

Traffic Data Analysis

Midland Point Road

Eastbound



Town of Midland

Engineering Department

April 26, 2023

| | | |
|------------|--|----------|
| 1.0 | Introduction | 3 |
| 1.1 | Location | 3 |
| 1.2 | Traffic Shield | 3 |
| 2.0 | Speed Summary | 3 |
| 2.1 | Eastbound Speed Analysis | 4 |
| 3.0 | Traffic Volume | 7 |
| 3.1 | Eastbound Volume by Hour | 7 |
| 4.0 | Conclusion | 9 |
| | | |
| | Figure 1- Traffic Shield..... | 3 |
| | Figure 2- Midland Point Road Eastbound | 4 |
| | Figure 3- Speed by Hour Analysis for Eastbound Weekdays | 5 |
| | Figure 4 Speed by Hour Analysis for Eastbound Weekends | 6 |
| | Figure 5- Total Volume per Day (Eastbound) | 7 |
| | Figure 6 Average Volume per Hour for Weekdays (Eastbound)..... | 8 |
| | Figure 7- Average Volume by Hour for Weekends (Eastbound)..... | 8 |
| | | |
| | Table 1- Locations of Traffic Trailer | 3 |
| | Table 2- Speed Summary..... | 4 |
| | Table 3- Volume Summary | 7 |

1.0 Introduction

A traffic count was conducted from February 7th, 2023 to April 26th 2023, on Midland Point Road for the eastbound direction with the speed display turned on. Vehicle speeds and traffic volume were collected by a traffic shield (model ATS 15). The purpose is to see if there are any speeding issues, raise safety awareness, and help calm traffic by displaying speeds of vehicles approaching.

1.1 Location

The traffic shield was placed on Midland Point Road for the eastbound direction. Table 1 below shows the location of the traffic trailer and data collection period.

Table 1- Locations of Traffic Trailer

| Direction | Location | Period |
|-----------|--|---|
| Eastbound | 855 Midland Point Road, Midland, ON | 10:00am on February 7 th , 2023 – 10:00am on April 26 th , 2023 |

1.2 Traffic Shield

The traffic shield used was model ATS 15 as shown in Figure 1. The traffic shield is able to show the speed of the approaching vehicle or display short messages depending on the speed. For this time period, the speed was shown.



Figure 1- Traffic Shield

2.0 Speed Summary

The posted speed limit on Midland Point Road is 50km/h; however, generally it is accepted that vehicles that are travelling up to 10km/h above the posted speed limit are not considered to be speeding. The area the Traffic Shield is located is now a community safety zone as well. Table 2 shows an overall speed summary of the data collected for the eastbound direction.

Table 2- Speed Summary

| Direction | Average Speed (km/h) | 85 th Percentile Speed (km/h) | Minimum Speed (km/h) | Maximum Speed(km/h) |
|-----------|----------------------|--|----------------------|---------------------|
| Eastbound | 41.59 | 48.88 | 5 | 117 |

2.1 Eastbound Speed Analysis

Figure 2 to 4 below show the speed summary for the eastbound traffic.

