January 2022

Conducting Road Safety Audits
Group Assignment 3: Data analysis

Background

Understanding the road environment and context is important for any road safety audit or appraisal. Conducting the site visit is critical, but so is a thorough understanding of the characteristics of the roadway, the road reserve, land use, traffic composition and crash history of a specific road section. Even if a project entails a complete new route alignment, an understanding of the current traffic flow patterns, likely road users and current and future land use is only obtained through the analysis of data. Some auditors prefer not to conduct a detailed analysis of crash data too early in the audit, to avoid being influenced by historic events. However, the analysis of crash data can be important to understand when and how crashes might occur in future, e.g. crashes might occur during certain times of day or under specific weather conditions.

The purpose of this assignment is to provide an overview of the data and analyses of data which is required to identify road safety risks.

Overview of assignment

Each group will receive information about an existing road section. The data includes amongst others:

- A locality map;
- Road and lane configurations;
- Access locations;
- Traffic flow data;
- Crash data.

Analyse the data as well as the crash data provided in Excel format and determine trends in the data which might contribute to crashes and therefore road safety risks. Identify trends in the data which might assist in identifying such risks. E.g.:

- Does crashes predominantly involved certain vehicle types or road users;
- When does crashes occur;
- Are there specific locations with higher crash rates;
- Does the road geometry or road signs/markings contribute to crash rates, e.g. a lack of passing opportunities, posted speed limits which are not in line with operating conditions or the design of the road;
- Others?

Format

Each team must prepare a PowerPoint Slideshow indicating the trends in the data/information which could contribute to road safety risks. Identify five trends in the data which you consider to be significant. You should include the following slides:

1. Context (1 slide):
    - Prepare a slide to provide context to the project for you were provided data.
2. Prepare one slide per significant finding from the data. Include:
    - Any relevant information to illustrate the finding.
    - Describe the significance of the data (why it is important from a road safety point of view).

Presentation

Each group will have approximately 10 minutes to present their findings.