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Transit Service Delivery Advisory Committee
John McGlennon, Chair,
c/o Virginia Dept. of Rail & Public Transportation
600 E Main St
Richmond, VA 23219

Dear Dr. McGlennon and Committee Members,

The Transit Service Delivery Advisory Committee may find this testimony useful in developing performance metrics for use in allocating new operating funds. My perspective comes from over three decades of developing, overseeing and evaluating paratransit and fixed route bus operations. However, this testimony has not been endorsed by my employer, nor by the committee that I co-chair (Fairfax Area Long Term Care Coordinating Council/Disability Services Board's Mobility and Transportation Committee). This is strictly from me.

Parameters:

Performance metrics should adhere to four principles:

1. Measures should be auditable, easy to explain, and can be applied state-wide.
 - a. The committee should recognize that while some transit properties may be able to automate data collection for a particular measure, other systems may have to collect data manually, using sampling methodology.
 - b. The Committee should consider requiring VDRPT to use monies from a reserve fund to assist transit properties that lack technical capabilities in collecting the required data. The reserve fund should retain five percent of new transit operating funds.
2. Measures should be based upon data derived from a three-year rolling average to cushion the impact of both economic decline and innovation.
 - a. A variety of sources such as closure of a major employer, curtailment of the federal transit benefit or major recession can reduce ridership and revenues in ways beyond the control of transit operators.
 - b. Expansion or realignment of new services – addition of a major route or route realignment – requires a year or more to develop ridership.
3. Transit properties should be expected only to compare their own current and past performance according to performance metrics specified by the Committee.
 - a. Peer groupings, even segregated by mode, cannot account for local differences in economic development, socio-economic demographics, topography, resources, ability to develop contractual partnerships to increase use and other factors. Use of national standards would have the same deficiency.
 - b. Peer groupings transform interactions between transit systems from a collaborative relationship of mutual aid and advice to a competitive environment.

- i. While some measures can be applied to all modes, others are only appropriate to particular modes.
 - ii. Even for those measures that cross-cut across modes, each mode differs in what results are reasonable to expect.
 - c. Transit Properties should be empowered to select the effectiveness and efficiency performance measures most appropriate for each type of service provided.
- 4. Transit properties that maintain productivity within an acceptable range or improve productivity should be rewarded.
- 5. The proportion of funding that could be awarded to any particular recipient should be based upon their current proportion of the services appropriate to the particular evaluation criteria. Restricting potential gains to their proportion of services or funding from any particular past fiscal year would restrict innovation and limit the ability to meet changing needs and opportunities.

Operations:

Performance metrics should include measures of effectiveness as well as efficiency. I offer three categories of effectiveness measures for your consideration, as these areas of effectiveness motivate transit managers, planners, and other personnel to choose this field and Virginia's legislature to fund transit. The percentages below are just suggestions for your consideration. However, I believe that half of the new transit operating funding should be allocated according to system effectiveness, a slightly higher proportion than allocated to efficiency measures. Five percent should be held in reserve or used to provide technical assistance as needed to develop performance measures. Prime focus should be on the importance of these services, as opposed to the management of those services. Specific performance metrics measuring effectiveness are offered below for your consideration.

- Expand transportation capacity
 - A seat-mile measure would allow recipients to measure their growth of capacity to accommodate commuter trips to roadway capacity. The comparison would require calculation of Peak Hour, Peak Direction One-Way Route Miles (ignoring any flex-route requests), multiplied by the average number of Peak Direction Peak Hour trips, multiplied by the average number of seats per vehicle. By allocating 15% of new transit operating funds to this measure, then dividing this allocation among fixed/flex route transit services according to their relative proportion of peak hour peak direction seat miles, the commonwealth will be regularly encouraging the expansion of capacity for all modes of transit.
 - A passenger-mile measure would allow recipients to measure success in utilizing transit capacity. By allocating 15% of new transit operating funds to this measure, then dividing this allocation among transit services according to their relative proportion of passenger miles, the commonwealth will be regularly encouraging the expansion of transit capacity.
- Increase constituent mobility to reach employment, education and training, shopping, and medical services.
 - People with low incomes are more likely to require transit or paratransit services to reach employment, education and training, shopping, and

