

To: Mayor and City Council

From: Damion Pregitzer, PE, PTOE; Traffic Engineer

Date: February 9, 2021

SUBJECT: Cessna Street Speed Trends

BACKGROUND:

In January of 2020, staff conducted a speed study for Cessna Street near its intersections with Agg Avenue in response to speeding complaints from residents who live in the South Campus Neighborhood. This speed study utilized vehicle data collected from traffic detectors placed along Cessna St adjacent to the "Agg Triangle." These detectors collected data from Tuesday, January 14, 2020, to Friday, January 17, 2020. Data collected was for both directions of travel.

Figure 1 (Attachment 1) summarizes the speed distribution and speed statistics from the original speed study. In short, the initial speed study did not find that substantial excessive speeding was occurring, thus **implementing an engineering solution was not warranted and only additional enforcement was recommended to City Council.**

However, **staff has continued to receive concerns from residents about speeding along this corridor.** It was noted that children in the neighborhood are potentially at risk, including those required to cross the street to get on the bus near the intersections with Agg Ave. **Therefore, staff has utilized new data sources to assess the speed trends along the Cessna Street corridor throughout the calendar year 2020 to see if speed behavior has changed significantly since the original study.**

SPEED TREND STUDY RESULTS:

Engineering practice defines speed statistics that should be evaluated when conducting speed studies. Two of these speed statistics are the **85th Percentile Speed** and the **percentage of vehicles excessively speeding** (vehicles traveling at or greater than 10 MPH over the posted speed limit). Therefore, when

assessing speeding behavior trends, tracking these speed statistics will be the primary focus and compare the monthly speed distributions.

The data used to assess the speed trends comes from the City's subscription to StreetLight Data, Inc., which provides the City with a wide range of vehicle data. Data were summarized for each month in 2020. This data was collected for three different segments along the Cessna Street corridor, as shown in **Figure 2 (Attachment 1)**. The data collected in the original speed study would fall within the "Central Segment" near Agg Avenue.

Figure 3 (Attachment 1) shows how the ADT (average daily traffic) varied for each segment throughout the year. **Note that March and April show sharp declines in traffic volumes due to the onset of the COVID-19 pandemic, followed by the gradual recovery of traffic volumes as the year progresses.**

Figure 4 (Attachment 1) shows how the average speed varied for each segment throughout the year, while **Figure 5 (Attachment 1)** shows how the 85th percentile speed varied throughout the year. **Figure 6 (Attachment 1)** shows how the percentage of vehicles excessively speeding varied throughout the year. **Figures 7, 8, and 9 (Attachment 1)** shows the cumulative speed distributions by month for each of the three segments.

SUMMARY OF FINDINGS:

The **average speed and 85th percentile speed remained relatively consistent throughout the year** for all three segments. **The percentage of vehicles excessively speeding fluctuated more, peaking around April, and has continued to steadily decline for all three segments since that time.** The east segment (approaching Beach Ave) consistently showed higher speeds across all speed statistics compared to the central segment and the west segment.

RECOMMENDATIONS:

2020 was an abnormal year due to the COVID-19 pandemic, as evidenced by the sharp decline in traffic volumes in the late Spring. The speed trends indicated consistency for most metrics except for the percentage of vehicles excessively speeding, which peaked for the year between February and April (around the same time that traffic volumes were most abnormal).

Additional Improvements:

Therefore, because speed along Cessna Street has remained relatively static throughout 2020, staff does not believe it to be beneficial to conduct another speed study at this time. However, the plan moving forward will be to **add flashing red lights to the All-Way stops at Beach and Cessna.** There was a similar issue at 24th and Northwestern, and the flashing stop sign solution seems to work well.

It should be noted that the original request also asked for flashers to be installed at the intersection of Country Club Blvd and Cessna St. Staff is not recommending they be installed at this time due to the lower traffic volumes and speeds and the fact that staff did not find an accident history at that intersection that indicates a failure of drivers to stop at the Stop Signs.

