National Capital Region Transportation Planning Board

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

MEMORANDUM

DATE: March 22, 2012

TO: Aviation Technical Subcommittee

FROM: Richard I. Roisman, AICP
               CASP Program Manager

RE: Early Plans for the 2013 Washington-Baltimore Regional Air Passenger Survey

Through the course of internal staff discussions and a debrief with the survey consultant following the administration of the 2011 Washington-Baltimore Regional Air Passenger Survey (APS), staff has identified a number of areas for potential improvement for the 2013 APS. With subcommittee approval, staff plans to begin exploring these issues now so that solutions can be considered, and if deemed acceptable by the subcommittee, be folded into the 2013 survey. The goal of these improvements is to improve the overall quality of the survey. <u>The purpose of this memo is to brief the subcommittee on the areas of improvement we plan to review, and seek subcommittee approval and guidance to begin the review process. For each issue, staff intends to explore all possible options and then come back to the subcommittee with a set of recommendations to be folded into the 2013 APS.</u>

Changing Questionnaire to Machine-Readable Instrument and Review of Survey Content

As I have reported to the committee previously during the 2011 APS, the firms that we previously used to conduct data entry (manual keypunching) of the completed paper survey questionnaires have all ceased business operation. We were able to locate a firm to perform the data entry for the 2011 APS, but at a higher-than-anticipated cost. Simply put, manual data entry is a nearly dead business and nearly all major transportation surveys conducted today involve some form of digital capture. It is time for the 2013 APS to keep pace with the state of the practice in survey administration and methodology. We will explore several options for updating the survey for the digital age, including:

- A hard copy questionnaire that can be read by optical character recognition (OCR) or other scanning technology that converts paper entries into digital form
- Adding a web address or QR code to the hard copy questionnaire that will allow a respondent to complete the survey on-line
- Full digital administration of the survey using tablets or other hand-held computing devices

Since all options will require a redesign of the survey questionnaire, staff also plans to conduct a review of the instrument, question by question. There were at least two existing questions identified in the field by the survey consultant as receiving a high number of illogical responses or flagged as

confusing by responders, and we have identified some others as part of our internal QA/QC of the survey responses during tabulation.

The genesis of the content of the APS questionnaire was the need to collect the necessary planning data for the CASP program; the information from the survey forms the foundation for the ground access forecasts and the ground access element that incorporate air systems into the regional transportation planning process. Periodically, questionnaire content has been added or modified in response to specific requests by the subcommittee, or to improve the information for use in CASP program activities.

The written questionnaire is essentially "full" from a physical page standpoint, and even with digital administration, adding new questions without removing an existing one is not recommended. There is significant value in the ability to conduct trend analysis with previous surveys, and changing the questionnaire puts that ability at risk; however, trend analysis alone is insufficient to justify keeping a question unchanged if the information is not being used either in other CASP work program activities or by our airport partners. Throughout the review process, staff will examine both the need to maintain compatibility with previous surveys and the need to make changes to the questionnaire to meet the current needs of CASP work program activities and our airport partners.

Increasing Response for International Flights

International flights historically have had the lowest response rate among those surveyed in the APS, and the results for the 2011 APS continue that trend. We have seen sporadic improvement in survey response for international flights, but surveyors are continually facing a "double whammy" – high numbers of passengers who are not native English speakers, and larger aircraft with more passengers to survey. Given that FAA has recently reduced its future year forecasts for all three regional airports, the change in international departures is not clear; however, even if the proportion of international departures at IAD and BWI remains constant, increasing response rates on those flights should be our goal. To that end, we will explore several options, including:

- Administering the survey (print or digital) in multiple languages
- Keeping the survey in English but printing placards in multiple languages to assist surveyors in the field with non-native speakers
- Utilizing existing multi-lingual COG staff to assist with the survey

These options are not mutually exclusive. Determining which other language(s) would be most appropriate for the survey would need to be performed simultaneously with the survey sample draw; currently, the questionnaire printing is done well in advance of the sample draw, so moving to multiple languages would require shifts in our internal business processes. Printing of placards might be possible following the sample draw. There would also need to be careful translation and consideration of other linguistic and cultural issues (e.g., multiple dialects of the same language, etc.) Use of COG staff is appealing, since our experience with international flights has shown that having a native speaker of Spanish, French, Amharic, etc., in the gate area for both the survey gate announcement and to assist with individual surveys increases overall response rate; furthermore, COG has a culturally diverse staff with native speakers of many of the foreign languages encountered on regional international departures. Procedurally, this option would either require obtaining airport badges for

the additional COG staff, or having existing survey staff obtain badges with escort privileges to allow them to accompany the foreign language speakers to the gate area for their surveyed flight. Both of these options require additional consultation with MAA and MWAA airport operations.

Reducing the Questionnaire Print Run

Following each survey we are left with thousands of printed survey questionnaires that go unused, a practice that is not cost-effective. Our print run is sized according to the project goal of surveying 100% of the available seats on the sampled flights, plus 100% of the available seats on an estimated number of resurveyed flights (those where the response rate on the initial flight was insufficient). The number of unused questionnaires at the end of the survey suggests that our distribution rate (i.e., the number of questionnaires given divided by the boarding count of the flight) may be lower than desirable. In addition, although we rarely achieve a 100% response rate on any given flight, the number of flights required for resurvey is also fairly low. All three pieces of information indicate that we may be able to reduce our print run without adversely impacting the survey. We will review historical information on APS distribution rates, response rates and resurveys (and response rates of resurveys) and bring to the subcommittee recommendations on a reduced print run for future printed surveys, along with any impacts the change might have on 2013 APS preparation and processing.

Improving Overall Survey Response through Procedural Changes

Additional improvements will be addressed directly as part of the consultant procurement process for the 2013 APS. The following changes will be considered for the RFP:

- Specifying earlier arrival times for surveyors to the gate area.
- Providing minimum recommendations for staffing levels at each airport rather than specifying hard numbers / head count. This should provide a consultant sufficient flexibility to allocate staff during high-demand periods while meeting the requirement to arrive at gates earlier.
- Providing clearer language that restricts modifying the survey sample. The 2011 APS was an extreme case due to the late survey period and subsequent erosion of sampled flights as the airlines geared up for Thanksgiving holiday operations, so some switching / replacement of flights was necessary, but we do not want consultants to move flights simply for staffing / convenience purposes. In general, switching surveyed flights between days and weeks in the survey period is extremely disruptive to the sample and has cascading effects in the survey processing, weighting and analysis.

Costs

All of the improvement options to be explored have cost implications, and those will be considered as part of the review. The overall cost of the survey for the airports ($300,000) has remained flat since 2005, as has the distribution of those costs between our survey consultants and staff time spent on the survey. A modest increase in staff costs for the survey has been assumed for 2013. Part of the APS review will include a sketch-level assessment of the cost impacts (either decrease or increase) of each proposed change. We will review the cost impacts of each proposed change with the subcommittee in preparing the budget for the 2013 APS.