

Investigation of Traffic Volume in the 3 Main Transportation Corridors in Chilliwack

Assessing the rise in traffic volume along Chilliwack's West, Central, and East corridors, and exploring the impact of population growth on road usage in these areas.

Purpose

As the population of Chilliwack continues to grow, transportation within the city is also on the rise as a result. By analyzing traffic data, our group aims to explore how traffic volume among these corridors has evolved since 2014, if the increase in residents within Chilliwack has lead to an increase in traffic volumein these corridors, and which road point experiences the highest volume of traffic.

Process

In order to determine the aim of our project, we had to analyze data provided to us on <https://maps.chilliwack.com/b/>. Through this site, we were able to determine specific traffic volume amounts at different road points, or **stations**. Each station in Chilliwack contains information detailing road usage during 24 hour counts of traffic for various years from 2014-2023, some stations with more data over the years than others. For our project, we gathered data from 12 stations throughout the city, so that we could understand the usage of each corridor. The stations used for our study are marked with green stars in Figure 1.

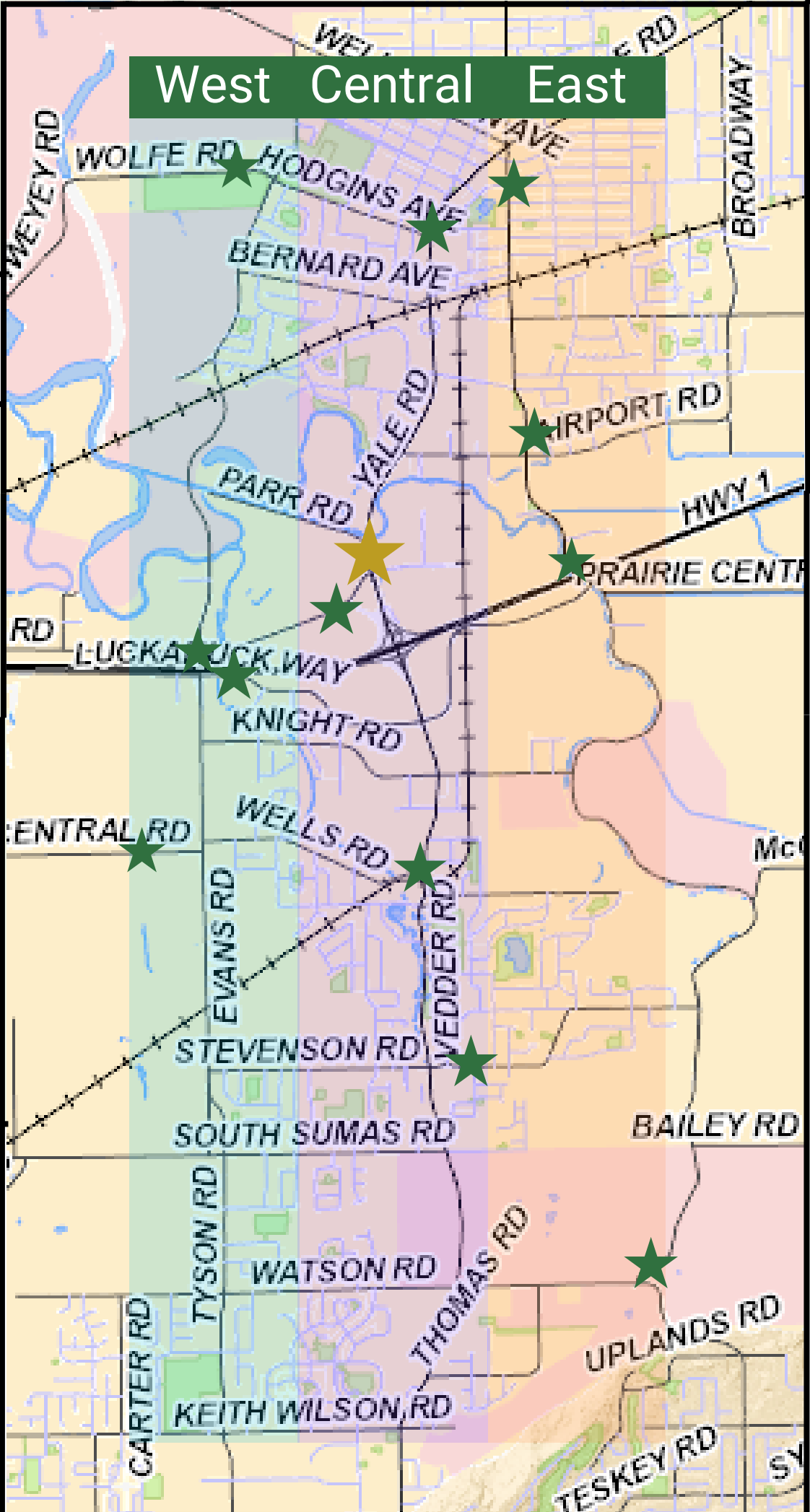


Figure 1. Corridors of Chilliwack [1]

