

# Traffic Data Analysis

Fuller Ave



Town of Midland  
Engineering Department  
May 18<sup>th</sup>, 2023

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## 1.0 Introduction

A traffic count was conducted from May 3<sup>rd</sup> to May 18<sup>th</sup> on Fuller Avenue for the northbound and southbound directions. Vehicle speeds and traffic volumes were collected by a traffic trailer (model ATS-3). 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 trailer was placed on Fuller for northbound and southbound direction. Table 1 below shows the location of the traffic trailer and data collection period.

**Table 1- Locations of Traffic Trailer**

Direction	Location	Period
Northbound	On Fuller Beside 1006 Everton, Midland, ON	08:30 on May 3, 2023 – 10:00 May 10, 2023
Southbound	Across the street from above location in boulevard, Midland, ON	10:00 on May 10, 2023 – 08:00 on May 17, 2023

### 1.2 Traffic Trailer

The traffic trailer used was model ATS-3 as shown in Figure 1. The traffic trailer is set to show the speed of the approaching vehicle and display short messages depending on the speed. The data is collected and grouped into one-hour intervals.



**Figure 1 - Traffic Trailer**

## 2.0 Speed Summary

The posted speed limit on Fuller Ave is 50 km/h; however, generally it is accepted that vehicles that are travelling up to 10 km/h above the posted speed limit are not considered to be speeding. Table 2 shows an overall speed summary of the data collected for Northbound and Southbound directions.

Table 2- Speed Summary

Direction	Average Speed (km/h)	85 <sup>th</sup> Percentile Speed (km/h)	Minimum Speed (km/h)	Maximum Speed (km/h)
Northbound	50.79	57.94	10.0	97.0
Southbound	55.4	63.31	10	106.0

