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# Memorandum

The City of Traverse City  
Engineering Department



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TO: Timothy J. Lodge, P.E., City Engineer  
FROM: Abhishek Deora, Engineering Aide  
DATE: August 11th, 2017  
SUBJECT: 8th St between Franklin & Railroad St Bike Count

This memo is to formalize City Engineering's initial findings and observations in regard to the class of vehicles traveling on 8th St between Franklin St and Railroad St. The data collected on 8<sup>th</sup> St between Franklin St and Railroad St was only for right turn lane, for vehicles travelling eastbound.

City Engineering performed a 6-day classification count of 8th St began at 11:30 am on August 3rd, 2017 and ended at 2:54 pm on August 9th, 2017. The data was gathered using a Jamar Bike Counter which collected traffic data, including vehicle classification, for right turn lane and bike lane of traffic 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 4984 vehicles traveled in the right hand turn lane on 8th St during the 6-day class count. The vehicle class count showed that 475 vehicles, 0.5 percent, traveling on 8th St during the count were a class 6 (FHA Scheme F) or higher. This means that 0.5 percent of the vehicles traveling on the road have at least three axels (not including buses or class 14).

A total of 484 bikes, 1.4 percent, traveled Eastbound using the Southside Bike lane on 8<sup>th</sup> St during the 6-day count. The average number of the bikes traveling on 8<sup>th</sup> St per day is 80 bikes.

1747 vehicles, 5.0 percent, fell into class 14 which is for unknown vehicles. 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 Eastbound on the 8<sup>th</sup> St is 25 miles per hour, with 56.3% of all the vehicles travelling at the greater speed than the posted limit of 25 miles per hour.

## Summary (Eastbound):

- Number of Vehicles(Using Right Hand Turn Lane) : 4984 vehicles
- Class 6 or Higher: 0.5%
- Class 1 to 5: 93.0%

Encl.: Detailed TraxPro Classification Report

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# Memorandum

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- Bicycles(Using Right Hand Turn Lane or EB Bike Lane): 1.4%
  - Unknown: 5.0%
  - Mean Speed: 25 MPH
  - 85<sup>th</sup> Percentile of Speed: 29 MPH
  - 95<sup>th</sup> Percentile of Speed: 32 MPH

8th St  
Btw Franklin and Railroad  
Class

Site Code:  
Station ID:

Latitude: 44' 45.5621 North

Direction 1

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
08/03/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	0	408	140	1	32	1	0	4	0	0	0	0	0	17	603
13:00	3	329	135	4	33	0	0	1	0	0	0	0	0	23	528
14:00	2	371	138	1	29	0	0	2	0	0	0	0	0	18	561
15:00	5	372	166	1	37	0	0	1	0	0	0	0	0	20	602
16:00	9	414	144	1	25	0	2	4	0	0	0	0	0	46	645
17:00	17	606	92	0	16	4	0	6	0	0	0	0	0	96	837
18:00	5	334	62	1	11	3	0	0	1	0	0	0	0	30	447
19:00	4	158	39	0	7	0	0	0	0	0	0	0	0	17	225
20:00	1	134	30	0	7	0	0	0	0	0	0	0	0	12	184
21:00	0	92	16	0	1	0	0	0	0	0	0	0	0	2	111
22:00	0	59	15	0	1	0	0	1	0	0	0	0	0	5	81
23:00	1	49	9	0	0	0	0	0	0	0	0	0	0	1	60
Total	47	3326	986	9	199	8	2	19	1	0	0	0	0	287	4884
Percent	1.0%	68.1%	20.2%	0.2%	4.1%	0.2%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	

AM  
Peak  
Vol.

PM Peak Vol.	17:00	17:00	15:00	13:00	15:00	17:00	16:00	17:00	18:00			17:00	17:00
Vol.	17	606	166	4	37	4	2	6	1			96	837

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08/04/17	0	35	11	0	1	0	0	0	0	0	0	0	0	1	48
01:00	0	15	3	0	1	0	0	0	0	0	0	0	0	3	22
02:00	0	7	5	0	0	0	0	0	0	0	0	0	0	0	12
03:00	2	5	2	1	0	0	0	0	0	0	0	0	0	0	10
04:00	0	18	8	0	1	0	0	0	0	0	0	0	0	1	28
05:00	0	17	11	1	1	0	1	1	0	0	0	0	0	2	34
06:00	2	53	31	1	6	1	0	0	0	0	0	0	0	7	101
07:00	1	163	48	0	11	2	0	3	0	0	0	0	0	10	238
08:00	0	227	80	2	16	0	0	2	0	0	0	0	0	17	344
09:00	2	254	115	2	16	2	0	3	0	0	0	0	0	24	418
10:00	1	324	120	1	26	0	0	0	1	2	0	0	1	25	501
11:00	7	378	111	0	24	0	0	0	0	1	0	0	1	50	572
12 PM	8	389	124	1	21	0	0	3	0	1	0	0	1	48	596
13:00	5	378	114	1	27	1	0	2	1	1	0	0	1	31	562
14:00	3	346	114	1	18	0	0	0	0	0	0	0	1	25	508
15:00	25	405	117	0	22	3	1	1	0	0	0	0	0	47	621
16:00	9	462	105	0	30	1	0	1	0	0	0	0	0	43	651
17:00	5	388	90	0	11	0	0	3	0	0	0	0	0	30	527
18:00	3	250	67	1	11	1	0	1	0	0	0	0	0	11	345
19:00	3	192	36	0	7	1	0	1	0	0	0	0	0	16	256
20:00	0	178	34	0	6	0	0	1	0	0	0	0	0	15	234
21:00	0	99	29	0	1	0	0	0	0	0	0	0	0	4	133
22:00	0	82	18	0	0	0	0	0	0	0	0	0	0	0	100
23:00	0	61	11	0	1	0	0	0	0	0	0	0	0	2	75
Total	76	4726	1404	12	258	12	2	22	2	5	0	0	5	412	6936
Percent	1.1%	68.1%	20.2%	0.2%	3.7%	0.2%	0.0%	0.3%	0.0%	0.1%	0.0%	0.0%	0.1%	5.9%	
AM Peak	11:00	11:00	10:00	08:00	10:00	07:00	05:00	07:00	10:00	10:00			10:00	11:00	11:00
Vol.	7	378	120	2	26	2	1	3	1	2			1	50	572
PM Peak	15:00	16:00	12:00	12:00	16:00	15:00	15:00	12:00	13:00	12:00			12:00	12:00	16:00
Vol.	25	462	124	1	30	3	1	3	1	1			1	48	651

