POPULUS
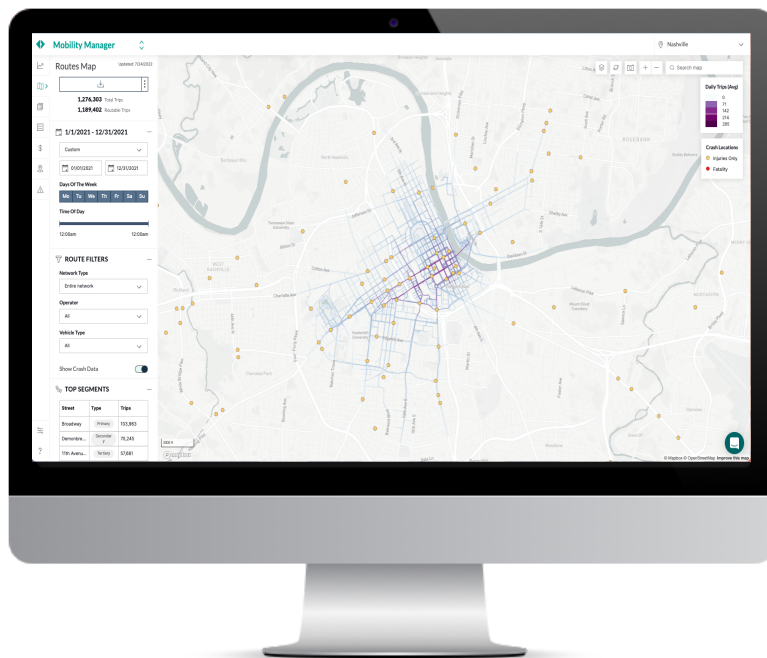
USDOT Safety Data Initiative (SDI) Micromobility Safety Project

USER MANUAL FOR POPULUS SAFETY-RELATED PLATFORM FEATURES
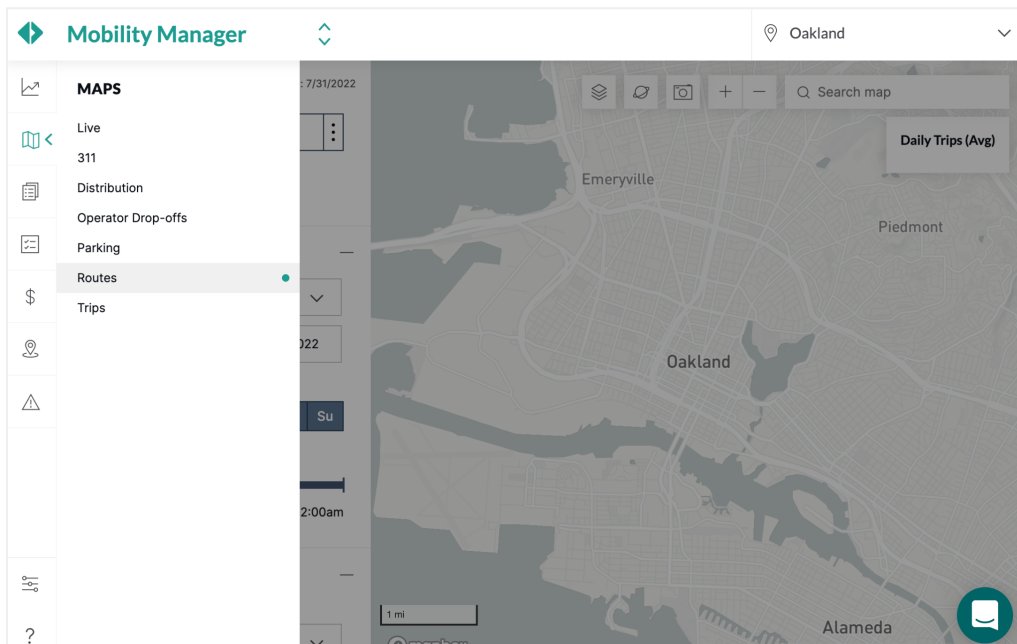
Background

