

## Appendix E

### Project Evaluation Methodology

The 2045 ESMPO LRTP Update includes a process for prioritization of Vision Plan projects for funding. This process includes nine different performance measures, consistent with the requirements of the Fixing America's Surface Transportation Act (FAST Act). Four of these performance measures are focused on quantifying future mobility resulting from implementation of the 2045 Plan. These metrics include the 2045 volume-over-capacity (V/C) ratio, congested speeds, identification of tourism corridors and commuter routes. Each of these measures is computed using outputs from the ESMPO travel demand forecasting model. A model run of 2045 demographic forecasts, in conjunction with an existing-plus-committed (E+C) highway network, was used to quantify measures for existing corridors proposed to be upgraded in the 2045 LRTP. The E+C network includes roadway projects either under construction or committed to construction in the MPO's Transportation Improvement Program (TIP). For proposed new roadway corridors, a 2045 Vision Plan model run was used instead. This model run also used 2045 demographic forecasts, but with the proposed 2045 Vision Plan network instead of the E+C network. The E+C network model is essentially a "worst case" scenario used to identify future roadway congestion. Proposed new roadway corridors are not "committed" so the 2045 Vision Plan model run helps explain how these new projects would improve mobility if added to the roadway network.

Most 2045 LRTP projects consist of several "links" in the highway network. The year 2045 **V/C Ratio** used in these assessments represents the link with the highest V/C ratio along a proposed roadway corridor. The scoring of V/C ratio is as follows:

Less than 1.0 = 0 points

1.0 to 1.39 = 1

1.4 or above = 2

**Congested Speed Change** reflects the difference between model input free-flow speeds and congested speeds output by the model after loading trips onto the respective highway network. The rationale for this measure is to highlight roadway corridors where travel speeds are most greatly impacted. Scoring for change in congested speed (free flow vs. congested) is as follows:

Less than -50% = 0 points

-50% to -100% = 1

Greater than -100% = 2

**Tourism Corridors** are identified based on the percent of trips that come from and/or go to locations outside the MPO study area. These "external" trips are dominated by visitors to the eastern shore region, along with travelers passing through the region. Tourism corridors are those with 54 percent or more external trips, as follows:

Under 54% = 0

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54% or over = 1

**Commuter Routes** are those with the highest percentage of home-based work trips. The rationale is that corridors used to get residents to work should be a high priority for future mobility enhancements. Commuter corridors are quantified as follows:

Less than 22% HBW trips = 0 points

22% or more HBW trips = 1