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# Memorandum

The City of Traverse City  
Engineering Department



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TO: Transportation Committee (Per Slabtown) *JS*  
FROM: Matthew Sexton, Seasonal Engineering Aide *M.S.*  
DATE: Friday, June 22<sup>nd</sup>, 2018  
SUBJECT: 24 Hour Speed and Volume of Wayne Street, Near Spruce

City Engineering performed a 24 hour speed study on Wayne Street, Near Spruce beginning on Wednesday, June 20<sup>th</sup>, 2018 and concluding on Thursday, June 21<sup>st</sup>, 2018. This memo is to formalize City Engineering's initial data observations and findings with to the speed statistics and volume of vehicular traffic on Wayne Street.

The data was gathered using a JAMAR Radar Recorder; this data recorder collects both vehicle speed and volume using radar sensors in both Eastbound and Westbound lanes. The raw data compiled and analyzed using TraxPro and reported vehicle speed count for every hour during the study in the increments of 5 miles per hour. The TraxPro software also compiled a report to be sent Traverse City Police Department to evaluate the possible percentage of enforceable violations. This data is organized into a small colored meter where red means there is a high enforcement potential and green equates to a low amount of speed infractions are occurring. For this report, the enforceable minimum speed a vehicle would need to be traveling is 5 miles per hour over the posted speed limit of 25 miles per hour.

**During this 24 hour study, 750 vehicles were recorded. The average (mean) speed of the 750 vehicles was 22 miles per hour, with 34.1% of all vehicles traveling at speeds greater than the posted limit of 25 miles per hour. Giving motorist an extra 5 miles per hour over the posted speed limit for enforcement tolerance, the number of vehicles speeding was 5.3%.**

**Summary (Combined):**

- **Mean Speed:** 22 MPH
- **Number of Vehicles above Posted Speed Limit** 34.1%
- **85<sup>th</sup> Percentile of Speed:** 27 MPH
- **95<sup>th</sup> Percentile of Speed:** 29 MPH

Enclosed:

Detailed TraxPro Speed Reports (Combined and Directional)  
TraxPro Police Enforcement Reports



# Wayne Street Near Spruce & Cedar

Wayne Street  
Spruce Street

Direction 2		16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace	Number
Start Time		20	25	30	35	40	45	50	55	60	65	70	75	999		in Pace	
06/20/18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
09:00	2	8	14	4	0	0	0	0	0	0	0	0	0	0	28	16-25	22
10:00	2	8	8	8	0	0	0	0	0	0	0	0	0	0	26	16-25	16
11:00	0	10	17	7	2	0	0	0	0	0	0	0	0	0	36	16-25	27
12 PM	2	2	4	8	0	0	0	0	0	0	0	0	0	0	16	21-30	12
13:00	5	4	4	3	0	0	0	0	0	0	0	0	0	0	16	15-24	8
14:00	4	8	8	3	2	0	0	0	0	0	0	0	0	0	25	16-25	16
15:00	0	7	10	3	1	0	0	0	0	0	0	0	0	0	21	16-25	17
16:00	4	19	11	3	0	0	0	0	0	0	0	0	0	0	37	16-25	30
17:00	7	9	18	2	2	0	0	0	0	0	0	0	0	0	38	16-25	27
18:00	2	12	3	1	2	0	0	0	0	0	0	0	0	0	20	15-24	15
19:00	2	6	7	4	1	0	0	0	0	0	0	0	0	0	20	16-25	13
20:00	1	2	8	3	0	0	0	0	0	0	0	0	0	0	14	19-28	11
21:00	2	0	6	9	0	0	0	0	0	0	0	0	0	0	17	21-30	15
22:00	1	0	1	0	1	0	0	0	0	0	0	0	0	0	3	*	1
23:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19-28	1
<b>Total</b>	34	95	119	59	11	0	0	0	0	0	0	0	0	0	318		
<b>Percent</b>	10.7%	29.9%	37.4%	18.6%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
<b>AM Peak</b>	09:00	11:00	11:00	10:00	11:00										11:00		
<b>Vol.</b>	2	10	17	8	2										36		
<b>PM Peak</b>	17:00	16:00	17:00	21:00	14:00										17:00		
<b>Vol.</b>	7	19	18	9	2										38		



