
National Capital Region Transportation Planning Board

Metropolitan Washington Council of Governments
777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290

Highlights of the September 21, 2012 meeting of the Travel Forecasting Subcommittee

Held at the Metropolitan Washington Council of Governments, from 9:30 AM to 12:00 PM

Status of highlights: Approved, 11/30/2012

Meeting attendees

- Shweta Dixit (George Mason University)
- Eric Graye (M-NCPPC, Montgomery Co.)
- Jamie Henson (DDOT)
- Bahram Jamei (Virginia DOT)
- Wendy Jia (WMATA)
- Dial J. Keju (Frederick Co.)
- David Kline (Fairfax County DOT)
- Dalia Leven (AECOM)
- Yuanjun Li (M-NCPPC, Montgomery Co.)
- Feng Liu (Cambridge Systematics)
- Jaak Pedak (Fairfax Co. DOT)
- Maggie Qi (CH2M Hill)
- David Roden (AECOM)
- Phil Shapiro (STC)
- Shanjiang Zhu (George Mason University)

COG/TPB staff in attendance

- William Bacon
- Elena Constantine
- Joe Davis
- Bob Griffiths
- Wanda Hamlin
- Charlene Howard
- Hamid Humeida
- John Kent
- Mary Martchouk
- Ron Milone
- Abdul Mohammed
- Mark Moran
- Jinchul (JC) Park
- Jane Posey
- Clara Reschovsky
- Rich Roisman
- Meseret Seifu
- Dusan Vuksan
- Feng Xie
- Jim Yin
- C. Patrick Zilliacus

The meeting was chaired by Bahram Jamei of VDOT.

1. Introduction and approval of meeting highlights

The highlights from the July 20 meeting of the Travel Forecasting Subcommittee (TFS) were approved without any changes.

2. Status report on the Version 2.3 Travel Model

Ron Milone of TPB staff gave an overview of the status of Version 2.3 Travel Model. He first reviewed current TPB events and activities, including additional modeling work (a 2015 scenario) necessitated by recent changes in the EPA requirements. He also briefly discussed the analysis schedule for the upcoming air quality conformity determination of the 2013 CLRP and FY 2013-2018 TIP. Next, Mr. Milone described the highway network changes that the TPB staff have been working on including refinements to the facility types based on the Federal Functional Classification data and zonal access to

highway network. Mr. Milone then reviewed TPB staff's work on speeding up model runs through model step parallelization. In FY 2012, TPB staff had used Cube Cluster to parallelize several steps in the travel model, in order to reduce model run times. Later that same year, AECOM proposed several other model steps that could benefit from further parallelization. TPB staff has tested these improvements and recommend that model parallelization be added to transit skims, mode choice, highway assignment, and transit assignment steps. If these steps are parallelized and the model run is performed using a computer with eight cores, the model run time is reduced from 27.7 hours to 17.8 hours. Lastly, Mr. Milone discussed the CTPP and the 2010 model validation. Between the years 1970 and 2000, the decennial Census included a long form that contained in-depth transportation information. The long form has now been replaced by the American Community Survey (ACS), which is a continuous survey that describes demographic and travel characteristics of a population. For a small level geography, the data is aggregated in five-year segments. The first CTPP data will be released in spring of 2013 and will reflect the period from 2005 through 2009. TPB staff is working on determining how the survey can be used for model validation. In addition, staff is performing household and population comparisons at the jurisdiction level of the Round 8.2 of the Cooperative Forecast and the 2010 Census. There were no questions following the presentation.

3. Status report on the consultant-assisted project for development of the TPB travel model: TPB staff proposal for FY 2013 task orders

Mark Moran of TPB staff gave the status report on the consultant-assisted project. He mentioned that the TPB staff has reviewed six years of consultant recommendations (FY 2006-2011) as well as AECOM's FY-2012 recommendations and developed a proposal for the work to be conducted by AECOM in FY 2013. Mr. Moran noted that task orders are developed in a collaborative fashion between TPB staff and AECOM: TPB staff first makes a proposal. Then, AECOM reacts to the proposal with a scope of work and a budget. If there is agreement between the two parties, TPB staff authorizes AECOM to proceed with the work. In this case, only the first step has occurred, i.e., TPB staff has made a proposal. The proposed task orders for FY-2013 include:

- Task Order 7: Attend meetings, respond to ad-hoc requests
- Task Order 8: Traffic assignment
- Task Order 9: Mode choice and transit modeling
- Task Order 10: Streamlining the Version 2.3 Travel Model
- Task Order 11: Special markets

Task Order 8 (traffic assignment) would aim to improve model run time possibly by improving HOT-lane and HOV-lane modeling and/or simplifying scripts. Task Order 9 (mode choice and transit modeling) would involve converting transit path building modules from TRNBUILD to Public Transport (PT). Task Order 10 (streamlining the Version 2.3 model) would involve making modifications to the model to use fewer inputs and outputs, add error checking, and reduce the likelihood of conflicts when running analysis for multiple years simultaneously. Task Order 11 (special markets) could focus on areas such as recalibrating the air passenger model, developing a partial airport mode choice model, investigating external travel, and developing a visitor travel model. However, TPB staff noted that there would likely

not be enough resources to do everything, so, for example, for Task Order 11, the focus would be on just one of the possible topics: visitor/tourist modeling (specifically, developing a multi-year plan for data collection and model building). TPB staff further prioritized the task orders themselves: Task Orders 8 and 9 were designated as the most important, followed by Task Order 10, and lastly Task Order 11. The next step is for AECOM to react to this proposal. In conclusion, Mr. Moran mentioned that the TPB staff plans to develop a multi-year, strategic plan that can be used to guide future models development at COG. There were no questions following the presentation.

4. Briefing on baseline transportation conditions for a regional BRAC and federal employment consolidation impact analysis

This item was presented by Rich Roisman of TPB staff. The Base Realignment and Closure (BRAC) process was an effort to align U.S. defense-based infrastructure with the current needs of the U.S. armed forces. Base closures and other similar changes can result in significant changes or redistribution in employment, thus affecting regional travel patterns and long-range transportation planning. The most recent BRAC actions were initiated in 2005 and were mostly completed by 2011. Following the completion of the BRAC actions, TPB staff have conducted vehicle and person counts during the AM peak period at various bases and sites around the region and produced a technical report documenting the existing conditions. The monitoring process was conducted at 15 sites, with over 111,000 persons counted entering the bases during the AM period. Overall, the vast majority of the trips were found to be drive alone (76%), followed by carpool (16%) with the other modes comprising only 8% of the trips. Next, Mr. Roisman discussed survey results at six individual sites, including the Joint Base Anacostia-Bolling, Washington Navy Yard, Fort Detrick, Walter Reed National Military Medical Center, Mark Center, and Fort Belvoir. Mr. Roisman concluded his presentation by requesting that any feedback from the subcommittee regarding the report be sent to him within 30 days. He also mentioned that the follow-up monitoring that would capture the long-term travel patterns in response to the changes to the BRAC sites will be conducted in 2017.

Mr. Milone inquired whether the employment change from the 2005 BRAC is reflected in Round 8.1 of the Cooperative Land Use Forecasts. Mr. Roisman responded that he is not sure, but it will definitely be in Round 8.2 of the forecasts. Wendy Jia of WMATA suggested that the non-motorized trips and the transit trips be combined because, in many cases, people walk from the Metrorail station to the base entrance, where they are counted as being non-motorized trips, even though the majority of the trip was on transit. Mr. Roisman agreed that this is a good suggestion. She also inquired whether there will be an evaluation of how well the mode share targets from the Travel Management Plan (TMP) are being achieved. Mr. Roisman responded that not all bases have TMP targets ready, but ultimately this analysis will be done.

5. Briefing on results from the 2011 Washington-Baltimore Regional Air Passenger Survey

This item was presented by Abdurahman Mohammed of TPB staff. Mr. Mohammed reminded the subcommittee of the reasons for conducting the airport passenger survey, including air passenger demand forecasting, planning for airport access and landside facilities, and trend and market analyses.

