National Capital Region
Transportation Planning Board

Approved
As of 7/19/19

TPB TRAVEL FORECASTING SUBCOMMITTEE

HIGHLIGHTS OF THE MAY 17, 2019 MEETING

Meeting time & location: 10:00 AM to 12:00 noon, Metropolitan Washington Council of Governments

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MEETING ATTENDEES

MEMBERS, ALTERNATES, AND PARTICIPANTS

- Bill Allen (Citilabs) *
- Xiao Cui (HNTB)
- Zuxuan Deng (DDOT)
- Michael Eichler (WMATA)
- Jay Evans (Cambridge Systematics)
- Nazneen Ferdous (Jacobs)
- Dan Goldfarb (NVTC)
- Tony Hofmann (Michael Baker)
- Navid Kalantari (AECOM)
- Kyeongsu Kim (Connetics Transportation)
- David Kline (Fairfax County DOT)
- Jaesup Lee (M-NCPPC, Montgomery Co.)
- Tim Padgett (Kimley-Horn & Assoc.) *
- Krishna Patnam (AECOM)
- Mark Radovic (Consultant for MD-SHA) *
- Harun Rashid (NVTA)
- Amir Shahpar (VDOT)
- Christine Sherman Baker (Arlington Co. DES)
- Sonali Soneji (VRE) *
- Aichong Sun (AECOM)
- Catherine Vanderwaart (WMATA)
- Samwel Zephaniah (PTV)

COG STAFF

- William Bacon
- Tim Canan
- Anant Choudhary
- Stacy Cook
- Joe Davis
- Matthew Gaskin
- Sanghyeon Ko
- Arianna Koudounas
- James Li *
- Nicole McCall
- Andrew Meese *
- Ron Milone (Contractor)
- Jessica Mirr
- Abdurahman (Abdul) Mohammed
- Mark Moran
- Ray Ngo
- Wanda Owens
- Jinchul (JC) Park
- Jane Posey
- Eric Randall *
- Meseret Seifu
- Jacqueline Sellman
- Dusan Vuksan
- Feng Xie

* An asterisk indicates that the person attended the meeting remotely via WebEx.

This meeting of the Travel Forecasting Subcommittee (TFS) was chaired by Dr. Zuxuan Deng.

1. INTRODUCTIONS AND APPROVAL OF MEETING HIGHLIGHTS FROM THE PREVIOUS MEETING

The highlights of the March 15, 2019 meeting of the TFS were approved.

2. TPB'S DEVELOPMENT TRAVEL DEMAND FORECASTING MODELS

A. Gen2/Ver.2.5 Model Status Report

This item was presented by Mr. Milone, who spoke from a set of presentation slides, which were distributed to the subcommittee. Mr. Milone provided background on the development of the Version 2.5 Model, including its history, essential features of the model, and the key objectives staff wishes to meet before the model can be considered ready for production use. Currently, the Ver. 2.5 Model remains in development.

Mr. Milone reported that recent staff activities have focused on implementing refinements to the trip generation process and adjusting the model application to ensure that transit PNR-related paths use highway assignment link speeds. He added that staff has spent considerable time examining detailed comparisons of 2014 estimated trips by mode and 2007/08 observed trips from the Household Travel Survey (HTS). He also reiterated some of the key findings of the Ver. 2.5 Travel Demand Model that have been reported to the TFS in recent months:

- The running time of the Ver. 2.5 Model application is about 80% longer than that of the existing Ver. 2.3 Travel Model. Staff continues to seek ways to minimize the model run time;
- The model performance metrics, with respect to highway demand, is comparable to that of the Ver. 2.3 Travel Model;
- The model performance, with respect to transit demand, is inferior to that of the Ver. 2.3 Model. The Ver. 2.5 Model currently understates overall observed transit boardings by about 16%. Further, the underestimation of transit boarding's is associated with non-Metrorail modes (i.e., bus and commuter rail).

Given the recent comparisons of estimated and observed data, staff assesses that the transit targets used in the original validation of the model need to be revisited and the mode choice model must be re-calibrated to properly address the under-estimation of transit trips. Mr. Milone acknowledged that staff has identified several areas where model improvement is needed, including sensitivity testing, documentation and preparatory functions required to support the Ver 2.5 Model application.

Mr. Deng asked Mr. Milone to address how the new features of the Ver. 2.5 Model were identified. Mr. Milone stated that the added features of the model were arrived at because of feedback from a stakeholder survey of local model users that was conducted around three years ago. The stakeholder survey was a developmental component of a multi-year strategic plan for the Models Development program that was completed in FY 2016.[1] TPB staff is currently implementing the strategic plan.