2.1 Northbound Speed Analysis

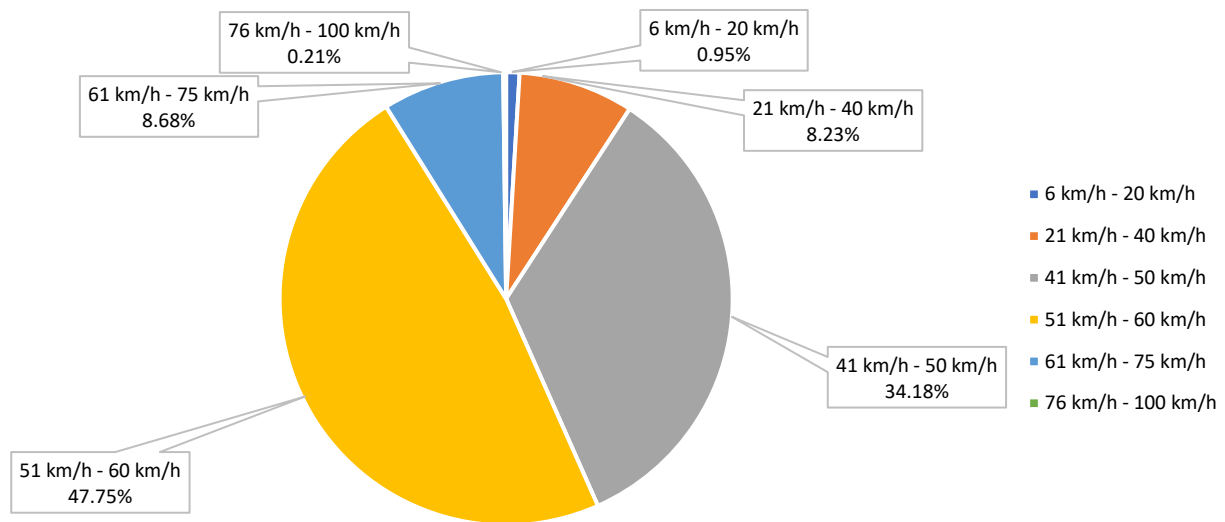
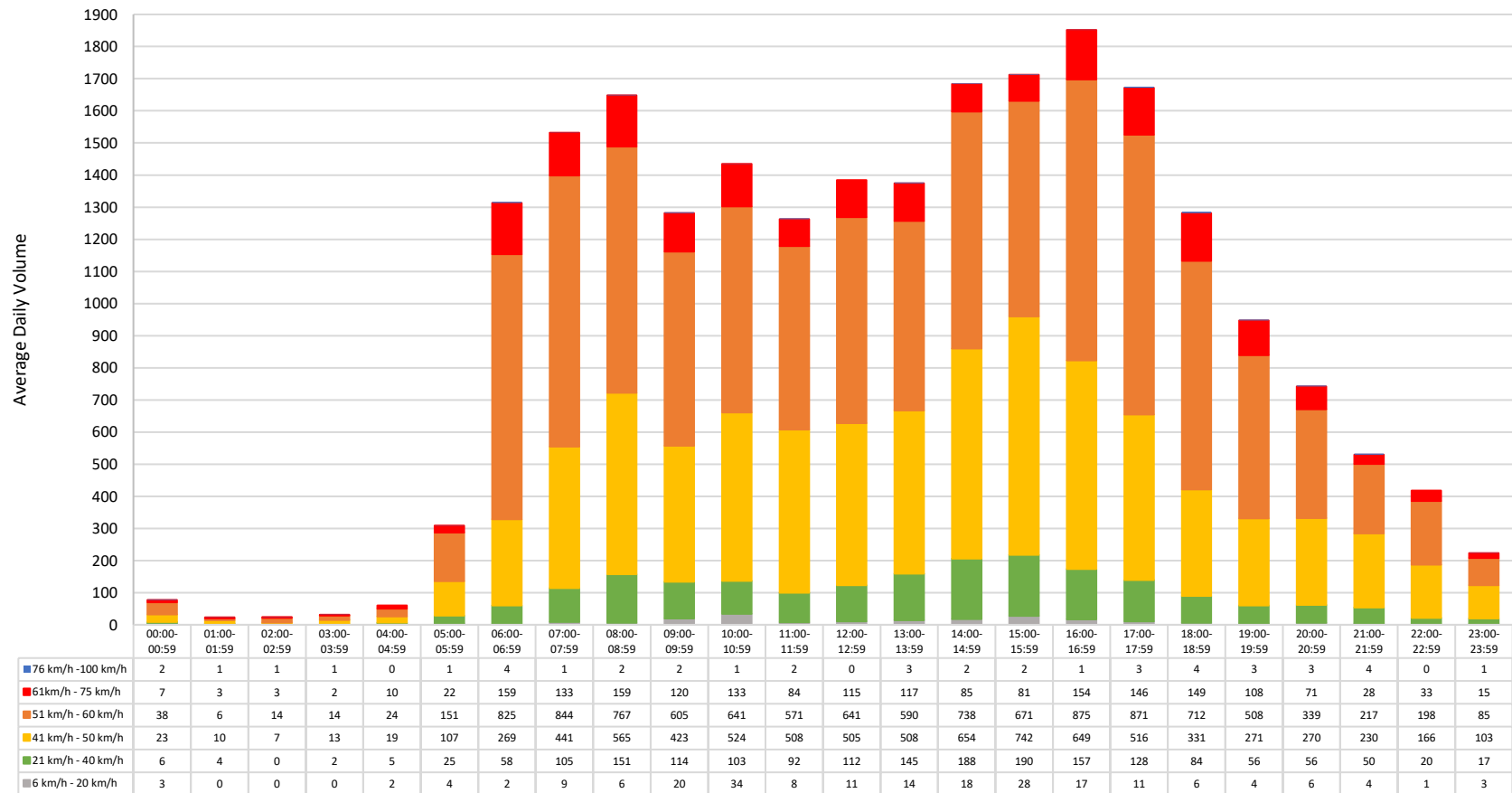


Figure 2- Total Volume Breakdown Based on Speed per Hour Intervals (Northbound)

Figure 2 above shows that 43.36% of vehicles were travelling below the posted speed limit, 47.75% of vehicles were travelling between 51-60 km/h, and 8.89% of vehicles were travelling above 60 km/h. Considering the accepted speed limit is 10 km/h over the posted speed limit, a total of 91.11% of vehicles were travelling within the accepted speed limit in the northbound direction.



**Figure 3 - Traffic Volume Speeds for Each Hour on Weekdays (Northbound)**

Figure 3 above is the graph used to determine the time when most speeding occurs on weekdays. The data does not have a definite curve shape, but traffic volumes increased throughout the day with a spike from 06:00 – 06:59 until it reached its peak at 16:00 – 16:59 and begins to decline. The largest volumes of traffic traveling at speeds beyond the acceptable limit were recorded from 6:00 - 6:59.