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08/05/17	1	38	7	0	0	0	0	0	0	0	0	0	0	2	48
01:00	0	25	8	0	0	0	0	0	0	0	0	0	0	1	34
02:00	0	22	3	0	1	0	0	0	0	0	0	0	0	0	26
03:00	0	9	3	0	0	0	0	0	0	0	0	0	0	0	12
04:00	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
05:00	0	9	6	1	1	1	0	0	0	0	0	0	0	1	19
06:00	2	22	7	1	0	0	0	0	0	0	0	0	0	1	33
07:00	1	71	22	0	3	0	0	0	0	0	0	0	0	2	99
08:00	1	93	23	1	9	0	0	0	0	0	0	0	0	5	132
09:00	4	153	39	0	4	0	0	0	0	0	0	0	0	8	208
10:00	0	231	61	0	8	0	0	2	0	0	0	0	0	10	312
11:00	2	269	66	0	13	0	0	0	0	0	0	0	0	36	386
12 PM	3	241	70	0	10	0	0	1	0	0	0	0	0	19	344
13:00	5	220	56	0	7	0	0	1	0	0	0	0	0	11	300
14:00	9	199	41	1	5	0	0	1	0	0	0	0	0	15	271
15:00	4	183	53	1	5	0	0	0	0	0	0	0	0	4	250
16:00	2	197	36	0	10	0	0	1	0	0	0	0	0	6	252
17:00	5	150	31	1	10	0	0	2	0	0	0	0	0	20	219
18:00	1	104	37	0	3	0	0	0	0	0	0	0	0	9	154
19:00	6	126	17	0	8	0	0	1	0	0	0	0	0	8	166
20:00	2	137	22	0	6	0	0	1	0	0	0	0	0	10	178
21:00	1	114	18	0	6	0	0	0	0	0	0	0	0	8	147
22:00	3	57	11	0	3	0	0	0	0	0	0	0	0	3	77
23:00	1	59	10	0	1	0	0	0	0	0	0	0	0	3	74
Total	53	2734	648	6	113	1	0	10	0	0	0	0	0	182	3747
Percent	1.4%	73.0%	17.3%	0.2%	3.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	
AM Peak Vol.	09:00	11:00	11:00	05:00	11:00	05:00		10:00						11:00	11:00
PM Peak Vol.	14:00	12:00	12:00	14:00	12:00			17:00						17:00	12:00

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08/06/17	1	37	9	0	0	0	0	0	0	0	0	0	0	1	48
01:00	0	20	3	0	2	0	0	0	0	0	0	0	0	0	25
02:00	0	28	2	0	1	0	0	0	0	0	0	0	0	0	31
03:00	1	13	2	0	0	0	0	0	0	0	0	0	0	0	16
04:00	0	8	2	0	1	0	0	0	0	0	0	0	0	0	11
05:00	0	11	3	0	1	0	0	0	0	0	0	0	0	1	16
06:00	0	8	4	0	2	0	0	0	0	0	0	0	0	1	15
07:00	0	34	5	0	3	0	0	2	0	0	0	0	0	2	46
08:00	2	45	17	0	1	0	0	2	0	0	0	0	0	5	72
09:00	3	94	31	0	4	0	0	3	0	0	0	0	0	12	147
10:00	1	142	32	0	4	0	0	0	0	0	0	0	0	14	193
11:00	3	173	40	0	7	0	0	1	0	0	0	0	0	15	239
12 PM	4	194	46	0	5	0	0	0	0	0	0	0	1	15	265
13:00	5	190	42	0	7	0	0	0	0	0	0	0	0	13	257
14:00	4	180	37	0	5	0	0	0	0	0	0	0	0	15	241
15:00	5	171	41	0	6	0	0	0	0	0	0	0	0	9	232
16:00	2	164	29	0	4	0	0	0	0	0	0	0	0	11	210
17:00	0	129	23	0	4	0	0	1	0	0	0	0	0	13	170
18:00	7	104	27	1	6	0	0	0	0	0	0	0	0	6	151
19:00	2	122	22	0	1	0	0	0	0	0	0	0	0	6	153
20:00	1	99	27	0	3	0	0	0	0	0	0	0	0	5	135
21:00	1	78	13	0	1	0	0	0	0	0	0	0	0	6	99
22:00	0	45	9	0	0	0	0	0	0	0	0	0	0	2	56
23:00	2	32	4	0	0	0	0	0	0	0	0	0	0	1	39
Total	44	2121	470	1	68	0	0	9	0	0	0	0	1	153	2867
Percent	1.5%	74.0%	16.4%	0.0%	2.4%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	
AM Peak	09:00	11:00	11:00		11:00			09:00						11:00	11:00
Vol.	3	173	40		7			3						15	239
PM Peak	18:00	12:00	12:00	18:00	13:00			17:00					12:00	12:00	12:00
Vol.	7	194	46	1	7			1				1	15	265	