B. Gen3 Model Status Report

This item was presented by Mr. Moran, who spoke from a set of presentation slides, which were distributed to the subcommittee and posted on the TFS website after the meeting. Mr. Moran noted

[1] Cambridge Systematics, Inc., "Strategic Plan for Model Development, Task Order 15.2, Report 3 of 3," Final Report (Washington, D.C.: Metropolitan Washington Council of Governments, National Capital Region Transportation Planning Board, October 15, 2015).

that, on May 15, two days before the subcommittee meeting, COG had begun the advertisement period for a Request for Proposals (RFP) seeking consultant assistance to develop the National Capital Region Transportation Planning Board's (TPB's) next-generation travel demand forecasting model, known as the Generation-3 or Gen3 Model. The services that COG is seeking include model estimation, calibration, validation, sensitivity testing, documentation, and training – resulting in a final model application package that is useable by TPB staff and metropolitan Washington modeling stakeholders. Mr. Moran noted that because the procurement process is currently active, he would not be taking any questions from the subcommittee. Instead, as noted in the RFP, technical and procedural questions concerning the RFP must be submitted in writing to purchasing@mwcog.org.

Mr. Moran said that the project is planned as a three-year, $900,000 project. The RFP (COG RFP 19-015) can be found on the "COG Bids/RFPs" website (https://www.mwcog.org/purchasing-and-bids/cog-bids-and-rfps/2019/05/15/rfp-19-015---generation-3-model/). He also mentioned key upcoming dates:

- Pre-proposal meeting: Tuesday, 5/28/19 at 2:00 PM
- Questions deadline: Wednesday, 6/12/19 at 12:00 noon
- Proposals deadline (close of RFP advertisement period): Friday, 6/21/19 at 2:00 PM [Editor's note: This deadline was later changed to 6/26/19 at 2:00 PM]

A Technical Selection Committee (TSC) will be formed and will review and score the proposals between late June and mid-July. The start of the contract is planned for September 2019.

3. FY 2021-2026 TIP UPDATE: SOLICITATION OF INPUTS AND AIR QUALITY CONFORMITY ANALYSIS

This item was presented by Ms. Posey, who spoke from a set of presentation slides, which were distributed to the subcommittee. Ms. Posey informed the committee that the TPB will be developing an FY 2021-2026 TIP and Long-Range Transportation Plan (LRTP) update that will include an air quality conformity analysis. She noted that a solicitation document, requesting inputs, was given to the Technical Committee, as well as a memo asking for updates to detailed coding assumptions associated with projects in the regional transportation plan. Links to the solicitation document and the memo were shown in the slide presentation. Ms. Posey indicated that transit service current to December 2018 will be used as the base upon which the future transit service will be coded. She showed the group the conformity input table from Visualize 2045 and explained that the table would be updated with new inputs for the FY 2021-2026 TIP and LRTP amendment. She reviewed the schedule for the air quality conformity analysis, noting that the TPB will be asked to approve inputs and the Scope of Work in July 2019, and will be asked to approve the conformity analysis and updated TIP and LRTP in May 2020.

Dan Goldfarb noted that Loudoun County now has GTFS files and asked if staff would be interested in having them. Ms. Posey replied yes. A TFS member asked what staff is doing regarding updating the Ver. 2.3 Model transit coding. Ms. Posey indicated that staff will be updating the base-year transit network (2018), as is always done with a conformity update, and that the future service assumptions will be built on the base transit in the networks.

Mr. Milone noted that the air quality conformity input table and much of the coding information is provided in the network documentation that is developed at the end of the conformity cycle. He asked if, since this was a TIP update, would the 2045 plan out-year network be changed. Ms. Posey indicated that it would, since the TIP is a subset of the plan, and therefore, a change to the TIP is a change to the plan (LRTP).

4. STUDY PREVIEW: MARKET ASSESSMENT & TECHNICAL FEASIBILITY FOR VRE-MARC RUN-THROUGH SERVICE

Nicole McCall, TPB staff, provided a preview of the upcoming Market Assessment and Technical Feasibility for VRE-MARC Run-Through Service study. The study will make creative and innovative use of existing travel demand data sources to assess the market potential for continuous commuter rail service between Maryland and Virginia. The potential present and future demand for through service will be assessed for all lines and station pairs in the combined MARC and VRE System. Earlier this spring, a Technical Selection Committee convened and recommended that the contract be awarded to Foursquare ITP. The membership of the Technical Advisory Committee (TAC) is being finalized and a project kick off meeting will be scheduled soon. TPB anticipates that the TAC will include 10 to 15 individuals representing regional, state, and/or federal agencies, railroads, as well as jurisdictions and economic development organizations along the corridor. The study is scheduled to be completed by June 2020.

