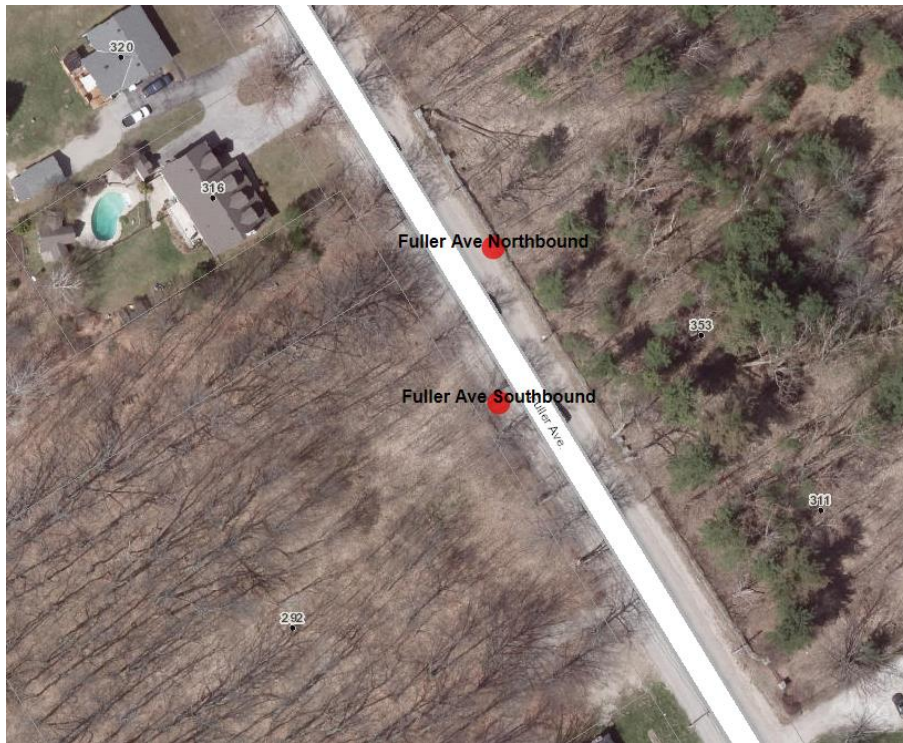


Traffic Data Analysis

Fuller Ave.

Northbound and Southbound



Town of Midland
Engineering Department

July 24th, 2019

1.0 Introduction

A traffic count was conducted from July 15th, 2019 to July 22nd, 2019 on Fuller Ave for both northbound and southbound directions. Vehicle speeds and traffic volume were collected by a traffic trailer (model ATS-3). The purpose is to see if there is any speeding issue and raise safety awareness and help calm traffic by displaying speeds of vehicles approaching.

1.1 Location

The traffic trailer was placed on Fuller Ave for both northbound and southbound directions. The trailer was placed at side of road to record the speed and volume of vehicles passing by. Table 1 below shows the location of the traffic trailer and data collection period.

Table 1. Locations of Traffic Trailer

Direction	Location	Period
Northbound	353 Fuller Ave, Midland, ON	14:00 on July 15 th , 2019 – 11:00 on July 18 th , 2019
Southbound	292 Fuller Ave, Midland, ON	11:00 on July 18 th , 2019 – 07:00 on July 22 nd , 2019

1.2 Traffic Trailer

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



Figure 1. Traffic Trailer

2.0 Speed Summary

The posted speed limit on Fuller Ave 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. 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)	Minimum Speed (km/h)	Maximum Speed(km/h)
Northbound	51.7	10	99
Southbound	53.7	10	91

2.1 Northbound Speed Analysis

Figure 2 and 3 below show the speed summary for the northbound traffic.