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08/07/17	0	16	3	0	1	0	0	0	0	0	0	0	0	0	20
01:00	0	17	3	0	0	0	0	0	0	0	0	0	0	1	21
02:00	1	7	4	0	0	0	0	0	0	0	0	0	0	0	12
03:00	1	3	1	1	1	0	0	0	0	0	0	0	0	0	7
04:00	1	9	5	0	0	0	0	0	0	0	0	0	0	1	16
05:00	0	20	9	1	2	0	0	0	0	0	0	0	0	4	36
06:00	0	53	33	2	7	0	0	0	0	0	0	0	0	0	95
07:00	5	143	62	1	22	0	0	2	0	0	0	0	0	14	249
08:00	2	249	82	1	28	0	0	1	0	0	0	0	0	14	377
09:00	2	297	83	0	19	1	0	1	0	0	0	0	1	30	434
10:00	5	322	105	1	19	0	0	2	0	1	0	0	1	23	479
11:00	5	368	91	1	31	1	0	5	0	1	0	0	1	24	528
12 PM	7	397	98	0	16	0	0	5	1	2	0	0	1	23	550
13:00	2	443	108	1	18	0	0	2	2	0	0	0	0	18	594
14:00	8	354	86	3	25	0	0	3	0	0	0	0	0	21	500
15:00	9	362	101	1	14	1	0	2	0	0	0	0	1	22	513
16:00	9	396	96	1	16	0	0	4	0	0	0	0	0	20	542
17:00	7	368	110	0	16	0	0	1	0	0	0	0	0	7	509
18:00	4	185	51	1	16	0	0	0	0	0	0	0	0	8	265
19:00	1	135	33	0	6	0	0	1	0	0	0	0	0	13	189
20:00	2	133	40	0	10	0	0	1	0	0	0	0	0	10	196
21:00	4	80	17	0	4	0	0	0	0	0	0	0	0	4	109
22:00	2	50	11	0	3	0	0	0	0	0	0	0	0	2	68
23:00	0	30	9	0	1	0	0	0	0	0	0	0	0	0	40
Total	77	4437	1241	15	275	3	0	30	3	4	0	0	5	259	6349
Percent	1.2%	69.9%	19.5%	0.2%	4.3%	0.0%	0.0%	0.5%	0.0%	0.1%	0.0%	0.0%	0.1%	4.1%	
AM Peak Vol.	07:00	11:00	10:00	06:00	11:00	09:00		11:00		10:00			09:00	09:00	11:00
PM Peak Vol.	15:00	13:00	17:00	14:00	14:00	15:00		12:00	13:00	12:00			12:00	12:00	13:00

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08/08/17	1	27	9	0	2	0	0	0	0	0	0	0	0	1	40
01:00	1	10	2	0	1	0	0	0	0	0	0	0	0	1	15
02:00	0	12	2	0	0	0	0	0	0	0	0	0	0	0	14
03:00	0	5	2	1	0	0	0	0	0	0	0	0	0	0	8
04:00	1	11	5	0	1	0	0	0	0	0	0	0	0	0	18
05:00	1	20	9	1	0	0	0	0	0	0	0	0	0	3	34
06:00	5	50	26	1	3	0	1	1	0	0	0	0	0	4	91
07:00	5	156	56	0	15	0	0	2	0	0	0	0	0	13	247
08:00	5	242	92	1	27	0	0	2	0	0	0	0	0	21	390
09:00	5	270	94	2	30	0	0	1	0	0	0	0	0	25	427
10:00	3	312	112	1	25	2	0	3	0	0	0	0	0	20	478
11:00	6	347	124	1	25	2	0	6	0	0	0	0	1	31	543
12 PM	10	353	117	0	30	1	0	5	0	0	0	0	1	16	533
13:00	13	339	109	1	33	0	0	1	0	0	0	0	1	19	516
14:00	25	308	90	5	25	0	0	1	1	0	0	0	2	8	465
15:00	15	309	117	0	34	1	0	2	0	1	0	0	0	8	487
16:00	5	395	118	2	29	0	0	1	1	1	0	0	0	15	567
17:00	13	382	118	1	16	1	0	3	0	0	0	0	0	17	551
18:00	2	180	64	1	24	1	0	0	0	0	0	0	0	9	281
19:00	4	146	38	0	5	0	0	2	0	0	0	0	0	6	201
20:00	8	134	37	0	6	0	0	0	0	0	0	0	0	4	189
21:00	3	97	19	0	6	0	0	0	0	0	0	0	0	7	132
22:00	2	71	12	0	3	0	0	1	0	0	0	0	0	3	92
23:00	0	43	8	0	0	1	0	0	0	0	0	0	0	3	55
Total	133	4219	1380	18	340	9	1	31	2	2	0	0	5	234	6374
Percent	2.1%	66.2%	21.7%	0.3%	5.3%	0.1%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.1%	3.7%	
AM Peak	11:00	11:00	11:00	09:00	09:00	10:00	06:00	11:00					11:00	11:00	11:00
Vol.	6	347	124	2	30	2	1	6					1	31	543
PM Peak	14:00	16:00	16:00	14:00	15:00	12:00		12:00	14:00	15:00			14:00	13:00	16:00
Vol.	25	395	118	5	34	1		5	1	1			2	19	567