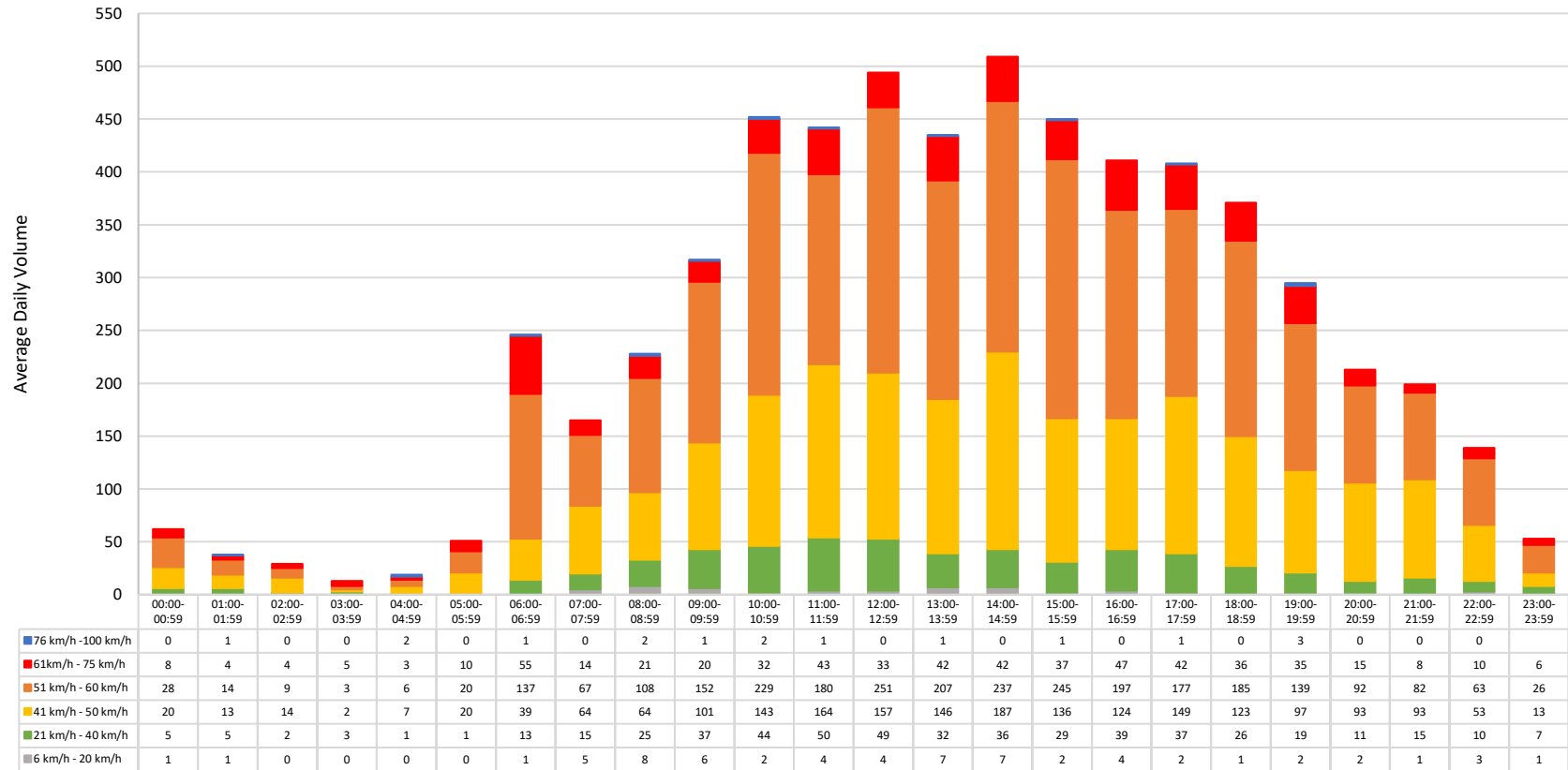
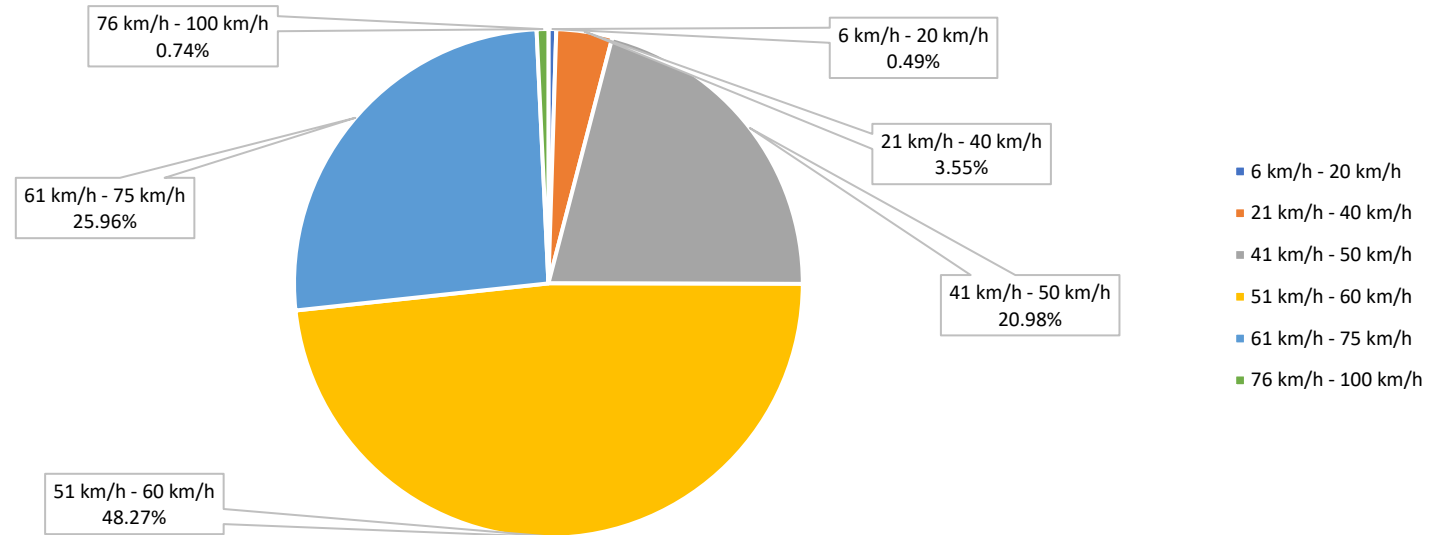


