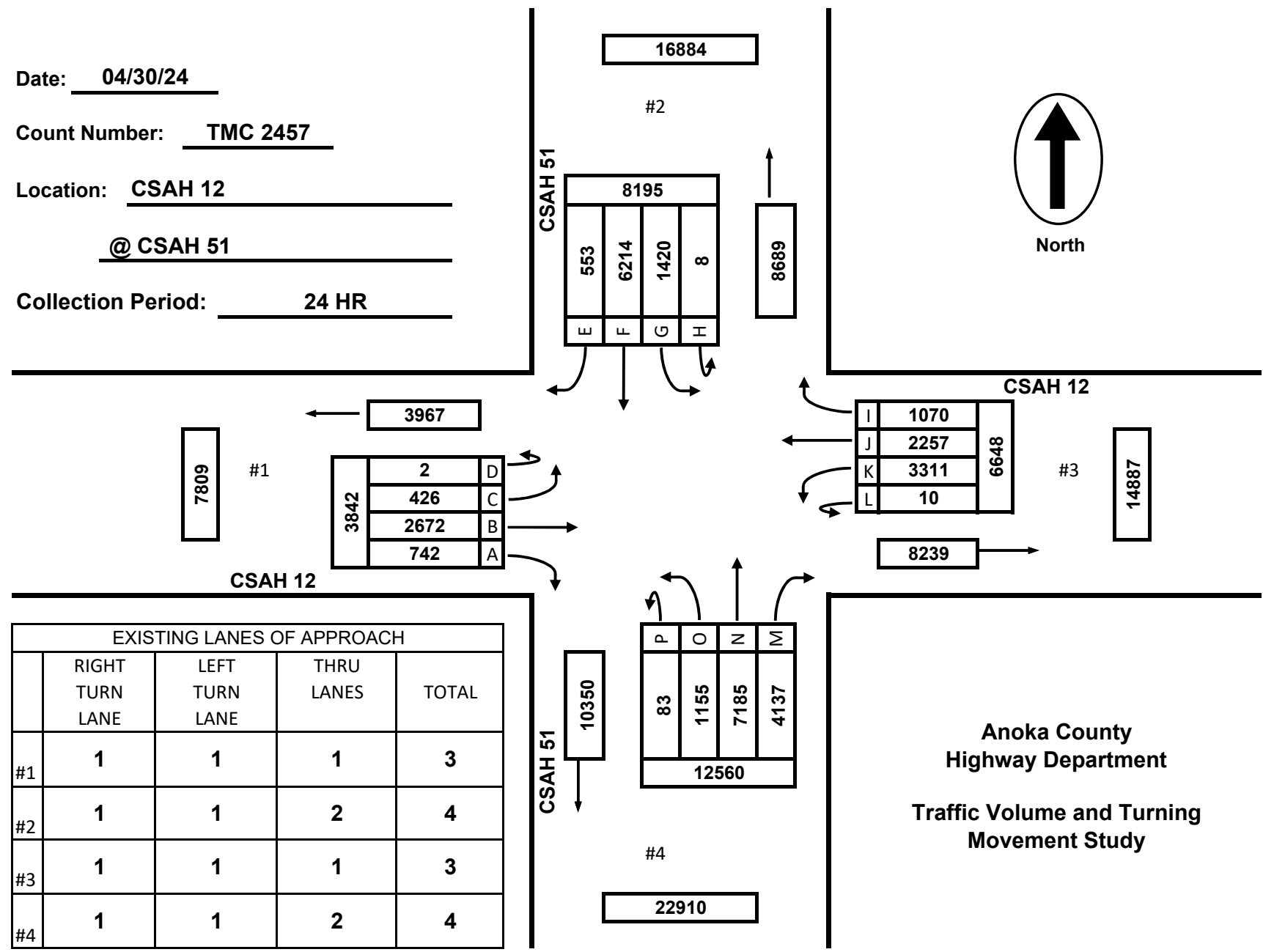
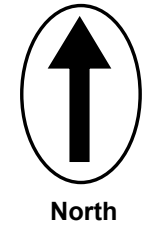


Date: 04/30/24

Count Number: TMC 2457

Location: CSAH 12
@ CSAH 51

Collection Period: 24 HR



CSAH 12

CSAH 51

CSAH 12

CSAH 51

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

Anoka County
 Highway Department
 Traffic Volume and Turning
 Movement Study

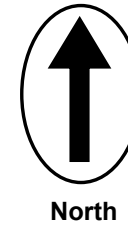
Date: 04/30/24

Count Number: TMC 2457

Location: CSAH 12
@ CSAH 51

Collection Period: 24 HR

Peak Hour: 7:00 - 8:00 AM



North

1343

#2

CSAH 51

908			
E	F	G	H
49	769	90	0

435

CSAH 12

I	89	489
J	120	
K	279	
L	1	

#3

903

414

455

#1

236

219	D	0
	C	24
	B	142
	A	53

CSAH 12

P	O	N	M
6	67	322	181
576			

#4

1683

CSAH 51

1107

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	1	1	3
#2	1	1	2	4
#3	1	1	1	3
#4	1	1	2	4