medical services. At the same time, economically-distressed jurisdictions have less ability to generate local financial support for these mobility links. Ten percent of new transit operating funds could be allocated among systems serving low-income census tracts. Low-income tracts would be defined as those tracts with Median Family Incomes (MFI) below 50% of the MFI in their Metropolitan Statistical Area or Metropolitan Division, based on the most recent decennial census. For rural census tracts, the comparison would be made to all Virginia census tracts outside of a Metropolitan Statistical Area or Metropolitan Division. To qualify for funding, one-third of the tracts served by a system would have to qualify as low-income and one-third of the riders on the most recent statistically-valid on-board survey would have to identify as low-income. Funds would be allocated among qualifying recipients according to the relative proportion of their service area population within low-income census tracts.

- Paratransit and Rideshare databases can provide information concerning the number of individuals using the services during the year and the rides provided. Ten percent of new transit operating funds would be divided among paratransit and publicly-sponsored rideshare agencies – eight percent to paratransit and two percent to rideshare – based on their relative proportion of unduplicated frequent riders (perhaps defined as using the service at least fifty days over the previous year) as well as total rides provided. Both measures are important, as the former encourages outreach to the transportation-disadvantaged while the latter encourages attention to the quality of services provided. The paratransit allocation would include human service agency transportation services excepting those provided through the state Medicaid Non-Emergency Medical Transportation brokerage. Agencies and providers who do not submit information into the National Transit Database or the OLGA database would be eligible for funding.

The remaining 45% of new transit operating funding could be allocated equally according to three efficiency performance measurements. Efficiency of transit services can be measured by two statistics that are applicable across transit modes, with data available in the National Transit Database.

- Passengers per Revenue Hour or Mile measures the productivity of the services offered. Fifteen percent of new transit operating funds would be allocated to qualifying recipients in accordance to their relative proportion of annual revenue hours of service as follows:
 - One-third would be allocated to recipients that have improved in this productivity measure by 3% or more; and
 - The remainder would be allocated to recipients that have maintained productivity or improved less than 3%.
- Cost/Recovery – locally generated revenues from the farebox, contracts and sponsorships divided by operating costs. This measures the support received by the riders and their sponsors as well as the match between resources supplied and revenue derived. A focus on this statistic will encourage efficiency measures to minimize costs while boosting service quality and creating partnerships to increase ridership and revenues. Fifteen percent of new transit operating funds

would be allocated to qualifying recipients in accordance to their relative proportion of annual revenue hours of service as follows:

- One-third would be allocated to recipients that have improved in this productivity measure by 3% or more; and
- The remainder would be allocated to recipients that have maintained productivity or improved less than 3%.

Efficiency of transit services should also be measured by on-time performance. The definition of on-time performance differs between modes and by local standards. However, transit properties can review their on-time performance against nationally-prevalent standards; one standard for fixed route and one for paratransit. Data can be derived from bus tracking software or gathered by surveying a sample of trips.

- Fixed Route riders should expect the trip to begin at the first stop from zero minutes early to five minutes late. Arrival at the last stop on each trip should be no later than five minutes late.
- Paratransit riders in most systems across the country are told to expect their pickup to occur as early as 15 minutes before the requested pickup time or as late as 15 minutes after. While ideally the standard at the destination should be the same, relatively few systems have the capability to measure on-time performance at the destination.

Fifteen percent of new transit operating funds would be allocated to qualifying recipients in accordance to their relative proportion of annual revenue hours of service as follows:

- One-third would be allocated to recipients that have improved in this productivity measure by 3% or more; and
- The remainder would be allocated to recipients that have maintained productivity or improved less than 3%.

Capital:

I don't have enough information to recommend a strategy for creating tiers of funding for of Capital Projects. However, grant requests should be reviewed in light of the transit system's management of assets and ability to maintain equipment in a state of good repair. Two measures appropriate to bus and paratransit provide an indication of this ability:

- Road Calls per 100,000 Miles is a reflection both on the adequacy of the vehicles for the assigned services and the ability of the transit system to keep up with system maintenance. While the County's transit contractor is also measured by the percentage of Preventive Maintenance performed on-time, auditing that requires considerably more effort than auditing road calls.
- The average fleet age, divided by the average vehicle lifespan (both measured in months), displays the need to replace vehicles. Maintenance costs are incurred at an increasing rate as the average age of the fleet rises.

