
Memorandum

The City of Traverse City
Engineering Department



TO: Timothy J. Lodge, P.E., City Engineer
FROM: John Zarafonitis, Seasonal Engineering Aide
DATE: Wednesday, August 6, 2014
SUBJECT: 7 Day Speed Study of E. Eighth St., 2000 Block between Wenonah St. and S. East Bay Blvd.

City Engineering performed an on-site 7 day speed count beginning Tuesday, July 29, 2014 at 3 pm until Tuesday, August 5, 2014 at 3 pm on the 2000 block of E. Eighth St. This memo is to formalize City Engineering's initial findings and observations with regard to the speeds of vehicles on the 2000 block of E. Eighth St. before and after the shoulders were striped.

The data was gathered using a Jamar Radar Recorder which collected traffic data, including vehicle speed, for each lane of traffic (eastbound and westbound). 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 speeds of the vehicles into groups based on 5 mile per hour increments, starting with 0-15 miles per hour. The report shows how many vehicles were within the specified speed range during the time indicated by the report.

During the 7 day study, 10,403 vehicles were recorded on this section of E. Eighth St. with about 65 percent of the vehicles traveling between 21 and 30 miles per hour. The average speed of vehicles was 24 miles per hour. 4,910 of these vehicles, about 47 percent, were recorded going speeds below the posted speed limit of 25 miles per hour. The total percentage of enforceable violations was about 12 percent.

A 6 day speed study was done on this section of E. Eighth St. before the shoulders were striped from May 19, 2014 until May 24, 2014. The average speed during this time period was 24 miles per hour. 7,482 vehicles were recorded with their 10 mile per hour pace speed being 22 to 31 miles per hour. Of the 7,482 vehicles, 3,422 of them, about 46 percent, were recorded going speeds below the posted speed limit of 25 miles per hour.

The post-striping average speed is the same as the pre-striping average speed. Also, the pace speed decreased by one mile per hour, and the percentage of vehicles driving under the posted speed limit was increased by one percent.

Post-Striping Summary:

- Speed Limit: 25 mph
- Number of Recorded Vehicles (7 days): 10,403
- Percent of Vehicles Under Speed Limit: 47.2 %
- Average Speed: 24 mph
- 10 Mile Per Hour Pace Speed: 21-30 mph
- 85th Percentile: 29 mph

Encl.: Detailed TraxPro Speed Report
E. Eighth St., 2000 Block Pre-Striping Speed Study Memo

E. Eighth St. (Post-Striping)
 (2000 Block, between Wenonah St. and S. East Bay Blvd.)
 Speed (Combined)

EB, WB	Start Time	15	16	20	21	25	26	30	31	35	36	40	41	45	46	50	51	55	60	61	65	70	71	75	76	Total	
08/05/14	0	15	16	20	21	25	26	30	31	35	36	40	41	45	46	50	51	55	60	61	65	70	71	75	76	9999	7
01:00	0	0	0	0	3	0	1	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	0	1	1	1	1	4	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
06:00	2	2	0	0	9	9	6	6	2	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	20
07:00	9	9	3	3	10	10	25	25	9	9	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
08:00	2	2	7	7	15	15	35	35	9	9	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70
09:00	5	5	10	10	22	22	43	43	7	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88
10:00	2	2	8	8	31	31	36	36	8	8	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87
11:00	2	2	8	8	42	42	42	42	6	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	101
12 PM	3	3	11	11	52	52	46	46	11	11	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	124
13:00	1	1	3	3	36	36	58	58	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109
14:00	7	7	19	19	38	38	55	55	14	14	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Day Total	34	71	261	261	352	352	85	85	10	10	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	814	
Grand Total	369	841	3700	3700	4282	4282	1102	1102	100	100	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	10403	

Statistics

Mean Speed(Average) : 24 MPH
 10 MPH Pace Speed : 21-30 MPH
 Number in Pace : 6790
 Percent in Pace : 65.3%
 Number of Vehicles > 25 MPH : 5493
 Percent of Vehicles > 25 MPH : 52.8%

15th Percentile : 18 MPH
 50th Percentile : 24 MPH
 85th Percentile : 29 MPH
 95th Percentile : 32 MPH

Memorandum

The City of Traverse City
Engineering Department



TO: Timothy J. Lodge, P.E., City Engineer
FROM: Jessica Cichowski, Engineering Technician
DATE: Thursday, May 29, 2014
SUBJECT: 6 Day Speed Study of E. Eighth St, 2000 Block

City Engineering performed an on-site 6 day speed count beginning Monday, May 19, 2014 at 12 pm until Saturday, May 24, 2014 at 11 am on the 2000 block of E. Eighth St. This memo is to formalize City Engineering's initial findings and observations with regard to the speeds of vehicles on the 2000 block of E. Eighth St.

The data was gathered using a Jamar Radar Recorder which collected traffic data, including vehicle speed, for each lane of traffic (eastbound and westbound). 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 speeds of the vehicles into groups based on 5 mile per hour increments, starting with 0-15 miles per hour. The report shows how many vehicles were within the specified speed range during the time indicated by the report.

During the 6 day study, 7482 vehicles were recorded on this section of E. Eighth St with about 63 percent of the vehicles traveling between 22 and 31 miles per hour and an average speed of 24 miles per hour. 3422 of these vehicles, about 46 percent, were recorded going speeds below the posted speed limit of 25 miles per hour.

Summary:

- Speed Limit: 25 mph
- Number of Recorded Vehicles (10 Days): 7482
- Percent of Vehicles Under Speed Limit: 45.7 %
- Average Speed: 24 mph
- 10 Mile Per Hour Pace Speed: 22-31 mph
- 85th Percentile: 30 mph

Encl.: Detailed TraxPro Speed Report