8th St  
Btw Franklin and Railroad  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.5621 North

Direction 1																	
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999		Speed	in Pace
08/03/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	28	27	233	275	39	1	0	0	0	0	0	0	0	0	603	21-30	508
13:00	25	13	139	<b>301</b>	<b>48</b>	2	0	0	0	0	0	0	0	0	528	21-30	440
14:00	21	25	177	288	47	<b>3</b>	0	0	0	0	0	0	0	0	561	21-30	465
15:00	26	24	250	269	32	1	0	0	0	0	0	0	0	0	602	21-30	519
16:00	84	67	233	236	25	0	0	0	0	0	0	0	0	0	645	21-30	469
17:00	<b>125</b>	<b>188</b>	<b>443</b>	80	1	0	0	0	0	0	0	0	0	0	<b>837</b>	16-25	631
18:00	34	23	183	190	17	0	0	0	0	0	0	0	0	0	447	21-30	373
19:00	17	5	84	103	14	2	0	0	0	0	0	0	0	0	225	21-30	187
20:00	12	2	53	101	14	2	0	0	0	0	0	0	0	0	184	21-30	154
21:00	2	8	33	61	7	0	0	0	0	0	0	0	0	0	111	21-30	94
22:00	5	1	29	38	8	0	0	0	0	0	0	0	0	0	81	21-30	67
23:00	1	0	18	32	7	2	0	0	0	0	0	0	0	0	60	21-30	50
Total	380	383	1875	1974	259	13	0	0	0	0	0	0	0	0	4884		
Percent	7.8%	7.8%	38.4%	40.4%	5.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak																	
Vol.																	
PM Peak	17:00	17:00	17:00	13:00	13:00	14:00									17:00		
Vol.	125	188	443	301	48	3									837		

8th St  
Btw Franklin and Railroad  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.5621 North

Direction 1																	
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76			
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Pace	Number
08/04/17	1	2	10	26	8	1	0	0	0	0	0	0	0	0	48	21-30	36
01:00	3	0	3	9	7	0	0	0	0	0	0	0	0	0	22	26-35	16
02:00	0	1	4	5	2	0	0	0	0	0	0	0	0	0	12	21-30	9
03:00	2	1	0	6	1	0	0	0	0	0	0	0	0	0	10	24-33	7
04:00	1	1	8	9	6	3	0	0	0	0	0	0	0	0	28	21-30	17
05:00	2	0	10	15	7	0	0	0	0	0	0	0	0	0	34	21-30	25
06:00	7	1	24	45	22	2	0	0	0	0	0	0	0	0	101	21-30	69
07:00	10	0	25	146	53	4	0	0	0	0	0	0	0	0	238	26-35	199
08:00	17	1	43	209	70	4	0	0	0	0	0	0	0	0	344	26-35	279
09:00	26	5	95	236	55	1	0	0	0	0	0	0	0	0	418	21-30	331
10:00	27	19	168	257	28	2	0	0	0	0	0	0	0	0	501	21-30	425
11:00	67	50	205	222	26	2	0	0	0	0	0	0	0	0	572	21-30	427
12 PM	62	45	257	207	25	0	0	0	0	0	0	0	0	0	596	21-30	464
13:00	42	55	225	218	22	0	0	0	0	0	0	0	0	0	562	21-30	443
14:00	34	52	234	180	8	0	0	0	0	0	0	0	0	0	508	21-30	414
15:00	86	150	284	94	7	0	0	0	0	0	0	0	0	0	621	16-25	434
16:00	74	97	305	159	15	1	0	0	0	0	0	0	0	0	651	21-30	464
17:00	40	61	225	184	16	1	0	0	0	0	0	0	0	0	527	21-30	409
18:00	12	6	95	193	36	2	1	0	0	0	0	0	0	0	345	21-30	288
19:00	15	1	67	134	36	3	0	0	0	0	0	0	0	0	256	21-30	201
20:00	15	0	80	110	27	2	0	0	0	0	0	0	0	0	234	21-30	190
21:00	4	5	51	61	11	0	1	0	0	0	0	0	0	0	133	21-30	112
22:00	0	1	28	56	13	2	0	0	0	0	0	0	0	0	100	21-30	84
23:00	2	1	20	39	10	1	0	2	0	0	0	0	0	0	75	21-30	59
Total	549	555	2466	2820	511	31	2	2	0	0	0	0	0	0	6936		
Percent	7.9%	8.0%	35.6%	40.7%	7.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	11:00	10:00	08:00	07:00									11:00		
Vol.	67	50	205	257	70	4									572		
PM Peak	15:00	15:00	16:00	13:00	18:00	19:00	18:00	23:00							16:00		
Vol.	86	150	305	218	36	3	1	2							651		

