The NCMUG's vision is to provide a forum for sharing knowledge and experiences of using state-of-practice transportation modeling tools, techniques and innovations appropriate to answer transportation planning and policy questions for the State of North Carolina, and promote its implementation across the State.

2017 Fall NCMUG Meeting

Wednesday, November 8, 2017

1:00 p.m. – 5:00 p.m.

Room 2600, ITRE/NCSU

909 Capability Drive, Research Building IV, Raleigh, North Carolina 27606

Agenda

Moderator: Joe Schirripa, Transportation Planning Division, NCDOT

- **INTRODUCTION**

- **NORTH CAROLINA STATEWIDE MODEL**
  1:00-1:40 PM
  North Carolina Statewide Model Recent and Upcoming Enhancements (40 minutes)
  Roberto Miquel, CDM Smith

  Learning Objectives
  ➢ Update the modeling community on the current state of the model.
  ➢ Familiarize the community with the uses of the statewide model and its role in P5.0 Project Prioritization
  ➢ Learn about recent enhancements to the model (e.g. new toll modeling component)
  ➢ Discuss proposed future enhancements to the model

- **APPLICATION - PERFORMANCE MEASUREMENT AND OTHERS**
  1:40-2:20 PM
  Modeling for Performance-Based Planning Measures (40 minutes)
  John (Jay) Evans, P.E., AICP, Principal; Feng Liu, Ph.D., Principal; John Lewis, Principal, Cambridge Systematics, Inc.

  Learning Objectives
  ➢ Familiarize audience with relevant aspects of the recently adopted national performance-based planning measures
  ➢ Identify key datasets and how they relate to performance targets and/or baselines
  ➢ Understand how the adoption of these measures will influence the requirements and emphasis areas for model development and model application
  ➢ Discuss example applications of analyzing NPRMDS and CTPP in a modeling environment
  ➢ Discuss challenges, opportunities, and experiences associated with emphasizing travel time as a model output

2:20-3:00 PM
Experiences Incorporating Reliability into Planning Models (40 minutes)
Stephen Tuttle, Consultant, RSG; Vince Bernardin, Ph.D., Director, RSG

Learning Objectives
➢ Review SHRP2 guidance on incorporating reliability into travel demand models, emphasizing methods for static planning models
➢ Discuss how modeling reliability can enhance travel forecasts
➢ Present experiences incorporating reliability into planning models, reviewing the advantages and limitations of different methods

3:00-3:20 PM
Using Performance Measures to Evaluate MTP Scenarios (20 minutes)
Mike Bruff, PE, DCHC MPO

Learning Objectives
➢ Review current DCHC 2045 MTP scenarios and process
➢ Review performance measures (TTI, Hourly Cost of Congestion, Travel Time, Peak Speed)
➢ Identify key model data elements needed (length, FF TT, Total VMT, Peak TT)
➢ Review calculations (Pk Avg Flow, Peak Speed, FF Speed, TTI, Hourly Cost of Congestion, Travel Time, Peak Speed)
➢ Discuss results (compare performance criteria, heat maps)

3:20-4:00 PM
Comprehensive Benefit-Cost Analysis (40 minutes)
Vince Bernardin, PhD, RSG

Learning Objectives
➢ Learn about recent research for FHWA and now being applied in places including Tampa, San Diego, San Francisco, and Portland
➢ Learn how public health benefits related to active transportation can be estimated and incorporated in benefit-cost analysis
➢ Learn how auto ownership savings are being incorporated in benefit-cost analysis
➢ Learn how accessibility benefits can be incorporated in benefit-cost analysis as increased options values from new destination and mode choice alternatives

4:00 – 4:40 PM
Atlanta Express Lane Network Study (ELNS) Traffic and Revenue Validation and Forecasting (40 minutes)
Jennifer Zhan, HNTB

Learning Objectives
➢ Familiarize audience with various levels of Traffic and Revenue (T&R) Studies and key risk drivers
➢ Discuss challenges and opportunities associated with utilizing regional model for T&R
➢ Discuss empirical data, focus and process for express lane network traffic and revenue validation and forecasting
➢ Discuss results and recommended refinements

4:40 – 5:00 PM
Open Discussion (20 minutes)

Note: Four (4) PDHs can be earned at the meeting (roster sheet & forms will be provided).