
Memorandum

The City of Traverse City
Engineering Department



TO: Timothy J. Lodge, P.E., City Engineer
FROM: Abhishek Deora, Engineering Aide
DATE: August 25th, 2017
SUBJECT: Elmwood Ave between 11th St & 7th St Classification Count

This memo is to formalize City Engineering's initial findings and observations in regard to the class of vehicles traveling on Elmwood Ave between 11th St and 7th St.

City Engineering performed a 24-hour classification count of Elmwood Ave began at 11:46 am on August 23rd, 2017 and ended at 1:05 pm on August 24th, 2017. The data was gathered using a Jamar Traffic Counter which collected traffic data, including vehicle classification, for each lane of traffic (northbound and southbound) using two parallel tubes that are placed on the road and are connected to the device. This information was then analyzed and the data for each lane compiled into one report, regardless of direction, using TraxPro. The TraxPro report organized the classification of the vehicles into groups. The report shows how many vehicles were within the specified class during one hour intervals as indicated by the report.

A total of 6783 vehicles traveled on Elmwood Ave during the 24-hour class count. The vehicle class count showed that 451 vehicles, 6.6 percent, traveling on Elmwood Ave during the count were a class 6 (FHA Scheme F) or higher.

1016 vehicles, 15.0 percent, fell into class 14 which is for bicycles and unknown vehicles. This number suggests that many people use this section of Elmwood Ave as a bicycling route. This number could also be partially due to vehicles parking on the tubes for the traffic counter.

During the 24 hour study the average mean speed of the vehicles travelling northbound is 22 miles per hour, and average mean speed of the vehicles travelling southbound is 25 miles per hour. The average mean speed of the vehicles travelling both directions is 23 miles per hour, with 28.9% of all the vehicles travelling at the speed greater than the posted limit of 25 mile per hour.

Summary:

- Number of Vehicles: 6783 vehicles
- Class 6 or Higher: 6.6%
- Class 1 to 5: 78.4%
- Class 14 (Unknown/Bicycles): 15.0%
- Mean Speed: 23 MPH
- 85th Percentile of Speed: 27 MPH
- 95th Percentile Of Speed: 29 MPH

Encl.: Detailed TraxPro Classification Report

Elmwood Ave
Between 11th St & 7th St
Class

Site Code: 00000000000
Station ID:

Latitude: 0' 0.0000 South

A to B

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
08/23/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	2	173	26	3	5	1	2	3	4	0	0	2	1	18	240
13:00	2	162	34	7	6	1	1	12	0	2	0	0	2	8	237
14:00	4	195	19	0	3	0	3	10	5	3	0	0	0	20	262
15:00	4	265	33	7	2	1	1	6	2	2	0	0	1	31	355
16:00	1	285	32	5	10	0	2	12	3	0	0	0	3	26	379
17:00	2	212	23	4	6	0	1	8	6	0	0	1	2	25	290
18:00	0	138	16	0	2	0	0	2	0	1	0	0	0	12	171
19:00	1	136	12	2	0	0	0	0	2	1	0	0	0	9	163
20:00	0	74	7	0	3	0	0	1	0	1	0	0	0	4	90
21:00	0	57	10	0	3	0	0	0	0	0	0	0	0	1	71
22:00	0	37	4	1	0	0	0	0	0	0	0	0	0	2	44
23:00	0	30	3	0	0	0	0	0	0	0	0	0	0	0	33
Total	16	1764	219	29	40	3	10	54	22	10	0	3	9	156	2335
Percent	0.7%	75.5%	9.4%	1.2%	1.7%	0.1%	0.4%	2.3%	0.9%	0.4%	0.0%	0.1%	0.4%	6.7%	

AM Peak Vol.

PM Peak Vol.	14:00	16:00	13:00	13:00	16:00	12:00	14:00	13:00	17:00	14:00	12:00	16:00	15:00	16:00
	4	285	34	7	10	1	3	12	6	3	2	3	31	379

Elmwood Ave
Between 11th St & 7th St
Class

Site Code: 00000000000
Station ID:

Latitude: 0' 0.0000 South

A to B

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
08/24/17	0	20	4	0	0	0	0	0	0	0	0	0	0	0	24
01:00	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
02:00	0	9	0	0	0	1	0	0	0	0	0	0	0	0	10
03:00	0	9	1	0	0	0	0	0	0	0	0	0	0	0	12
04:00	0	10	2	0	1	0	0	0	0	0	0	0	0	0	13
05:00	0	16	3	1	1	0	0	0	0	0	0	0	0	0	23
06:00	1	47	9	0	1	1	1	0	0	1	0	0	0	0	65
07:00	3	102	16	3	3	2	1	2	1	0	0	0	0	0	139
08:00	1	105	19	1	4	1	1	5	0	0	0	0	0	0	152
09:00	1	142	31	3	2	1	0	1	3	1	0	0	0	0	197
10:00	3	162	28	4	6	0	2	9	1	3	0	0	0	2	228
11:00	3	170	30	3	3	2	3	8	1	0	0	0	0	0	235
12 PM	4	197	26	0	8	0	1	7	1	1	0	0	0	2	263
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	16	995	171	15	29	8	9	32	7	6	0	0	4	77	1369
Percent	1.2%	72.7%	12.5%	1.1%	2.1%	0.6%	0.7%	2.3%	0.5%	0.4%	0.0%	0.0%	0.3%	5.6%	
AM Peak	07:00	11:00	09:00	10:00	10:00	07:00	11:00	10:00	09:00	10:00			10:00	08:00	11:00
Vol.	3	170	31	4	6	2	3	9	3	3			2	15	235
PM Peak	12:00	12:00	12:00		12:00		12:00	12:00	12:00	12:00			12:00	12:00	12:00
Vol.	4	197	26		8		1	7	1	1			2	16	263
Grand Total	32	2759	390	44	69	11	19	86	29	16	0	3	13	233	3704
Percent	0.9%	74.5%	10.5%	1.2%	1.9%	0.3%	0.5%	2.3%	0.8%	0.4%	0.0%	0.1%	0.4%	6.3%	

Elmwood Ave
Between 11th St & 7th St
Class

Site Code: 00000000000
Station ID:

Latitude: 0' 0.0000 South

B to A

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
08/23/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	41	63	13	1	3	16	1	4	1	0	0	0	0	55	198
13:00	47	59	23	1	6	16	2	1	4	0	0	0	2	73	234
14:00	33	57	23	1	1	9	0	4	0	1	0	0	0	61	190
15:00	32	58	29	1	4	13	1	2	2	0	0	0	1	57	200
16:00	33	59	27	4	5	19	0	6	1	0	0	0	0	67	221
17:00	39	67	19	2	6	15	0	4	2	0	0	0	1	71	226
18:00	27	66	14	1	5	14	0	2	0	0	0	0	0	40	169
19:00	13	43	15	1	6	4	0	1	0	0	0	0	0	26	109
20:00	4	40	16	0	7	5	0	0	0	0	0	0	0	11	83
21:00	0	34	5	0	0	4	0	1	1	0	0	0	0	3	48
22:00	4	14	8	0	0	0	0	1	0	0	0	0	0	4	31
23:00	1	15	2	0	1	0	0	0	0	0	0	0	0	7	26
Total	274	575	194	12	44	115	4	26	11	1	0	0	4	475	1735
Percent	15.8%	33.1%	11.2%	0.7%	2.5%	6.6%	0.2%	1.5%	0.6%	0.1%	0.0%	0.0%	0.2%	27.4%	

AM Peak Vol.	PM Peak Vol.
13:00	13:00
17:00	13:00
15:00	13:00
16:00	13:00
20:00	16:00
16:00	13:00
13:00	16:00
16:00	13:00
13:00	14:00
14:00	
	13:00
	13:00
	13:00
47	67
29	4
4	7
19	2
6	4
4	1
	2
	73
	234

Elmwood Ave
Between 11th St & 7th St
Class

Site Code: 00000000000
Station ID:

Latitude: 0' 0.0000 South

B to A

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
08/24/17	2	9	1	0	0	1	0	0	0	0	0	0	0	2	15
01:00	0	4	0	0	0	2	0	0	0	0	0	0	0	2	8
02:00	1	1	1	0	0	1	0	0	0	0	0	0	0	0	4
03:00	0	10	0	0	0	1	0	1	0	0	0	0	0	2	14
04:00	0	9	2	0	2	3	0	0	0	0	0	0	0	0	16
05:00	6	34	9	0	2	6	0	0	0	0	0	0	0	8	65
06:00	25	91	16	0	3	4	0	1	0	0	0	0	1	29	170
07:00	22	82	29	1	7	13	1	2	0	0	0	0	0	31	188
08:00	2	90	21	2	7	2	0	0	0	0	0	0	0	13	137
09:00	17	69	19	0	3	8	1	6	1	0	0	0	0	35	159
10:00	25	65	18	0	3	11	1	3	1	1	0	0	0	50	178
11:00	34	48	15	1	9	21	1	2	0	0	0	0	0	72	203
12 PM	29	61	10	1	5	11	0	5	0	0	0	0	1	64	187
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	163	573	141	5	41	84	4	20	2	1	0	0	2	308	1344
Percent	12.1%	42.6%	10.5%	0.4%	3.1%	6.3%	0.3%	1.5%	0.1%	0.1%	0.0%	0.0%	0.1%	22.9%	
AM Peak	11:00	06:00	07:00	08:00	11:00	11:00	07:00	09:00	09:00	10:00			06:00	11:00	11:00
Vol.	34	91	29	2	9	21	1	6	1	1			1	72	203
PM Peak	12:00	12:00	12:00	12:00	12:00	12:00		12:00					12:00	12:00	12:00
Vol.	29	61	10	1	5	11		5					1	64	187
Grand Total	437	1148	335	17	85	199	8	46	13	2	0	0	6	783	3079
Percent	14.2%	37.3%	10.9%	0.6%	2.8%	6.5%	0.3%	1.5%	0.4%	0.1%	0.0%	0.0%	0.2%	25.4%	

Elmwood Ave
Between 11th St & 7th St
Class

Site Code: 00000000000
Station ID:

Latitude: 0' 0.0000 South

A to B, B to A

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
08/23/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	43	236	39	4	8	17	3	7	5	0	0	2	1	73	438
13:00	49	221	57	8	12	17	3	13	4	2	0	0	4	81	471
14:00	37	252	42	1	4	9	3	14	5	4	0	0	0	81	452
15:00	36	323	62	8	6	14	2	8	4	2	0	0	2	88	555
16:00	34	344	59	9	15	19	2	18	4	0	0	0	3	93	600
17:00	41	279	42	6	12	15	1	12	8	0	0	1	3	96	516
18:00	27	204	30	1	7	14	0	4	0	1	0	0	0	52	340
19:00	14	179	27	3	6	4	0	1	2	1	0	0	0	35	272
20:00	4	114	23	0	10	5	0	1	0	1	0	0	0	15	173
21:00	0	91	15	0	3	4	0	1	1	0	0	0	0	4	119
22:00	4	51	12	1	0	0	0	1	0	0	0	0	0	6	75
23:00	1	45	5	0	1	0	0	0	0	0	0	0	0	7	59
Total	290	2339	413	41	84	118	14	80	33	11	0	3	13	631	4070
Percent	7.1%	57.5%	10.1%	1.0%	2.1%	2.9%	0.3%	2.0%	0.8%	0.3%	0.0%	0.1%	0.3%	15.5%	

AM Peak Vol.	PM Peak Vol.	13:00	16:00	15:00	16:00	16:00	16:00	12:00	16:00	17:00	14:00	12:00	13:00	17:00	16:00
		49	344	62	9	15	19	3	18	8	4	2	4	96	600

Elmwood Ave
Between 11th St & 7th St
Class

Site Code: 00000000000
Station ID:

Latitude: 0' 0.0000 South

A to B, B to A

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
08/24/17	2	29	5	0	0	1	0	0	0	0	0	0	0	2	39
01:00	0	10	2	0	0	2	0	0	0	0	0	0	0	2	16
02:00	1	10	1	0	0	2	0	0	0	0	0	0	0	0	14
03:00	0	19	1	0	0	1	0	1	0	0	0	0	0	4	26
04:00	0	19	4	0	3	3	0	0	0	0	0	0	0	0	29
05:00	6	50	12	1	3	6	0	0	0	0	0	0	0	10	88
06:00	26	138	25	0	4	5	1	1	0	1	0	0	1	33	235
07:00	25	184	45	4	10	15	2	4	1	0	0	0	0	37	327
08:00	3	195	40	3	11	3	1	5	0	0	0	0	0	28	289
09:00	18	211	50	3	5	9	1	7	4	1	0	0	0	47	356
10:00	28	227	46	4	9	11	3	12	2	4	0	0	2	58	406
11:00	37	218	45	4	12	23	4	10	1	0	0	0	0	84	438
12 PM	33	258	36	1	13	11	1	12	1	1	0	0	3	80	450
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	179	1568	312	20	70	92	13	52	9	7	0	0	6	385	2713
Percent	6.6%	57.8%	11.5%	0.7%	2.6%	3.4%	0.5%	1.9%	0.3%	0.3%	0.0%	0.0%	0.2%	14.2%	
AM Peak	11:00	10:00	09:00	07:00	11:00	11:00	11:00	10:00	09:00	10:00			10:00	11:00	11:00
Vol.	37	227	50	4	12	23	4	12	4	4			2	84	438
PM Peak	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00			12:00	12:00	12:00
Vol.	33	258	36	1	13	11	1	12	1	1			3	80	450
Grand Total	469	3907	725	61	154	210	27	132	42	18	0	3	19	1016	6783
Percent	6.9%	57.6%	10.7%	0.9%	2.3%	3.1%	0.4%	1.9%	0.6%	0.3%	0.0%	0.0%	0.3%	15.0%	

