

## MEMORANDUM

To: David Eatman, City of Raleigh  
Ray Boylston, Town of Cary  
Harmon Crutchfield, City of Durham  
Saundra Freeman, Triangle Transit  
From: John Tallmadge, Triangle Transit  
Date: February 19, 2013  
  
Re: Regional Fare Structure Evaluation

As many transit agencies have taken actions to raise fares or cut services, or both, since the Great Recession, the five urban public transportation agencies in the Triangle have been able to keep fare levels constant while modestly increasing service. The agencies have been able to accomplish through varying combinations of finding operating efficiencies, freezing or limiting salary increases, attracting new fare-paying customers, and receiving one-time federal grants. Despite these efforts, the gap operating costs have increased faster than fare revenues, putting increasing pressures on local budgets.

It has been eight years since Triangle Transit established its \$2.00 base fare for regional service, and five years since the local services in Raleigh, Durham, and Cary set \$1.00 local fares. The staff of these four transit agencies in the region agreed to evaluate the regional fare structure and pricing prior to the FY2014 budget process. We agreed to look at recent trends in service levels, costs, and fare revenues; current usage levels of current fare payment options; compare our fares to peer agencies, and estimate the impacts on revenue and ridership levels of several fare change scenarios.

### **Recent Trends**

Data reported to the National Transit Database (including preliminary figures for FY2012) were compared for the years between FY2007 and FY2012. The variables considered are revenue hours, operating costs, fare revenues, and customer boardings for fixed route services. I also calculated results for cost per revenue hour, farebox recovery rate, fare revenue per boarding, and the net of costs less fare revenues.

The primary findings include:

- Since the last local fare increases in FY2007, rapid ridership growth has generated more revenue, somewhat masking the erosion of revenue collected per boarding
  - Customer boardings have grown 35% on DATA, 56% on CAT, 82% on Triangle Transit, and 316% on C-Tran over the six-year period since FY2007.
  - Total fare revenue has grown slightly for DATA (8%) over the period, and more significantly for the others (52% for CAT, 64% for Triangle Transit, and 80% for C-Tran).
  - Revenue per boarding has decreased at each agency (from 2% at CAT to 57% at C-Tran) due to expansion of customer categories eligible for free or discounted travel.

- Costs have increased more than fare revenues since FY2007, putting more pressure on other sources of revenue.
  - Since the local fare increases in FY2007, each agency has substantially increased service hours (from 11% at DATA to 42% at C-Tran), though the pattern of changes has been different at each agency.
  - While operating costs per revenue hour at DATA, CAT, and TTA have varied significantly from year-to-year, these three agencies have kept annual cost increases below 5% for the period from FY2007 through FY2012. C-Tran has kept costs per revenue hour flat over that period.
  - The net costs less fares have grown at each agency over the six-year period. The lowest annual rate of growth is 4.6% at DATA. The highest is 6.1% at CAT.
  - In FY12, DATA had a gap between operating costs and fares that was \$3.33 million greater than in FY07. CAT had a gap \$4.92 million greater. TTA had a gap \$3.01 million greater. C-Tran had a gap \$427,000 greater.

### **Current Fare Type Usage**

The current regional fare structure is nearly consistent among the four transit agencies. There are local fares, regional fares, and regional express fares. Since Spring 2012, when C-Tran installed GFI electronic fareboxes, all agencies are able to track customer boardings by fare type through the farebox. These results are based on results from FY2012 or the first quarter of FY2013.

The four transit agencies have been successful at moving the majority of boardings from cash to other fare types, though predominantly daypasses and GoPasses. Only approximately one-quarter of all boardings are made with a cash transaction. Looking at Table 1 below, this is a combination of the cash boardings and a significant share of the daypass boardings, nearly all of which are purchased on-board the bus at the customer's first boarding of the day.

Customers qualify for free boardings if they are in any of the three following groups: children ages 12 and younger, adults ages 65 and greater, and employees of the transit agencies or municipalities. All boardings on CAT's R-Line and DATA's Bull City Connector are also free-of-charge.