Ms. McCall was asked if she was aware of any metropolitan areas with run-through rail service. She was aware of run-through service only in Philadelphia, but additional metropolitan areas with this service may be identified during the study.

5. INTRODUCTION TO WMATA'S TRACE MODEL

This item was presented by Ms. Vanderwaart, who spoke from a set of presentation slides. Ms. Vanderwaart began the presentation by discussing the motivation behind the Trace model, what the model is and how it works. The Trace model is designed to answer questions related to Metrorail and Metrobus such as the following: How crowded are station platforms? How many passengers are on the trains? Where are customers transferring? How long are passengers waiting? Where do the customers get off the bus? Which bus passengers are making transfers?

Trace combines a series of data sets (i.e., SmarTrip trip data and vehicle location data) to answer the questions mentioned above. It makes use of a nightly data processing service provided by KORBATO, a data analytics firm that merges transit data sources to reveal ridership and performance patterns.

Mr. Milone asked whether WMATA could use the Trace model to model passenger behavior during an emergency event, such as a terrorist attack. Ms. Vanderwaart stated that different scenarios have not been built into the model, but this topic could be investigated in the future. Mr. Milone asked whether the SmarTrip data includes any passenger-specific information. Ms. Vanderwaart indicated that the SmarTrip data includes only a limited set of passenger-specific information. She noted that WMATA has survey data that can be paired with SmarTrip data. She also noted that WMATA has address information, based on smart card registration, that has not yet been used.

A TFS member asked whether WMATA plans to use this technical analysis for all transit routes operated by WMATA? Yes, Ms. Vanderwaart stated, adding that WMATA has all the data for the whole system going back a year or two. Mr. Xie asked whether this data could be used to analyze transfers to commuter rail. Ms. Vanderwaart indicated that WMATA does not have commuter rail data, adding that the data shows when customers enter the system, but not what prior mode was used. A TFS member asked whether WMATA plans to use the Trace model for operational scheduling. Ms. Vanderwaart said that WMATA is not currently using the Trace model as a real-time tool.

Mr. Moran asked whether there are any bus passengers, other than fare evaders, who are not included in the data. Ms. Vanderwaart stated that are some passengers who flash a pass (and the operator presses a button indicating that someone got on the bus), so these passengers are not included in SmarTrip data. Also, DC school kids should tap their badges/SmarTrip cards, but some kids do not do this, so the bus driver is supposed to record their entries.

6. ROUNDTABLE DISCUSSION OF CURRENT MODELING EFFORTS AROUND THE REGION

Ms. Sherman Baker noted that Arlington Co. is beginning to develop a simplified tour-based model for the county. The starting point for the model is the TPB travel model. Mr. Eichler said that he recently attended the training held at COG on FTA's Simplified Trips-on-Project Software (STOPS). He noted that WMATA has interest in using this software as a sketch planning tool. Mr. Eichler thanked COG for hosting the training and encouraged COG to take the lead in gathering the data needed to develop a STOPS model calibrated for the metropolitan Washington region. Mr. Moran noted that COG staff is currently discussing the pros and cons of COG taking the lead in such an effort. Mr. Kline stated that Fairfax County has been engaged in a Fairfax County Parkway Corridor Study. This study corridor is long (about 30 miles). David also stated that, during a recent public meeting, that there was such an outcry against putting tolls on the parkway, that tolls are currently not being studied at this time.

7. OTHER BUSINESS

Ms. Kile stated that she has heard from almost all the local jurisdictions regarding their Participant Statistical Areas Program (PSAP) submissions for the 2020 Census. Everyone has either submitted their block-group/tract and Census designated place boundaries, or they are almost done and should be done by the end of the month. According to Ms. Kile, most of the larger counties took advantage of the new special-use block-group/tracts where they could identify the areas that do not have a lot of population but might have other characteristics that we are interested in, such as large numbers of jobs. No one has yet submitted their changes to Ms. Kile, but COG staff hopes to get those this summer, so that staff can start comparing local jurisdictions submissions against our TAZs.

8. ADJOURN

The next meeting is scheduled for Friday, July 19, 2019 at 9:30 A.M.