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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: September 5<sup>th</sup>, 2017  
SUBJECT: Railroad at Fern St Classification Count

This memo is to formalize City Engineering's initial findings and observations in regard to the class of vehicles traveling on Fern St at Railroad.

City Engineering performed a 24-hour classification count of Fern St began at 11:48 am on August 31<sup>st</sup>, 2017 and ended at 2:24 pm on September 1<sup>st</sup>, 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 613 vehicles traveled on Fern St during the 24-hour class count. The vehicle class count showed that 11 vehicles, 1.9 percent, traveling on Fern St during the count were a class 6 (FHA Scheme F) or higher.

37 vehicles, 6.0 percent, fell into class 14 which is for bicycles and unknown vehicles. This number suggests that many people use this section of Fern St as a bicycling route. This number could also be partially due to vehicles parking on the tubes for the traffic counter.

## Summary:

- Number of Vehicles: 613 vehicles
- Class 6 or Higher: 1.9%
- Class 1 to 5: 92.1%
- Class 14 (Unknown/Bicycles): 6.0%

Encl.: Detailed TraxPro Classification Report

Railroad at Fern 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
08/31/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	15	4	0	2	0	0	0	0	0	0	0	0	1	22
13:00	1	14	2	0	0	0	0	0	0	0	0	0	0	1	18
14:00	0	21	1	0	0	0	0	0	0	0	0	0	0	1	23
15:00	0	13	5	0	0	0	0	0	0	0	0	0	0	1	19
16:00	0	17	8	0	0	0	0	0	0	0	0	0	0	0	25
17:00	0	14	5	0	0	0	0	0	0	0	0	0	0	1	20
18:00	0	14	2	0	1	0	0	0	0	0	0	0	0	0	17
19:00	1	9	0	0	0	0	0	0	0	0	0	0	0	0	10
20:00	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
21:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
22:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
23:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	2	137	28	0	3	0	0	0	0	0	0	0	0	5	175
Percent	1.1%	78.3%	16.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	

AM  
Peak  
Vol.

PM Peak Vol.	13:00	14:00	16:00	12:00	12:00	16:00
	1	21	8	2	1	25

Railroad at Fern 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
09/01/17	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:00	0	8	2	0	0	0	0	0	0	0	0	0	0	0	10
08:00	0	11	5	0	0	0	0	0	0	0	0	0	0	1	17
09:00	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
10:00	1	14	1	0	0	0	0	0	0	0	0	0	0	1	17
11:00	0	11	6	0	0	0	0	0	0	0	0	0	0	1	18
12 PM	0	15	6	0	1	0	0	2	0	0	0	0	0	0	24
13:00	0	14	4	0	0	0	0	0	1	0	0	0	0	2	21
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	1	86	27	0	2	0	0	2	0	1	0	0	0	5	124
Percent	0.8%	69.4%	21.8%	0.0%	1.6%	0.0%	0.0%	1.6%	0.0%	0.8%	0.0%	0.0%	0.0%	4.0%	
AM Peak	10:00	10:00	11:00		00:00									08:00	11:00
Vol.	1	14	6		1									1	18
PM Peak		12:00	12:00		12:00			12:00		13:00				13:00	12:00
Vol.		15	6		1			2		1				2	24
Grand Total	3	223	55	0	5	0	0	2	0	1	0	0	0	10	299
Percent	1.0%	74.6%	18.4%	0.0%	1.7%	0.0%	0.0%	0.7%	0.0%	0.3%	0.0%	0.0%	0.0%	3.3%	

Railroad at Fern 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
08/31/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	1	14	4	0	1	0	0	1	0	0	0	0	0	3	24
13:00	0	11	5	0	1	0	0	0	0	0	0	0	0	1	18
14:00	0	20	6	0	2	0	0	0	0	0	0	0	0	4	32
15:00	0	9	5	0	2	0	0	0	0	0	0	0	0	0	16
16:00	0	18	4	0	0	0	0	0	0	0	0	0	0	5	27
17:00	1	18	6	0	1	0	0	0	0	0	0	0	0	1	27
18:00	1	13	1	0	1	0	0	0	0	0	0	0	0	0	16
19:00	0	9	3	0	0	0	0	0	0	0	0	0	0	1	13
20:00	0	4	2	0	0	0	0	0	0	0	0	0	0	2	8
21:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
22:00	0	1	0	0	0	0	0	0	0	0	0	0	0	3	4
23:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	3	120	36	0	8	0	0	1	0	0	0	0	0	20	188
Percent	1.6%	63.8%	19.1%	0.0%	4.3%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	10.6%	
AM Peak Vol.															
PM Peak Vol.	12:00	14:00	14:00		14:00			12:00						16:00	14:00
	1	20	6		2			1					5	32	