Continued Monitoring:

With the new data tools at the City's disposal, traffic speeds can be easily monitored as new monthly data become available throughout 2021. Should speed trends or any future field data indicate significant increases in speeding along this corridor, an additional speed study will be conducted.

ATTACHMENT 1

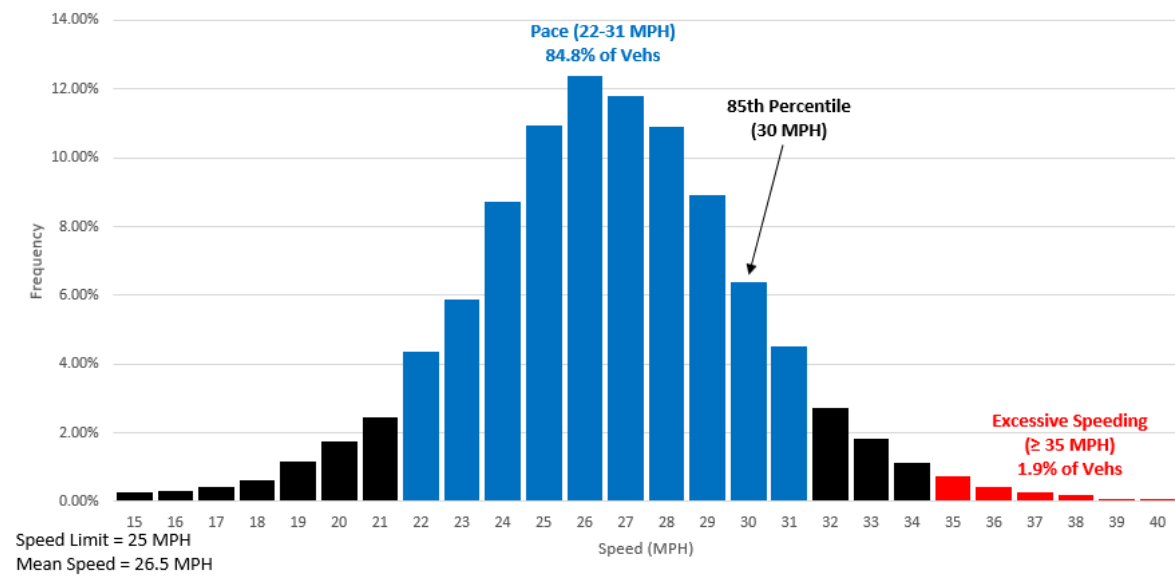


Figure 1: Original Speed Study Results (January 2020 – Cessna St @ Agg Ave)