Figure 4 - Traffic Volume Speeds for Each Hour on Weekends (Northbound)

Figure 4 above is the graph used to determine the time when most speeding occurs on weekends. Generally, traffic volumes increased throughout the day from 06:00 – 06:59 and peaks at 14:00 – 14:59.

## 2.2 Southbound Speed Analysis



**Figure 5 - Total Volume Breakdown Based on Speed per Hour Intervals (Southbound)**

Figure 5 shows that 24.53% of the vehicles were travelling below the posted speed limit, 48.27% of vehicles were travelling between 51-60 km/h, and 26.7% of vehicles were travelling above 60 km/h. Considering the accepted speed limit is 10 km/h over the posted speed limit, a total of 72.8% of vehicles were driving within the accepted speed limit.

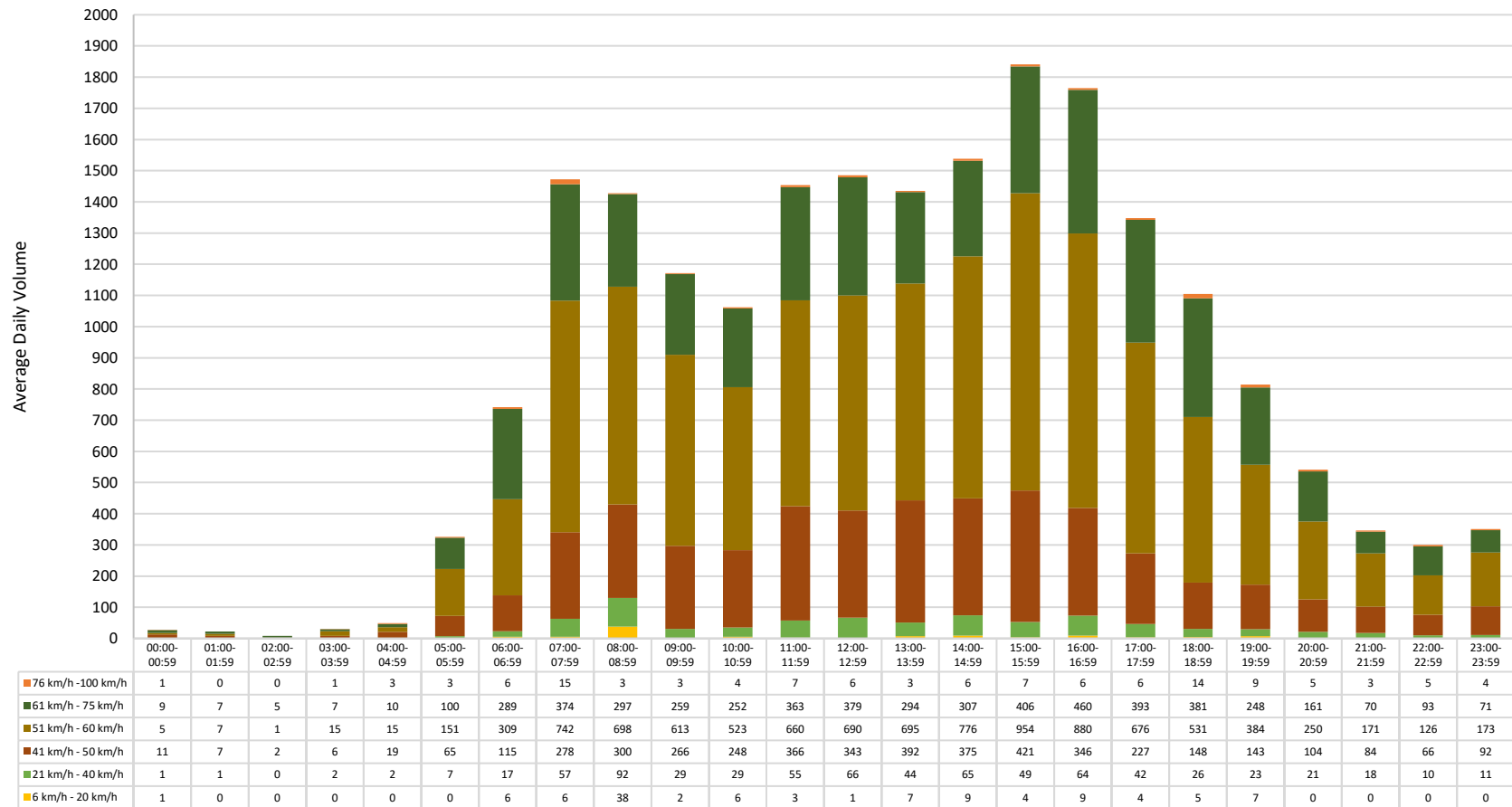


Figure 6 - Traffic Volume Speeds for Each Hour on Weekdays (Southbound)

Figure 6 above is the graph used to determine the time when most speeding occurs on weekdays. The data does not have a definite curve shape. Traffic volumes increased throughout the day with a spike from 05:00 – 05:59 and reached its peak at 15:00 – 15:59 and began to decline. The largest volumes of traffic traveling at speeds beyond the acceptable limit were recorded from 16:00 - 16:59.