# Wayne Street Near Spruce & Cedar

Wayne Street  
Spruce Street

Start Time	6/18/2018 Mon	6/19/2018 Tue	6/20/2018 Wed	6/21/2018 Thu	6/22/2018 Fri	Weekday Average	6/23/2018 Sat	6/24/2018 Sun
12:00 AM	*	*	*	4	*	4	*	*
01:00	*	*	*	3	*	3	*	*
02:00	*	*	*	0	*	0	*	*
03:00	*	*	*	0	*	0	*	*
04:00	*	*	*	2	*	2	*	*
05:00	*	*	*	4	*	4	*	*
06:00	*	*	*	16	*	16	*	*
07:00	*	*	*	51	*	51	*	*
08:00	*	*	*	58	*	58	*	*
09:00	*	*	50	43	*	46	*	*
10:00	*	*	40	9	*	24	*	*
11:00	*	*	54	*	*	54	*	*
12:00 PM	*	*	40	*	*	40	*	*
01:00	*	*	31	*	*	31	*	*
02:00	*	*	36	*	*	36	*	*
03:00	*	*	41	*	*	41	*	*
04:00	*	*	55	*	*	55	*	*
05:00	*	*	67	*	*	67	*	*
06:00	*	*	47	*	*	47	*	*
07:00	*	*	30	*	*	30	*	*
08:00	*	*	27	*	*	27	*	*
09:00	*	*	31	*	*	31	*	*
10:00	*	*	9	*	*	9	*	*
11:00	*	*	2	*	*	2	*	*
Total	0	0	560	190	0		0	0
Percentage	0.0%	0.0%	82.6%	28.0%	0.0%		0.0%	0.0%
AM Peak	-	-	11:00	08:00	-	-	-	-
Vol.	-	-	54	58	-	-	-	-
PM Peak	-	-	17:00	-	-	-	-	-
Vol.	-	-	67	-	-	-	-	-
Total		0	560					

# Wayne Street

## Speed Enforcement Evaluator

**Location:**  
Wayne Street

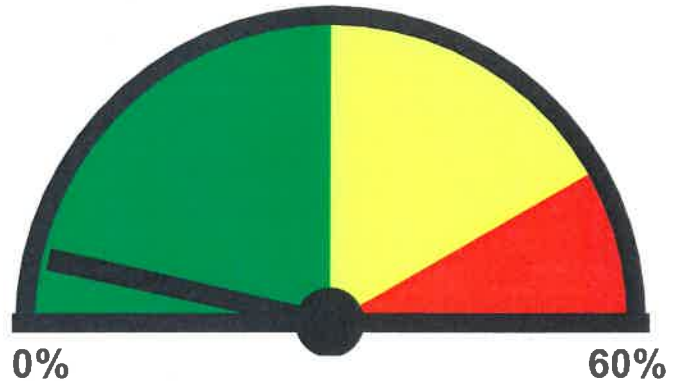
Total Percentage of  
Enforceable Violations

**Closest Cross Street:**  
Spruce Street

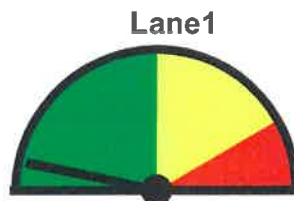
**Analysis Dates:**  
Wednesday, June 20, 2018  
Thursday, June 21, 2018

**Equipment Used:**  
Radar Recorder

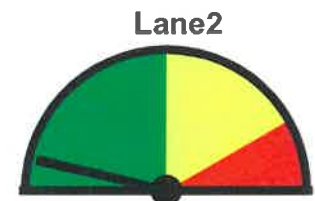
**Requested By:**  
Slabtown Neighborhood



0% 60%  
**Posted Speed Limit:** 25 MPH  
**Enforcement Tolerance:** 5 MPH  
**Enforcement Limit:** 31 MPH & Up  
**Percentage Above Limit:** 4.3%  
**Enforcement Rating:** **LOW**



**Percent Above Limit:** 4.0%  
**Enforcement Rating:** **LOW**



**Percent Above Limit:** 4.5%  
**Enforcement Rating:** **LOW**

Combined

1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65
0	13	64	192	280	165	30	2	0	0	0	0	0	0

85 percentile = 27

Lane1

1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65
0	7	33	80	104	62	12	0	0	0	0	0	0	0

85 percentile = 27

Lane2

1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65
0	6	31	112	176	103	18	2	0	0	0	0	0	0

85 percentile = 27

# Wayne Street Near Spruce & Cedar

## Best Times for Enforcement

<p><b>Location:</b> Wayne Street</p> <p><b>Closest Cross Street:</b> Spruce Street</p> <p><b>Analysis Dates:</b> Wednesday, June 20, 2018 Thursday, June 21, 2018</p> <p><b>Equipment Used:</b> Radar Recorder</p> <p><b>Requested By:</b> Slabtown Neighborhood</p>	<p><b>Sun</b></p> <p><b>Mon</b></p> <p><b>Tue</b></p> <p><b>Wed</b>      Combined: 5 PM to 7 PM Lane1: 5 PM to 7 PM Lane2: 5 PM to 7 PM</p> <p><b>Thu</b>      Combined: 7 AM to 9 AM Lane1: 7 AM to 9 AM Lane2: 7 AM to 9 AM</p> <p><b>Fri</b></p> <p><b>Sat</b></p>
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