Railroad at Fern 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
09/01/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
06:00	0	2	4	0	0	0	0	0	0	0	0	0	0	1	7
07:00	0	8	1	0	0	0	0	0	0	0	0	0	0	1	10
08:00	1	10	3	0	0	0	0	0	0	0	0	0	0	0	14
09:00	0	4	4	0	0	2	0	1	0	0	0	0	0	1	12
10:00	0	9	2	0	0	1	0	0	0	0	0	0	0	2	14
11:00	0	12	8	1	0	1	0	0	0	0	0	0	0	0	22
12 PM	0	14	4	0	1	0	0	1	0	0	0	0	1	0	21
13:00	1	14	5	0	0	0	0	0	0	0	0	0	0	2	22
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	2	77	31	1	1	4	0	2	0	0	0	0	1	7	126
Percent	1.6%	61.1%	24.6%	0.8%	0.8%	3.2%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.8%	5.6%	
AM Peak	08:00	11:00	11:00	11:00		09:00		09:00						10:00	11:00
Vol.	1	12	8	1		2		1						2	22
PM Peak	13:00	12:00	13:00		12:00			12:00					12:00	13:00	13:00
Vol.	1	14	5		1			1					1	2	22
Grand Total	5	197	67	1	9	4	0	3	0	0	0	0	1	27	314
Percent	1.6%	62.7%	21.3%	0.3%	2.9%	1.3%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.3%	8.6%	

Railroad at Fern 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
08/31/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	1	29	8	0	3	0	0	1	0	0	0	0	0	4	46
13:00	1	25	7	0	1	0	0	0	0	0	0	0	0	2	36
14:00	0	41	7	0	2	0	0	0	0	0	0	0	0	5	55
15:00	0	22	10	0	2	0	0	0	0	0	0	0	0	1	35
16:00	0	35	12	0	0	0	0	0	0	0	0	0	0	5	52
17:00	1	32	11	0	1	0	0	0	0	0	0	0	0	2	47
18:00	1	27	3	0	2	0	0	0	0	0	0	0	0	0	33
19:00	1	18	3	0	0	0	0	0	0	0	0	0	0	1	23
20:00	0	15	2	0	0	0	0	0	0	0	0	0	0	2	19
21:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
22:00	0	3	1	0	0	0	0	0	0	0	0	0	0	3	7
23:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	5	257	64	0	11	0	0	1	0	0	0	0	0	25	363
Percent	1.4%	70.8%	17.6%	0.0%	3.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	
AM Peak Vol.															
PM Peak Vol.	12:00	14:00	16:00		12:00			12:00						14:00	14:00
	1	41	12		3			1					5	55	

Railroad at Fern 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
09/01/17	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
06:00	0	3	4	0	0	0	0	0	0	0	0	0	0	1	8
07:00	0	16	3	0	0	0	0	0	0	0	0	0	0	1	20
08:00	1	21	8	0	0	0	0	0	0	0	0	0	0	1	31
09:00	0	14	6	0	0	2	0	1	0	0	0	0	0	1	24
10:00	1	23	3	0	0	1	0	0	0	0	0	0	0	3	31
11:00	0	23	14	1	0	1	0	0	0	0	0	0	0	1	40
12 PM	0	29	10	0	2	0	0	3	0	0	0	0	1	0	45
13:00	1	28	9	0	0	0	0	0	1	0	0	0	0	4	43
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	3	163	58	1	3	4	0	4	0	1	0	0	1	12	250
Percent	1.2%	65.2%	23.2%	0.4%	1.2%	1.6%	0.0%	1.6%	0.0%	0.4%	0.0%	0.0%	0.4%	4.8%	
AM Peak	08:00	10:00	11:00	11:00	00:00	09:00		09:00						10:00	11:00
Vol.	1	23	14	1	1	2		1						3	40
PM Peak	13:00	12:00	12:00		12:00			12:00		13:00			12:00	13:00	12:00
Vol.	1	29	10		2			3		1			1	4	45
Grand Total	8	420	122	1	14	4	0	5	0	1	0	0	1	37	613
Percent	1.3%	68.5%	19.9%	0.2%	2.3%	0.7%	0.0%	0.8%	0.0%	0.2%	0.0%	0.0%	0.2%	6.0%	