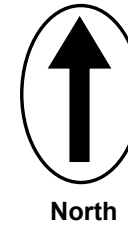
Date: 04/30/24

Count Number: TMC 2457

Location: CSAH 12
@ CSAH 51

Collection Period: 24 HR

Peak Hour: 4:30 - 5:30 PM



North

1751

#2

CSAH 51

621			
E	F	G	H
51	432	138	0

1130

CSAH 12

I	94	529
J	197	
K	238	
L	0	

#3

1326

797

703

#1

367

336	D	0
	C	54
	B	239
	A	43

CSAH 12

P	O	N	M
7	119	982	420
1528			

#4

2248

CSAH 51

720

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	1	1	3
#2	1	1	2	4
#3	1	1	1	3
#4	1	1	2	4

TMC 2457 - CSAH 12 @ CSAH 51
Blaine MN
Tuesday, April 30, 2024

Time	Southbound CSAH 51						Westbound CSAH 12						Northbound CSAH 51						Eastbound CSAH 12						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
12:00 AM	0	1	6	2	0	9	0	6	1	3	0	10	0	3	10	3	0	16	0	0	1	1	0	2	37
12:15 AM	0	1	8	1	0	10	0	2	1	0	0	3	0	0	13	2	0	15	0	0	0	2	0	2	30
12:30 AM	0	1	7	0	0	8	0	2	1	3	0	6	0	2	13	3	0	18	0	0	3	1	0	4	36
12:45 AM	0	0	0	0	0	0	0	4	2	1	0	7	1	1	6	4	0	12	0	0	3	0	0	3	22
Hourly Total	0	3	21	3	0	27	0	14	5	7	0	26	1	6	42	12	0	61	0	0	7	4	0	11	125
1:00 AM	0	2	7	0	0	9	0	3	1	2	0	6	0	1	7	3	0	11	0	0	2	0	0	2	28
1:15 AM	0	0	3	0	0	3	0	3	0	1	0	4	1	0	16	3	0	20	0	0	0	0	0	0	27
1:30 AM	0	0	8	1	0	9	0	3	0	2	1	5	1	0	10	4	0	15	0	0	0	0	0	0	29
1:45 AM	0	0	2	0	0	2	0	3	3	2	1	8	0	0	4	1	2	5	0	0	0	1	0	1	16
Hourly Total	0	2	20	1	0	23	0	12	4	7	2	23	2	1	37	11	2	51	0	0	2	1	0	3	100
2:00 AM	0	0	2	0	0	2	0	3	1	2	0	6	0	0	9	8	0	17	0	0	2	0	0	2	27
2:15 AM	0	0	7	0	0	7	0	0	0	0	0	0	0	0	11	2	0	13	0	0	2	0	0	2	22
2:30 AM	0	0	5	0	0	5	0	1	1	0	0	2	0	0	4	1	0	5	0	0	1	0	0	1	13
2:45 AM	0	2	5	0	0	7	1	2	1	1	0	5	0	0	4	3	0	7	0	0	1	0	0	1	20
Hourly Total	0	2	19	0	0	21	1	6	3	3	0	13	0	0	28	14	0	42	0	0	6	0	0	6	82
3:00 AM	0	1	5	0	0	6	0	4	0	1	0	5	0	3	4	1	0	8	0	0	1	0	0	1	20
3:15 AM	0	0	11	0	0	11	0	2	1	0	0	3	0	0	7	5	0	12	0	0	0	0	0	0	26
3:30 AM	0	2	10	0	0	12	0	3	0	1	0	4	0	0	7	5	0	12	0	0	3	2	0	5	33
3:45 AM	0	4	10	0	0	14	0	8	0	3	0	11	1	1	4	2	0	8	0	1	3	2	0	6	39
Hourly Total	0	7	36	0	0	43	0	17	1	5	0	23	1	4	22	13	0	40	0	1	7	4	0	12	118
4:00 AM	0	3	13	0	0	16	0	3	0	1	0	4	0	0	1	6	0	7	0	0	6	0	0	6	33
4:15 AM	0	5	29	3	0	37	0	4	3	0	0	7	0	0	2	6	0	8	0	1	3	1	0	5	57
4:30 AM	0	0	51	1	0	52	0	8	3	2	0	13	1	0	1	6	0	8	0	0	4	4	0	8	81
4:45 AM	0	1	36	1	0	38	0	15	5	1	0	21	0	1	5	6	0	12	0	0	11	1	0	12	83
Hourly Total	0	9	129	5	0	143	0	30	11	4	0	45	1	1	9	24	0	35	0	1	24	6	0	31	254
5:00 AM	0	5	51	1	0	57	0	15	0	2	0	17	0	3	8	7	1	18	0	2	5	2	0	9	101
5:15 AM	0	9	76	3	0	88	0	31	2	4	1	37	1	3	6	9	0	19	0	1	6	3	0	10	154
5:30 AM	0	12	98	1	0	111	1	32	4	2	1	39	0	2	12	14	0	28	0	0	15	4	0	19	197
5:45 AM	0	9	67	5	0	81	0	25	6	3	0	34	0	2	25	12	0	39	0	0	24	5	0	29	183
Hourly Total	0	35	292	10	0	337	1	103	12	11	2	127	1	10	51	42	1	104	0	3	50	14	0	67	635
6:00 AM	0	11	115	3	0	129	0	48	6	8	0	62	3	2	15	21	0	41	0	1	7	3	0	11	243
6:15 AM	0	6	130	2	0	138	0	44	10	3	0	57	1	5	24	26	0	56	0	1	11	4	0	16	267
6:30 AM	0	9	159	4	0	172	0	50	14	10	0	74	0	7	42	42	1	91	0	2	28	11	0	41	378
6:45 AM	0	23	168	7	0	198	0	59	27	11	1	97	2	4	60	39	1	105	0	2	17	9	0	28	428
Hourly Total	0	49	572	16	0	637	0	201	57	32	1	290	6	18	141	128	2	293	0	6	63	27	0	96	1316
7:00 AM	0	16	185	8	0	209	0	66	21	14	0	101	1	8	106	39	0	154	0	7	22	11	0	40	504
7:15 AM	0	26	197	8	0	231	0	68	23	45	0	136	1	10	83	40	0	134	0	8	34	17	0	59	560
7:30 AM	0	24	221	17	0	262	1	80	26	24	0	131	1	22	75	41	0	139	0	5	41	14	0	60	592
7:45 AM	0	24	166	16	0	206	0	65	50	6	0	121	3	27	58	61	0	149	0	4	45	11	1	60	536
Hourly Total	0	90	769	49	0	908	1	279	120	89	0	489	6	67	322	181	0	576	0	24	142	53	1	219	2192

