



TPB TRAVEL FORECASTING SUBCOMMITTEE

HIGHLIGHTS OF THE MAY 21, 2021 MEETING

Meeting time & location: 9:30 AM to 11:30 AM, **Web conferencing ONLY, due to COVID-19 precautions. There was no on-site meeting.**

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MEETING ATTENDEES

MEMBERS, ALTERNATES, AND PARTICIPANTS

- Justin Antos (WMATA)
- Jonathan Avner (Whitman, Requardt & Assoc.)
- Charles Baber (BMC)
- Christine Sherman Baker (Arlington Co. DES)
- Keith Belcher (MDOT-SHA - TFAD)
- Jim Bunch (Sabra & Associates)
- Kayleigh Campbell (WMATA)
- Kevin Chai (Fairfax Co. DOT)
- Michael Eichler (WMATA)
- Joel Freedman (RSG Inc)
- Andrew Gerritsen (WMATA)
- Dan Goldfarb (NVTC)
- Eric Graye (M-NCPPC, Montgomery Co.)
- Kyeongsu Kim (Connetics Transportation Group)
- David Kline (Fairfax County DOT)
- Anurag Komanduri (Cambridge Systematics)
- Jaesup Lee (M-NCPPC, Montgomery Co.)
- Li Li (Whitman, Requardt & Assoc.)
- Yuanjun Li (M-NCPPC, Montgomery Co.)
- Feng Liu (Cambridge Systematics)
- Atabak Mardan (C&M Associates)
- Vahid Moshtagh (AECOM)
- Tim Padgett (Kimley-Horn & Assoc.)
- Krishna Patnam (AECOM)
- Binny Paul (RSG Inc)
- Marie Pham (Loudoun Co.)
- Hongtu Qi (Fairfax Co.)
- Maggie Qi (Fairfax County DOT)
- Mark Radovic (Gannet Fleming)
- Mushtaqur (Mushtaq) Rahman (Baseline Mobility Group)
- Harun Rashid (NVTA)
- Elham Shayanfar (MDOT)
- Lisa Shemer (MDOT-SHA)
- Aichong Sun (AECOM)
- Amir Shahpar (VDOT)
- Jiaxin Tong (Kimley-Horn & Assoc.)

COG STAFF

- William Bacon
- Antonio Castaneda
- Joe Davis
- Tim Canan
- Anant Choudhary
- Nazneen Ferdous

- Charlene Howard
- Ken Joh
- Martha Kile
- Sanghyeon Ko
- Nicole McCall
- Jessica Mirr
- Mark Moran
- Janie Nham
- Ray Ngo
- Jinchul (JC) Park
- Meseret Seifu
- Dusan Vuksan
- Feng Xie
- Jim Yin
- Yue Zhang

* All meeting participants attended the meeting remotely via WebEx.

This meeting of the Travel Forecasting Subcommittee (TFS) was chaired by Mr. Eichler.

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

First, a roll call was conducted. Next, the highlights of the March 26, 2021 meeting of the TFS were approved without changes.

2. USING LBS AND APC DATA IN LOS ANGELES TO SUPPORT TRANSIT RECOVERY IN RESPONSE TO COVID-19-RELATED RESTRICTIONS

This item was presented by Mr. Anurag Komanduri, who spoke from a set of presentation slides. Mr. Komanduri presented an overview of how the location-based services (LBS) and automatic passenger counter (APC) data were analyzed and utilized by Los Angeles County Metropolitan Transportation Authority (LA Metro) in 2020. The LA Metro developed and implemented a new data warehousing and analytics solution to update the LBS and APC data on a weekly basis to inform service recovery planning and to help LA Metro support social distancing guidelines on their bus network.

Mr. Rashid asked how equity was considered in this transit service redesign. Mr. Komanduri explained that the data was recorded by all devices, making it possible to identify the home block groups. Attributes reflecting equity including low income, minority, seniors, etc. were utilized. He added that this same approach was applied to work done by Cambridge Systematics in Boston, Massachusetts and Denver, Colorado.