Railroad at Fern 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
08/31/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	5	10	6	1	0	0	0	0	0	0	0	0	0	0	22	16-25	16
13:00	3	8	6	1	0	0	0	0	0	0	0	0	0	0	18	16-25	14
14:00	8	12	3	0	0	0	0	0	0	0	0	0	0	0	23	16-25	15
15:00	3	9	5	1	1	0	0	0	0	0	0	0	0	0	19	16-25	14
16:00	10	10	5	0	0	0	0	0	0	0	0	0	0	0	25	16-25	15
17:00	5	6	9	0	0	0	0	0	0	0	0	0	0	0	20	16-25	15
18:00	4	8	4	1	0	0	0	0	0	0	0	0	0	0	17	16-25	12
19:00	3	5	1	1	0	0	0	0	0	0	0	0	0	0	10	16-25	6
20:00	6	2	3	0	0	0	0	0	0	0	0	0	0	0	11	16-25	5
21:00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5	11-20	4
22:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3	16-25	2
23:00	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	15-24	2
Total	50	74	45	5	1	0	0	0	0	0	0	0	0	0	175		
Percent	28.6%	42.3%	25.7%	2.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	16:00	14:00	17:00	12:00	15:00										16:00		
	10	12	9	1	1										25		



Railroad at Fern 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
	15	20	25	30	35	40	45	50	55	60	65	70	75	9999			
09/01/17	1	1	2	0	0	0	0	0	0	0	0	0	0	0	4	16-25	3
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
06:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19-28	1
07:00	3	4	3	0	0	0	0	0	0	0	0	0	0	0	10	16-25	7
08:00	6	5	3	3	0	0	0	0	0	0	0	0	0	0	17	16-25	8
09:00	3	6	3	0	0	0	0	0	0	0	0	0	0	0	12	16-25	9
10:00	4	5	6	1	1	0	0	0	0	0	0	0	0	0	17	16-25	11
11:00	5	6	7	0	0	0	0	0	0	0	0	0	0	0	18	16-25	13
12 PM	10	8	6	0	0	0	0	0	0	0	0	0	0	0	24	16-25	14
13:00	7	12	1	1	0	0	0	0	0	0	0	0	0	0	21	13-22	14
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	39	47	31	6	1	0	0	0	0	0	0	0	0	0	124		
Percent	31.5%	37.9%	25.0%	4.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	09:00	11:00	08:00	10:00										11:00		
Vol.	6	6	7	3	1										18		
PM Peak	12:00	13:00	12:00	13:00											12:00		
Vol.	10	12	6	1											24		
Total	89	121	76	11	2	0	0	0	0	0	0	0	0	0	299		
Percent	29.8%	40.5%	25.4%	3.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 7 MPH  
 50th Percentile : 17 MPH  
 85th Percentile : 22 MPH  
 95th Percentile : 24 MPH

Stats  
 10 MPH Pace Speed : 16-25 MPH  
 Number in Pace : 201  
 Percent in Pace : 67.2%  
 Number of Vehicles > 25 MPH : 13  
 Percent of Vehicles > 25 MPH : 4.3%  
 Mean Speed(Average) : 17 MPH