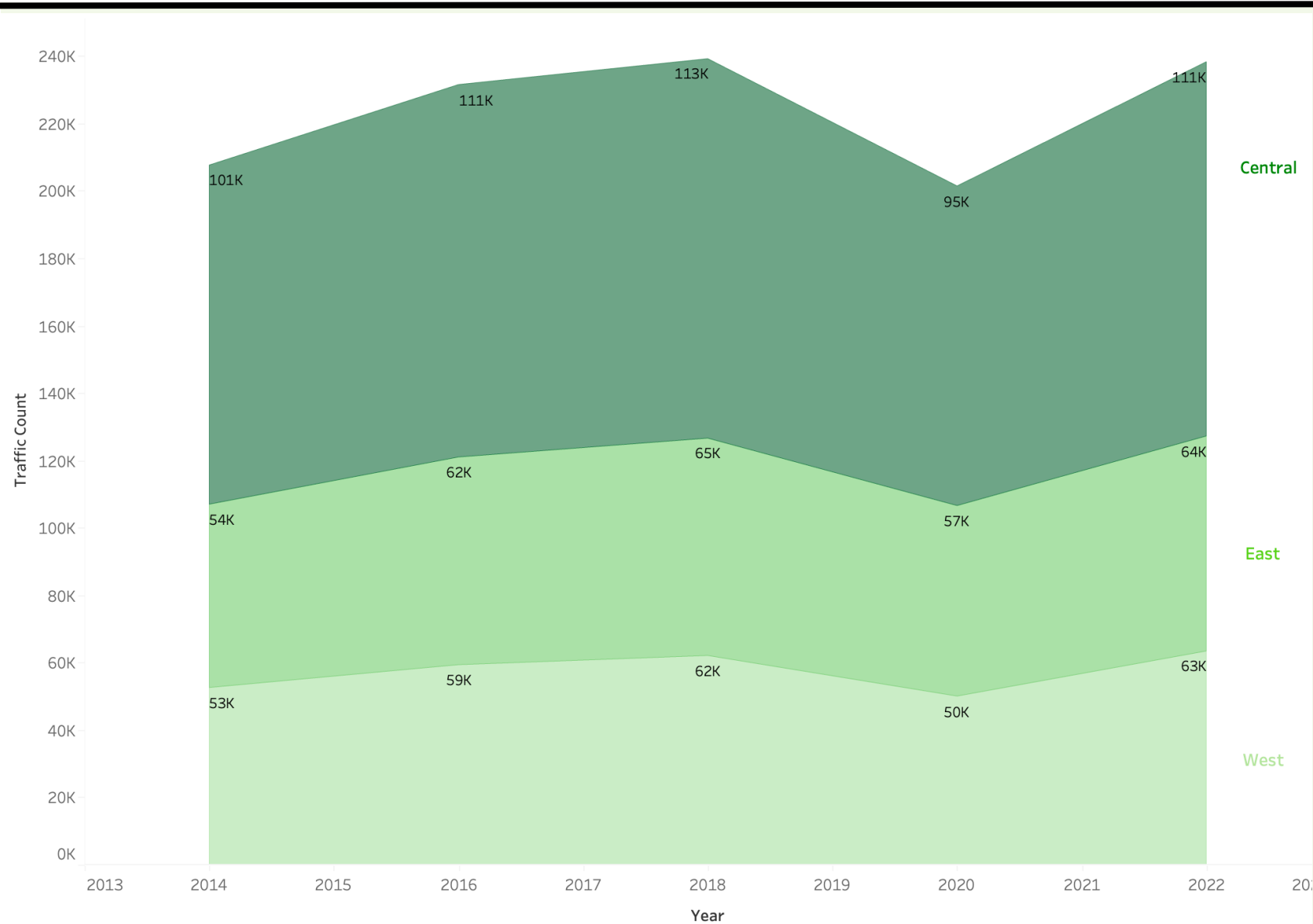


Figure 2. Chilliwack Corridor traffic counts over time (2014-2022)

Transportation within each corridor shows an increase over time, with the Central corridor experiencing the highest volume of traffic (~173% difference compared to the East corridor).