GoPasses are free to the customer, and are made available through institutions to their employees or students. The transit agencies have contracts with the institutions to bill at a discounted rate for boardings made with the passes. This has become a significant fare type used on CAT and DATA, and the predominant fare type used on Triangle Transit.

The transit agencies have had less success in getting customers to purchase longer period passes. The agencies currently offer a 5-day pass and a 31-day pass (DATA also offers a 7-day pass). Fewer than 14% use these passes at CAT, C-Tran, and Triangle Transit. While DATA has a bit more success only about 20% of customers use these fare types. This is important because the longer period passes have benefits of both reducing boarding time, since they are purchased off the bus, and because they result in lower fare media printing costs for the transit agencies.

<b>Percent of Boardings</b>		<b>CAT</b>	<b>C-TRAN</b>	<b>DATA</b>	<b>TTA</b>
Fare Type	<b>Free</b>	<b>15.5%</b>	<b>16.9%</b>	<b>22.4%</b>	<b>8.6%</b>
	<b>Cash</b>	<b>7.9%</b>	<b>19.4%</b>	<b>5.9%</b>	<b>17.8%</b>
	<b>Local Passes</b>	<b>61.0%</b>	<b>39.7%</b>	<b>57.1%</b>	<b>0.0%</b>
	<i>Local DayPass</i>	<i>49.2%</i>	<i>36.9%</i>	<i>39.0%</i>	
	<i>Local 5-Day Pass</i>	<i>1.7%</i>	<i>2.8%</i>		
	<i>Local 31-Day Pass</i>	<i>10.1%</i>	<i>0.0%</i>		
	<b>GoPass</b>	<b>9.4%</b>	<b>3.9%</b>	<b>10.3%</b>	<b>39.9%</b>
	<b>Regional Passes</b>	<b>2.8%</b>	<b>18.9%</b>	<b>4.2%</b>	<b>30.5%</b>
	<i>Regional DayPass</i>	<i>1.9%</i>	<i>11.8%</i>		<i>20.2%</i>
	<i>Regional 5-Day Pass</i>	<i>0.2%</i>	<i>3.3%</i>		<i>1.7%</i>
	<i>Regional 31-Day Pass</i>	<i>0.7%</i>	<i>3.8%</i>		<i>8.6%</i>
	<b>Stored Value Card</b>	<b>0.3%</b>	<b>1.1%</b>	<b>0.0%</b>	<b>2.3%</b>
	<b>Other</b>	<b>3.3%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.9%</b>

**Table 1. Summary of Percentages of Boardings by Fare Type by Agency**

### Peer Analysis

Peer transit agencies were identified using several methodologies or criteria: an online tool developed by the Public Transit Office of the Florida Department of Transportation (7 peers); recommendations by the consulting firm, Parsons Brinckerhoff, made as part of Durham’s Designing Better Bus Service plan (4 peers); each of the neighboring state capital cities (3 peers); in-state comparisons (2 peers); commuter-oriented systems (2 peers); and a southeastern comparison (1 peer).

<b>Peer Agency</b>	<b>Peer Justification</b>
CARTA, Chattanooga, TN	DATA DBBS Peer
CAT, Savannah, GA	DATA DBBS Peer
CATS, Charlotte, NC	in-state comparison
Charleston, SC	INTDAS peer for DATA
CMRTA, Columbia, SC	DATA DBBS Peer, neighbor state Capital
Cobb County, GA*	Commuter Service Provider
GTA, Greensboro, NC	INTDAS peer for DATA
Hampton Roads, VA	Southeast
KAT, Knoxville, TN	INTDAS peer for TTA
KVRTA, Charleston, WV	DATA DBBS Peer
LexTran, Lexington, KY	INTDAS peer for CAT
MARTA, Atlanta, GA	Neighbor state Capital
Nashville, TN	Neighbor state Capital
PART, Triad, NC*	INTDAS peer for DATA, TTA