Those systems documenting their maintenance ability and proposing to procure durable vehicles that offer attractive life-cycle costs for the services required should be rewarded with a higher subsidy.

A third criterion to evaluate Capital Projects would be their effect upon economic vitality. However, research in this area indicates that only those transit systems with fixed

guideways or separate right-of-ways generate major economic benefits that are statistically significantly attributable to transit. One could measure change in assessed value of real estate along fixed guideway or separate right-of-way transit routes.

Committee members should be clear on the scope of their role in developing tiers. I'm not clear about several issues:

- Would the Committee be recommending tiers for both current VDRPT capital programs and new funds?
- What is the current distribution of funds to the various capital program types, classified in the VDRPT Fiscal Year 2013 Annual Budget as:
 - Replacement of Transit Vehicles,
 - Expansion Transit Vehicles,
 - Vehicles for Elderly & Disabled Services,
 - Support Service Vehicles,
 - Transit Facility Construction or Renovation and
 - Transit Facility Planning or Design
- Would the Committee's scope include federal transit or paratransit capital funding passed through the states – for example Federal Transit Administration 5310 funding?
- Should funding for transit technology, security and system accessibility projects be included? Transit technology projects would include hardware and software necessary to improve the management and oversight of transit services and public access to transit information including arrival times at transit stops. Security projects would include monitoring technology of passengers and capital assets. System accessibility projects would include transit facilities, stops and pathways.
- Should procurement of durable and costly equipment for transit maintenance (such as vehicle lifts) be considered as part of Transit Facility Construction or Renovation, or dealt with separately?
- How should the committee approach fixed guideway or separate right-of-way transit investment opportunities? These projects indirectly benefit the entire Commonwealth by generating increased economic activity, and directly benefit the relatively few localities with sufficient congestion to justify specific projects. This question is similar to the issues that the Commonwealth Transportation Board faces when deciding whether to fund a new highway.

Your consideration of these suggestions is appreciated. A table summarizing my recommended operations allocations is attached.

Sincerely,

Steve Yaffe

Recommended Allocation Formula for New Operations Funding

Focus	Objective	Measure	% of Funds	Allocation Method	Purpose	Prequalifiers
Effectiveness	Expand Capacity	Peak Hour Peak Direction Seat Miles	15%	Relative Proportion of Peak Seat Miles	Increase Peak Coverage & Frequency	None
Effectiveness	Expand Capacity	Passenger Miles	15%	Relative Proportion of Passenger Miles	Measure success in filling seats	None
Effectiveness	Increase Mobility	US Census Data by Tract Comparing Median Family Income with the norm.	10%	Relative Proportion of Service Area population within Low-Income Census Tracts	Support Transit in low-income areas	One-Third of Census Tracts are Low-Income (below 50% of the norm)
Effectiveness	Increase Mobility	Unduplicated Individuals Riding 50+ Days/Year	10%	Relative proportion of Unduplicated Individuals Riding 50+ Days/Year	Support the Transportation-Disadvantaged and Support Ridesharing Programs	Paratransit (including Human Service Transportation Programs) and Rideshare Organizations
Efficiency	Increase Productivity	Passengers per Revenue Hour	15%	5% Among Recipients Improving 3+%; 10% Among Recipients Maintaining Performance	Incentivize Route Evaluation Process & Focus on Customer Service	Improving Performance or Maintaining Effort (Based on 3-Year Rolling Average)
Efficiency	Increase Local Support	Cost/Recovery	15%	5% Among Recipients Improving 3+%; 10% Among Recipients Maintaining Performance	Incentivize partnerships to sponsor rides	Improving Performance or Maintaining Effort (Based on 3-Year Rolling Average)
Efficiency	Increase Reliability	On-Time Performance	15%	5% Among Recipients Improving 3+%; 10% Among Recipients Maintaining Performance	Incentivize improved Scheduling and Training	Improving Performance or Maintaining Effort (Based on 3-Year Rolling Average)
Reserve Fund			5%	Discretionary	Contingency in case of revenue shortfall	None