8th St  
Btw Franklin and Railroad  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.5621 North

Direction 1																	
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76			
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Pace	Number
																Speed	in Pace
08/05/17	2	2	15	21	5	3	0	0	0	0	0	0	0	0	48	21-30	36
01:00	1	1	8	18	6	0	0	0	0	0	0	0	0	0	34	21-30	26
02:00	0	2	9	8	6	1	0	0	0	0	0	0	0	0	26	21-30	17
03:00	0	1	0	9	1	1	0	0	0	0	0	0	0	0	12	24-33	10
04:00	0	0	2	3	1	0	0	0	0	0	0	0	0	0	6	21-30	5
05:00	1	3	5	6	3	1	0	0	0	0	0	0	0	0	19	21-30	11
06:00	1	0	12	14	6	0	0	0	0	0	0	0	0	0	33	21-30	26
07:00	2	0	11	65	15	6	0	0	0	0	0	0	0	0	99	26-35	80
08:00	5	1	14	76	31	5	0	0	0	0	0	0	0	0	132	26-35	107
09:00	11	1	32	115	46	3	0	0	0	0	0	0	0	0	208	26-35	161
10:00	10	3	79	182	36	1	1	0	0	0	0	0	0	0	312	21-30	261
11:00	36	9	110	191	40	0	0	0	0	0	0	0	0	0	386	21-30	301
12 PM	21	13	95	187	27	1	0	0	0	0	0	0	0	0	344	21-30	282
13:00	16	4	83	171	23	3	0	0	0	0	0	0	0	0	300	21-30	254
14:00	20	6	71	151	22	1	0	0	0	0	0	0	0	0	271	21-30	222
15:00	6	6	64	150	23	1	0	0	0	0	0	0	0	0	250	21-30	214
16:00	7	6	62	148	25	4	0	0	0	0	0	0	0	0	252	21-30	210
17:00	21	0	50	109	37	2	0	0	0	0	0	0	0	0	219	21-30	159
18:00	9	0	27	99	19	0	0	0	0	0	0	0	0	0	154	21-30	126
19:00	11	0	26	93	33	3	0	0	0	0	0	0	0	0	166	26-35	126
20:00	10	3	49	86	27	2	1	0	0	0	0	0	0	0	178	21-30	135
21:00	8	6	52	68	12	1	0	0	0	0	0	0	0	0	147	21-30	120
22:00	5	3	28	28	13	0	0	0	0	0	0	0	0	0	77	21-30	56
23:00	3	0	25	38	8	0	0	0	0	0	0	0	0	0	74	21-30	63
Total	206	70	929	2036	465	39	2	0	0	0	0	0	0	0	3747		
Percent	5.5%	1.9%	24.8%	54.3%	12.4%	1.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	11:00	11:00	09:00	07:00	10:00								11:00		
Vol.	36	9	110	191	46	6	1								386		
PM Peak	12:00	12:00	12:00	12:00	17:00	16:00	20:00								12:00		
Vol.	21	13	95	187	37	4	1								344		

8th St  
Btw Franklin and Railroad  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.5621 North

Direction 1																	
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999		Speed	in Pace
08/06/17	1	1	16	27	3	0	0	0	0	0	0	0	0	0	48	21-30	43
01:00	0	0	9	11	5	0	0	0	0	0	0	0	0	0	25	21-30	20
02:00	0	2	17	10	2	0	0	0	0	0	0	0	0	0	31	21-30	27
03:00	1	1	4	7	3	0	0	0	0	0	0	0	0	0	16	21-30	11
04:00	0	0	2	8	1	0	0	0	0	0	0	0	0	0	11	21-30	10
05:00	1	0	1	8	5	0	1	0	0	0	0	0	0	0	16	26-35	13
06:00	1	0	2	7	4	1	0	0	0	0	0	0	0	0	15	26-35	11
07:00	2	0	5	25	12	1	1	0	0	0	0	0	0	0	46	26-35	37
08:00	5	1	9	40	16	1	0	0	0	0	0	0	0	0	72	26-35	56
09:00	14	2	19	75	36	1	0	0	0	0	0	0	0	0	147	26-35	111
10:00	14	1	28	109	38	3	0	0	0	0	0	0	0	0	193	26-35	147
11:00	16	4	55	123	38	3	0	0	0	0	0	0	0	0	239	21-30	178
12 PM	16	1	56	172	20	0	0	0	0	0	0	0	0	0	265	21-30	228
13:00	13	3	67	139	33	2	0	0	0	0	0	0	0	0	257	21-30	206
14:00	16	4	47	140	32	2	0	0	0	0	0	0	0	0	241	21-30	187
15:00	9	10	50	129	29	5	0	0	0	0	0	0	0	0	232	21-30	179
16:00	11	2	29	131	33	4	0	0	0	0	0	0	0	0	210	26-35	164
17:00	13	0	29	92	33	3	0	0	0	0	0	0	0	0	170	26-35	125
18:00	9	3	30	82	27	0	0	0	0	0	0	0	0	0	151	21-30	112
19:00	6	1	27	96	22	1	0	0	0	0	0	0	0	0	153	21-30	123
20:00	5	0	26	73	30	1	0	0	0	0	0	0	0	0	135	26-35	103
21:00	6	2	29	50	12	0	0	0	0	0	0	0	0	0	99	21-30	79
22:00	2	0	12	29	11	1	0	1	0	0	0	0	0	0	56	21-30	41
23:00	2	3	13	17	4	0	0	0	0	0	0	0	0	0	39	21-30	30
Total	163	41	582	1600	449	29	2	1	0	0	0	0	0	0	2867		
Percent	5.7%	1.4%	20.3%	55.8%	15.7%	1.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	11:00	11:00	10:00	10:00	05:00								11:00		
Vol.	16	4	55	123	38	3	1								239		
PM Peak	12:00	15:00	13:00	12:00	13:00	15:00		22:00							12:00		
Vol.	16	10	67	172	33	5		1							265		