Railroad at Fern 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
08/31/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	5	6	10	2	0	0	0	1	0	0	0	0	0	0	24	16-25	16
13:00	2	5	8	3	0	0	0	0	0	0	0	0	0	0	18	16-25	13
14:00	6	8	12	4	2	0	0	0	0	0	0	0	0	0	32	16-25	20
15:00	1	8	1	6	0	0	0	0	0	0	0	0	0	0	16	16-25	9
16:00	7	9	7	4	0	0	0	0	0	0	0	0	0	0	27	16-25	16
17:00	7	5	12	3	0	0	0	0	0	0	0	0	0	0	27	16-25	17
18:00	4	7	3	2	0	0	0	0	0	0	0	0	0	0	16	16-25	10
19:00	4	5	4	0	0	0	0	0	0	0	0	0	0	0	13	16-25	9
20:00	3	4	1	0	0	0	0	0	0	0	0	0	0	0	8	16-25	5
21:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14-23	1
22:00	3	0	1	0	0	0	0	0	0	0	0	0	0	0	4	*	2
23:00	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	15-24	2
Total	42	57	62	24	2	0	0	1	0	0	0	0	0	0	188		
Percent	22.3%	30.3%	33.0%	12.8%	1.1%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	16:00	16:00	14:00	15:00	14:00				12:00						14:00		
	7	9	12	6	2				1						32		

Railroad at Fern 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
	15	20	25	30	35	40	45	50	55	60	65	70	75	9999			
09/01/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	10-19	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
05:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	14-23	2
06:00	2	0	4	1	0	0	0	0	0	0	0	0	0	0	7	21-30	5
07:00	3	2	4	1	0	0	0	0	0	0	0	0	0	0	10	16-25	6
08:00	4	1	6	2	1	0	0	0	0	0	0	0	0	0	14	21-30	8
09:00	3	6	1	2	0	0	0	0	0	0	0	0	0	0	12	16-25	7
10:00	3	4	6	1	0	0	0	0	0	0	0	0	0	0	14	16-25	10
11:00	2	8	7	4	0	0	0	0	1	0	0	0	0	0	22	16-25	15
12 PM	7	7	4	3	0	0	0	0	0	0	0	0	0	0	21	16-25	11
13:00	6	6	7	2	1	0	0	0	0	0	0	0	0	0	22	16-25	13
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	30	37	40	16	2	0	0	0	1	0	0	0	0	0	126		
Percent	23.8%	29.4%	31.7%	12.7%	1.6%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	11:00	11:00	11:00	08:00				11:00								11:00
Vol.	4	8	7	4	1				1								22
PM Peak	12:00	12:00	13:00	12:00	13:00												13:00
Vol.	7	7	7	3	1												22
Total	72	94	102	40	4	0	0	1	1	0	0	0	0	0	314		
Percent	22.9%	29.9%	32.5%	12.7%	1.3%	0.0%	0.0%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 10 MPH  
50th Percentile : 19 MPH  
85th Percentile : 24 MPH  
95th Percentile : 28 MPH

Stats  
10 MPH Pace Speed : 16-25 MPH  
Number in Pace : 199  
Percent in Pace : 63.4%  
Number of Vehicles > 25 MPH : 46  
Percent of Vehicles > 25 MPH : 14.6%  
Mean Speed(Average) : 19 MPH

Railroad at Fern St  
Speed

Site Code: 00000000000  
Station ID:

Latitude: 0' 0.0000 South

A to B, B to A

Start	0	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	9999		Speed	in Pace
08/31/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	10	16	16	3	0	0	0	1	0	0	0	0	0	0	46	16-25	32
13:00	5	13	14	4	0	0	0	0	0	0	0	0	0	0	36	16-25	27
14:00	14	20	15	4	2	0	0	0	0	0	0	0	0	0	55	16-25	36
15:00	4	17	6	7	1	0	0	0	0	0	0	0	0	0	35	16-25	23
16:00	17	19	12	4	0	0	0	0	0	0	0	0	0	0	52	16-25	32
17:00	12	11	21	3	0	0	0	0	0	0	0	0	0	0	47	16-25	33
18:00	8	15	7	3	0	0	0	0	0	0	0	0	0	0	33	16-25	22
19:00	7	10	5	1	0	0	0	0	0	0	0	0	0	0	23	16-25	15
20:00	9	6	4	0	0	0	0	0	0	0	0	0	0	0	19	16-25	10
21:00	2	3	1	0	0	0	0	0	0	0	0	0	0	0	6	16-25	4
22:00	4	1	2	0	0	0	0	0	0	0	0	0	0	0	7	16-25	3
23:00	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	16-25	4
Total	92	131	107	29	3	0	0	1	0	0	0	0	0	0	363		
Percent	25.3%	36.1%	29.5%	8.0%	0.8%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak																	
Vol.																	
PM Peak	16:00	14:00	17:00	15:00	14:00				12:00						14:00		
Vol.	17	20	21	7	2				1						55		