**TMC 2457 - CSAH 12 @ CSAH 51
Blaine MN
Tuesday, April 30, 2024**

Time	Southbound CSAH 51						Westbound CSAH 12						Northbound CSAH 51						Eastbound CSAH 12						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
8:00 AM	0	28	143	19	0	190	0	53	53	14	0	120	1	21	61	46	2	129	0	1	40	14	0	55	494
8:15 AM	0	25	106	6	0	137	0	39	23	8	2	70	1	22	56	45	0	124	0	7	60	13	0	80	411
8:30 AM	0	11	104	9	0	124	0	71	36	18	0	125	0	9	64	47	0	120	0	7	31	10	0	48	417
8:45 AM	0	22	112	20	0	154	0	48	33	10	0	91	0	8	63	42	0	113	0	7	44	16	0	67	425
Hourly Total	0	86	465	54	0	605	0	211	145	50	2	406	2	60	244	180	2	486	0	22	175	53	0	250	1747
9:00 AM	0	21	115	17	0	153	0	42	35	8	1	85	0	17	48	39	0	104	0	10	48	21	0	79	421
9:15 AM	0	20	80	18	0	118	0	48	30	10	0	88	1	14	65	52	0	132	0	10	48	16	0	74	412
9:30 AM	0	12	75	8	0	95	0	43	26	12	0	81	1	13	58	48	0	120	0	8	34	15	0	57	353
9:45 AM	0	17	68	14	0	99	0	47	24	9	0	80	2	11	49	50	1	112	0	4	25	14	0	43	334
Hourly Total	0	70	338	57	0	465	0	180	115	39	1	334	4	55	220	189	1	468	0	32	155	66	0	253	1520
10:00 AM	0	16	56	2	0	74	0	48	36	5	0	89	1	13	48	46	1	108	0	3	23	10	0	36	307
10:15 AM	0	9	71	3	0	83	0	49	36	16	0	101	0	11	49	41	0	101	0	7	43	13	0	63	348
10:30 AM	0	16	69	6	0	91	0	40	17	11	4	68	0	15	49	66	1	130	0	2	22	11	0	35	324
10:45 AM	0	18	81	8	0	107	0	49	35	11	0	95	3	11	88	61	1	163	0	5	33	11	1	49	414
Hourly Total	0	59	277	19	0	355	0	186	124	43	4	353	4	50	234	214	3	502	0	17	121	45	1	183	1393
11:00 AM	0	21	66	3	0	90	0	60	39	14	1	113	0	15	78	49	1	142	0	11	50	7	0	68	413
11:15 AM	2	27	57	8	0	94	0	36	40	12	1	88	0	15	75	68	0	158	0	3	36	14	0	53	393
11:30 AM	0	23	67	6	0	96	1	45	37	16	0	99	2	19	79	60	0	160	0	1	27	7	0	35	390
11:45 AM	0	9	66	8	1	83	0	49	44	13	0	106	1	17	55	65	1	138	0	4	45	11	0	60	387
Hourly Total	2	80	256	25	1	363	1	190	160	55	2	406	3	66	287	242	2	598	0	19	158	39	0	216	1583
12:00 PM	0	19	52	4	0	75	0	61	37	14	0	112	0	12	82	58	1	152	0	9	38	6	0	53	392
12:15 PM	0	21	74	8	0	103	0	36	34	12	0	82	1	16	83	71	0	171	0	4	44	16	0	64	420
12:30 PM	0	19	74	3	2	96	1	56	37	11	2	105	1	21	72	62	3	156	0	6	33	12	0	51	408
12:45 PM	2	22	72	10	0	106	0	53	48	10	0	111	1	12	86	57	0	156	0	8	46	13	2	67	440
Hourly Total	2	81	272	25	2	380	1	206	156	47	2	410	3	61	323	248	4	635	0	27	161	47	2	235	1660
1:00 PM	0	10	59	8	0	77	0	49	40	16	0	105	1	19	91	59	0	170	0	5	36	11	0	52	404
1:15 PM	1	19	61	7	0	88	0	44	44	12	0	100	1	21	71	63	0	156	0	7	41	7	2	55	399
1:30 PM	0	19	78	4	0	101	0	69	45	13	0	127	2	18	77	63	0	160	0	6	40	8	0	54	442
1:45 PM	0	25	77	6	0	108	0	43	25	12	1	80	1	11	100	75	0	187	1	2	37	11	0	51	426
Hourly Total	1	73	275	25	0	374	0	205	154	53	1	412	5	69	339	260	0	673	1	20	154	37	2	212	1671
2:00 PM	0	24	78	6	0	108	0	36	24	23	0	83	0	10	120	79	0	209	0	13	36	11	0	60	460
2:15 PM	0	32	88	6	0	126	0	49	41	12	0	102	1	14	138	79	0	232	0	3	44	8	0	55	515
2:30 PM	0	40	75	23	1	138	0	58	49	31	1	138	2	21	147	73	0	243	0	9	46	14	0	69	588
2:45 PM	0	31	94	13	1	138	0	52	43	13	0	108	1	43	180	103	0	327	0	9	66	12	0	87	660
Hourly Total	0	127	335	48	2	510	0	195	157	79	1	431	4	88	585	334	0	1011	0	34	192	45	0	271	2223
3:00 PM	0	26	90	7	0	123	0	70	32	23	0	125	0	20	189	82	3	291	0	6	57	13	0	76	615
3:15 PM	0	31	81	10	0	122	0	55	40	27	2	122	2	30	193	102	3	327	0	13	87	14	0	114	685
3:30 PM	0	25	104	20	1	149	1	58	48	18	2	125	0	37	231	107	2	375	0	11	62	9	0	82	731
3:45 PM	0	27	95	10	0	132	0	57	50	17	0	124	2	25	255	129	1	411	0	11	47	12	1	70	737
Hourly Total	0	109	370	47	1	526	1	240	170	85	4	496	4	112	868	420	9	1404	0	41	253	48	1	342	2768