Elmwood Ave
Between 11th St & 7th St
Speed

Site Code: 00000000000
Station ID:

Latitude: 0' 0.0000 South

Start Time	21-Aug-17 Mon	22-Aug-17 Tue	23-Aug-17 Wed	24-Aug-17 Thu	25-Aug-17 Fri	Weekday Average	26-Aug-17 Sat	27-Aug-17 Sun
12:00 AM	*	*	*	39	*	39	*	*
01:00	*	*	*	16	*	16	*	*
02:00	*	*	*	14	*	14	*	*
03:00	*	*	*	26	*	26	*	*
04:00	*	*	*	29	*	29	*	*
05:00	*	*	*	88	*	88	*	*
06:00	*	*	*	235	*	235	*	*
07:00	*	*	*	327	*	327	*	*
08:00	*	*	*	289	*	289	*	*
09:00	*	*	*	356	*	356	*	*
10:00	*	*	*	406	*	406	*	*
11:00	*	*	*	438	*	438	*	*
12:00 PM	*	*	438	450	*	444	*	*
01:00	*	*	471	*	*	471	*	*
02:00	*	*	452	*	*	452	*	*
03:00	*	*	555	*	*	555	*	*
04:00	*	*	600	*	*	600	*	*
05:00	*	*	516	*	*	516	*	*
06:00	*	*	340	*	*	340	*	*
07:00	*	*	272	*	*	272	*	*
08:00	*	*	173	*	*	173	*	*
09:00	*	*	119	*	*	119	*	*
10:00	*	*	75	*	*	75	*	*
11:00	*	*	59	*	*	59	*	*
Total	0	0	4070	2713	0		0	0
Percentage	0.0%	0.0%	64.2%	42.8%	0.0%		0.0%	0.0%
AM Peak	-	-	-	11:00	-	-	-	-
Vol.	-	-	-	438	-	-	-	-
PM Peak	-	-	16:00	12:00	-	-	-	-
Vol.	-	-	600	450	-	-	-	-
Total		0	4070					

Elmwood Ave
Between 11th St & 7th St
Speed

Site Code: 000000000000
Station ID:

Latitude: 0' 0.0000 South

A to B

Start Time	0	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
08/23/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	12	86	115	20	0	0	0	0	0	0	1	0	0	6	240	16-25	202
13:00	13	80	105	26	4	1	1	2	1	0	2	1	0	1	237	16-25	186
14:00	19	85	133	19	1	0	0	0	0	0	0	0	0	5	262	16-25	219
15:00	22	119	160	35	1	1	2	1	1	0	2	1	0	10	355	16-25	280
16:00	21	112	207	29	0	0	1	1	0	0	0	0	0	8	379	16-25	320
17:00	11	61	165	40	2	1	0	1	0	0	0	0	0	9	290	16-25	227
18:00	8	21	114	24	2	0	0	1	0	0	0	0	0	1	171	21-30	138
19:00	4	30	95	27	3	0	0	0	0	0	0	0	0	4	163	16-25	125
20:00	1	21	42	20	1	1	0	1	0	0	0	0	0	3	90	16-25	63
21:00	0	17	41	13	0	0	0	0	0	0	0	0	0	0	71	16-25	58
22:00	1	12	30	0	0	0	0	0	1	0	0	0	0	0	44	16-25	42
23:00	0	11	18	4	0	0	0	0	0	0	0	0	0	0	33	16-25	29
Total	112	655	1225	257	14	4	4	7	3	0	5	2	0	47	2335		
Percent	4.8%	28.1%	52.5%	11.0%	0.6%	0.2%	0.2%	0.3%	0.1%	0.0%	0.2%	0.1%	0.0%	2.0%			
AM Peak Vol.																	
PM Peak Vol.	15:00	15:00	16:00	17:00	13:00	13:00	15:00	13:00	13:00		13:00	13:00		15:00	16:00		
	22	119	207	40	4	1	2	2	1		2	1		10	379		