PRTC, Rappahannock, VA	Commuter Service Provider
Richmond, VA	Neighbor state Capital
TANK, Fort Wright, KY	INTDAS peer for TTA
WSTA, Winston-Salem, NC	in-state comparison

\*Comparison for Regional/Express fares only

We compared the fare structures for each agency, their fare revenues, operating expenses and farebox recovery ratios for fiscal year 2010, the last year for which all National Transit Database information is available. The primary findings include:

- 1) **Local fares and fare recovery ratios in the region are low compared to peers.** Only three of the 16 peer agencies had local fares of \$1.00. The median local fare (at 8 of the agencies) is \$1.50. Only three of the peer agencies had lower farebox recovery ratios.
- 2) **We have more generous free and discounted fare categories.** While the Triangle agencies offer free boardings to customers up through age 12, and after 65, none of the peers offered free rides to children over 6 or to any Seniors. A simple online search only turned up free transit fares for seniors in Pennsylvania and Illinois where the state mandates it and provides funding specifically to cover the lost revenue.
- 3) **Youth discounts are common.** Ten of the peers offer a discount to youth in primary or secondary schools. None are as generous as DATA's 25-cent fare, but they don't come with limitations on times or days, and they cover youth through high school age.
- 4) **While the DayPass rate is inexpensive compared to peers, the 5-Day Pass we provide does not offer as much discount as at peers.** The median DayPass multiple of the cash fare is 2.7 among peers, while we only charge twice the cash fare. Seven peer agencies offer 7-day passes (none offer 5-day passes), and price it at a median daily multiple of 1.4 times the cash fare (7-day price = cash fare \* 1.4 \* 7 days)

### Fare Change Scenarios

We discussed and agreed to evaluate a set of minor changes to the current fare structure and three service increase scenarios. Below, I describe each fare change scenario, and estimate the impacts on ridership and fare revenue for each agency.

#### *Minor changes to fare structure*

There are five minor changes proposed to the fare structure.

#### **1. All agencies offer and promote Stored Value Card valid for use on all services.**

The Stored Value Card carries a value of \$25 and is priced at \$20, offering a 20% discount to customers compared with paying cash fares or purchasing daypasses on-board the bus. Benefits to the transit agencies come from the pre-paid nature of the Card. We both receive revenue in advance of the customer boardings, and we shift the cash payments from the bus to a sales

outlet. The primary customers who would find the Stored Value Card attractive are those who ride frequently, but not daily.

Durham is the only agency that needs to begin offering this.

While this is currently used by a small segment of customers, it is valued by customers who do not travel daily, which is often the “choice” rider. It also shifts cash transactions off the bus, reducing boarding time on the bus.

**2. All agencies honor GoPasses, with contracts updated to bill local boardings at 40-55% of cashfare and regional boardings directly serving contractee at a minimum of 50%.**

Currently, GoPass contracts vary, and some are written at a fixed billing amount per boarding, some are written as a percentage of cash fares. Contracts written as a fixed billing amount per boarding would not generate additional revenue from an increase in the cash fare, muting the revenue benefits of any fare increase.

**3. All agencies offer the pack of eleven 2-trip passes to non-profit agencies.**

Last year, Raleigh began to offer a pack of eleven 2-trip passes priced at 9 times the cash fare. They offered this when discontinuing free paper transfers. The primary customers who would find the 2-trip passes attractive are organizations who provide free transit passes to clients.

Durham, Cary, and Triangle Transit would begin offering local 2-trip passes similar to Raleigh. This is assumed to be a very small customer market, less than 1%.

**4. Replace the 5-Day Passes with 7-Day Passes**

The Durham and Raleigh local systems have a high percentage of customers who ride more often than 5 days per week (59% and 43%, respectively). Cary and Triangle Transit have fewer customers who ride more than 5 days per week (17% and 14%, respectively) due in part to not operating service on Sundays. None of the peer agencies offer a 5-Day Pass, but more than one-third offer a 7-Day Pass. The recommended price for the Local 7-Day Pass is 4.8 times the DayPass price. The recommended price for the Regional 7-Day Pass is 4 times the regional DayPass price. The recommended price for the Express 7-Day Pass is 4 times the Express DayPass price.