During 2020, there appears to be a decrease in road usage, most likely due to COVID-19 lockdowns. Road usage is expected to continue increasing over time. Future research past 2024 should be conducted to confirm this.

Outcomes

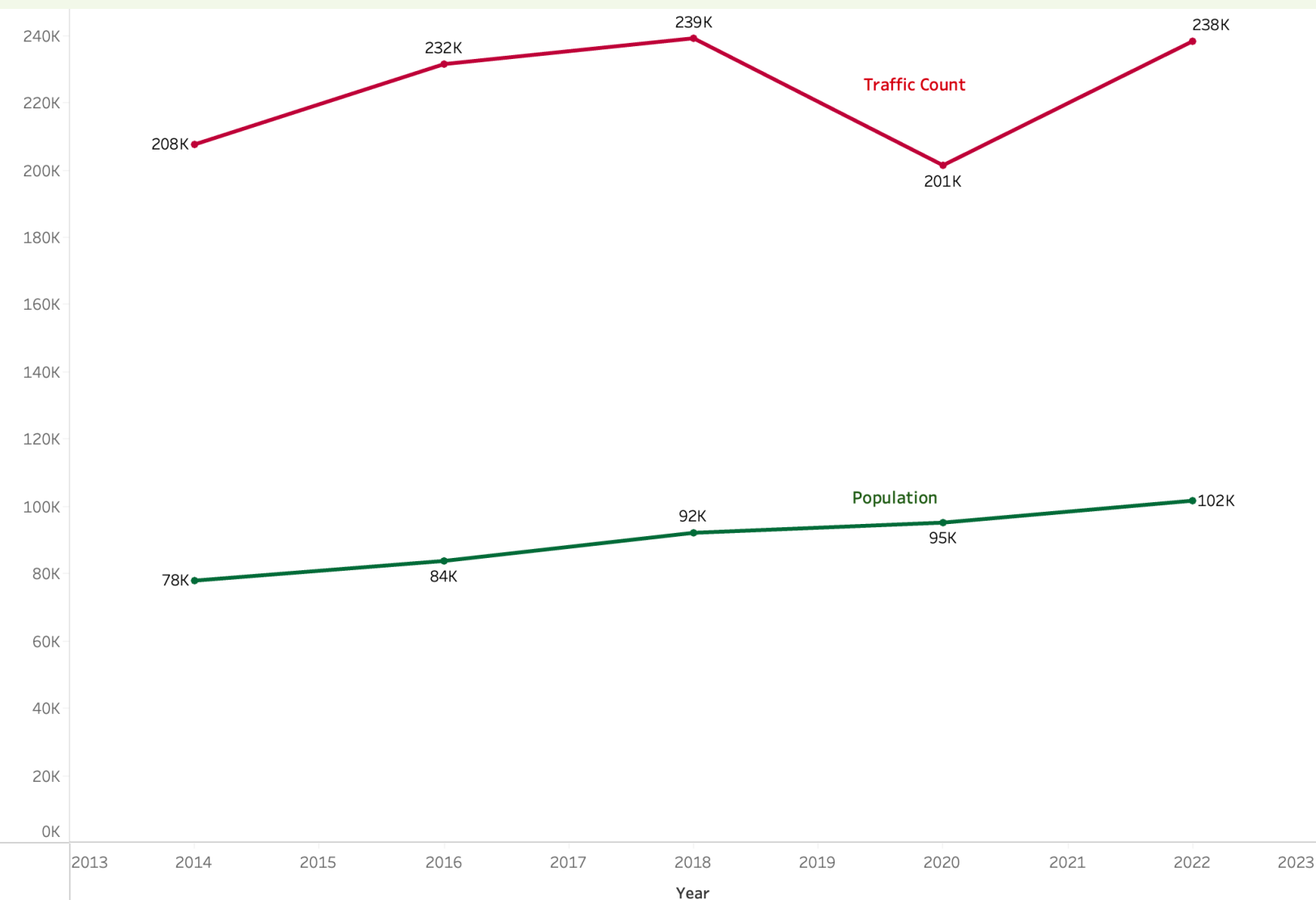


Figure 3. Chilliwack Corridor traffic counts compared to population growth over time. [2-3]

Transportation within each corridor continues to increase as the population increases over time. Although the population increased from 2018 to 2020, road usage decreased, but then continued to rise after lockdowns. Data is also dependent on days that stations are surveyed.