8th St  
Btw Franklin and Railroad  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.5621 North

Direction 1																	
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76			
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Pace	Number
																Speed	in Pace
08/07/17	0	0	8	11	1	0	0	0	0	0	0	0	0	0	20	21-30	19
01:00	1	2	4	8	5	1	0	0	0	0	0	0	0	0	21	24-33	13
02:00	1	0	1	5	5	0	0	0	0	0	0	0	0	0	12	26-35	10
03:00	0	1	4	2	0	0	0	0	0	0	0	0	0	0	7	19-28	6
04:00	1	2	7	6	0	0	0	0	0	0	0	0	0	0	16	21-30	13
05:00	4	1	11	11	7	1	1	0	0	0	0	0	0	0	36	21-30	22
06:00	0	1	16	51	24	3	0	0	0	0	0	0	0	0	95	26-35	75
07:00	14	0	34	126	70	5	0	0	0	0	0	0	0	0	249	26-35	196
08:00	14	1	56	208	95	3	0	0	0	0	0	0	0	0	377	26-35	303
09:00	32	8	95	239	57	3	0	0	0	0	0	0	0	0	434	21-30	334
10:00	24	11	127	265	51	1	0	0	0	0	0	0	0	0	479	21-30	392
11:00	25	31	228	222	20	2	0	0	0	0	0	0	0	0	528	21-30	450
12 PM	43	74	261	147	22	3	0	0	0	0	0	0	0	0	550	21-30	408
13:00	30	77	273	197	16	1	0	0	0	0	0	0	0	0	594	21-30	470
14:00	34	68	256	133	8	1	0	0	0	0	0	0	0	0	500	21-30	389
15:00	45	80	237	143	7	1	0	0	0	0	0	0	0	0	513	21-30	380
16:00	37	73	227	174	29	2	0	0	0	0	0	0	0	0	542	21-30	401
17:00	22	72	253	143	18	1	0	0	0	0	0	0	0	0	509	21-30	396
18:00	8	8	40	154	52	3	0	0	0	0	0	0	0	0	265	26-35	206
19:00	14	0	19	116	38	2	0	0	0	0	0	0	0	0	189	26-35	154
20:00	10	1	34	94	53	4	0	0	0	0	0	0	0	0	196	26-35	147
21:00	6	2	33	55	13	0	0	0	0	0	0	0	0	0	109	21-30	88
22:00	4	1	20	36	6	1	0	0	0	0	0	0	0	0	68	21-30	56
23:00	0	1	8	28	3	0	0	0	0	0	0	0	0	0	40	21-30	36
Total	369	515	2252	2574	600	38	1	0	0	0	0	0	0	0	6349		
Percent	5.8%	8.1%	35.5%	40.5%	9.5%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	11:00	11:00	10:00	08:00	07:00	05:00								11:00		
Vol.	32	31	228	265	95	5	1								528		
PM Peak	15:00	15:00	13:00	13:00	20:00	20:00									13:00		
Vol.	45	80	273	197	53	4									594		

8th St  
Btw Franklin and Railroad  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.5621 North

