

2035 LRTP

Congestion Maps (V/C maps)

Use of Congestion 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 and corridors based on the afternoon peak hour. The afternoon peak hour is used because that period traditionally experiences the greatest travel demand. 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 is equal to a Level of Service (LOS) of “E”, which can be described as:

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

Although the term traffic congestion is subjective in that it means different levels of delay to different people, it can be said that any road segment approaching a V/C of 1.0, which is indicated on the maps with an **orange color**, experiences some delays. A V/C greater than 1.0, which is indicated on the maps by the **purple color**, means frequent delays for motorists, and a V/C greater than 1.1, which is indicated by the **red color** on the maps, translates into unacceptable travel delays.

The Triangle Regional Model (the travel demand model for the Triangle Region) uses travel behavior data for the Triangle Region, future transportation system 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 2035.

Review and comparison of the Congestion Maps for the various transportation options will show how well a particular option addresses travel demand on the key roadway segments and corridors in the MPO planning area.

Of particular importance is the comparison of the **Draft 2035 LRTP map** with the **E+C map** (Existing plus Committed – used as a benchmark) on the next two pages. 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 2035. This map shows the level of service to be experienced if no additional roadway improvements or transit services are implemented, and thus helps to answer the question, “When we make our next transportation investment decision, where do we need to focus our investment?” Furthermore, by comparing the E+C Congestion Map with the Draft 2035 LRTP, you can see how well the transportation investments in that option address the congestion in the E+C.

2035 Existing Plus Committed Network

PM Peak Hour V/C Ratio
DCHC MPO