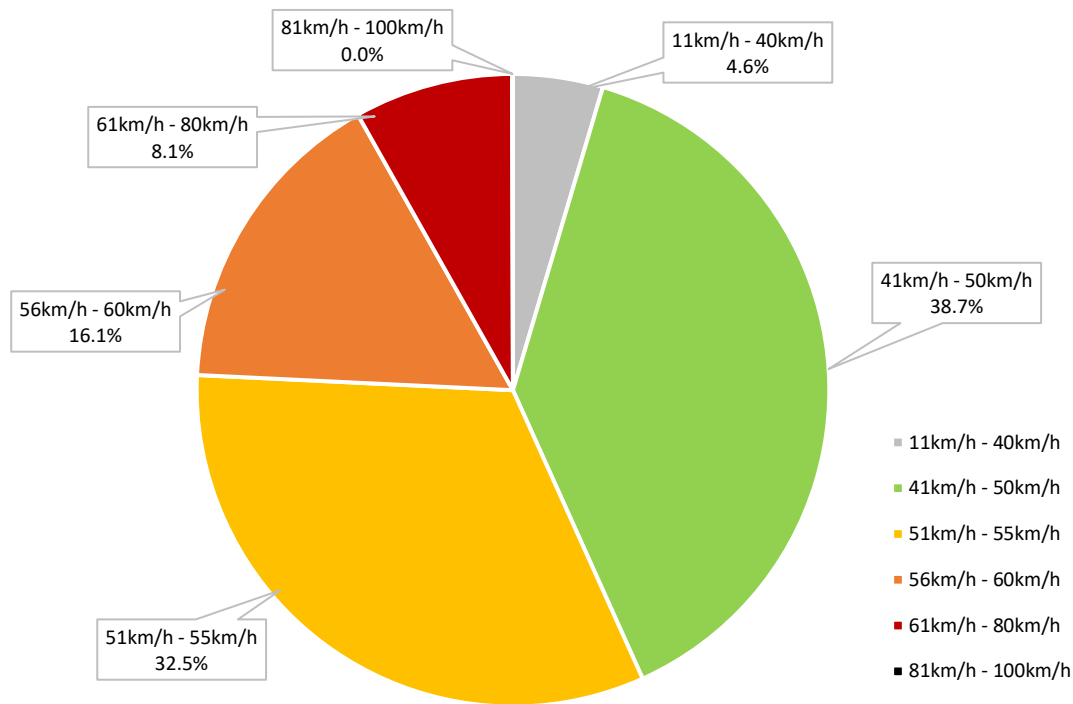


Figure 2. Fuller Ave. Northbound

From this summary we can see that 43% of vehicles were travelling below the posted speed limit, 49% of vehicles were travelling between 51-60 km/h, and 8% of vehicles were travelling above 60km/h. When we consider the accepted speed limit is 10km/h over the posted speed limit, we find that a total of 92% of vehicles were travelling within the accepted speed limit in the northbound direction.