Direction 1																	
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76			
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Pace	Number
																Speed	in Pace
08/08/17	2	0	9	20	8	1	0	0	0	0	0	0	0	0	40	21-30	29
01:00	2	0	1	10	2	0	0	0	0	0	0	0	0	0	15	24-33	12
02:00	0	1	7	3	3	0	0	0	0	0	0	0	0	0	14	20-29	10
03:00	0	1	3	1	2	1	0	0	0	0	0	0	0	0	8	21-30	4
04:00	1	2	5	8	2	0	0	0	0	0	0	0	0	0	18	21-30	13
05:00	3	2	8	13	8	0	0	0	0	0	0	0	0	0	34	21-30	21
06:00	3	4	32	38	12	2	0	0	0	0	0	0	0	0	91	21-30	70
07:00	12	0	15	154	63	3	0	0	0	0	0	0	0	0	247	26-35	217
08:00	24	1	65	224	<b>71</b>	<b>5</b>	0	0	0	0	0	0	0	0	390	26-35	295
09:00	26	3	82	257	58	0	<b>1</b>	0	0	0	0	0	0	0	427	21-30	339
10:00	23	<b>20</b>	<b>150</b>	239	44	2	0	0	0	0	0	0	0	0	478	21-30	389
11:00	<b>35</b>	13	143	<b>290</b>	61	1	0	0	0	0	0	0	0	0	<b>543</b>	21-30	433
12 PM	26	35	206	236	28	2	0	0	0	0	0	0	0	0	533	21-30	442
13:00	24	34	187	<b>249</b>	22	0	0	0	0	0	0	0	0	0	516	21-30	436
14:00	28	30	152	219	35	1	0	0	0	0	0	0	0	0	465	21-30	371
15:00	25	32	187	211	32	0	0	0	0	0	0	0	0	0	487	21-30	398
16:00	25	42	<b>221</b>	240	37	2	0	0	0	0	0	0	0	0	<b>567</b>	21-30	461
17:00	<b>30</b>	<b>66</b>	217	206	32	0	0	0	0	0	0	0	0	0	551	21-30	423
18:00	10	0	48	168	<b>51</b>	3	<b>1</b>	0	0	0	0	0	0	0	281	26-35	219
19:00	6	2	18	124	45	<b>6</b>	0	0	0	0	0	0	0	0	201	26-35	169
20:00	12	2	33	108	32	2	0	0	0	0	0	0	0	0	189	21-30	141
21:00	7	1	25	89	10	0	0	0	0	0	0	0	0	0	132	21-30	114
22:00	3	1	31	39	16	2	0	0	0	0	0	0	0	0	92	21-30	70
23:00	3	3	20	18	11	0	0	0	0	0	0	0	0	0	55	21-30	38
Total	330	295	1865	3164	685	33	2	0	0	0	0	0	0	0	6374		
Percent	5.2%	4.6%	29.3%	49.6%	10.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	10:00	10:00	11:00	08:00	08:00	09:00								11:00		
Vol.	35	20	150	290	71	5	1								543		
PM Peak	17:00	17:00	16:00	13:00	18:00	19:00	18:00								16:00		
Vol.	30	66	221	249	51	6	1								567		

8th St  
Btw Franklin and Railroad  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.5621 North

Direction 1	Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	76	999	Total	Pace Speed	Number in Pace
08/09/17	1	0	6	17	2	0	1	0	0	0	0	0	0	0	0	0	27	21-30	23
01:00	2	1	4	9	1	1	0	0	0	0	0	0	0	0	0	0	18	21-30	13
02:00	1	1	7	12	4	0	0	0	0	0	0	0	0	0	0	0	25	21-30	19
03:00	0	1	2	3	5	0	0	0	0	0	0	0	0	0	0	0	11	26-35	8
04:00	2	0	3	5	4	1	0	0	0	0	0	0	0	0	0	0	15	26-35	9
05:00	5	1	10	13	6	0	0	0	0	0	0	0	0	0	0	0	35	21-30	23
06:00	1	0	14	52	21	1	2	0	0	0	0	0	0	0	0	0	91	26-35	73
07:00	10	2	31	170	73	2	0	0	0	0	0	0	0	0	0	0	288	26-35	243
08:00	24	4	75	219	104	3	0	0	0	0	0	0	0	0	0	0	429	26-35	323
09:00	31	10	72	284	63	5	0	0	0	0	0	0	0	0	0	0	465	21-30	356
10:00	63	15	124	235	77	4	0	0	0	0	0	0	0	0	0	0	518	21-30	359
11:00	46	24	178	276	46	1	0	0	0	0	0	0	0	0	0	0	571	21-30	454
12 PM	45	49	254	221	30	1	0	0	0	0	0	0	0	0	0	0	600	21-30	475
13:00	29	39	197	245	41	1	0	0	0	0	0	0	0	0	0	0	552	21-30	442
14:00	22	10	115	163	27	1	0	0	0	0	0	0	0	0	0	0	338	21-30	278
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	282	157	1092	1924	504	21	3	0	0	0	0	0	0	0	0	0	3983		
Percent	7.1%	3.9%	27.4%	48.3%	12.7%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	11:00	11:00	09:00	08:00	09:00	06:00										11:00		
Vol.	63	24	178	284	104	5	2										571		
PM Peak	12:00	12:00	12:00	13:00	13:00	12:00											12:00		
Vol.	45	49	254	245	41	1											600		
Total	2279	2016	11061	16092	3473	204	12	3	0	0	0	0	0	0	0	0	35140		
Percent	6.5%	5.7%	31.5%	45.8%	9.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 20 MPH  
50th Percentile : 25 MPH  
85th Percentile : 29 MPH  
95th Percentile : 32 MPH

Stats  
10 MPH Pace Speed : 21-30 MPH  
Number in Pace : 27153  
Percent in Pace : 77.3%  
Number of Vehicles > 25 MPH : 19784  
Percent of Vehicles > 25 MPH : 56.3%  
Mean Speed(Average) : 25 MPH