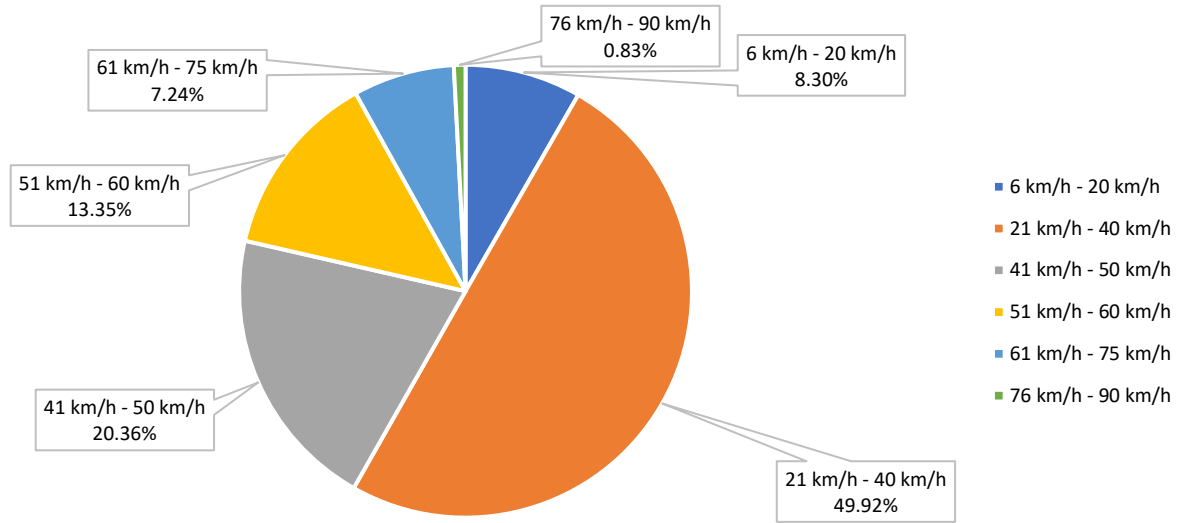


Figure 2- Midland Point Road Eastbound

Figure 2 above shows that 78.58% of vehicles were travelling below the posted speed limit, 13.35% of vehicles were travelling between 51-60 km/h, and 8.07% of vehicles were travelling above 60km/h. Considering the accepted speed limit is 10km/h over the posted speed limit, a total of 91.93% of vehicles were travelling within the accepted speed limit in the eastbound direction.

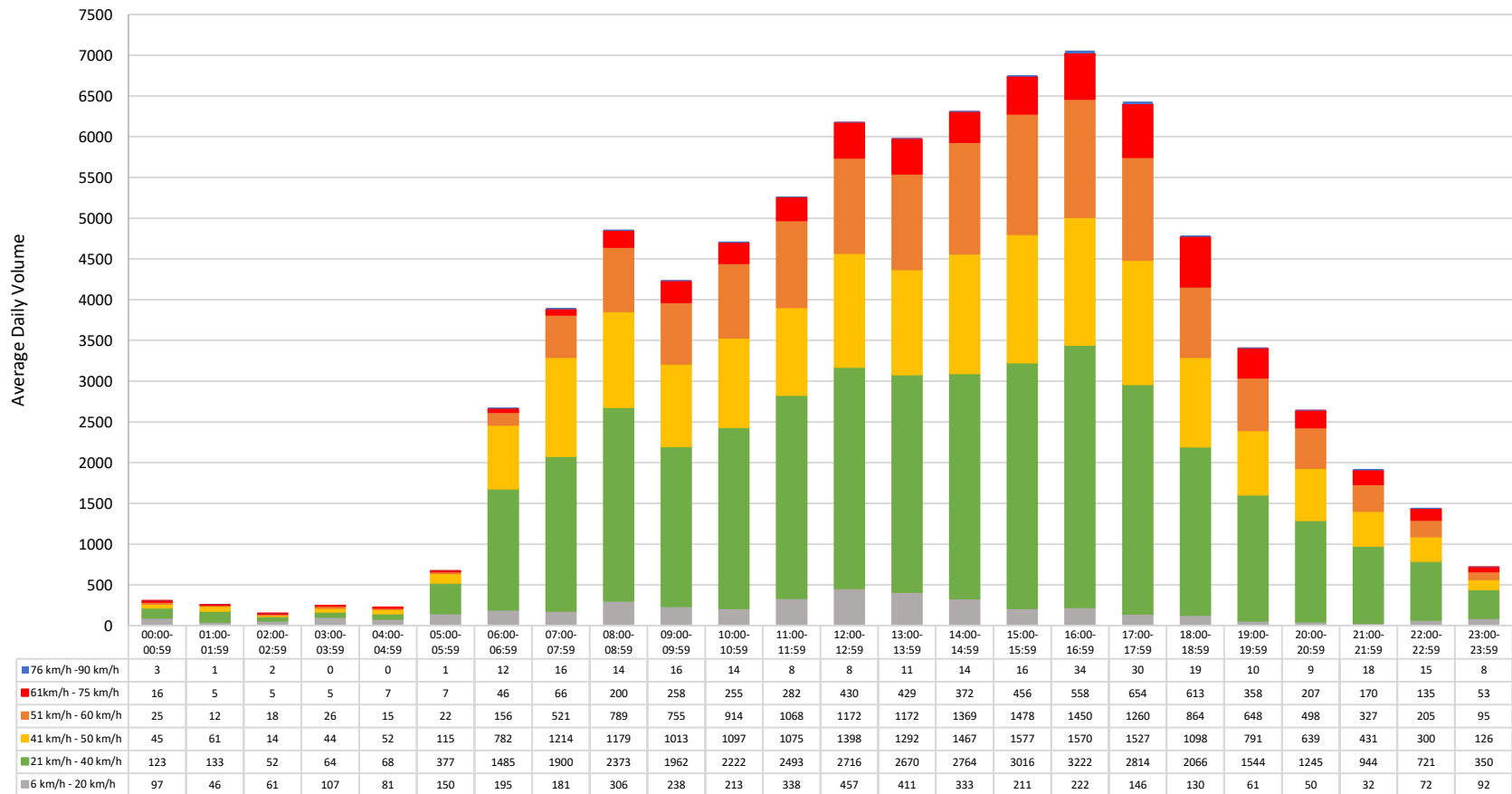


Figure 3- Speed by Hour Analysis for Eastbound Weekdays

Figure 3 above is the speed by hour graph used to determine the time where most speeding occurs on weekdays. The data shows that speeding formed a “u” shape as it increased in the morning and declined throughout the late afternoon. It reached its peak from 15:00 to 17:59 and begins to decline again.