**TMC 2457 - CSAH 12 @ CSAH 51
Blaine MN
Tuesday, April 30, 2024**

Time	Southbound CSAH 51						Westbound CSAH 12						Northbound CSAH 51						Eastbound CSAH 12						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
4:00 PM	0	29	86	16	0	131	1	52	50	22	0	125	1	20	221	111	0	353	0	16	64	29	0	109	718
4:15 PM	0	25	77	10	1	112	0	57	48	25	0	130	0	23	231	105	2	359	0	11	67	11	0	89	690
4:30 PM	0	28	112	13	0	153	0	56	43	16	0	115	4	26	286	123	1	439	0	11	50	8	0	69	776
4:45 PM	0	42	106	23	0	171	0	47	57	32	0	136	1	41	224	109	0	375	0	14	65	16	0	95	777
Hourly Total	0	124	381	62	1	567	1	212	198	95	0	506	6	110	962	448	3	1526	0	52	246	64	0	362	2961
5:00 PM	0	40	98	12	0	150	0	73	56	19	0	148	1	32	246	103	0	382	0	13	54	6	0	73	753
5:15 PM	0	28	116	3	0	147	0	62	41	27	0	130	1	20	226	85	0	332	0	16	70	13	1	99	708
5:30 PM	0	26	109	14	0	149	0	45	40	24	1	109	2	36	219	96	1	353	1	7	48	9	0	65	676
5:45 PM	1	24	85	9	0	119	2	53	38	25	2	118	3	33	187	92	0	315	0	9	43	7	0	59	611
Hourly Total	1	118	408	38	0	565	2	233	175	95	3	505	7	121	878	376	1	1382	1	45	215	35	1	296	2748
6:00 PM	0	26	71	5	0	102	0	46	47	23	0	116	2	24	157	81	4	264	0	5	56	16	0	77	559
6:15 PM	0	23	109	6	2	138	0	57	39	19	2	115	0	32	152	55	4	239	0	10	42	15	3	67	559
6:30 PM	0	29	84	5	0	118	0	36	48	17	0	101	3	25	131	73	0	232	0	7	51	12	0	70	521
6:45 PM	0	22	86	9	0	117	0	40	41	32	3	113	1	18	101	52	0	172	0	3	34	4	0	41	443
Hourly Total	0	100	350	25	2	475	0	179	175	91	5	445	6	99	541	261	8	907	0	25	183	47	3	255	2082
7:00 PM	1	23	69	5	0	98	0	40	39	16	0	95	3	13	96	61	0	173	0	11	29	10	0	50	416
7:15 PM	0	18	70	7	0	95	0	36	29	14	4	79	1	18	88	56	0	163	0	8	39	9	0	56	393
7:30 PM	0	26	51	5	0	82	1	37	24	13	0	75	1	12	71	55	0	139	0	4	26	9	0	39	335
7:45 PM	0	8	37	0	0	45	0	26	28	18	0	72	1	12	89	36	0	138	0	7	33	7	0	47	302
Hourly Total	1	75	227	17	0	320	1	139	120	61	4	321	6	55	344	208	0	613	0	30	127	35	0	192	1446
8:00 PM	0	19	35	0	0	54	0	30	25	20	0	75	1	8	69	40	0	118	0	8	21	8	0	37	284