We developed this manual to guide users and answer common questions about the features, data, and layout of Populus' *Routes* feature, and core datasets that have been integrated into this feature to accelerate transportation safety planning.. This dashboard visualizes municipal and regional bike network data and crash data, with the intent to help planners make data-driven decisions around infrastructure improvements.
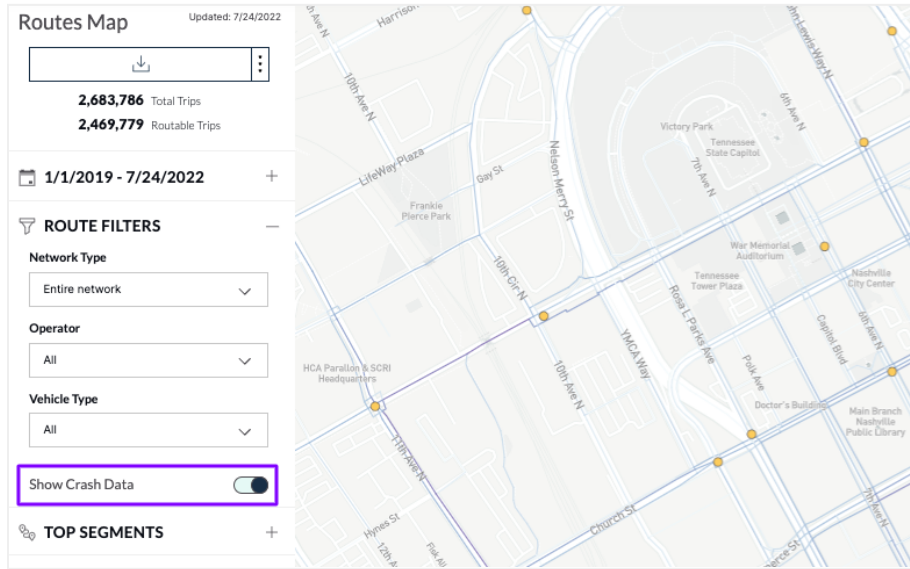
Accessing the Populus Routes Map

Users of the Populus platform can access the safety dashboard's crash data by first selecting the **Routes** map under the map tab on the left hand side. This will direct you to the map, pictured below.
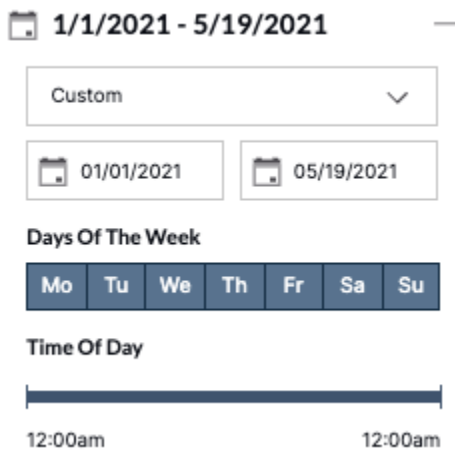
Overlay Crash Data

