

# **APPENDIX F. MODELING DOCUMENTATION**



## MEMO

**TO:** Scott Smith, CVMPO  
**FROM:** Will Cockrell, EPR-PC  
**DATE:** October 15<sup>th</sup>, 2019

**RE:** Initial Modeling Memo

**PURPOSE:** The purpose of this memo is to discuss the validation checks of the travel demand model and preliminary existing and future needs for the highway system revealed by the model results, per Task 1.9 of the Scope of Work. This memo serves as Deliverable 1.9a of Task 1.

**BACKGROUND:** The Lynchburg Travel Demand Model is a fully functional, fully calibrated model that appears to validate well at the regional level. The model is appropriate for use at all planning levels for items such as long range plan development, corridor studies and other macro level uses. The Lynchburg Model is a 4-step model encompassing the trip generation, trip distribution, auto occupancy conversion and highway assignment steps. The Model Users’ guide provides information on folder layout, model steps and model execution.

**ISSUES:** The model comes set up with a 2016 base year and a 2045 future year which includes future projects. Model land use for the base and future years is shown below and shows a 0.7%/year increase in future population and future employment in the modeled area. The base year and future year population, household and employment values are depicted in the table below:

Data Point	2016	2045
Population	162,562	197,450
Households	70,425	87,036
Total Employment	86,217	105,041

No issues were encountered and all output made reasonable sense. The preliminary existing needs for the highway system can be found in the 2020 State of the System report, which serves as Chapter Three of the plan document. The preliminary future needs of the highway system will be discussed in the 2045 State of the System report, which serves as Chapter Five of the plan document.

**ACTIONS NEEDED:** There are no actions needed. If there are any comments or questions, please contact me at [w.cockrell@epr-pc.com](mailto:w.cockrell@epr-pc.com).