Railroad at Fern St  
Speed

Site Code: 000000000000  
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
09/01/17	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	4	16-25	3
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10-19	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
05:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	14-23	2
06:00	2	0	4	2	0	0	0	0	0	0	0	0	0	0	0	8	21-30	6
07:00	6	6	7	1	0	0	0	0	0	0	0	0	0	0	0	20	16-25	13
08:00	10	6	9	5	1	0	0	0	0	0	0	0	0	0	0	31	17-26	15
09:00	6	12	4	2	0	0	0	0	0	0	0	0	0	0	0	24	16-25	16
10:00	7	9	12	2	1	0	0	0	0	0	0	0	0	0	0	31	16-25	21
11:00	7	14	14	4	0	0	0	0	1	0	0	0	0	0	0	40	16-25	28
12 PM	17	15	10	3	0	0	0	0	0	0	0	0	0	0	0	45	16-25	26
13:00	13	18	8	3	1	0	0	0	0	0	0	0	0	0	0	43	16-25	27
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	69	84	71	22	3	0	0	0	1	0	0	0	0	0	0	250		
Percent	27.6%	33.6%	28.4%	8.8%	1.2%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	11:00	11:00	08:00	08:00				11:00							11:00		
Vol.	10	14	14	5	1				1							40		
PM Peak	12:00	13:00	12:00	12:00	13:00											12:00		
Vol.	17	18	10	3	1											45		
Total	161	215	178	51	6	0	0	1	1	0	0	0	0	0	0	613		
Percent	26.3%	35.1%	29.0%	8.3%	1.0%	0.0%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 8 MPH  
50th Percentile : 18 MPH  
85th Percentile : 24 MPH  
95th Percentile : 27 MPH

Stats  
10 MPH Pace Speed : 16-25 MPH  
Number in Pace : 400  
Percent in Pace : 65.3%  
Number of Vehicles > 25 MPH : 59  
Percent of Vehicles > 25 MPH : 9.6%  
Mean Speed(Average) : 18 MPH

Railroad at Fern St  
Class

Site Code: 00000000000  
Station ID:

Latitude: 0' 0.0000 South

Start Time	28-Aug-17 Mon	29-Aug-17 Tue	30-Aug-17 Wed	31-Aug-17 Thu	01-Sep-17 Fri	Weekday Average	02-Sep-17 Sat	03-Sep-17 Sun
12:00 AM	*	*	*	*	*	4	*	*
01:00	*	*	*	*	*	0	*	*
02:00	*	*	*	*	*	2	*	*
03:00	*	*	*	*	*	0	*	*
04:00	*	*	*	*	*	0	*	*
05:00	*	*	*	*	*	2	*	*
06:00	*	*	*	*	*	8	*	*
07:00	*	*	*	*	*	20	*	*
08:00	*	*	*	*	*	31	*	*
09:00	*	*	*	*	*	24	*	*
10:00	*	*	*	*	*	31	*	*
11:00	*	*	*	*	*	40	*	*
12:00 PM	*	*	*	46	45	46	*	*
01:00	*	*	*	36	43	40	*	*
02:00	*	*	*	55	*	55	*	*
03:00	*	*	*	35	*	35	*	*
04:00	*	*	*	52	*	52	*	*
05:00	*	*	*	47	*	47	*	*
06:00	*	*	*	33	*	33	*	*
07:00	*	*	*	23	*	23	*	*
08:00	*	*	*	19	*	19	*	*
09:00	*	*	*	6	*	6	*	*
10:00	*	*	*	7	*	7	*	*
11:00	*	*	*	4	*	4	*	*
Total	0	0	0	363	250		0	0
Percentage	0.0%	0.0%	0.0%	68.6%	47.3%		0.0%	0.0%
AM Peak	-	-	-	-	11:00	-	-	-
Vol.	-	-	-	-	40	-	-	-
PM Peak	-	-	-	14:00	12:00	-	-	-
Vol.	-	-	-	55	45	-	-	-
Total		0	0					