

Research Project Title

Developing Statewide Land Use Forecasting Model and Integrate with TDOTs Statewide Travel Demand Model

Purpose of the Project

The purpose of the project is to develop a statewide integrated land use-transport model to obtain accuracy of future year land use forecast that represent long range transportation and to provide a flexible tool for statewide policy analysis.

Scope and Significance

The scope of the research project includes:

- Development of a statewide land use forecasting model in Tennessee based on available data;
- Collection of open source data and other data sets available from TDOT and other planning agencies in TN to build a statewide land use model;
- Validation of the statewide land use model to assess strengths and limitations;
- Integration of statewide land use and travel demand model;
- Development and application of selected scenarios for assessment of responsiveness with the integrated land use and travel demand model;
- Development of user manual for training and knowledge transfer.

Expected Outcomes

The land use model and its integration with the travel demand model will enable TDOT to analyze the impact of projects included in the transportation improvement plan and long-range transportation plan. A number of corridor studies, and other special projects when needed to be analyzed, the integrated land use and transport model will provide specific scenario based performance measures such as population density, household (by size, income) density, employment (by type) density, land usage versus vacant, vehicle miles travelled, vehicle hours travelled etc. The project will generate a number of visuals showing output of the land use model and also when integrated with the travel demand model. The visuals can be used to assist decision making and also for display at stakeholder and public meetings. The project deliverable is expected to support efficient funding allocation and decision making in selecting future transportation projects

Time Period

The time period for the project is 24 months.

Contact Information

| | |
|--|---|
| <p>Principal Investigator (PI): Sabyasachee Mishra Department of Civil Engineering University of Memphis Address: ES 112D, 3815 Central Avenue Memphis, TN 38152 Phone: 901-678-5043 Email: smishra3@memphis.edu</p> | <p>TDOT Lead Staff: Dr. David Lee Long Range Planning Division Phone: 615-253-4519 Email: david.lee@tn.gov</p> |
|--|---|