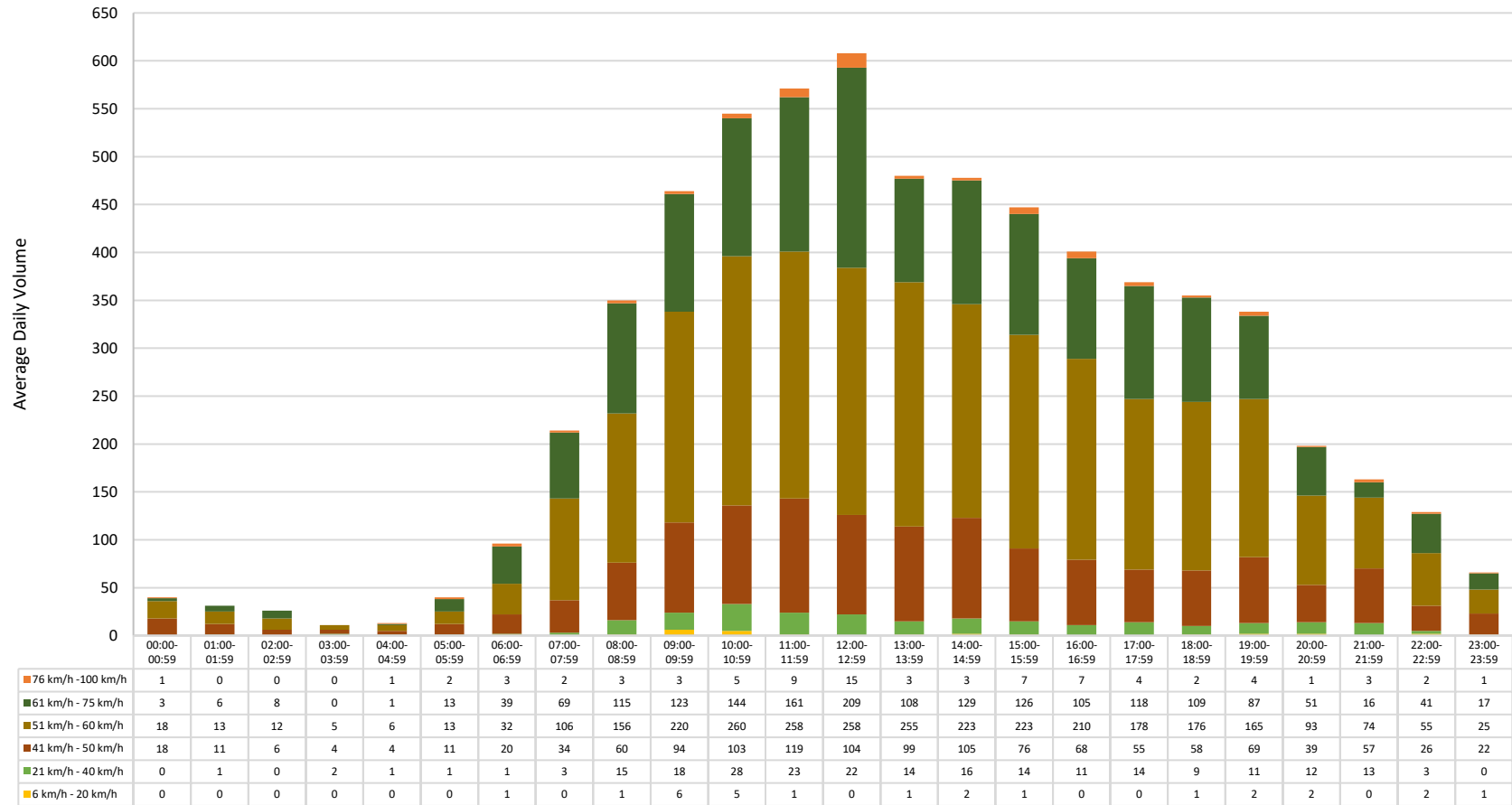


Figure 7 - Traffic Volume Speeds for Each Hour on Weekends (Southbound)

Figure 7 above is the graph used to determine the time when most speeding occurs on weekends. Generally, the data shows that speeds formed a curve as traffic volumes increased throughout the day from 07:00 – 07:59. It peaks at 12:00 – 12:59 and begins to decline.



