

# MEMORANDUM



**To:** Transit Task Force

**CC:** Carlos de Leon  
John Zukas

**From:** Mary McLain, Assistant General Manager

**Date:** 4/8/2014

**Re:** Additional Information

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A few questions were raised regarding specific aspects of the Fare Policy and Comprehensive Operational Analysis (COA), and in an effort to keep TTF members fully informed and facilitate your agenda discussions, additional information is being provided.

#### Peer Review and Farebox Recovery:

An individual transit system's farebox recovery results from several factors including whether there is dedicated funding provided to the system, the City's or system's owner's ability to subsidize transit fares based upon overall finances, the other demands upon overall finances, the level of operating funds, ridership levels and overall efficiency of operation. Generally, a community's investment in transit is revealed through two data factors, both which can be used to gain a comparative look at peer systems. These are local or non-federal funding (non-federal is a combination of local and state funding) and the farebox recovery ratio. It is correct that Sun Tran's farebox recovery ratio is comparable to the peer systems identified through the COA and that the goal of 25% farebox recovery is higher than the actual farebox ratio reported by these same peer systems, as reported in the 2012 National Transit Database.

However; another fact realized from a review of system performance information shows that of the entire peer group, Tucson has the lowest local and lowest non-federal source of revenues at 22% local funds and 32% non-federal funds. The non-federal funds include RTA and other IGA revenues, in addition to City funds. Tucson's total of farebox revenues and non-federal funding 52%, again the lowest of the group. The majority of the peer group realizes are in the 80 – 98% range, with only three other exceptions, which are at 68%, 71% and 79%. Without a dedicated funding source and without the ability to stretch the investment from the general fund, Sun Tran's operations budget has been offset by a greater percentage of federal funds than others in the peer group, resulting in a decrease in capital funds to replace equipment or in deferred maintenance.

#### Onboard Survey:

A primary purpose of the onboard survey was for regulatory reasons, such as determining household income, and other demographic information. For this reason, the survey consultant only sought persons ranging in age from the mid-teens through adults to provide the responses. The trips of school-age children were accounted for through the gathering and analysis of ridership information, provided through the automatic passenger counters and onboard data collectors.

#### Consideration of Other Fare Reductions/Eliminations:

It is difficult to predict the exact results of a fare increase to any individual transit system, and various elasticity models have been used for planning purposes. The fare elasticity model used by Sun Tran for the fare scenarios discussed were based upon a model predicting a 4% loss in ridership for every 10% increase in the fare, coupled with Sun Tran's historical ridership growth pattern. This model was selected after research of the use of modeling, actual results, and various transit research reports. It should be noted that fare elasticity results changed during the last eight years, during the country's economic downturn. Most of the nation's transit systems raised fares, reduced service, or both; and some did so significantly. The results varied without lending one to ascertain that a specific elasticity model would prove true in every situation or for every system. Research indicates that passenger ridership pursuant to a fare increase differs in larger cities than smaller ones, systems that have a large transit-dependent ridership base, systems that carry large percentages of student ridership, etc.

The two primary fare considerations mentioned as alternatives to the fare scenarios presented to the committee are the offering of a youth fare and the possibility of a free fare program, with the thought that the increased ridership resulting would negate the need for further fare considerations. The fare scenarios recommended by staff were developed from a perspective of revenue generation, while the inquiries about these two fare reduction considerations were offered from a ridership generation. Ridership initiatives that will not contribute to improving the budgetary status are not recommended by staff at this time for several reasons.

Youth Fares: Sun Tran already has a strong school trip purpose ridership, with the demand having exceeded capacity along several routes at times of the day corresponding with school opening and closing times. Currently additional buses are dispatched for fifteen trips a day during the school year to address capacity needs; all but one of these are for student-related service. Sun Tran also has relationships with several schools/school districts that provide monthly passes to students in lieu of the provision of student transportation. This enables the school/district to save money and provides the students who are given the passes to make additional trips at absolutely no cost to them. To date this fiscal year, schools have purchased in excess of 47,000 SunGo products, varying from day passes to annual passes. Some of these are provided at no cost to the students and others at a

discount; but in any regard a reduction of fares in this classification during the school year would have significant negative revenue impacts. Upon implementation of any service changes, staff recommends collecting and reviewing data over a full year prior to further consideration of promotions which address ridership through fare reduction to avoid inadvertently creating capacity or other negative impacts.

Free Fares: There have been studies and demonstrations of free fare programs, nationally and a recent one from Europe. It has been concluded that free fare programs may increase ridership, but result in additional costs and operational concerns. It is also concluded that free fares programs are not successful to attract choice ridership; typically reducing this category of ridership with the loss not being recovered for years. A summary from one such report and a recent article regarding free fare programs are attached.