Figure 2: Analysis Segment Names and Locations

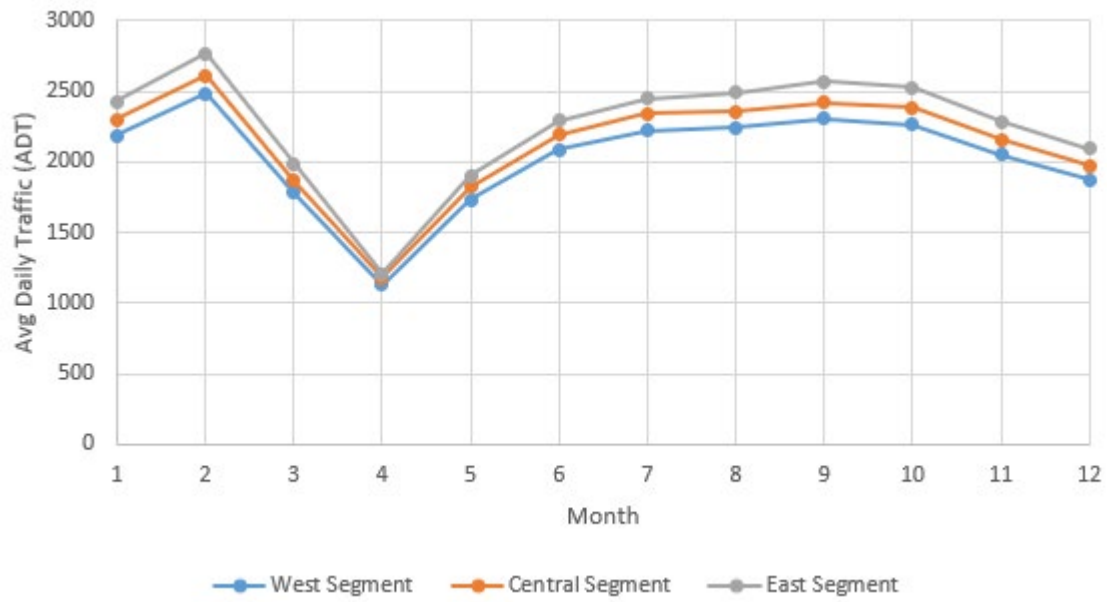


Figure 3: Average Daily Traffic (ADT) 2020 Monthly Trend (by Segment)

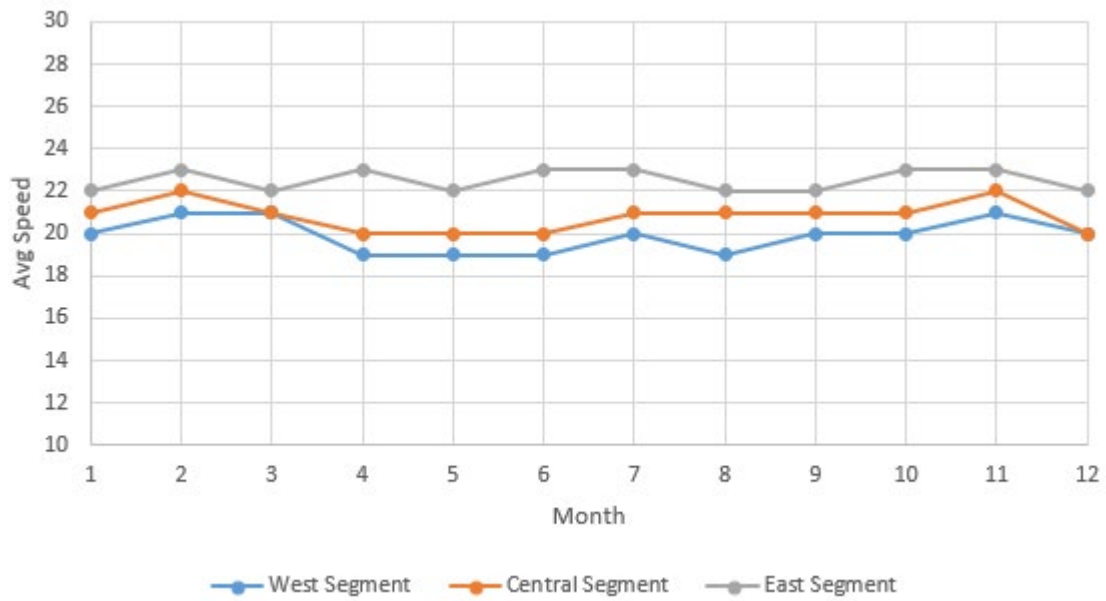


Figure 4: Average Speed 2020 Monthly Trend (by Segment)