Elmwood Ave
Between 11th St & 7th St
Speed

Site Code: 00000000000
Station ID:

Latitude: 0' 0.0000 South

A to B

Start Time	0	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
08/24/17	0	6	15	3	0	0	0	0	0	0	0	0	0	0	24	16-25	21
01:00	0	2	5	1	0	0	0	0	0	0	0	0	0	0	8	16-25	7
02:00	0	4	6	0	0	0	0	0	0	0	0	0	0	0	10	16-25	10
03:00	2	4	2	2	1	0	0	0	0	0	0	0	0	1	12	16-25	6
04:00	1	2	8	1	1	0	0	0	0	0	0	0	0	0	13	16-25	10
05:00	1	5	13	3	0	0	0	0	0	0	0	0	0	1	23	16-25	18
06:00	1	16	41	6	1	0	0	0	0	0	0	0	0	0	65	16-25	57
07:00	3	39	84	12	0	0	0	0	0	0	0	0	0	1	139	16-25	123
08:00	8	46	75	17	1	0	0	0	1	0	0	0	0	4	152	16-25	121
09:00	7	64	109	14	0	0	0	0	0	0	0	0	0	3	197	16-25	173
10:00	5	93	102	19	3	0	0	2	0	0	0	0	1	3	228	16-25	195
11:00	9	82	122	17	3	0	0	0	0	0	0	0	0	2	235	16-25	204
12 PM	12	85	143	19	1	0	0	0	0	0	0	0	1	2	263	16-25	229
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	49	448	725	114	11	0	0	2	1	0	0	0	2	17	1369		
Percent	3.6%	32.7%	53.0%	8.3%	0.8%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	1.2%			
AM Peak	11:00	10:00	11:00	10:00	10:00			10:00	08:00				10:00	08:00	11:00		
Vol.	9	93	122	19	3			2	1				1	4	235		
PM Peak	12:00	12:00	12:00	12:00	12:00								12:00	12:00	12:00		
Vol.	12	85	143	19	1								1	2	263		
Total	161	1103	1950	371	25	4	4	9	4	0	5	2	2	64	3704		
Percent	4.3%	29.8%	52.6%	10.0%	0.7%	0.1%	0.1%	0.2%	0.1%	0.0%	0.1%	0.1%	0.1%	1.7%			

15th Percentile : 16 MPH
50th Percentile : 21 MPH
85th Percentile : 24 MPH
95th Percentile : 28 MPH

Stats
10 MPH Pace Speed : 16-25 MPH
Number in Pace : 3061
Percent in Pace : 82.6%
Number of Vehicles > 25 MPH : 490
Percent of Vehicles > 25 MPH : 13.2%
Mean Speed(Average) : 22 MPH

Elmwood Ave
Between 11th St & 7th St
Speed

Site Code: 00000000000
Station ID:

Latitude: 0' 0.0000 South

B to A

Start Time	0	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
08/23/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	3	20	82	73	14	1	0	1	0	0	0	0	0	4	198	21-30	155
13:00	3	28	101	73	15	5	1	0	3	0	0	0	0	5	234	21-30	174
14:00	4	16	68	84	14	1	0	0	0	0	1	0	0	2	190	21-30	152
15:00	8	16	78	74	16	3	2	0	0	0	0	1	0	2	200	21-30	152
16:00	5	12	81	93	18	1	3	3	0	0	0	1	0	4	221	21-30	174
17:00	8	11	88	98	12	0	1	0	1	0	2	0	1	4	226	21-30	186
18:00	4	7	61	72	19	4	0	0	0	0	1	0	0	1	169	21-30	133
19:00	2	3	46	43	6	1	2	1	0	1	0	1	1	2	109	21-30	89
20:00	5	9	34	32	2	0	0	0	0	0	0	1	0	0	83	21-30	66
21:00	0	7	20	19	0	2	0	0	0	0	0	0	0	0	48	21-30	39
22:00	1	4	19	5	2	0	0	0	0	0	0	0	0	0	31	21-30	24
23:00	0	5	11	8	2	0	0	0	0	0	0	0	0	0	26	21-30	19
Total	43	138	689	674	120	18	9	5	4	2	3	4	2	24	1735		
Percent	2.5%	8.0%	39.7%	38.8%	6.9%	1.0%	0.5%	0.3%	0.2%	0.1%	0.2%	0.2%	0.1%	1.4%			
AM Peak Vol.																	
PM Peak Vol.	15:00	13:00	13:00	17:00	18:00	13:00	16:00	16:00	13:00	18:00	17:00	15:00	17:00	13:00	13:00		
	8	28	101	98	19	5	3	3	3	1	2	1	1	5	234		