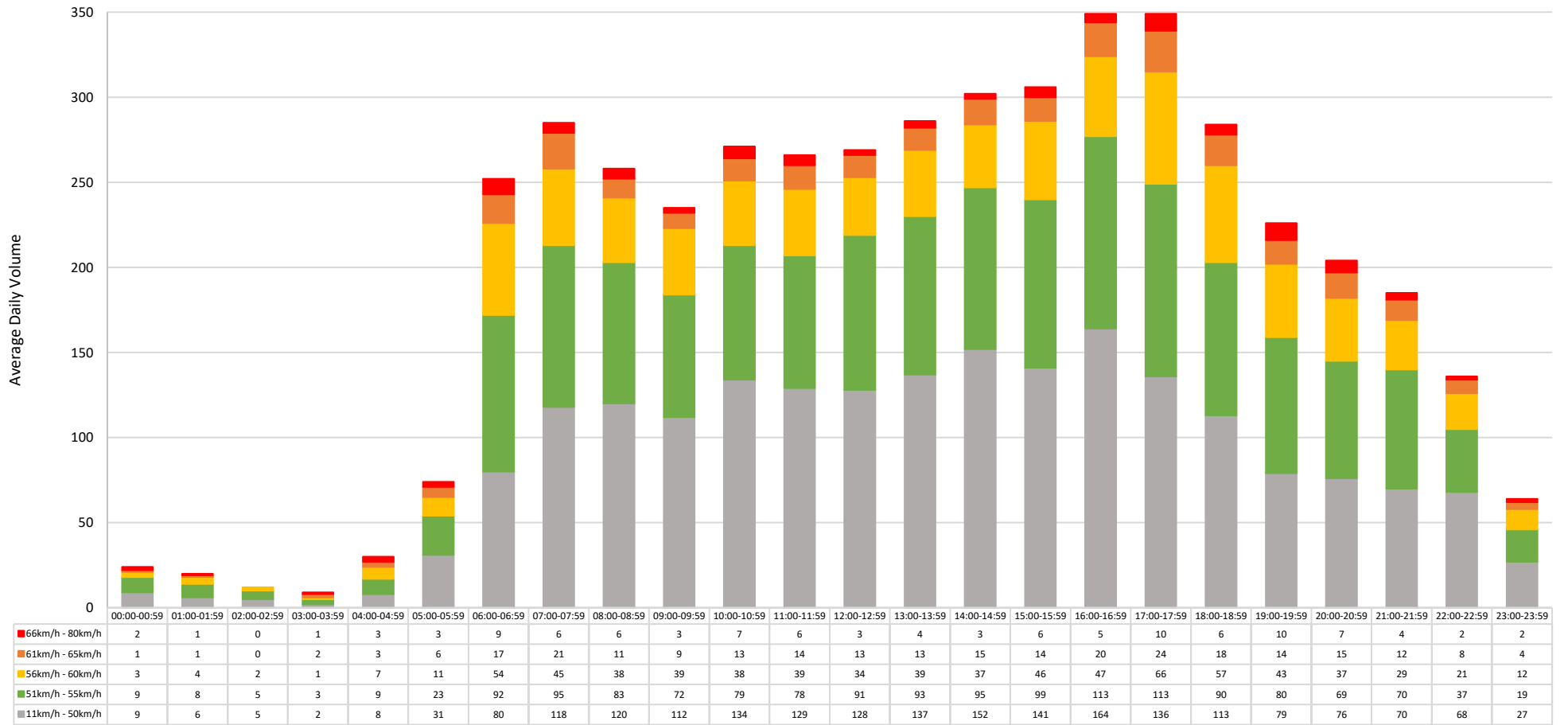


Figure 3. Speed by Hour Analysis for Northbound

2.2 Southbound Speed Analysis

Figure 4 to 6 are the speed summary for the southbound traffic.