8:15 PM	0	21	53	7	0	81	0	32	16	15	0	63	2	11	69	35	1	117	0	1	26	8	0	35	296
8:30 PM	0	14	37	2	0	53	0	27	19	9	0	55	1	9	60	40	0	110	0	2	22	11	0	35	253
8:45 PM	0	10	33	3	0	46	0	23	23	12	0	58	3	9	57	32	1	101	0	2	16	9	1	27	232
Hourly Total	0	64	158	12	0	234	0	112	83	56	0	251	7	37	255	147	2	446	0	13	85	36	1	134	1065
9:00 PM	0	11	36	2	0	49	0	20	18	3	0	41	0	9	54	24	0	87	0	1	25	4	0	30	207
9:15 PM	0	6	41	3	0	50	0	29	17	8	0	54	1	9	62	27	0	99	0	2	20	8	0	30	233
9:30 PM	0	8	38	2	0	48	0	16	12	13	0	41	0	7	56	15	0	78	0	0	19	1	0	20	187
9:45 PM	0	7	27	3	0	37	0	17	15	3	0	35	2	6	35	19	0	62	0	2	12	4	0	18	152
Hourly Total	0	32	142	10	0	184	0	82	62	27	0	171	3	31	207	85	0	326	0	5	76	17	0	98	779
10:00 PM	0	5	22	0	0	27	0	19	8	5	0	32	0	5	45	22	0	72	0	3	9	3	0	15	146
10:15 PM	0	6	23	3	0	32	0	9	6	14	0	29	0	6	41	25	0	72	0	2	10	4	0	16	149
10:30 PM	0	6	16	2	0	24	0	12	9	5	0	26	0	5	35	11	0	51	0	0	13	2	0	15	116
10:45 PM	0	2	13	0	0	15	0	13	10	1	0	24	0	4	33	6	0	43	0	1	17	4	0	22	104
Hourly Total	0	19	74	5	0	98	0	53	33	25	0	111	0	20	154	64	0	238	0	6	49	13	0	68	515
11:00 PM	1	3	9	0	0	13	0	4	3	3	0	10	0	7	28	16	0	51	0	2	12	4	0	18	92
11:15 PM	0	2	6	0	0	8	0	9	7	4	0	20	0	3	21	10	0	34	0	1	2	0	0	3	65
11:30 PM	0	0	5	0	0	5	0	8	3	4	2	15	1	1	20	5	0	27	0	0	4	0	0	4	51
11:45 PM	0	1	8	0	0	9	0	5	4	0	0	9	0	3	23	5	0	31	0	0	3	2	0	5	54
Hourly Total	1	6	28	0	0	35	0	26	17	11	2	54	1	14	92	36	0	143	0	3	21	6	0	30	262
DAILY TOTAL	8	1420	6214	553	9	8195	10	3311	2257	1070	36	6648	83	1155	7185	4137	40	12560	2	426	2672	742	12	3842	31245
Cars	8	1393	6144	530	8	8075	10	3262	2212	1051	30	6535	83	1137	7096	4073	28	12389	2	413	2618	729	9	3762	30761
Heavy Vehicles	0	27	70	23	1	120	0	49	45	19	6	113	0	18	89	64	12	171	0	13	54	13	3	80	484
Heavy Vehicle %	0.00%	1.90%	1.13%	4.16%	11.11%	1.46%	0.00%	1.48%	1.99%	1.78%	16.67%	1.70%	0.00%	1.56%	1.24%	1.55%	30.00%	1.36%	0.00%	3.05%	2.02%	1.75%	25.00%	2.08%	1.55%