From the Routes map, select the "+" next to *Route Filters* to display the *Show Crash Data* toggle, outlined in purple. Selecting the toggle will turn on the crash data layer.
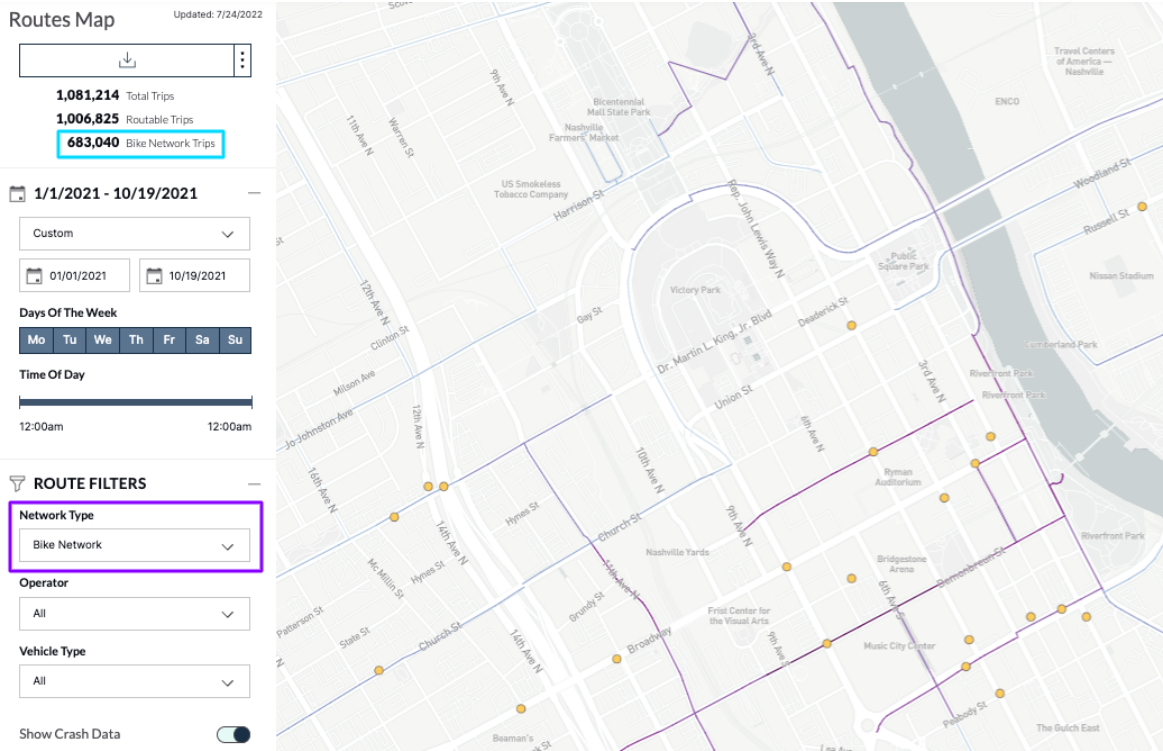
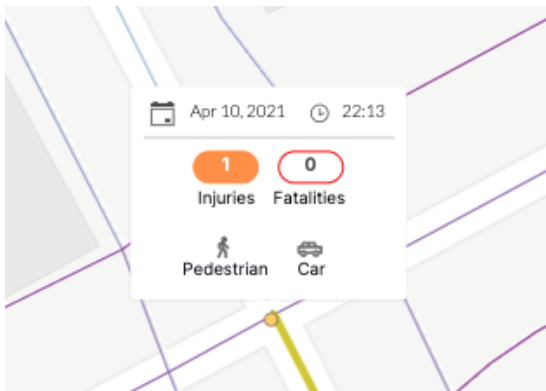

Date, Time, and Route Filters

You can use the filters on the left to see how the route travel volumes change, depending on the date interval, selected days of week, and hours of day.

This can be helpful when evaluating the effectiveness of roadway improvements, for example, seeing how they may impact travel behavior and/or volume of crash events before and after interventions.

Selecting a route filter (outlined in purple) will display trips only along the relevant route route. This will prompt another data point (outlined in blue) to appear under *Routable Trips* that sums the trips that apply to said route.

Crash Data

You can hover over the yellow and red points to view crash severity, date and time of incident, and involved road users.

Note that the map will only display incidents that occur within the selected date and time parameters.

Data Considerations

The time interval the USDOT safety project focused on was generally between 1/1/2021 to 12/31/2021, with some exceptions. For this reason, the *Show Crash Data* toggle will not activate for time intervals beyond what was studied. Review the data source citation for specific dataset details

Glossary

Total Trips: Sums the discrete trip events made by users that are provided directly by the operators. Populus includes all trips that start, stop, or pass through the city/regional boundary. We filter out trips lasting longer than 7 hours or containing more than 5,000 points.

Routable Trips: Sums the number of trips included in the *Routes* map. Includes trips that were not eliminated due to poor or unusable GPS data, and trips removed due to privacy data filtering.

Top Segments: Populus aggregates trip volumes over street segments using a basemap from OpenStreetMap, ranking them by trip frequency under *Top Segments*. Low trip volume streets are not included to protect privacy. For a single day, we would only display routes averaging at least 1 trip/day.