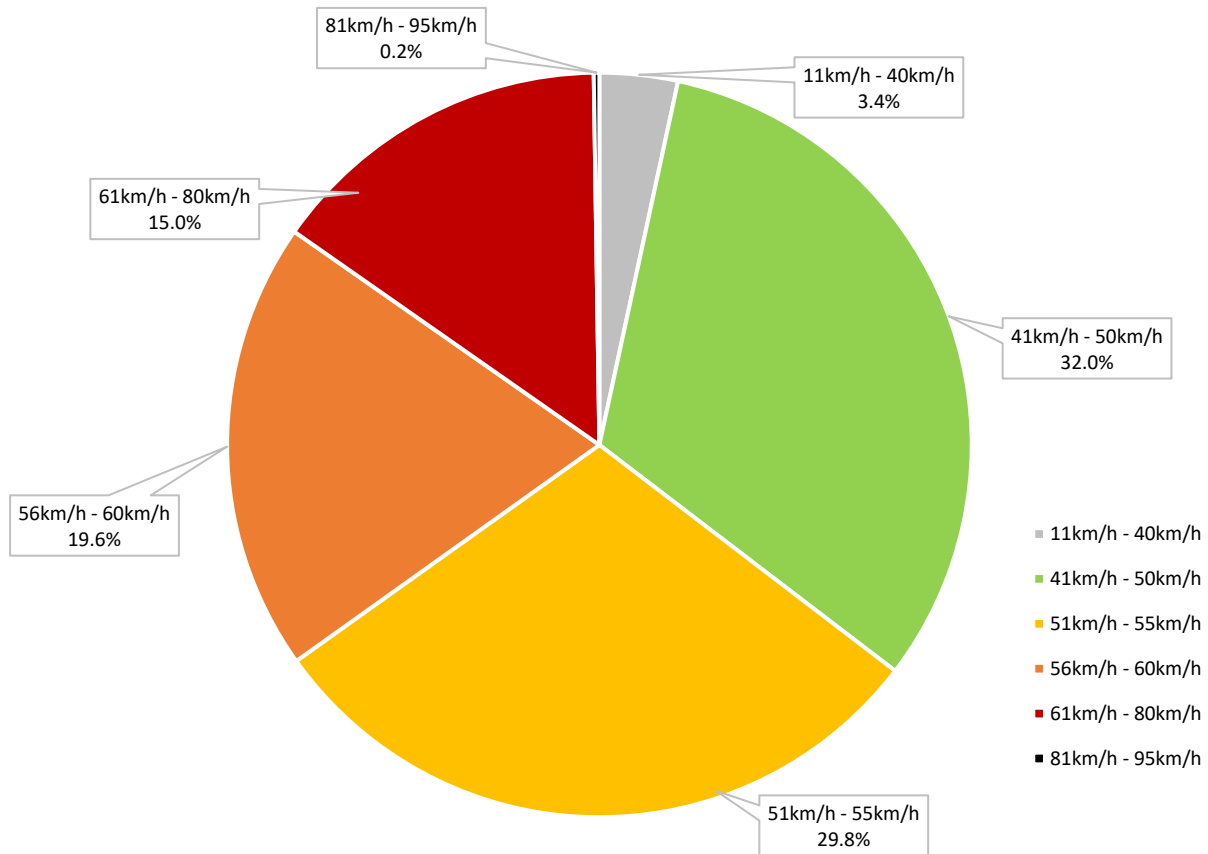


Figure 4. Fuller Ave. Southbound

From this summary we can see that 35% of the vehicles were travelling below the posted speed limit, 50% of vehicles were travelling between 51-60 km/h, and 15% of vehicles were travelling above 60km/h. When we consider the accepted speed limit is 10km/h over the posted speed limit, we find that a total of 85% of vehicles were driving within the accepted speed limit. It is also noticed that speeding mostly occurred in the afternoon.

Furthermore, the traffic trailer detected that 58% of vehicles slowed down in northbound direction and 91% slowed down in southbound direction when approaching the trailer. These percentages could include the vehicles slowed down to make a turn; however, it also shows that the trailer is influencing traffic calming.