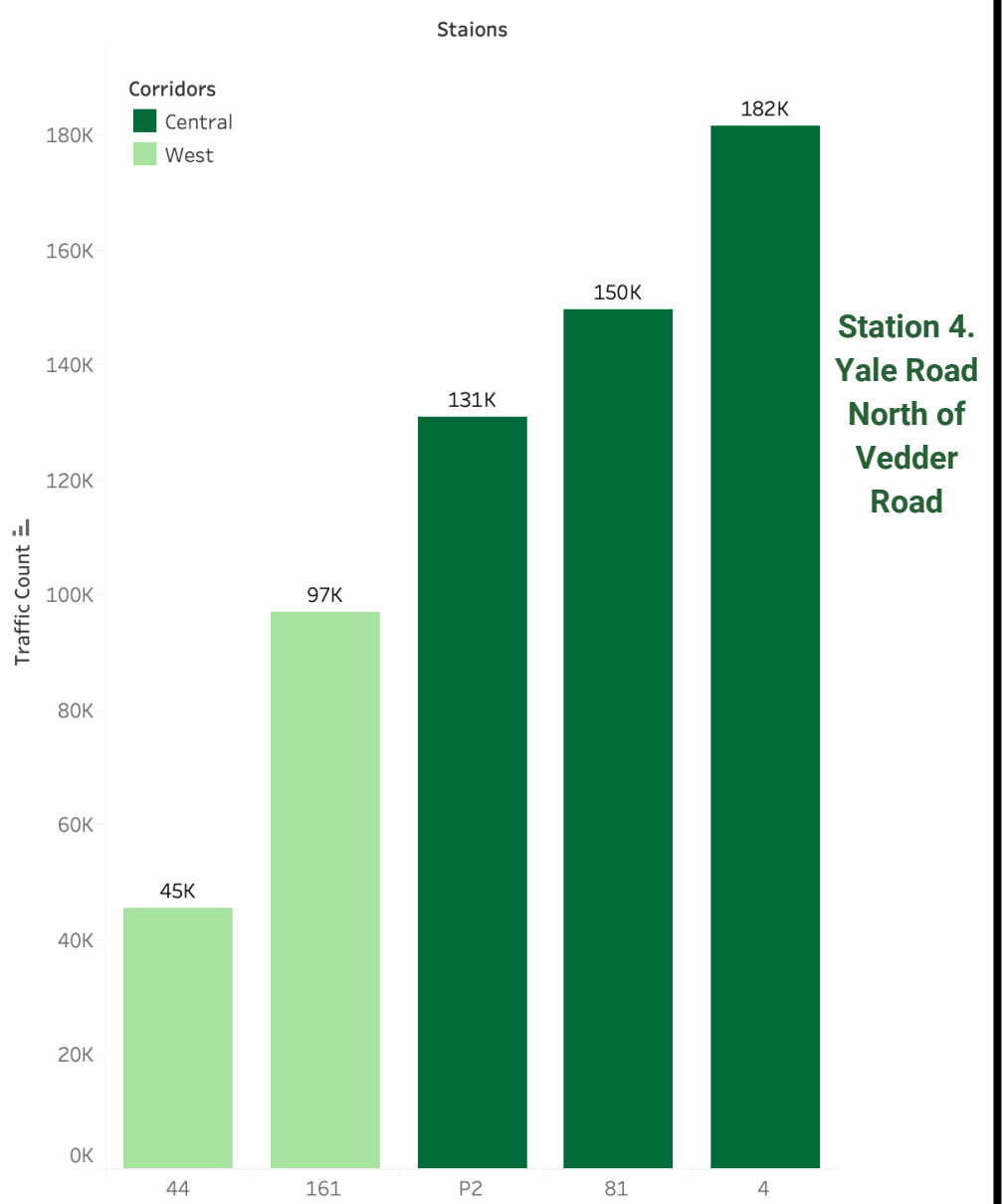


Figure 4. Top 5 stations with highest volume of traffic (2014-2022)

Station 4 is determined to have the highest volume of traffic (182K) compared to the rest of the stations. The location of Station 4 is shown in Figure 1 with a gold star.

References:

- [1]<https://maps.chilliwack.com/b/>
- [2]<https://www.chilliwack.com/main/attachments/Files/2387/OCP%202040%20Schedule%205%20-%20Growth%20Projections.pdf>
- [3]<https://www12.statcan.gc.ca/census-recensement/2021/as-sa/fogs-spg/page.cfm?lang=E&topic=1&dguid=2021S0503930>