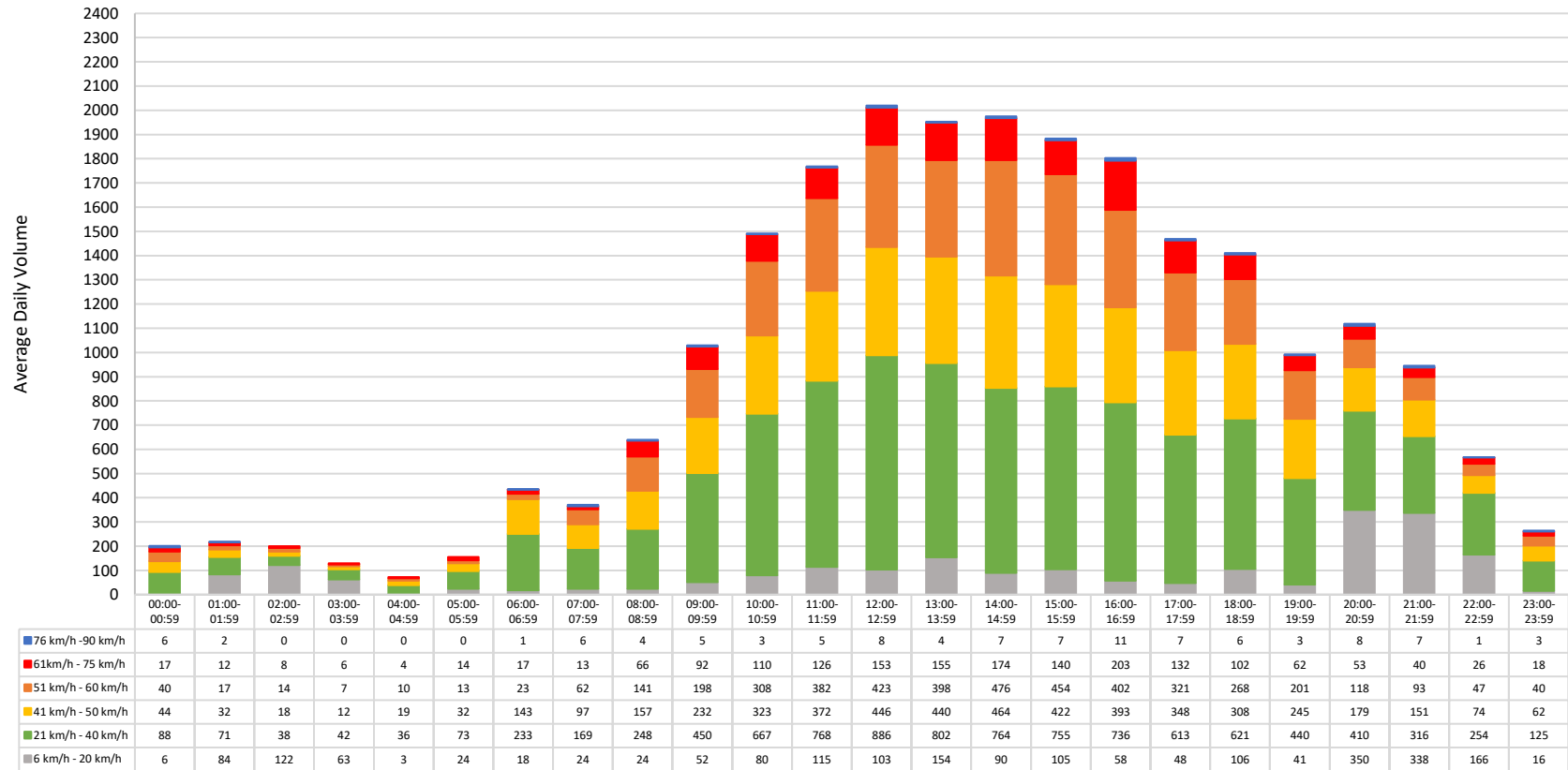


Figure 4 Speed by Hour Analysis for Eastbound Weekends

Figure 4 above is the speed by hour graph used to determine the time where most speeding occurs on the weekend. The data shows that speeding was low at night and began to increase around 9:00 am before beginning to decline again at 15:00. The speeding reached a peak from 12:00 until 14:00.