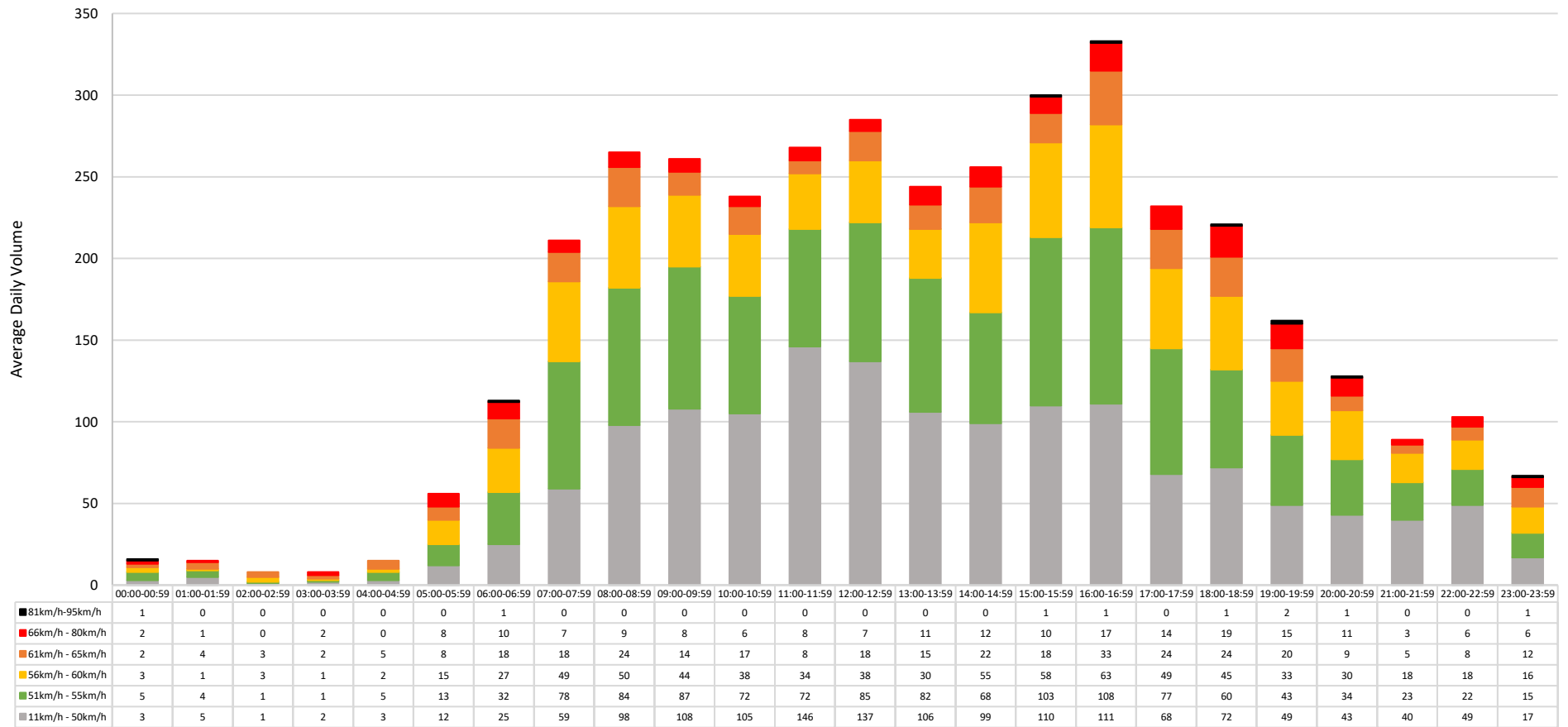


Figure 5. Speed by Hour Analysis for Southbound (July 18th to July 19th, 2019)