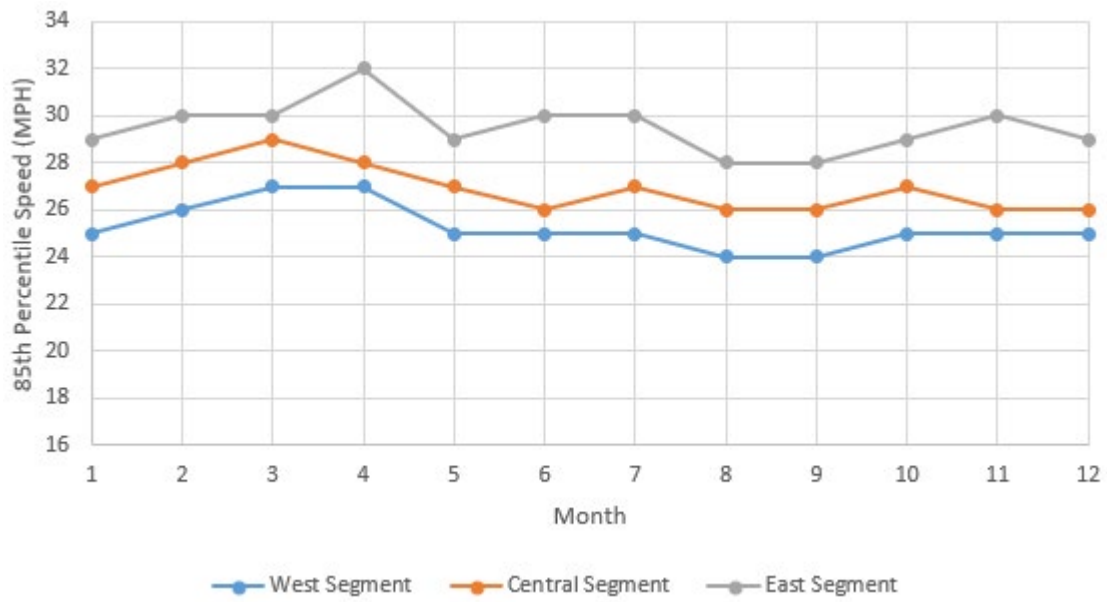


Figure 5: 85th Percentile Speed 2020 Monthly Trend (by segment)

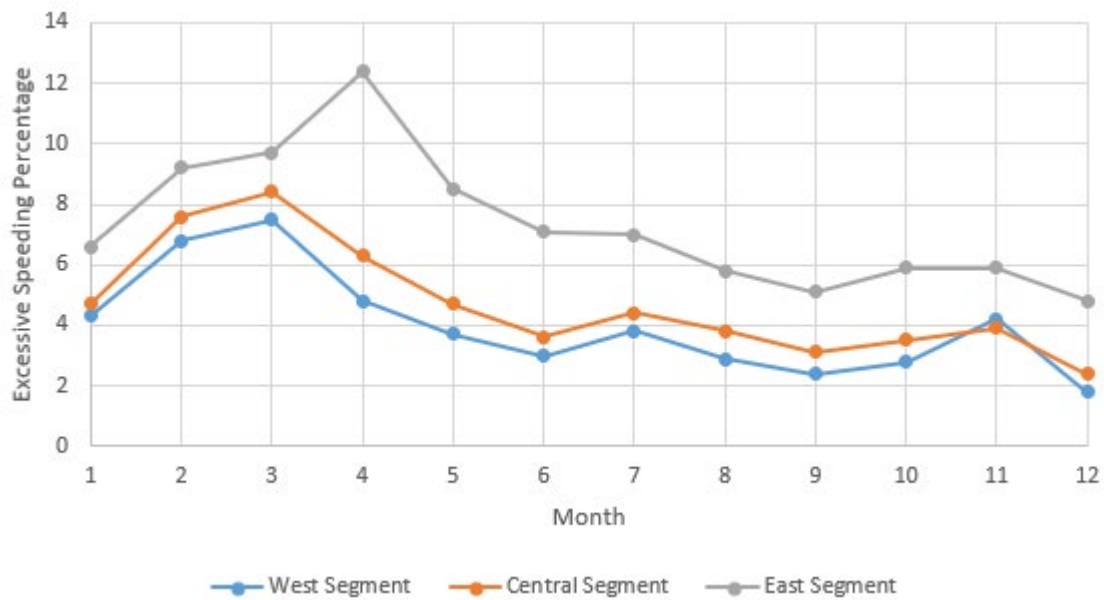


Figure 6: Excessive Speeding Percentage 2020 Monthly Trend (by Segment)