In addition, the traffic trailer detected that 66.3% of vehicles slowed down when approaching the trailer in the eastbound direction. This showed that the presence of the trailer influenced traffic calming.

3.0 Traffic Volume

Table 3 shows the average daily volume on Hugel Ave for eastbound and westbound directions.

Table 3- Volume Summary

| Direction | Period | Average Daily Traffic Volume |
|-----------|----------|------------------------------|
| Eastbound | Weekdays | 1982.0 |
| Eastbound | Weekends | 1444.4 |

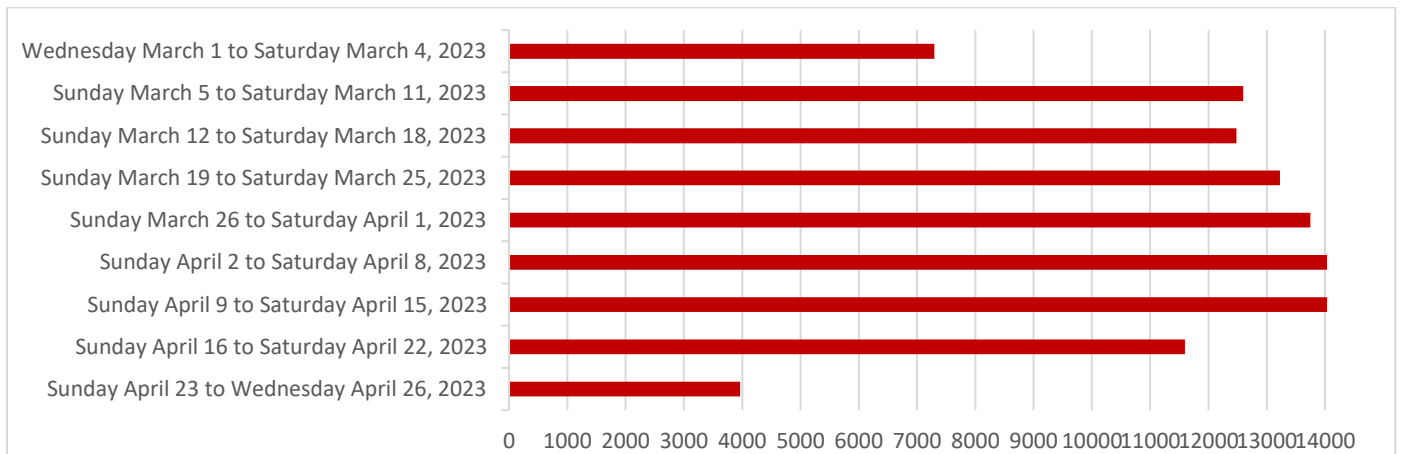


Figure 5- Total Volume per Day (Eastbound)

3.1 Eastbound Volume by Hour

The data collected from weekdays and weekends are used to analyze the average traffic volume at different times of the day as shown in Figure 10 and Figure 11, respectively.

