

**Date:** March 11, 2024

**Re:** Shoreline Drive Road Diet Traffic Analysis – 2023

**VEHICLE SPEED AND TRAVEL TIME SUMMARY**

Vehicle speed data along Shoreline Drive, Muskegon Avenue, and Webster Avenue was collected over a 24-hour time period on a typical weekday in August and September 2023 during the lane reduction effort. Speed data at the same locations was collected during July 2022, with two (2) lanes in each direction operable on Shoreline Drive, to provide a baseline for comparison between summer months.

**Table 1: 85th Percentile Speed Comparison**

Location	Change in 85th Percentile Speed for NB Traffic (MPH)	Change in 85th Percentile Speed for SB Traffic (MPH)
Shoreline Drive, between 4th and 7th Streets	-8	-7
Webster Avenue, between 4th and 5th Streets	-1	-7
Muskegon Avenue, between 4th and 5th Streets	0	-6

Vehicle speeds were significantly reduced along Shoreline Drive and primarily remained consistent along Muskegon and Webster Avenues during road diet conditions. 85th percentile speeds along Shoreline Drive were reduced by 7 miles to 8 miles per hour (mph), between existing conditions in 2022 and road diet conditions in 2023. Slower vehicular traffic improves safety for all road users, particularly vulnerable road users such as pedestrians or cyclists, by exponentially reducing the severity of crashes that do occur. When considering the contextual land use, as well as the presence of pedestrians and other non-motorized users along Shoreline Drive, it is anticipated that roadway reconfiguration would aid in fostering the City of Muskegon’s goal of creating safer streets for all.

A travel time analysis along Shoreline Drive was also completed to compare the existing and future road diet conditions. Table 2 shows a summary of simulated travel times for the existing and future road diet conditions.

**Table 2: Shoreline Drive Travel Time Comparison**

Time Period	Change in Travel Time on NB Shoreline Drive (seconds)	Change in Travel Time on SB Shoreline Drive (seconds)
Weekday Mornings (7–9 A.M.)	3	3
Weekday Afternoons (4–6 P.M.)	14	8
<b>Saturday (11 A.M. – 6 P.M.)</b>	<b>29</b>	<b>23</b>

The average travel time along the corridor is anticipated to increase slightly during the morning peak hour, increase during the afternoon peak hour, and increase significantly during the Saturday peak hours. Travel time increases in the morning peak hours are considered to be negligible, while increases of 8 seconds to 14 seconds during the afternoon peak hours are considered acceptable. Travel time increases during the Saturday peak hours of 23 seconds to 29 seconds are more significant; however, it is important to consider that this analysis represents travel time under peak summer traffic volumes during special events and that operations at each intersection within the corridor are anticipated to remain acceptable. It is further anticipated that travel time increases will continue to remain acceptable during typical summer weekends with a lane reduction in place in the absence of special events.

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