TMC 2457 - CSAH 12 @ CSAH 51
Blaine MN
Tuesday, April 30, 2024
AM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL																								
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total																									
7:00 AM	0	16	185	8	0	209	0	66	21	14	0	101	1	8	106	39	0	154	0	7	22	11	0	40	0	26	197	8	0	231	0	68	23	45	0	136	1	10	83	40	0	134	0	8	34	17	0	59	504
7:15 AM	0	26	197	8	0	231	0	68	23	45	0	136	1	10	83	40	0	134	0	8	34	17	0	59	0	24	221	17	0	262	1	80	26	24	0	131	1	22	75	41	0	139	0	5	41	14	0	60	592
7:30 AM	0	24	221	17	0	262	1	80	26	24	0	131	1	22	75	41	0	139	0	5	41	14	0	60	0	24	166	16	0	206	0	65	50	6	0	121	3	27	58	61	0	149	0	4	45	11	1	60	536
7:45 AM	0	24	166	16	0	206	0	65	50	6	0	121	3	27	58	61	0	149	0	4	45	11	1	60	0	90	769	49	0	908	1	279	120	89	0	489	6	67	322	181	0	576	0	24	142	53	1	219	2192
Peak Hour Total	0	90	769	49	0	908	1	279	120	89	0	489	6	67	322	181	0	576	0	24	142	53	1	219	0	24	142	53	1	219	0	279	120	89	0	489	6	67	322	181	0	576	0	24	142	53	1	219	0.926
PHF	0.000	0.865	0.870	0.721	0.000	0.866	0.250	0.872	0.600	0.494	0.000	0.899	0.500	0.620	0.759	0.742	0.000	0.935	0.000	0.750	0.789	0.779	0.250	0.913	0.000	0.750	0.789	0.779	0.250	0.913	0.000	0.750	0.789	0.779	0.250	0.913	0.926												

PM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL																								
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total																									
4:30 PM	0	28	112	13	0	153	0	56	43	16	0	115	4	26	286	123	1	439	0	11	50	8	0	69	0	42	106	23	0	171	0	47	57	32	0	136	1	41	224	109	0	375	0	14	65	16	0	95	776
4:45 PM	0	42	106	23	0	171	0	47	57	32	0	136	1	41	224	109	0	375	0	14	65	16	0	95	0	40	98	12	0	150	0	73	56	19	0	148	1	32	246	103	0	382	0	13	54	6	0	73	777
5:00 PM	0	40	98	12	0	150	0	73	56	19	0	148	1	32	246	103	0	382	0	13	54	6	0	73	0	28	116	3	0	147	0	62	41	27	0	130	1	20	226	85	0	332	0	16	70	13	1	99	753
5:15 PM	0	28	116	3	0	147	0	62	41	27	0	130	1	20	226	85	0	332	0	16	70	13	1	99	0	138	432	51	0	621	0	238	197	94	0	529	7	119	982	420	1	1528	0	54	239	43	1	336	3014
Peak Hour Total	0	138	432	51	0	621	0	238	197	94	0	529	7	119	982	420	1	1528	0	54	239	43	1	336	0	138	432	51	0	621	0	238	197	94	0	529	7	119	982	420	1	1528	0	54	239	43	1	336	0.970
PHF	0.000	0.821	0.931	0.554	0.000	0.908	0.000	0.815	0.864	0.734	0.000	0.894	0.438	0.726	0.858	0.854	0.250	0.870	0.000	0.844	0.854	0.672	0.250	0.848	0.000	0.821	0.931	0.554	0.000	0.908	0.000	0.815	0.864	0.734	0.000	0.894	0.438	0.726	0.858	0.854	0.250	0.870	0.970						

Total Vehicles On Leg						16884					
Vehicles Entering Intersection			8195			Vehicles Exiting Intersection			8689		
Southbound											
Cars	530	6144	1393	8	8						
Heavy	23	70	27	0	1						
Total	553	6214	1420	8	9						

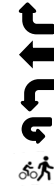


Total Vehicles on Leg 7809	Vehicles Entering Intersection 3842	Eastbound	Cars	Heavy	Total
			9	3	12
	2		0	2	
	413		13	426	
	2618		54	2672	
	Vehicles Exiting Intersection 3967		729	13	742



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 6648	Total Vehicles on Leg 14887
1051	19	1070			
2212	45	2257			
3262	49	3311			
10	0	10			
30	6	36		Vehicles Exiting Intersection 8239	



Cars	28	83	1137	7096	4073
Heavy	12	0	18	89	64
Total	40	83	1155	7185	4137
Northbound					
Vehicles Entering Intersection			12560		
Vehicles Exiting Intersection			10350		
Total Vehicles On Leg			22910		



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2457

Study Date : 05/02/2024

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 51

Number of Lanes : 2+

Total Approach Volume: 12,560

Southbound: CSAH 51

Number of Lanes :2+

Total Approach Volume: 8,195

Minor Street Approaches

Eastbound: CSAH 12

Number of Lanes :1

Total Approach Volume: 3,842

Westbound: CSAH 12

Number of Lanes :1

Total Approach Volume: 6,648

Warrant Summary (Rural Values Apply)

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

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

Required volumes reached for 17 hours, 8 are needed

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

Required volumes reached for 15 hours, 8 are needed

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

Required 1A volumes reached for 18 hours, 8 are needed

Required 1B volumes reached for 16 hours, 8 are needed

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

Number of hours (16) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

Warrant 3A - Peak Hour Delay.....Satisfied

Number of one hour periods (62) volumes exceed minimum >= required (1). Delay data not evaluated.

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

Volumes exceed minimums for at least one hour period.