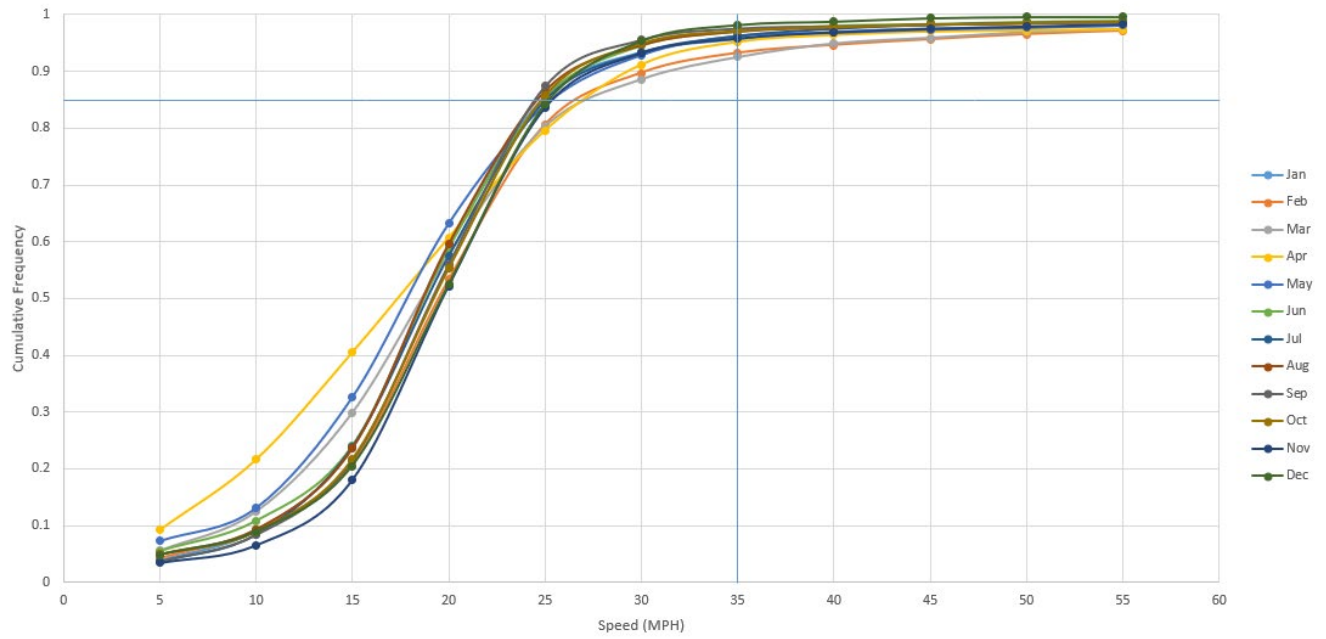


Figure 7: Cumulative Speed Distributions by Month (West Segment)

