

REGIONAL COORDINATION OF TRANSIT ON-BOARD SURVEYS

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Background

- TPB is developing its next-generation, activity-based regional travel demand model (“Gen3 Model”), which should improve the model's ability to explore policy questions by representing phenomena such as pricing, equity, telecommuting, and vehicle choice
- Observed transit trip data needed for Model Development
 1. Origin & destination (O/D) location and purpose
 2. Access & egress mode (walk, bike, park and ride, kiss and ride, other)
 3. First boarding/alighting transit stops and sequence of transit routes taken
 4. Sociodemographic characteristics (auto ownership, auto sufficiency, income, person type, etc.)
- Data can be obtained through a regionally-coordinated effort to conduct Transit On-Board Surveys (TOBS) among the region’s 25 public transportation providers



Goals of Regional Coordination of TOBS

- Provide data that is needed by transit agencies, e.g.,
 - Title VI information for federal reporting purposes (every 5 years)
 - Customer satisfaction data
 - Subsidy allocation data
- Provide data that is needed by COG/TPB staff to estimate, calibrate, and validate regional travel demand forecasting models, which are used by COG/TPB staff and other modeling stakeholders to forecast both public and private transportation demand
- Provide data that is regionally consistent and available on a regular, on-going basis



Benefits

- TOBS data can be used to:
 - Understand transit market segmented by O/D location and purpose, access and egress mode, and other sociodemographic characteristics
 - Understand transfer rates within and between modes/operators and convert unlinked transit trips to “linked” trips
 - Test transit network and path-building parameters by assigning linked trips onto the transit network
 - Create model estimation, calibration, and validation targets
 - Understand external/visitor transit trip characteristics
 - Provide data that is regionally consistent and available on a regular, on-going basis



Previous Approaches

- While household travel surveys such as the Regional Travel Survey (RTS) collect similar information (for all trips), transit trips account for too small a percentage of total individual trips to sufficiently represent travel patterns of transit users
- While transit operators often collect information for Title VI compliance, customer satisfaction, and subsidy allocation, these surveys often do not include data needed to calibrate a travel model, such as O/D information
- Regionally coordinated transit on-board surveys have not been a common practice in the metropolitan Washington region
 - 2008 – (1) TPB conducted a regional bus survey for all major bus operators, except for Fairfax Connector; (2) Contractor conducted Metrorail Passenger Survey for MTA and WMATA
 - 2014 – TPB conducted Metrobus Passenger Survey for WMATA



Proposed Approach

- TPB can play a key role in coordinating agencies' efforts to collect and develop a consistent TOBS dataset that can be used to support modeling and other noted data needs
- Partnership role envisioned where TPB provides technical support and potentially other resources to other transit operators
- TPB staff met with WMATA staff on May 1, 2023, and hopes a strong commitment to partner can strengthen the proposed approach
- Staff intends to reach out to and engage other transit operators individually as well as through the TPB Regional Public Transportation Subcommittee
- Staff intends to coordinate with the travel modeling community via the TPB Travel Forecasting Subcommittee



Possible services to be provided by TPB

TPB can provide the following elements of coordination and support:

1. Assistance with designing survey instrument(s), including survey questions
2. Assistance with developing sampling methods
3. Provide technical assistance funding and/or consultant assistance for smaller, under-resourced agencies that cannot undertake survey themselves
4. Process and analyze collected data to develop regional TOBS dataset



Questions



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