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 2457

Study Date : 05/02/2024

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

17 one hour periods 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**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	CSAH 51					CSAH 12		
16:00 - 17:00	1526	+	567	=	2093	362	506	Yes
17:00 - 18:00	1382	+	565	=	1947	296	505	Yes
15:00 - 16:00	1404	+	526	=	1930	342	496	Yes
14:00 - 15:00	1011	+	510	=	1521	271	431	Yes
07:00 - 08:00	576	+	908	=	1484	219	489	Yes
18:00 - 19:00	907	+	475	=	1382	255	445	Yes
08:00 - 09:00	486	+	605	=	1091	250	406	Yes
13:00 - 14:00	673	+	374	=	1047	212	412	Yes
12:00 - 13:00	635	+	380	=	1015	235	410	Yes
11:00 - 12:00	598	+	363	=	961	216	406	Yes
19:00 - 20:00	613	+	320	=	933	192	321	Yes
09:00 - 10:00	468	+	465	=	933	253	334	Yes
06:00 - 07:00	293	+	637	=	930	96	290	Yes
10:00 - 11:00	502	+	355	=	857	183	353	Yes
20:00 - 21:00	446	+	234	=	680	134	251	Yes
21:00 - 22:00	326	+	184	=	510	98	171	Yes
05:00 - 06:00	104	+	337	=	441	67	127	Yes
04:45 - 05:45	77	+	294	=	371	50	114	No
22:00 - 23:00	238	+	98	=	336	68	111	No
22:15 - 23:15	217	+	84	=	301	71	89	No
04:30 - 05:30	57	+	235	=	292	39	88	No
22:30 - 23:30	179	+	60	=	239	58	80	No
04:15 - 05:15	46	+	184	=	230	34	58	No
22:45 - 23:45	155	+	41	=	196	47	69	No
23:00 - 00:00	143		35		178	30	54	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2457

Study Date : 05/02/2024

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

15 one hour periods 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**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
15:45 - 16:45	1562	+	528	=	2090	337	494	Yes
16:45 - 17:45	1442	+	617	=	2059	332	523	Yes
14:45 - 15:45	1320	+	532	=	1852	359	480	Yes
17:45 - 18:45	1050	+	477	=	1527	273	450	Yes
06:45 - 07:45	532	+	900	=	1432	187	465	Yes
13:45 - 14:45	871	+	480	=	1351	235	403	Yes
07:45 - 08:45	522	+	657	=	1179	243	436	Yes
18:45 - 19:45	647	+	392	=	1039	186	362	Yes
12:45 - 13:45	642	+	372	=	1014	228	443	Yes
10:45 - 11:45	623	+	387	=	1010	205	395	Yes
08:45 - 09:45	469	+	520	=	989	277	345	Yes
11:45 - 12:45	617	+	357	=	974	228	405	Yes
09:45 - 10:45	451	+	347	=	798	177	338	Yes
05:45 - 06:45	227	+	520	=	747	97	227	Yes
19:45 - 20:45	483	+	233	=	716	154	265	Yes
05:30 - 06:30	164	+	459	=	623	75	192	No
20:45 - 21:45	365	+	193	=	558	107	194	No
05:15 - 06:15	127	+	409	=	536	69	172	No
21:00 - 22:00	326	+	184	=	510	98	171	No
21:15 - 22:15	311	+	162	=	473	83	162	No
05:00 - 06:00	104	+	337	=	441	67	127	No
21:30 - 22:30	284	+	144	=	428	69	137	No
21:45 - 22:45	257	+	120	=	377	64	122	No
04:45 - 05:45	77	+	294	=	371	50	114	No
22:00 - 23:00	238		98		336	68	111	No

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2457

Study Date : 05/02/2024

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

18 hours meet 1A minimums.
16 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 51

Minor Road CSAH 12

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
15:45 - 16:45	1562	+	528	=	2090	337	494	Yes
16:45 - 17:45	1442	+	617	=	2059	332	523	Yes
14:45 - 15:45	1320	+	532	=	1852	359	480	Yes
17:45 - 18:45	1050	+	477	=	1527	273	450	Yes
06:45 - 07:45	532	+	900	=	1432	187	465	Yes
13:45 - 14:45	871	+	480	=	1351	235	403	Yes
07:45 - 08:45	522	+	657	=	1179	243	436	Yes
18:45 - 19:45	647	+	392	=	1039	186	362	Yes
12:45 - 13:45	642	+	372	=	1014	228	443	Yes
10:45 - 11:45	623	+	387	=	1010	205	395	Yes
08:45 - 09:45	469	+	520	=	989	277	345	Yes
11:45 - 12:45	617	+	357	=	974	228	405	Yes

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:15 - 17:15	1555	+	586	=	2141	326	529	Yes
15:15 - 16:15	1466	+	534	=	2000	375	496	Yes
17:15 - 18:15	1264	+	517	=	1781	300	473	Yes
14:15 - 15:15	1093	+	525	=	1618	287	473	Yes
07:15 - 08:15	551	+	889	=	1440	234	508	Yes
18:15 - 19:15	816	+	471	=	1287	228	424	Yes
06:15 - 07:15	406	+	717	=	1123	125	329	Yes
13:15 - 14:15	712	+	405	=	1117	220	390	Yes
12:15 - 13:15	653	+	382	=	1035	234	403	Yes
08:15 - 09:15	461	+	568	=	1029	274	371	Yes
11:15 - 12:15	608	+	348	=	956	201	405	Yes
10:15 - 11:15	536	+	371	=	907	215	377	Yes

ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2457

Study Date : 05/02/2024

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.