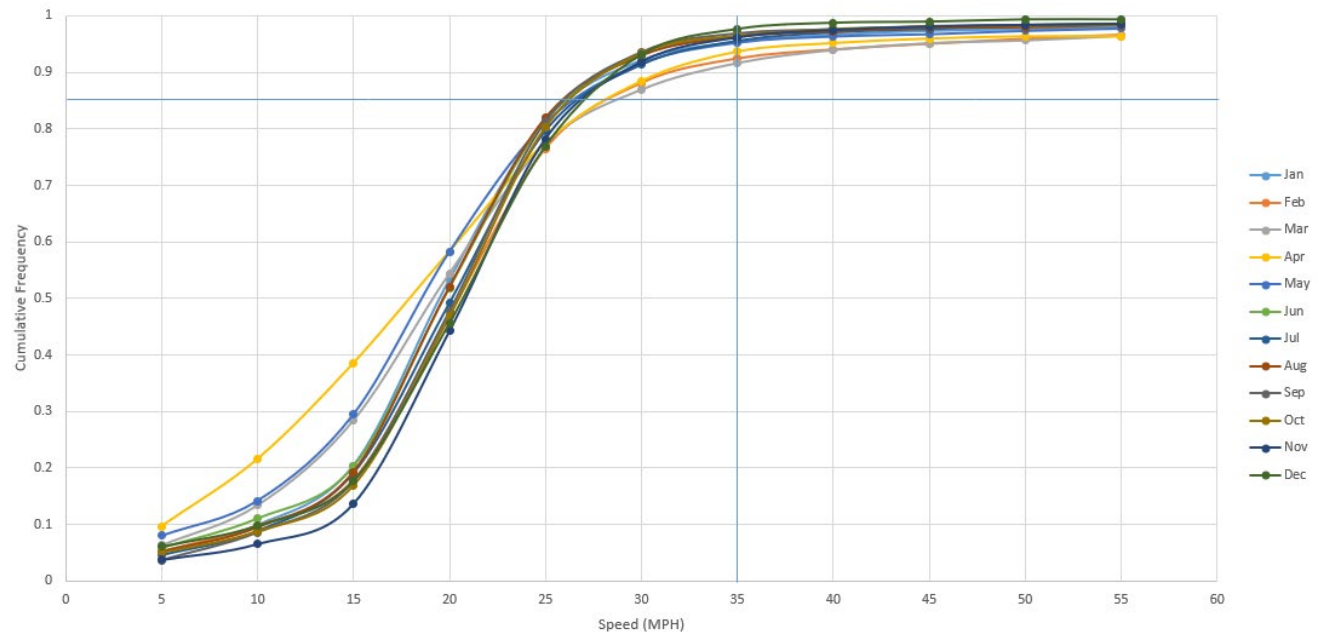


Figure 8: Cumulative Speed Distributions by Month (Central Segment)

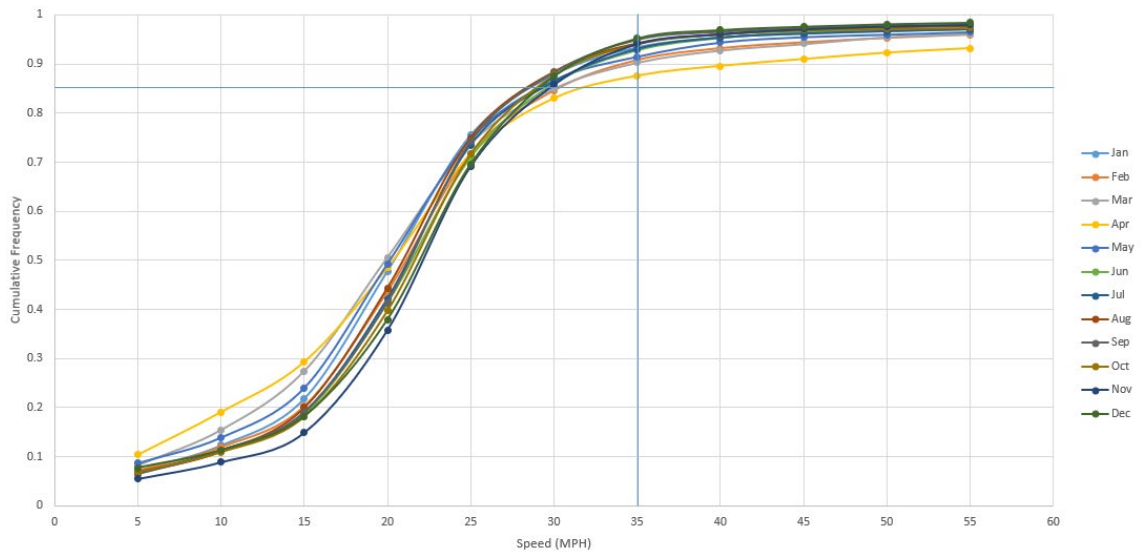


Figure 9: Cumulative Speed Distributions by Month (East Segment)