Mr. Eichler asked how the Locus tool/analysis is different from other such products in the market place. Mr. Komanduri highlighted that Locus is a customized solution, noting that the fundamental analysis approach was introduced in a recent TRB report.¹

3. AIR QUALITY CONFORMITY ANALYSIS: 2022 UPDATE TO VISUALIZE 2045 AND FY 2023-26 TIP, DRAFT SCOPE OF WORK

This item was presented by Mr. Vuksan, who spoke from a set of presentation slides. Mr. Vuksan briefed the committee on the draft scope of work for the 2022 Update to Visualize 2045 and FY 2023-2026 Transportation Improvement Program (TIP) Air Quality Conformity Analysis. Mr. Vuksan noted that the 2022 Update to Visualize 2045 represented a major quadrennial update. He further remarked that although the region's long-range transportation plan consists of both a constrained and an aspirational element, the air quality conformity process and the presentation were related to

¹ Kimon Proussaloglou et al., "NCHRP Research Report 868: Cell Phone Location Data for Travel Behavior Analysis, NCHRP Project 08-95."

the constrained element only. Mr. Vuksan discussed the elements of the constrained plan and some of the constraints.

Regarding the scope of work and schedule, Mr. Vuksan noted that TPB staff are in the process of collecting public comments and sharing these with the TPB. The TPB will be asked to approve the projects and the scope of work in June 2021. He noted that the air quality conformity analysis will evaluate nitrogen oxide (NOx) and volatile organic compounds (VOC) emissions using the Round 9.2 Cooperative Forecasts, new project inputs, EPA's MOVES2014b model with the 2020 vehicle registration data, and the Version 2.4 Trip-Based Travel Model. He described the major project submissions by the member agencies, noting that MDOT's Traffic Relief Plan (TRP) project inputs have changed recently based on the developments in project planning, and that the Capital Beltway portion of the plan from MD 355 all the way to the Woodrow Wilson Bridge will not be coded and modeled, as this portion of the project will now only be considered a study (rather than a construction project). Mr. Vuksan noted that the modeling files and inputs related to the analysis are expected to become available in July 2022, a month following the TPB action on the air quality conformity analysis and the plan update, which is expected to take place in June 2022.

In response to a question by Mr. Rashid, Mr. Vuksan also provided an updated link to the current conformity project table and noted that the table might change over the next couple of months.

4. GEOGRAPHIC FINDINGS OF THE 2019 AIR PASSENGER SURVEY

This item was presented by Mr. Canan, who spoke from a set of presentation slides. Mr. Canan discussed the geographic findings of COG/TPB's 2019 Washington-Baltimore Regional Air Passenger Survey. This biennial survey collects important planning information from departing air passengers at the region's three large commercial airports: Baltimore/Washington International Thurgood Marshall Airport (BWI), Ronald Reagan Washington National Airport (DCA), and Washington Dulles International Airport (IAD). The presentation contained details of the geographic characteristics of departing passengers' ground access trip to their departure airport. These included geographic findings on airport use, airport preference, ground access trip originations, and ground access trip mode choice.

Following the presentation, several comments and questions were raised. Mr. Komanduri asked whether the survey included making distinctions between frequent and infrequent flyers and asked if any location-based service (LBS) data had been used to supplement the survey findings. Mr. Canan indicated that while making a distinction between frequent and infrequent flyers is interesting, the survey instrument was not designed to collect that information. He did indicate that there is a process under way to consider enhancements to the methods and procedures for future survey efforts and perhaps these can be included in future considerations. Mr. Rashid asked if causal relationships between passenger originations and airport choice were examined based on the types of air service offered at each of the airports. These relationships were examined and were documented in the report. Ms. Li asked if the survey asked passengers about specific public transit modes and sub-modes that may be available for only certain airports. Mr. Canan confirmed this was analyzed and the information can be found in Table 7 of the survey's General Findings report, comparing all modes and sub-modes of access, by airport, for 2015, 2017, and 2019.