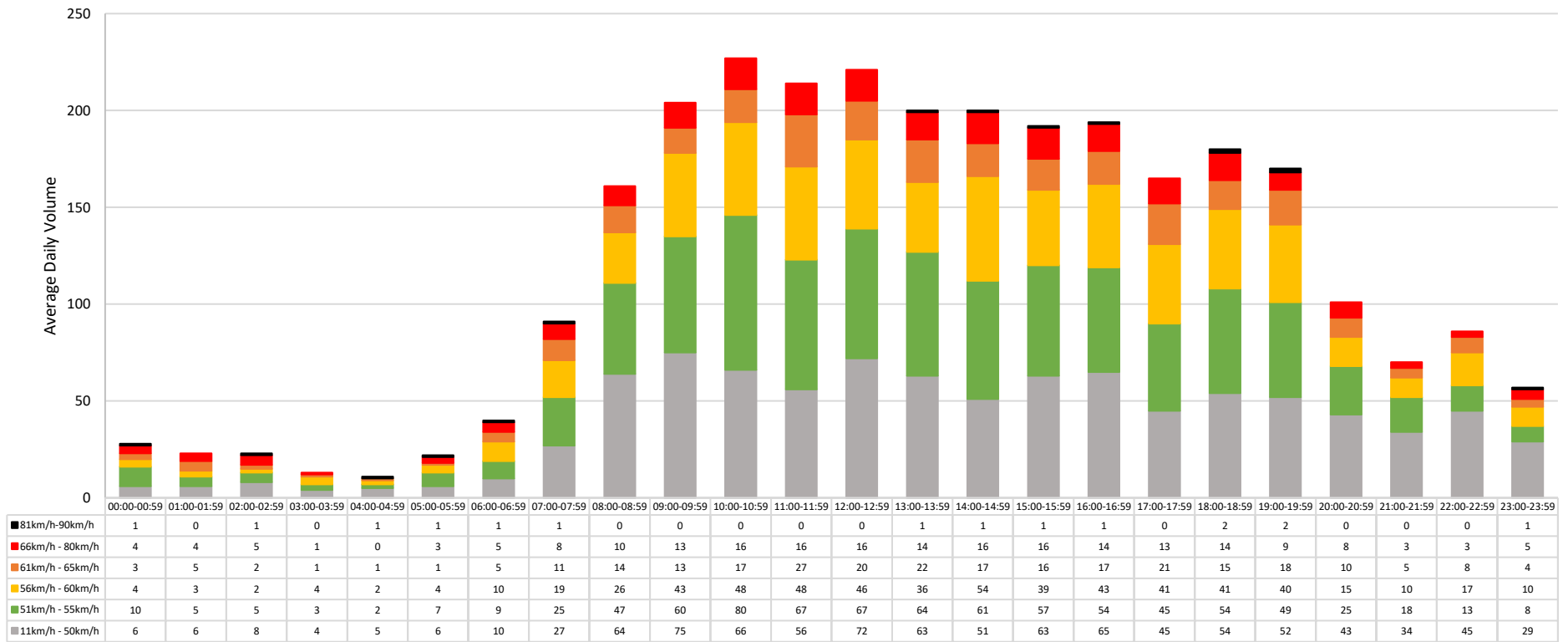


Figure 6. Speed by Hour Analysis for Southbound (July 20th to July 21st, 2019)

3.0 Traffic Volume

Table 3 shows the average daily volume on Fuller Ave for northbound and southbound directions. Only the days when the traffic trailer was placed there for the full 24 hours are used in traffic volume analysis.

Table 3. Volume Summary

Direction	Period	Average Daily Traffic Volume
Northbound	July 16 th to July 17 th (Tuesday to Wednesday)	4,709
Southbound	July 19 th (Friday)	3,753
Southbound	July 20 th to July 21 th (Saturday to Sunday)	2,846

3.1 Northbound Volume by Hour

The data collected for two full days (July 16th and July 17th) is used to analyze the average traffic volume at different time of a day (Figure 7). From the graph, Fuller Ave has peak traffic during the typical evening rush hour.

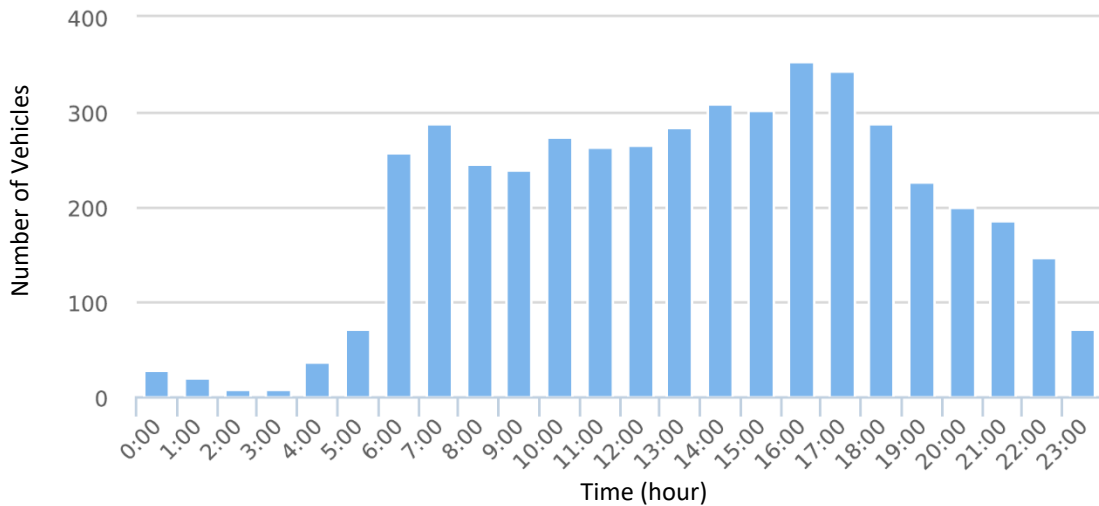


Figure 7. Average Volume by Hour from July 16th to July 17th (Northbound)

3.2 Southbound Volume by Hour

The data collected on July 19th is used to analyze the average traffic volume at different time of a day on a weekday (Figure 8). From the graph, Fuller Ave has peak traffic during the typical rush hour.

