
Memorandum

The City of Traverse City
Engineering Department



TO: Timothy J. Lodge, P.E., City Engineer
FROM: Colby Winter, Seasonal Engineering Aide
DATE: Friday, May 13, 2016
SUBJECT: 24 Hour Speed Study of Bay St between Monroe St and Ramsdell Rd

City Engineering performed a 24 hour speed study on Bay St between Monroe St and Ramsdell Rd beginning on Wednesday, May 11, 2016 at Noon and concluded at Noon Thursday, May 12, 2016. This memo is to formalize City Engineering's initial data observations and findings with to the speed statistics of vehicular traffic on Bay St.

The data was gathered using a JAMAR Radar Recorder, this data recorder collects both vehicle speed and volume using radar sensors in both northwestbound and southeastbound 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 the 24 hour study, 2,935 vehicles were recorded on Bay St between Monroe St and Ramsdell Rd with the mean speed of northwest bound traffic 24 miles per hour and the mean speed of southeast bound traffic 27 miles per hour. Southeast bound traffic had a higher percentage of traffic above the enforcement limit with 23.6% of traffic above the limit while northwest bound traffic had 7.6% of traffic above the limit.

Analyzing historical data, a speed study was performed November 16, 2012 prior to Bay St being striped at the shoulders of the road as a traffic calming measure. Post-striping (2016) average speeds reduced by 8 miles per hour from pre-striping (2012), a 25.3% change. Post-striping, the percentage of vehicles driving above the posted speed limit has reduced by 38.1%.

It should be noted that during the between the hours of 6:00 AM and 3:00 PM during the days of the study, road crews had one lane of Northbound traffic on Grandview Parkway between Division St and M-72 / County Line Rd closed for construction of a sidewalk.

Summary (Combined):

- Speed Limit: 25 mph
- Number of Recorded Vehicles (24hr): 2935
- Average Speed: 25 mph
- Total Enforcement Rating: Medium
- Total Percentage Above Speed Limit: 51.8 %
- Total Percentage Above the Enforcement Tolerance Limit 15.2%

Historical Speed Summary

| Year | Percent Over Speed Limit (%) | 85 th Percentile Speed (mph) | Mean Speed (mph) | Percent Change (of Mean Speed) from 2012 to 2016 |
|------|------------------------------|---|------------------|--|
| 2016 | 51.8% | 30 | 25 | -25.25% |
| 2012 | 89.9% | 39 | 33 | |

Encl.:
Detailed TraxPro Speed Reports (Combined and Directional)
TraxPro Enforcement Reports