### 3.0 Traffic Volume

Table 3 shows the average daily volume on Fuller Ave for both northbound and southbound directions.

Table 3 - Volume Summary

Direction	Period	Average Daily Traffic Volume
Northbound	Weekday	3809.8
Northbound	Weekend	3019.5
Southbound	Weekday	3444.5
Southbound	Weekend	3218.0

### 3.1 Northbound Volume by Date

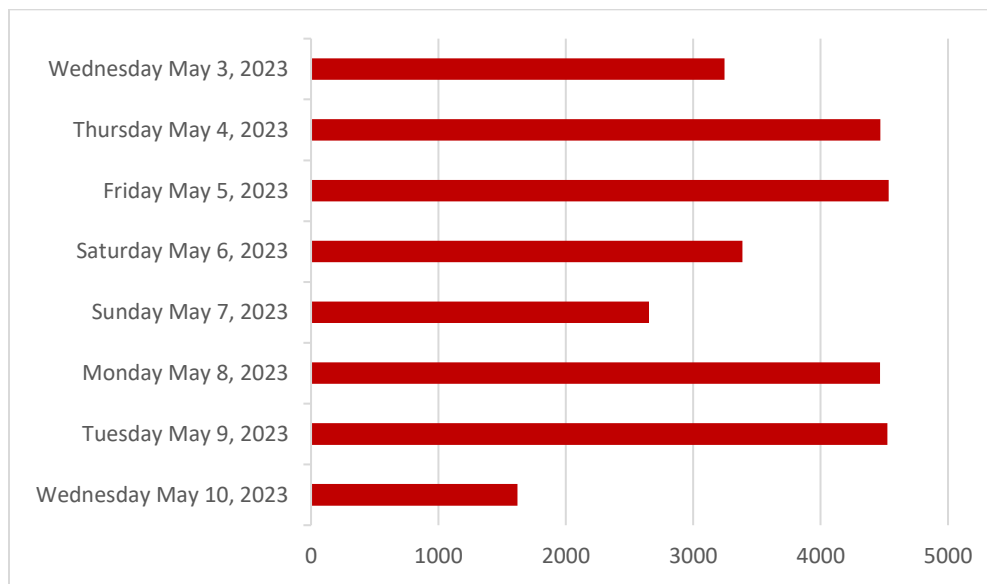
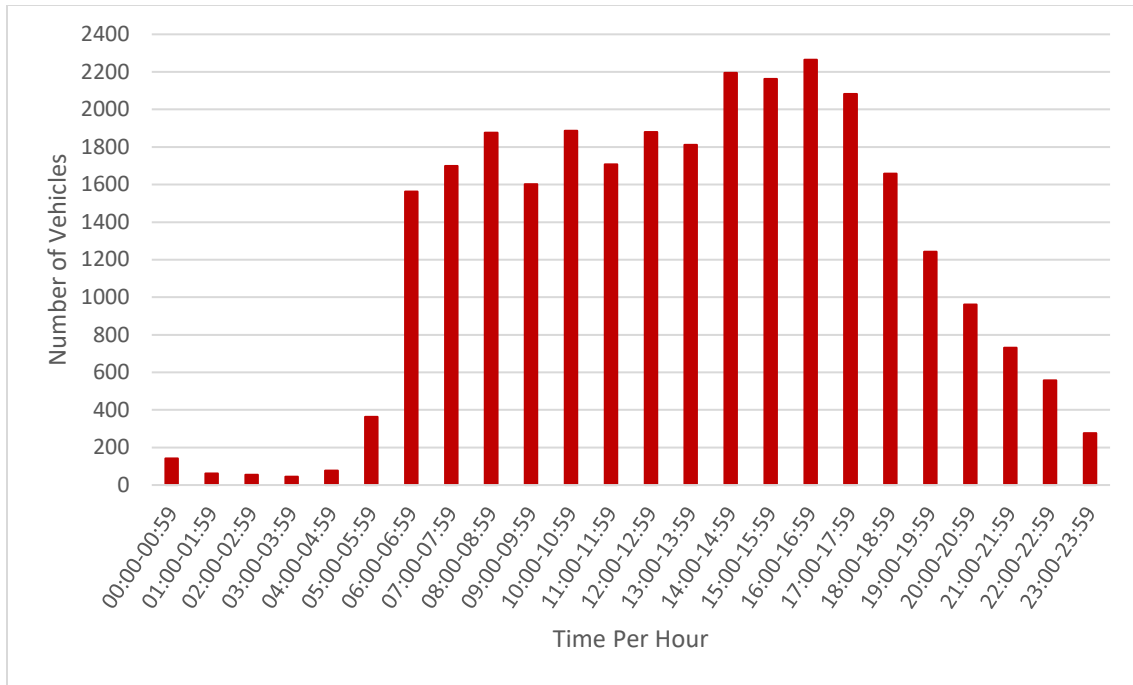


