

## Performance Monitoring Program

An important element of a CMP is a program to monitor its effectiveness, as well as to identify new congested areas in the region. Monitoring the impacts associated with the implementation of measures designed to address congestion is important to inform whether the measures have had the desired effect and also the magnitude of that change. This will help in the updating of future versions of the CMP, allowing for a change to those strategies that are not performing optimally. Updating and monitoring congestion in the region will also help identify new areas of growing congestion. Proactive efforts can be made to alleviate growing congestion issues before they become major issues. Those areas identified through the CMP and its monitoring process can help inform the transportation project selection process.

Whereas the previous CMP collected vehicle travel time and speed data utilizing travel time runs, this CMP update made use of INRIX vehicle probe data for all corridors except Route 610, for which INRIX data is not currently available, but is expected to be in the near future. INRIX is a commercial vendor contracted by the I-95 Corridor Coalition to gather and disseminate real-time traffic flow data on interstate and major arterial roadways. This data is collected “24/7” using vehicle probe data. The specific data items that can be obtained relevant to a CMP monitoring program include:

- *Speed* - the current estimated mean speed for the roadway segment in miles per hour.
- *Travel Time* - the current estimated time it takes to traverse the roadway segment in minutes.
- *Reference Speed* –the calculated “free flow” mean speed for the roadway segment in miles per hour (capped at 65 miles per hour). This attribute is calculated based upon the 85th-percentile of the observed speeds on that segment for all time periods, which establishes a reliable proxy for the speed of traffic at free-flow for that segment.
- *Average Speed* - the historical average mean speed for the roadway segment for that hour of the day and day of the week in miles per hour.

As part of this overall CMP project, Parsons Brinckerhoff has developed a web-based interactive mapping application that will be linked through the FAMPO website, whereby people can view vehicle speed data that will be updated on a monthly basis along the CMP corridors. This application also includes V/C ratio and crash rate data as this data is updated and supplied to FAMPO by VDOT. This will likely be a yearly update process. Finally, FAMPO will update the completed, planned and programmed improvement projects along each corridor as these occur.

Further analyses can be performed specifically associated with assessing each individual strategy. The type and level of data should be specific to the strategy

being used. Those strategies that impact travel speeds can be assessed using the INRIX speed data described above. Strategies associated with travel demand management or travel mode may be assessed through an examination of ridership associated with a specific program (carpool, vanpool, public transit). Another potential measure could be the change in vehicle miles traveled associated with the strategy.