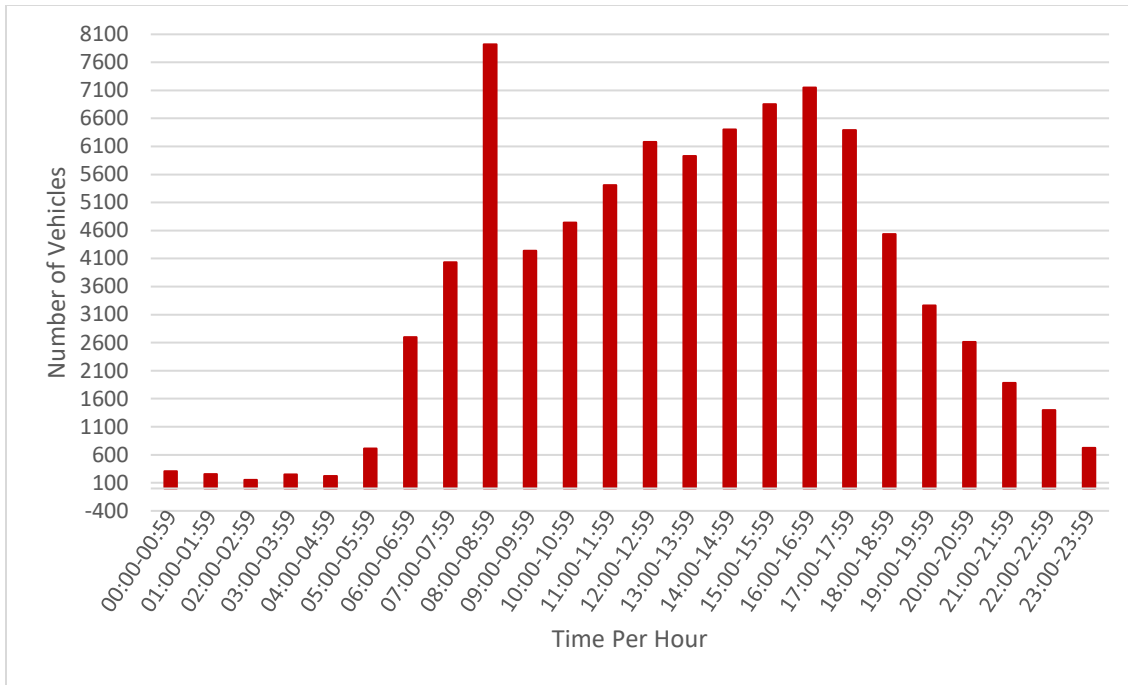


Figure 6 Average Volume per Hour for Weekdays (Eastbound)

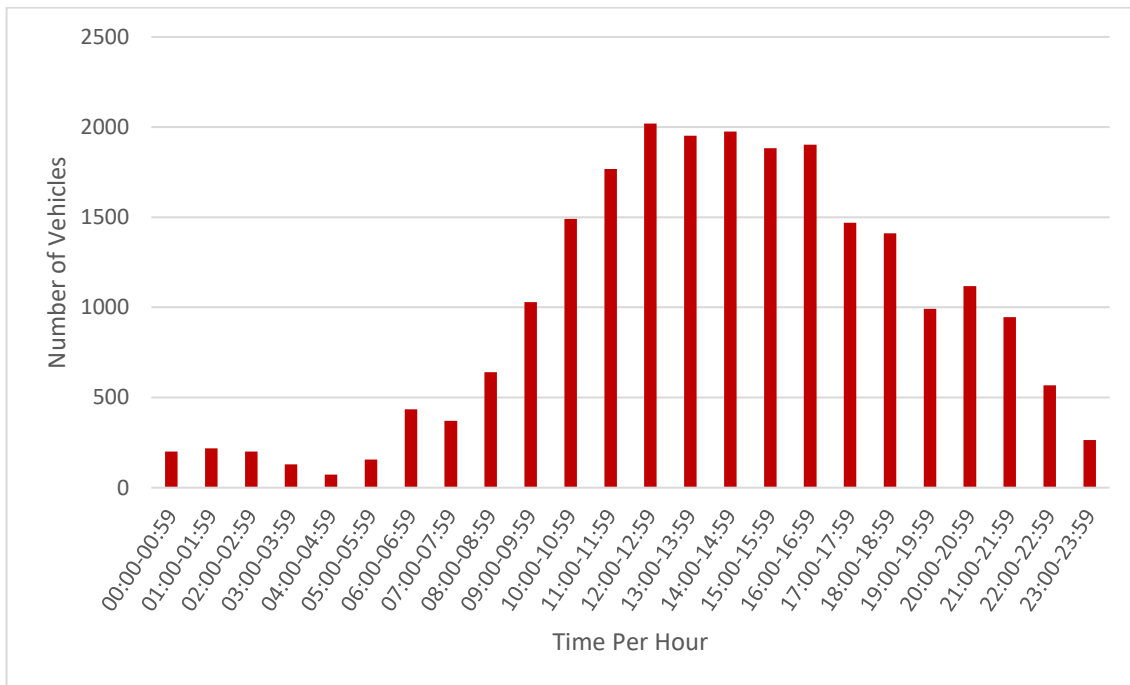


Figure 7- Average Volume by Hour for Weekends (Eastbound)

As shown in Figure 9, on weekdays, peak traffic occurs from 07:00 to 16:59 in the eastbound direction. Figure 10 shows that on weekends, the peak occurs between 10:00 and 16:59 in the eastbound direction.

4.0 Conclusion

The traffic study conducted on Midland Point Road for the eastbound direction was carried out from March 1st to April 26th, 2023. From the speed analysis, it was determined that 91.93% of vehicles were travelling within the accepted speed limit for the eastbound direction, respectively. In addition, from the volume analysis, it was determined that the peak traffic hours were around the mid-morning to early afternoon.