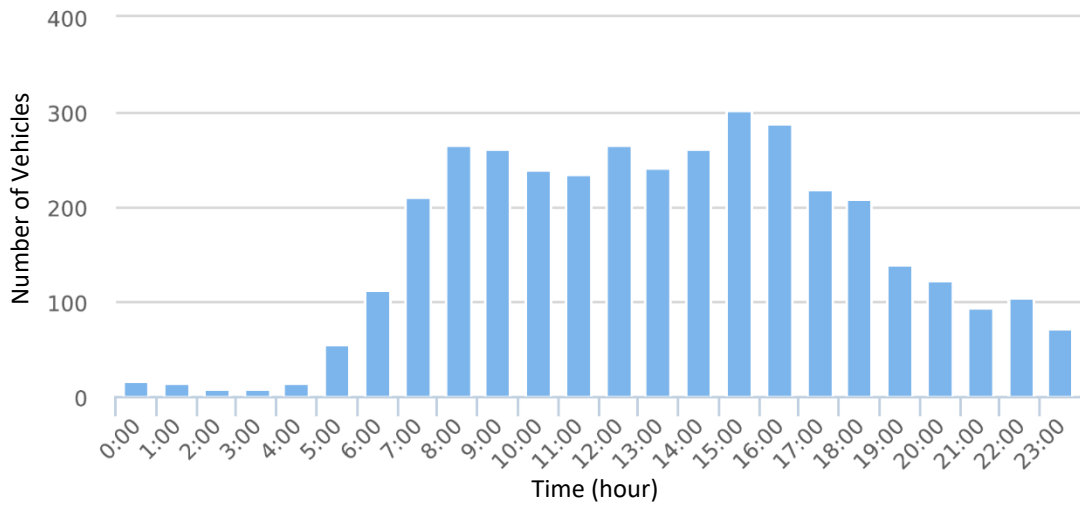


Figure 8. Volume by Hour on July 19th (Southbound)

The data collected from July 20th to July 21st (weekends) are used to analyze the average traffic volume at different time of the day as shown in Figure 9. From the graph, the traffic on the weekend in the southbound direction has a peak volume around noon.

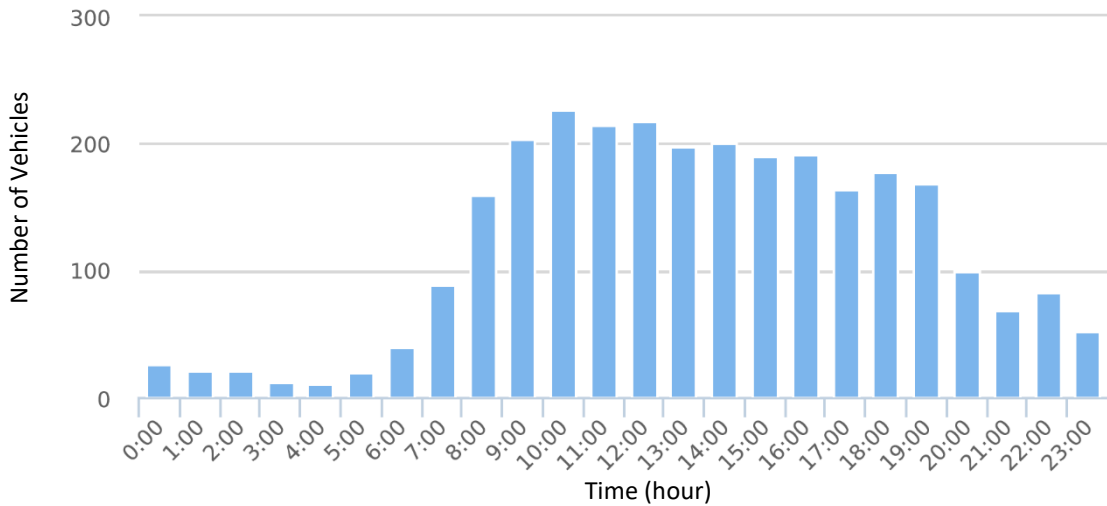


Figure 9. Average Volume by Hour on July 20th to July 21st (Southbound)

4.0 Conclusion

The traffic study conducted on Fuller Ave for both northbound and southbound directions was successfully carried out from July 15th to July 22nd, 2019. From the speed analysis, it was determined that 92% of vehicles travelling in the northbound direction were travelling within the accepted speed limit. It was also determined that 85% of vehicles travelling in the southbound direction were travelling within the accepted speed limit.

In addition, from the volume analysis, it was determined that the peak traffic hours were at the typical evening rush hour for northbound direction on a weekday. It was also determined that the peak traffic hours were at typical morning and evening hours in the southbound direction. The southbound traffic was monitored over the weekend and it was noted that it has peak volume around noon.