
Memorandum

The City of Traverse City
Engineering Department



TO: Timothy J. Lodge, P.E., City Engineer *JL*
FROM: John Zarafonitis, Seasonal Engineering Aide *JZ*
DATE: Wednesday, June 18, 2014
SUBJECT: 24 Hour Speed Study of E. Front, 1700 Block between E. Bay Blvd. and Wenonah

City Engineering performed an on-site 24 hour count beginning Tuesday, June 10, 2014 at 2 pm until Wednesday, June 11, 2014 at 3 pm on the 1700 block of E. Front St. This memo is to formalize City Engineering's initial findings and observations with regard to the speeds of vehicles on the 1700 block of E. Front 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. The speed data was also analyzed through TraxPro's Police Report program to evaluate the possible percentage of enforceable violations. This data was then organized into a small colored chart where red means high enforcement potential and green means low on a total scale for enforceable violations of 30 percent. For this report the enforceable minimum speed a vehicle would need to be traveling was set to 5 miles per hour over the posted speed limit.

During the 24 hour study, 986 vehicles were recorded on this section of E. Front St. with about 60 percent of the vehicles traveling between 23 and 32 miles per hour and an average speed of 25 miles per hour. 347 of these vehicles, about 35 percent, were recorded going speeds below the posted speed limit of 25 miles per hour. The total percentage of enforceable violations was about 19 percent. Westbound traffic had an enforcement percentage of about 23 percent.

Summary:

- Speed Limit: 25 mph
- Number of Recorded Vehicles (24 Hours): 986
- Percent of Vehicles Under Speed Limit: 35.2 %
- Average Speed: 25 mph
- 10 Mile Per Hour Pace Speed: 23-32 mph
- 85th Percentile: 31 mph
- Total Enforcement Rating: Medium
- Total Percentage Above Speed Limit: 19.1 %

Encl.: Detailed TraxPro Speed Reports

E Front St.
 (1700 Block, between E Bay Blvd. and Wenonah)
 Speed

Site Code: 00000001
 Station ID:
 E Front St
 Wenonah
 Latitude: 0' 0.0000 South

WB, EB	0	16	21	26	31	36	41	46	51	56	61	66	71	76	Total
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	9999	
06/11/14	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3
01:00	0	1	3	2	1	0	0	0	0	0	0	0	0	0	7
02:00	0	0	1	3	0	0	0	0	0	0	0	0	0	0	4
03:00	1	1	0	1	0	0	0	0	0	0	0	0	0	0	3
04:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
05:00	0	0	4	2	1	0	0	0	0	0	0	0	0	0	7
06:00	0	2	3	5	1	0	0	0	0	0	0	0	0	0	11
07:00	2	7	8	24	10	1	0	0	0	0	0	0	0	0	52
08:00	1	10	22	25	2	1	0	0	0	0	0	0	0	0	61
09:00	2	7	8	21	6	1	0	0	0	0	0	0	0	0	45
10:00	1	4	8	22	5	3	0	0	0	0	0	0	0	0	43
11:00	3	7	16	23	18	3	0	0	0	0	0	0	0	0	70
12 PM	8	4	14	35	9	4	0	0	0	0	0	0	0	0	74
13:00	2	8	11	23	3	4	0	0	0	0	0	0	0	0	51
14:00	0	5	11	24	12	1	0	0	0	0	0	0	0	0	53
15:00	4	6	12	23	5	1	0	0	0	0	0	0	0	0	51
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Day Total	24	62	122	237	73	19	0	0	0	0	0	0	0	0	537
Grand Total	37	106	204	461	144	33	1	0	0	0	0	0	0	0	986

15th Percentile : 16 MPH
 50th Percentile : 26 MPH
 85th Percentile : 31 MPH
 95th Percentile : 34 MPH

Mean Speed(Average) : 25 MPH
 10 MPH Pace Speed : 23-32 MPH
 Number in Pace : 591
 Percent in Pace : 59.9%

Number of Vehicles > 25 MPH : 639

Percent of Vehicles > 25 MPH : 64.8%