8th St  
Btw Franklin and Railroad St  
Speed

Site Code:  
Station ID:

























Latitude: 44' 45.5621 North

Start Time	Mon 31-Jul-17	Tue 01-Aug-17	Wed 02-Aug-17	Thu 03-Aug-17	Fri 04-Aug-17	Average Day	Sat 05-Aug-17	Sun 06-Aug-17	Week Average			
12:00 AM	*	*	*	*	48	48	48	48	48			
01:00	*	*	*	*	22	22	34	25	27			
02:00	*	*	*	*	12	12	26	31	23			
03:00	*	*	*	*	10	10	12	16	13			
04:00	*	*	*	*	28	28	6	11	15			
05:00	*	*	*	*	34	34	19	16	23			
06:00	*	*	*	*	101	101	33	15	50			
07:00	*	*	*	*	238	238	99	46	128			
08:00	*	*	*	*	344	344	132	72	183			
09:00	*	*	*	*	418	418	208	147	258			
10:00	*	*	*	*	501	501	312	193	335			
11:00	*	*	*	*	<b>572</b>	<b>572</b>	<b>386</b>	<b>239</b>	<b>399</b>			
12:00 PM	*	*	*	603	596	600	<b>344</b>	<b>265</b>	<b>452</b>			
01:00	*	*	*	528	562	545	300	257	412			
02:00	*	*	*	561	508	534	271	241	395			
03:00	*	*	*	602	621	612	250	232	426			
04:00	*	*	*	645	<b>651</b>	648	252	210	440			
05:00	*	*	*	<b>837</b>	527	<b>682</b>	219	170	438			
06:00	*	*	*	447	345	396	154	151	274			
07:00	*	*	*	225	256	240	166	153	200			
08:00	*	*	*	184	234	209	178	135	183			
09:00	*	*	*	111	133	122	147	99	122			
10:00	*	*	*	81	100	90	77	56	78			
11:00	*	*	*	60	75	68	74	39	62			
Day Total	0	0	0	4884	6936	7074	3747	2867	4984			
% Avg. WkDay	0.0%	0.0%	0.0%	69.0%	98.0%							
% Avg. Week	0.0%	0.0%	0.0%	98.0%	139.2%	141.9%	75.2%	57.5%				
AM Peak	-	-	-	-	11:00	-	11:00	11:00	-	11:00	-	-
Vol.	-	-	-	-	572	-	386	239	-	399	-	-
PM Peak	-	-	-	17:00	16:00	-	12:00	12:00	-	12:00	-	-
Vol.	-	-	-	837	651	-	344	265	-	452	-	-

8th St  
Btw Franklin and Railroad St  
Speed

Site Code:  
Station ID:

Latitude: 44' 45.5621 North

Start Time	Mon 07-Aug-17	Tue 08-Aug-17	Wed 09-Aug-17	Thu 10-Aug-17	Fri 11-Aug-17	Average Day	Sat 12-Aug-17	Sun 13-Aug-17	Week Average
12:00 AM	20	40	27	*	*	29	*	*	29 
01:00	21	15	18	*	*	18	*	*	18 
02:00	12	14	25	*	*	17	*	*	17 
03:00	7	8	11	*	*	9	*	*	9 
04:00	16	18	15	*	*	16	*	*	16 
05:00	36	34	35	*	*	35	*	*	35 
06:00	95	91	91	*	*	92	*	*	92 
07:00	249	247	288	*	*	261	*	*	261 
08:00	377	390	429	*	*	399	*	*	399 
09:00	434	427	465	*	*	442	*	*	442 
10:00	479	478	518	*	*	492	*	*	492 
11:00	<b>528</b>	<b>543</b>	<b>571</b>	*	*	<b>547</b>	*	*	<b>547</b> 
12:00 PM	550	533	<b>600</b>	*	*	<b>561</b>	*	*	<b>561</b> 
01:00	<b>594</b>	516	552	*	*	554	*	*	554 
02:00	500	465	338	*	*	434	*	*	434 
03:00	513	487	*	*	*	500	*	*	500 
04:00	542	<b>567</b>	*	*	*	554	*	*	554 
05:00	509	551	*	*	*	530	*	*	530 
06:00	265	281	*	*	*	273	*	*	273 
07:00	189	201	*	*	*	195	*	*	195 
08:00	196	189	*	*	*	192	*	*	192 
09:00	109	132	*	*	*	120	*	*	120 
10:00	68	92	*	*	*	80	*	*	80 
11:00	40	55	*	*	*	48	*	*	48 
Day Total	6349	6374	3983	0	0	6398	0	0	6398
% Avg. WkDay	99.2%	99.6%	62.3%	0.0%	0.0%				
% Avg. Week	99.2%	99.6%	62.3%	0.0%	0.0%	100.0%	0.0%	0.0%	
AM Peak	11:00	11:00	11:00	-	-	11:00	-	-	11:00
Vol.	528	543	571	-	-	547	-	-	547
PM Peak	13:00	16:00	12:00	-	-	12:00	-	-	12:00
Vol.	594	567	600	-	-	561	-	-	561

Grand Total	6349	6374	3983	4884	6936	13472	3747	2867	11382
ADT	ADT 5,626		AADT 5,626						