For current customers who use the 5-Day Pass and travel 5 days per week, this change would result in a lower discount than the current 5-Day Pass. For those traveling 6 or 7 days per week, this change would offer a greater discount than current 5-Day Pass. It would still not be discounted as deeply as the 31-Day Pass, so the primary beneficiaries would be customers who travel 6-7 days per week but cannot afford the up front price of the 31-Day Pass, or are not planning to travel for the full 31-Day period (due to vacation, change in residence or job, etc.).

Currently, only 2-4% of customers use the Local or Regional 5-Day Passes. One goal of this recommendation is to encourage more DayPass customers who travel 6-7 days per week to purchase 7-Day Passes to reduce the cash transactions on-board the buses and to reduce printing costs for fare media and maintenance costs due to the on-board DayPass purchases.

*Limit free fares to children age 5 and younger*

The peer review reveals that the agencies in the Triangle region are the most generous in the establishment of customer ages eligible for free travel. While some agencies still use height thresholds to determine eligibility, no other agency allows free rides for children older than six. On the other hand, more than half of the peer agencies offer discounted fares to youth through high-school age. While DATA offers 25-cent fares to students 17 and younger during weekday hours until 8pm, no other agency offers a youth discount. This recommendation is to set the Youth prices at half-price for passes. A discounted cash fare would not be available to Youth. This is comparable to DATA's current youth pricing, since many trips require a transfer, resulting in four 25-cent payments for a round-trip.

Seniors 65 and older also currently ride free of charge. All of the peer agencies offer seniors 65 and older half-price fares, as required by federal law. In fact, the only agencies that we found that offer seniors free rides were in Pennsylvania and Illinois where the state legislatures require it in order to be eligible for additional formula grant funds. This recommendation is to discontinue the free rides for Seniors 65 and older, replacing it with half-price fares for all passes.

*Two-Step fare increase scenario*

This scenario includes the recommendations above, with a fare increase in January 2014 and again in January 2015. In FY14, the local fares for cash and passes would increase 25%. The regional fares for cash and passes would increase 12.5%, and the Express fares for cash and passes would increase 20%. In FY15, the local fares would increase an additional 20%. Regional fares would increase an additional 11.1%. Express fares would increase an additional 16.7%. The combined increases would result in local fares 50% higher than current, regional fares 25% higher than current, and express fares 40% higher than current.

Though the percentage increases are higher for local services, the local and regional increases are the same, 25-cent cash fare increase each step. The Express increase would be a 50-cent cash fare increase each step.

The estimated impacts on fares and revenues for each agency are summarized in the attached table.

*One-Jump fare increase scenario*

This scenario includes the base recommendations and adds a 50% increase for all local services and fare types, a 25% increase for regional fares, and a 40% increase for express fares in FY14 in January 2014. No further increase would occur the following year. By January 2015, the Two-Step fare increase and the One-Jump fare increase would have the same prices for all fare media.

The estimated impacts on fares and revenues for each agency are summarized in the attached table.

*Two-Step DayPass Multiple increase scenario*

This scenario evaluates the impacts of increasing the cash fare multiple used to price a DayPass from 2 to 2.4 (rounded to nearest 50-cents). For example, with a cash fare of one dollar, a DayPass would be \$2.50. In this scenario, while the local cash fare only increases to \$1.10 in FY2014 and \$1.25 in FY2015, the local DayPass would still increase to \$2.50 in FY2014 and \$3.00 in FY2015, equal to the prices in Scenario One. The relationship between local fares,

Because the cash fare does not rise as quickly as Scenario One, GoPass revenue does not grow as much in this Scenario.

The estimated impacts on fares and revenues for each agency are summarized in the attached table.