Elmwood Ave
Between 11th St & 7th St
Speed

Site Code: 000000000000
Station ID:

Latitude: 0' 0.0000 South

B to A

Start Time	0	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
08/24/17	0	2	6	6	1	0	0	0	0	0	0	0	0	0	15	21-30	12
01:00	0	2	6	0	0	0	0	0	0	0	0	0	0	0	8	16-25	8
02:00	1	0	1	2	0	0	0	0	0	0	0	0	0	0	4	21-30	3
03:00	1	2	8	2	1	0	0	0	0	0	0	0	0	0	14	21-30	10
04:00	1	3	5	5	2	0	0	0	0	0	0	0	0	0	16	21-30	10
05:00	1	5	25	34	0	0	0	0	0	0	0	0	0	0	65	21-30	59
06:00	3	6	69	84	6	0	1	0	0	0	0	0	0	1	170	21-30	153
07:00	3	16	71	79	13	2	0	1	0	0	0	0	1	2	188	21-30	150
08:00	0	11	66	52	6	0	0	0	1	1	0	0	0	0	137	21-30	118
09:00	3	12	91	47	3	2	0	0	0	0	0	1	0	0	159	21-30	138
10:00	4	14	86	61	10	1	0	0	0	0	0	1	0	1	178	21-30	147
11:00	5	15	85	69	18	2	0	0	2	0	0	1	0	6	203	21-30	154
12 PM	13	21	75	50	17	1	2	0	0	0	0	1	1	6	187	21-30	126
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	35	109	594	491	77	8	3	1	3	1	0	4	2	16	1344		
Percent	2.6%	8.1%	44.2%	36.5%	5.7%	0.6%	0.2%	0.1%	0.2%	0.1%	0.0%	0.3%	0.1%	1.2%			
AM Peak	11:00	07:00	09:00	06:00	11:00	07:00	06:00	07:00	11:00	08:00		09:00	07:00	11:00	11:00		
Vol.	5	16	91	84	18	2	1	1	2	1		1	1	6	203		
PM Peak	12:00	12:00	12:00	12:00	12:00	12:00	12:00					12:00	12:00	12:00	12:00		
Vol.	13	21	75	50	17	1	2					1	1	6	187		
Total	78	247	1283	1165	197	26	12	6	7	3	3	8	4	40	3079		
Percent	2.5%	8.0%	41.7%	37.8%	6.4%	0.8%	0.4%	0.2%	0.2%	0.1%	0.1%	0.3%	0.1%	1.3%			

15th Percentile : 20 MPH
50th Percentile : 24 MPH
85th Percentile : 29 MPH
95th Percentile : 32 MPH

Stats
10 MPH Pace Speed : 21-30 MPH
Number in Pace : 2452
Percent in Pace : 79.6%
Number of Vehicles > 25 MPH : 1471
Percent of Vehicles > 25 MPH : 47.8%
Mean Speed(Average) : 25 MPH

Elmwood Ave
Between 11th St & 7th St
Speed

Site Code: 00000000000
Station ID:

Latitude: 0' 0.0000 South

A to B, B to A

Start Time	0	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
08/23/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9999	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	15	106	197	93	14	1	0	1	0	0	1	0	0	10	438	16-25	304
13:00	16	108	206	99	19	6	2	2	4	0	2	1	0	6	471	16-25	315
14:00	23	101	201	103	15	1	0	0	0	0	1	0	0	7	452	20-29	305
15:00	30	135	238	109	17	4	4	1	1	0	2	2	0	12	555	16-25	374
16:00	26	124	288	122	18	1	4	4	0	0	0	1	0	12	600	16-25	413
17:00	19	72	253	138	14	1	1	1	1	0	2	0	1	13	516	21-30	392
18:00	12	28	175	96	21	4	0	1	0	1	0	0	0	2	340	21-30	272
19:00	6	33	141	70	9	1	2	1	0	1	0	1	1	6	272	21-30	211
20:00	6	30	76	52	3	1	0	1	0	0	0	1	0	3	173	21-30	128
21:00	0	24	61	32	0	2	0	0	0	0	0	0	0	0	119	21-30	93
22:00	2	16	49	5	2	0	0	0	1	0	0	0	0	0	75	16-25	65
23:00	0	16	29	12	2	0	0	0	0	0	0	0	0	0	59	16-25	45
Total	155	793	1914	931	134	22	13	12	7	2	8	6	2	71	4070		
Percent	3.8%	19.5%	47.0%	22.9%	3.3%	0.5%	0.3%	0.3%	0.2%	0.0%	0.2%	0.1%	0.0%	1.7%			
AM Peak Vol.																	
PM Peak Vol.	15:00	15:00	16:00	17:00	18:00	13:00	15:00	16:00	13:00	18:00	13:00	15:00	17:00	17:00	16:00		
	30	135	288	138	21	6	4	4	4	1	2	2	1	13	600		

Elmwood Ave
Between 11th St & 7th St
Speed

Site Code: 00000000000
Station ID:

Latitude: 0' 0.0000 South

A to B, B to A

Start Time	0	16	21	26	31	36	41	46	51	56	61	66	71	76	9999	Total	Pace Speed	Number in Pace
08/24/17	0	8	21	9	1	0	0	0	0	0	0	0	0	0	0	39	19-28	30
01:00	0	4	11	1	0	0	0	0	0	0	0	0	0	0	0	16	16-25	15
02:00	1	4	7	2	0	0	0	0	0	0	0	0	0	0	0	14	16-25	11
03:00	3	6	10	4	2	0	0	0	0	0	0	0	0	0	1	26	16-25	16
04:00	2	5	13	6	3	0	0	0	0	0	0	0	0	0	0	29	21-30	19
05:00	2	10	38	37	0	0	0	0	0	0	0	0	0	0	1	88	21-30	75
06:00	4	22	110	90	7	0	1	0	0	0	0	0	0	0	1	235	21-30	200
07:00	6	55	155	91	13	2	0	1	0	0	0	0	1	3	327	21-30	246	
08:00	8	57	141	69	7	0	0	0	2	1	0	0	0	4	289	21-30	210	
09:00	10	76	200	61	3	2	0	0	0	0	0	1	0	3	356	16-25	276	
10:00	9	107	188	80	13	1	0	2	0	0	0	1	1	4	406	16-25	295	
11:00	14	97	207	86	21	2	0	0	2	0	0	1	0	8	438	16-25	305	
12 PM	25	106	218	69	18	1	2	0	0	0	0	1	2	8	450	16-25	325	
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	84	557	1319	605	88	8	3	3	4	1	0	4	4	33	2713			
Percent	3.1%	20.5%	48.6%	22.3%	3.2%	0.3%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	1.2%				
AM Peak	11:00	10:00	11:00	07:00	11:00	07:00	06:00	10:00	08:00	08:00		09:00	07:00	11:00	11:00			
Vol.	14	107	207	91	21	2	1	2	2	1		1	1	8	438			
PM Peak	12:00	12:00	12:00	12:00	12:00	12:00	12:00					12:00	12:00	12:00	12:00			
Vol.	25	106	218	69	18	1	2					1	2	8	450			
Total	239	1350	3233	1536	222	30	16	15	11	3	8	10	6	104	6783			
Percent	3.5%	19.9%	47.7%	22.6%	3.3%	0.4%	0.2%	0.2%	0.2%	0.0%	0.1%	0.1%	0.1%	1.5%				

15th Percentile : 17 MPH
50th Percentile : 22 MPH
85th Percentile : 27 MPH
95th Percentile : 29 MPH

Stats
10 MPH Pace Speed : 21-30 MPH
Number in Pace : 4780
Percent in Pace : 70.5%
Number of Vehicles > 25 MPH : 1961
Percent of Vehicles > 25 MPH : 28.9%
Mean Speed(Average) : 23 MPH