Mr. Eichler asked if the processing of data examined the actual causes of some of the observed changes, particularly with respect to trip purpose and modes. Mr. Canan explained that the General Findings report did take a deeper dive into trip purpose and mode and noted that one of the important considerations in this analysis is that each of the three airports, while serving the entire Washington-Baltimore region, also offers unique air services that affect traveler market segmentation and airport choice. Mr. Eichler also asked for more explanation on the interpretation of the "airport satisfaction" results from the survey. Mr. Canan noted that while passengers may not be flying out of their preferred airport, they do have three large airports from which to choose in the

region. These airports, which can vary in terms of the type of air service offered, are becoming more accessible through mobility improvements, which can explain the increase in the number of travelers flying out of airports that may not be their top choice. Mr. Eichler also noted that price sensitivity in commercial air service may also be a driver in airport choice to consider.

5. COG/TPB GEN3 TRAVEL MODEL: STATUS REPORT

This item was presented by Mr. Paul and Mr. Freedman, who both spoke from a set of presentation slides. Mr. Paul spoke first, providing an update on the status of Gen3 Phase 1 Model development. He reported that population synthesis is 95% complete, and data development is 85% complete. Next, Mr. Paul discussed ActivitySim deployment and initial model performance assessment using the ABM Visualizer. Mr. Paul summarized the key enhancements to the base MTC Travel Model One (TM1) ActivitySim version that RSG implemented as part of ActivitySim development for South East Michigan Council of Governments (SEMCOG) in Detroit. He outlined the steps taken to transfer the SEMCOG ActivitySim implementation as the Phase 1 ActivitySim implementation for MWCOG. He then described the development process for the ABM Visualizer and how it is used as a diagnostic and validation tool for ActivitySim models. Finally, Mr. Paul presented some key summaries from the MWCOG ABM Visualizer and discussed the performance of the uncalibrated model. He presented key takeaways from the model performance assessment and noted that the model performs reasonably well without any calibration. Next, Mr. Freedman presented details of the ongoing Gen3 Phase 1 modeling activities. He then discussed the next steps in Phase 1 of Gen3 Model development.

6. ROUNDTABLE DISCUSSION OF CURRENT MODELING EFFORTS AROUND THE REGION

Mr. Eichler announced that WMATA is in the first iteration of developing models of customer market segmentation and behavior elasticity to prepare a simple fare and service model.

Mr. Rashid from NVRTA announced a model is being applied with the TRANSIMS model, using DTALite for traffic assignment in an area spanning four counties.

7. OTHER BUSINESS

A. Monthly Snapshots of Effects of COVID-19 on travel available on COG Website

Martha Kile reported that COG/TPB staff has developed the fourth in a series of snapshots to illustrate how the COVID-19 pandemic is impacting travel in the Metropolitan Washington Region. The snapshot is available on the COG website using this link

<https://www.mwcog.org/documents/2021/05/18/covid-19-travel-monitoring-snapshot-covid19-traffic-monitoring/>. It includes 2020 data updates and allows a full pandemic year review for the whole region. The charts include data from 2021 and they can be compared to the pre-pandemic trends for 2020. The next update will include 2019 data as the comparison year and will be available in the coming weeks.

B. Upcoming Guest Presenters at TFS Meetings in 2021

Mr. Moran discussed the planned guest presentation topics at upcoming TFS meetings:

- July 16: Arlington County's new tour-based travel model (follow-up to an earlier presentation), by Arlington Co. and/or Bentley Systems, Inc.
- September 24: Integrating ActivitySim and Dynamic Traffic Assignment for a medium-sized city in Ohio, by Caliper Corporation.
- November 19: Overview of recent transportation modeling activities at the Prince George's County Planning Department at M-NCPPC (follow-up to an earlier presentation), by AECOM.

- Jan. 2022: Vacant.

8. ADJOURN

The meeting adjourned at 11:45 A.M. The next meeting is scheduled for Friday, July 16, 2021 at 9:30 A.M.