## AVANTAGES AND DISADVANTAGES OF FARE-FREE TRANSIT POLICY

### PROBLEM STATEMENT

From time to time, either transit policy board members or transit managers seriously consider providing transit services free of charge to passengers. There are a number of factors behind the motivation to offer fare-free transit—e.g., a desire to increase the use of public transportation and possibly decrease traffic congestion; a recognition that farebox revenue is sometimes relatively minimal and possibly not worth the effort and expense to collect; a political desire to “fill empty buses”; a strategic effort to introduce younger people to transit services in order to encourage future ridership; a desire to accommodate certain niche passenger markets in resort areas where transit operating revenue can be gained through other sources; a strategic decision to help redevelopment of a particular area; or some other public policy goal.

There are consequences to any operational transit policy, and those who make decisions about whether to offer fare-free service should be aware of their possible effects. Many factors influence whether fare-free transit would be a negative or a positive experience in any given environment. Among these factors are the size of the community and transit system, the degree of commitment to fare-free service by both the community and the transit system management and employees, and the age and establishment of the transit service (Hodge, Orrell, & Strauss, 1994).

### OBJECTIVES

This study investigates the advantages and the disadvantages of fare-free service in differing transit system environments within the framework of several fundamental policy questions:

- How much would it cost to implement a fare-free policy in the system?
- How would fare-free policy impact existing transit services?
- How would fare-free policy affect the attainment of the transit system’s goals? (Hodge et al, 1994)

### FINDINGS AND CONCLUSIONS

The suggestion to offer transit on a fare-free basis is almost always well-intended. However, while fare-free policy might be successful for small transit systems in fairly homogenous communities, it is nearly certain that fare-free implementation *would not* be appropriate for larger transit systems. Two well-documented fare-free demonstrations in larger systems in Denver, Colorado and Trenton, New Jersey, conducted during the late 1970s, were limited to off-peak hours and were both discontinued after approximately one year in spite of increased ridership. Since that time, there has been only one other fare-free system-wide experiment in a large transit system, which was conducted in Austin, Texas from October 1989 until December 1990. While several large transit agencies (*i.e.*, *Seattle Metro*; *Denver, Colorado*; *Houston, Texas*; *Baltimore, Maryland*; *Pittsburgh*,

*Pennsylvania; St. Louis, Missouri; and Tri-Met in Portland, Oregon*) offer fare-free service on a small portion of their systems, there has not been a full fare-free policy instituted on a system-wide basis since the experiment in Austin. The negative consequences of these experiments, the Austin experiment in particular, have left lasting impressions on transit operators throughout the country.

A fare-free policy will increase ridership; however, the type of ridership demographic generated is another issue. In the fare-free demonstrations in larger systems reviewed in this study, most of the new riders generated were not the choice riders the transit systems were seeking to lure out of automobiles in order to decrease traffic congestion and air pollution. The larger transit systems that offered free fares suffered dramatic rates of vandalism, graffiti, and rowdiness as a result of the younger passengers who could ride the system for free and who caused. Vehicle maintenance and security costs escalated due to the need for repairs associated with abuse from passengers. The greater presence of vagrants on board buses also discouraged choice riders and caused increased complaints from long-time passengers. Furthermore, inadequate planning and scheduling for the additional ridership resulted in overcrowded and uncomfortable conditions for riders. Additional buses needed to be placed in service to carry the heavier loads that occurred on a number of routes, which added to the agencies' operating costs. Nevertheless, the crowded and rowdy conditions on too many of the buses discouraged many long-time riders from using the system as frequently as they did prior to the implementation of free-fares.

Researchers thus conclude that a fare-free policy might be appropriate for smaller transit systems in certain communities, but it is ill advised for larger transit systems in major urban areas. The findings demonstrate that a more effective way to increase choice ridership in larger systems would be to offer incentives such as reduced fares to students and to the elderly, all-day passes, and pre-paid employer-provided passes to workers in areas served by transit. All well-informed transit professionals that were surveyed spoke strongly against the concept of free fares for large systems, suggesting some minimal fare needs to be in place to discourage vagrancy, rowdiness, and a degradation of service. Ultimately, people are more concerned about issues such as safety, travel time, frequency and reliability of service, availability and ease of schedule and route information, infrastructure at stops, and driver courtesy than about the cost of fares. When fares are eliminated, substantial revenues that help to pay for such service characteristics are lost.

## **BENEFITS**

This research documents that there have been no recent studies of the impact of no-fare systems on a large scale, and that the thinking in the industry is that a no-fare policy results in more problems than benefits. Transit agency managers are often asked about the merits of such policies, and this research will provide them with the most current information on the subject.

This research project was conducted by Joel Volinski and Jennifer Perrone, of the Center for Urban Transportation Research at the University of South Florida. For more information on the project, contact Tara Bartee, Project Manager, at (850) 414-4520, [tara.bartee@dot.state.fl.us](mailto:tara.bartee@dot.state.fl.us).