Figure 8 - Total Volume per Day (Northbound)

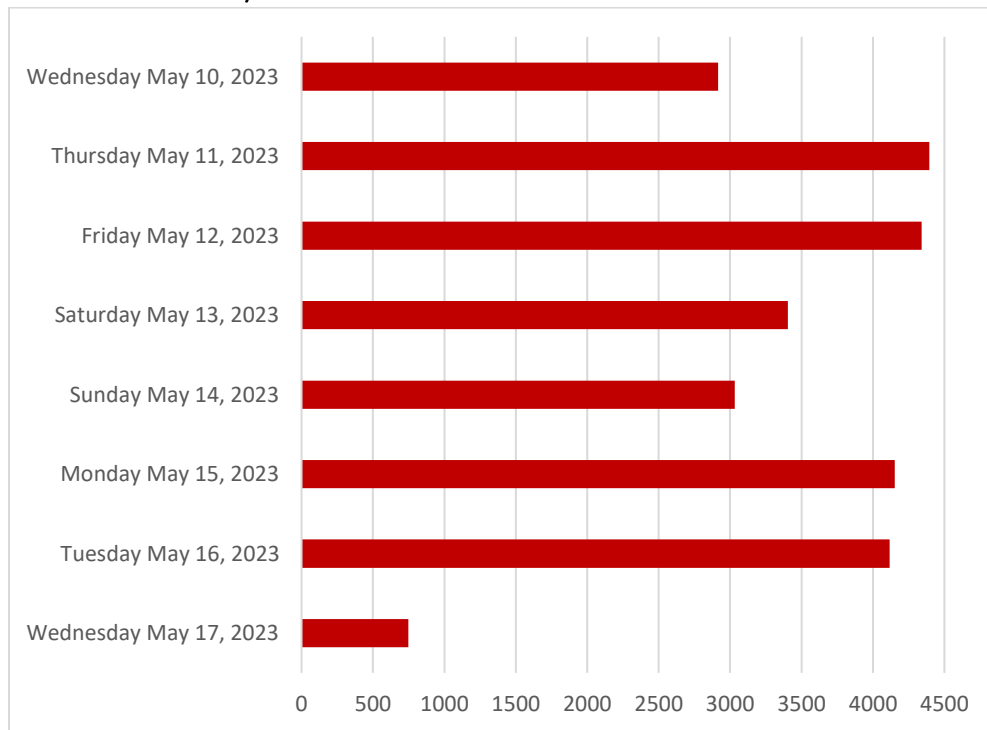
Figure 8 above shows the total volumes of each day data that was collected in the Northbound direction. Friday May 5<sup>th</sup> and Tuesday May 9<sup>th</sup> both had about the largest traffic volume, while Sunday May 7<sup>th</sup> had the least (not including Wednesday May 10<sup>th</sup> when the Traffic Trailer was moved). Generally, more traffic was recorded on weekdays than weekends (Wednesday May 3<sup>rd</sup> is when the trailer was moved to location).



