2050 MTP

Congestion Maps (V/C maps)

How to Use Maps

Click the layer icon  in the top right of the web map screen to access a pop-up that allows the various 2050 and 2016 maps to be turned on and off. Note that the map on top, which is turned on, will display over the other maps. Click on the legend icon  in the top right of the web map to view the V/C color values.

Understanding the Maps

The Performance Measures provide a general indicator of the overall transportation system. On the other hand, the Congestion Maps show the forecasted level of service on specific road segments based on the daily traffic volume and capacity. These maps are sometimes called "V/C" maps (V over C maps) because the level of service, or existence of congestion, is derived by dividing the traffic volume by the traffic capacity of the road segment. For example, a volume of 9,000 vehicles on a road that is capable of carrying 10,000 vehicles will produce a V/C of 0.9. A V/C of 1.0, which is full capacity, is equal to a Level of Service (LOS) of "E" and can be described as:

> Limit of acceptable delay, unstable flow, poor signal progression, traffic near roadway capacity, frequent cycle failures.

These congestion maps show the daily values. Thus, it should be noted that the V/C ratio for the morning or afternoon peak period and hour is likely to be higher and therefore more congested than the daily values.

The term traffic congestion is subjective in that people are likely to experience or describe the same level of delay differently. Nonetheless, it can be said that any road segment approaching a V/C of 1.0, which is indicated on the maps with a **yellow color**, experiences some delays. A V/C greater than 1.0, which is indicated on the maps by the **orange color**, means frequent delays for the motorist and when the V/C exceeds a value of 1.2, the **red color**, most motorists experience what might be termed unacceptable travel delays.

The Triangle Regional Model (this region's travel demand model) uses travel behavior data for the Triangle Region, future highway and transit networks, and future population and employment data, to forecast the volume and capacity values needed to produce these maps. The forecasts are for the year 2050 build scenario, the 2050 no-build scenario, and the base year used for the model, which is 2016. Each map represents one

of these scenarios, which are comprised of a specific mobility investment, or set of highway, transit and other transportation facilities, and a specific development foundation, or set of land uses, population, and employment.

Review and comparison of the congestion maps for the various scenarios will show how well a particular scenario addresses vehicle travel demand on the key roadway segments and corridors in the MPO planning area.

Of particular importance is the comparison of the adopted 2050 MTP scenario (i.e., build scenario) with the **E+C map** (Existing plus Committed, or no-build scenario), which can be considered a benchmark. The E+C map uses a transportation network with the current roadways and transit services plus any others that have been committed to being implemented, and the Socioeconomic Data (i.e., population and employment) for the year 2050. This map shows the level of service to be experienced if no additional roadways improvements or transit services are implemented. By comparing the E+C Congestion Map with the adopted 2050 MTP, you can see how well the transportation investments in the adopted 2050 MTP address the congestion in the E+C.

The 2016 congestion map is an additional benchmark. The 2016 basically represents currents conditions because it is based on the current transportation network and socioeconomic data.