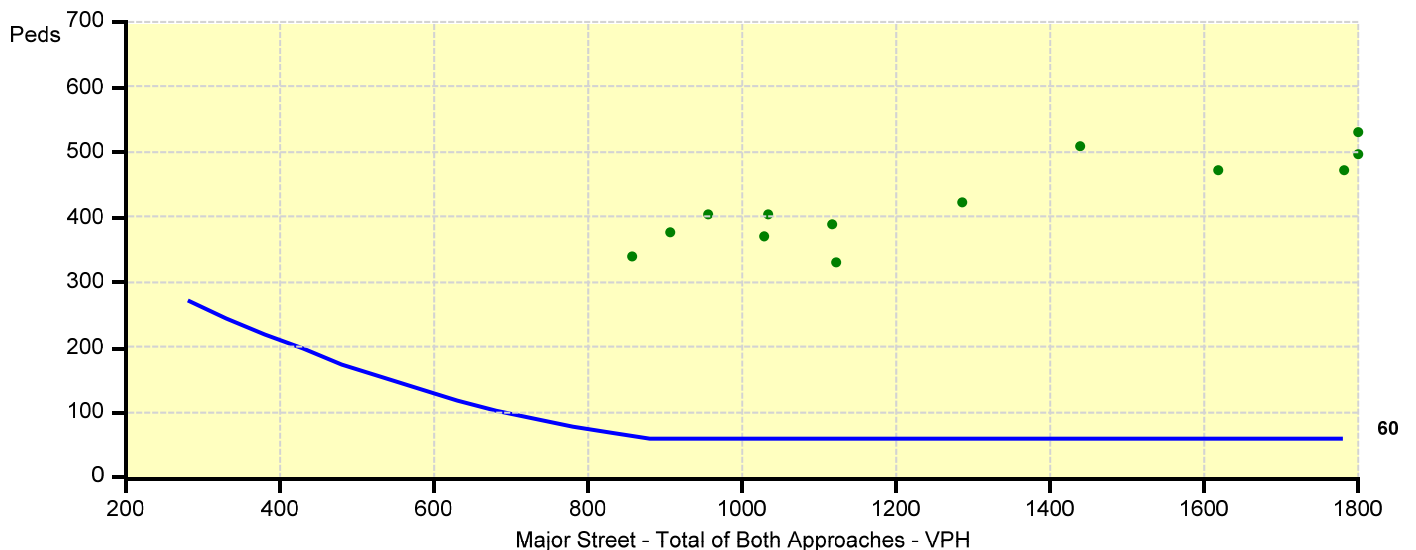
Summary

16 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 51				Total	Minor Road CSAH 12		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:15 - 17:15	1555	+	586	=	2141	326	529	Yes
15:15 - 16:15	1466	+	534	=	2000	375	496	Yes
17:15 - 18:15	1264	+	517	=	1781	300	473	Yes
14:15 - 15:15	1093	+	525	=	1618	287	473	Yes
07:15 - 08:15	551	+	889	=	1440	234	508	Yes
18:15 - 19:15	816	+	471	=	1287	228	424	Yes
06:15 - 07:15	406	+	717	=	1123	125	329	Yes
13:15 - 14:15	712	+	405	=	1117	220	390	Yes
12:15 - 13:15	653	+	382	=	1035	234	403	Yes
08:15 - 09:15	461	+	568	=	1029	274	371	Yes
11:15 - 12:15	608	+	348	=	956	201	405	Yes
10:15 - 11:15	536	+	371	=	907	215	377	Yes



ANOKA COUNTY HIGHWAY

PC-WARRANTS

TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name: TMC 2457

Study Date : 05/02/2024

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

58 one hour periods meet minimums.
Warrant IS met.

Site Data Required

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

Time	Major Road CSAH 51				Total	Minor Road CSAH 12		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	1528	+	621	=	2149	336	529	Yes
16:15 - 17:15	1555	+	586	=	2141	326	529	Yes
16:00 - 17:00	1526	+	567	=	2093	362	506	Yes
15:45 - 16:45	1562	+	528	=	2090	337	494	Yes
16:45 - 17:45	1442	+	617	=	2059	332	523	Yes
15:30 - 16:30	1498	+	524	=	2022	350	504	Yes
15:15 - 16:15	1466	+	534	=	2000	375	496	Yes
17:00 - 18:00	1382	+	565	=	1947	296	505	Yes
15:00 - 16:00	1404	+	526	=	1930	342	496	Yes
14:45 - 15:45	1320	+	532	=	1852	359	480	Yes
17:15 - 18:15	1264	+	517	=	1781	300	473	Yes
14:30 - 15:30	1188		521		1709	346	493	Yes