**Figure 9 - Total Volume per Hour (Northbound)**

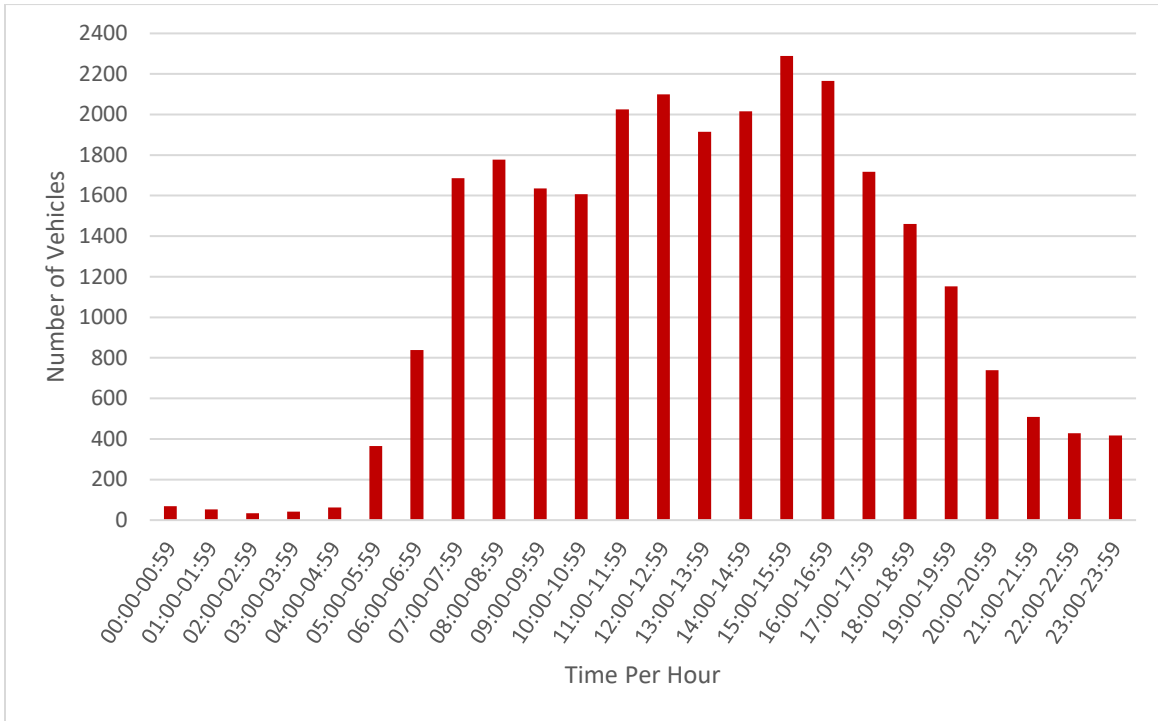
As shown in Figure 9 above, the traffic volume does not have a definite curve shape, in which traffic flow is low at night and begins to increase at 06:00 – 06:59. Peak traffic volume occurs at 16:00 – 16:59 and it begins to decline into the night.

### 3.2 Southbound Volume by Date



**Figure 10 - Total Volume per Day (Southbound)**

Figure 10 above shows the daily total traffic volumes in the southbound direction. Thursday May 11<sup>th</sup> had the largest traffic volume. Generally, more traffic was recorded on weekdays than weekends.



**Figure 11 - Total Volume per Hour (Southbound)**

The total volumes of traffic at different hours of the day in the southbound direction are shown in Figure 11 above. Traffic volumes increased throughout the day from 06:00 – 06:59 until it reached its peak at 15:00 – 15:59.

#### 4.0 Conclusion

The traffic study conducted on Fuller Ave for the northbound and southbound directions were carried out from May 3<sup>rd</sup> to May 17<sup>th</sup>, 2023. From the speed analysis, it was determined that 91.11% of vehicles were travelling within the accepted speed limit for the northbound direction and 72.8 % in the southbound direction, respectively. Traffic generally was higher on weekdays than on weekends and the most volume was around 15:00 to 15:59 times.