In the 2011 survey, 684 flights were captured with 23,563 revenue air passenger responses. The results of the survey were compared to those from the 2007 and 2009 surveys. It was found that the total regional enplanements increased from their 2009 levels, with airport shares remaining relatively constant. There was a shift in the share of local originations and connections between the two years, with more connections made at the Baltimore Washington International Airport (BWI) and fewer at the Dulles International Airport (IAD). Next, the reasons for selecting the departure airport were analyzed. It was found that accessibility (proximity) was the biggest factor in selection of the airport (57%). Reagan National Airport (DCA) was determined to be the most preferred airport. Another finding from the survey was an increase in the percentage of business travel from 38% in 2009 to 44% in 2011. The percentage of resident travel also increased from 39% in 2009 to 47% in 2011. Lastly, the survey was used to determine that 63% of the trips are made by car, 18% by taxi, 18% by transit, and 1% by other modes. Mr. Mohammed then summarized the findings and informed the TFS that TPB staff will next geocode the survey file, conduct some additional analyses, and produce the 2011 Air Passenger Survey Geographic Findings Report by spring of 2013.

Mr. Milone inquired whether the survey includes a question regarding the ticket price. Mr. Mohammed responded that it does not, in part because many business travelers do not know this information. Another attendee inquired how the transit share can be as high as 18% while the Metrorail share to the Reagan National Airport, which is the most transit accessible one, is only 16%. Mr. Mohammed and Mr. Roisman explained that transit included the private shuttle provided by many hotels as well as commercial shuttles.

6. Status report on the geographically focused household travel survey

This item was presented by Bob Griffiths of TPB staff. Mr. Griffiths reminded the TFS attendees that the geographically focused household survey is an add-on to the 2007-2008 Regional Household Travel Survey, which aims to collect additional small area community-level data. The survey includes two stages: recruitment and travel data retrieval stage. In the spring of 2012, seven areas were surveyed including Friendship Heights, New York Avenue Corridor, St. Charles, National Harbor, Beauregard Corridor, East Falls Church and West Falls Church, and the Dulles North area. Mr. Griffiths mentioned that the household response targets were met for all seven areas. Initial survey results showed the number of unlinked daily trips per household varying between 9.58 and 13.76. Next, Mr. Griffiths informed the TFS that the fall 2012 data collection had been moved to spring 2013 because Westat requested a 30% increase in the project budget and TPB chose to re-bid the contract. Six areas that will be surveyed in spring 2013 include Federal Center/Southwest/Navy Yard, H Street NE Corridor, Silver Spring, US 1/Green Line, City of Fairfax, and City of Manassas. There were no questions following the presentation.

7. Briefing on the process for revising the designation of the COG Regional Activity Centers

This item was presented by Ryan Hand of MWCOG staff. He first gave a brief history of activity center designation. The first map of activity centers was developed in 2002 and updated in 2007 to include 59 centers. The 2012 update, based on a different selection methodology, resulted in 136 centers,

however, in many cases, a single center was just split into multiple centers. In the new methodology, an area is designated as an activity center if it meets two core attributes, which are policy and density, and any two additional attributes, which include intersection density, transit capacity, land use mix, and housing & transportation. The key outcomes of the new process include centers better aligned with local planning, more mixed-use centers, groups of multiple smaller centers, and better alignment with the transportation system. The new centers will be used for demographic analysis, transportation modeling, and growth forecasts. They will also help with policy decisions regarding priority growth areas, monitoring of Region Forward, and prioritizing locations for investment. Next, Mr. Hand showed maps of activity centers in Maryland, Virginia, and District of Columbia. He concluded by providing a schedule for presenting the new activity center designations to the different counties and proceeding with the implementation work.

Mr. Milone asked whether there is a minimum size for the activity centers. Mr. Hand responded that there is not, however, these areas are generally about a mile in diameter. A member of the subcommittee inquired whether there is a difference between the “low-level” and “high-level” activity centers and whether the “high-level” ones should satisfy more criteria. Mr. Hand responded that there is no hierarchy and that the long term goal is to get a profile for each individual center. Another attendee inquired about the advantage of splitting the larger activity centers. Mr. Hand responded that this way, the centers are similar in size and, thus, can be compared to each other. Bob Griffiths commented that if the new activity centers are going to split the TAZs, there need to be forecasts at the smaller level of geography. Mr. Milone mentioned that TPB staff aim to summarize many of the technical analyses results at the activity center level in addition to the jurisdiction level, which is currently done.

8. Round-table discussion

The round-table discussion was postponed until the next meeting of the subcommittee.

9. Other business

The next proposed meeting of the TFS is Friday, November 30, 2012 from 9:30 AM to 12:00 noon. The meeting adjourned at about 12:00 PM.

The highlights were written by Mary Martchouk.