

ABRAMS-CHERWONY GROUP of



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MEMORANDUM

To: Chuck Kamp
Fr: Owen O'Neil
Date: November 17, 2008
Re: Metro Revenue Projections

Chuck:

Per your request, we have reviewed the revenue projections prepared by Metro staff which respond to the proposed fare increases. The main industry source of information regarding passenger's response to fare changes is the *TCRP Report #95: Transit Pricing and Fares: Traveler Response to Transportation System Changes*. While revenue projections can vary in their complexity, accuracy can be improved through the recognition of certain factors such as:

- There will be a segment of the current ridership base that will stop riding or will make fewer trips. This does not necessarily indicate that there will be an overall loss of ridership since other segments of the ridership base may increase through new riders or more frequent use. This is especially the case for a system like Madison Metro which serves the host community of a large university.
- There will be a shift in ridership among the various fare types. Passengers will use different fare media to ride depending upon their travel habits.
- There will be different demand elasticities for different groups of riders depending on such factors as trip purpose, frequency of travel, and the socio-economic and demographic characteristics of the rider.

After reviewing the calculations prepared by Metro staff, we concluded that the model used does take into account each of these factors. Staff calculations assume that there will be a decrease in ridership among certain groups, however, the model also accounts for significant shifting among riders to pre-paid and multi-ride fare media. This is supported by the industry research included in the TCRP Report. Basically, passengers who ride often enough to realize a savings under the break-even point (i.e., price of the pass divided by the base cash fare) will shift to the multi-ride media. In addition, the model developed by Metro staff assumes that some of the shifters to unlimited ride passes will be induced to ride more. This is also supported by industry research.

Also, the model assumes different demand elasticity rates for different fare types. Industry research shows that infrequent, cash paying, riders have the highest demand elasticity, while pass users have the lowest rates. The elasticities assumed in Metro's model are consistent with this

pattern in that the highest demand elasticity, (0.2), is applied to cash paying riders, while the lowest, (0.05), is applied to pass users. The industry research has shown that demand elasticity varies widely among systems and depends on various factors such as the size of the metropolitan area and the make-up of the ridership base. While the elasticities used in the Metro model are lower than what is typically used for rather quick and uncomplicated revenue projections, (0.33), they are within the range of observed rates reported in the TCRP Report. Also, staff reports that the elasticity rates are, to some extent, based on the previous experience of Metro, in that Metro has never experienced an overall ridership loss with a fare increase. Past experience of the specific system is the most accurate source of information to use when attempting to predict rider response to fare changes. Again, the location of a major university within your service area is a significant contributing factor to these projections.

Based on these observations, we do not feel that there are any changes that could be made to the model that would improve the accuracy of the resulting projections.