Appendix C: Corridor Study Area Crash Evaluation Methodology

Introduction

This memorandum provides details for the crash data analysis completed to support the 2019 update to the Congestion Management Process (CMP) Policies and Procedures Document. This information is intended for inclusion in the *Transportation Trends Report* under development for the CMP to provide guidance to Metropolitan Council staff in future CMP update cycles.

Crash Aggregation

Data Sources

Minnesota Department of Public Safety maintains a geospatial database of crashes recorded by law enforcement throughout the State. This database provides the location, date and time, severity, number of fatalities of each crash the State Patrol responded to. There are also numerous other attributes recorded within the dataset, for example, age and sex details of person involved, type of the crash and weather conditions.

Step 1: Data Aggregation

MnDOT provided upon request a GIS shapefile for all crashes in each county in the metro area. This geospatial dataset was filtered in ArcGIS using 'Select by Attributes' on the Attribute Table. Ae a new selection was created for each for each of the final corridors selected in the CMP process. The fields used for filtering were ROUTE_ID and ROUTE_DIR (direction). Manual selection (Select Elements) based filtering was then used to capture any crashed within the extents of each corridor.

Step 2: Produce Metrics

The severity, direction and manner of collision (front to rear, front to front etc.) for each crash was aggregated for each corridor in both directions. For each level of severity and manner of collision a percentage of total crashes was calculated along the corridor. This information was then formatted and displayed in tabular format.