

# **Wisconsin Department of Transportation**

Transit System Management Performance Audit

of the

Madison Metro Transit System

# **DRAFT INTERIM REPORT:** PEER AND TREND ANALYSIS

Prepared by



Abrams-Cherwony & Associates

with

Urbitran Associates, Inc.

September 2008

## PEER AND TREND ANALYSIS

#### Introduction

The Wisconsin Department of Transportation is required by Wisconsin Statutes to conduct a management performance audit of all urban transit systems receiving state aid at least once every five years. This study entails the audit of the Madison Metro Transit System "Metro Transit". One of the initial tasks in this management performance audit is to conduct a peer review and trend analysis to compare and contrast Metro Transit's fixed route operating statistics with other similarly sized fixed route transit operators. However, some caution should be exercised in comparing one transit system to another due to inherent differences between the transit systems which management has little control over, such as funding sources, local political legislation, land use patterns and the built environment, and the demographic and socioeconomic characteristics of the area being served. In spite of these limitations, peer group reviews do provide valuable insight into agency operations.

The peer systems selected for this analysis were the same peers used in the prior management performance review of Metro Transit which was completed in October 2003. The Metro Transit peer group consists of 11 systems which are:

- Capital District Transit Authority in Albany, NY
- Miami Valley Regional Transit Authority in Dayton, OH
- Connecticut Transit in Hartford, CT
- Indianapolis Public Transportation Corporation in Indianapolis, IN
- Metro Area Transit in Omaha, NE
- Rhode Island Public Transit Authority in Providence, RI
- Regional Transit Service Inc. and Lift Line Inc. in Rochester, NY
- Spokane Transit Authority in Spokane, WA
- CNY Centro, Inc. in Syracuse, NY
- Pierce Co. Public Transportation Benefit Area in Tacoma, WA
- Toledo Area Regional Transit Authority in Toledo, OH

The 11 peer systems were chosen for being northern climate systems and having similar size characteristics (hours, miles and peak vehicles) and modes (i.e., bus and paratransit) of service as Metro Transit. The systems also have similar overall expenses, passenger revenue and unlinked passenger trips. However, the 11 peer systems differ significantly from Metro Transit in terms of population and population density characteristics. Metro Transit is a much larger bus system relative to the population that it serves than any of its peers. There are no systems in the country that serve slightly more than 200,000 people and provide 4.7 million miles of service with a fleet of nearly 200 vehicles. In large part, this reflects the unique situation of Madison as

the state capital and the host community of a major university. Some of these attributes are noted for several of the peer systems listed above. For example, Albany is the state capital of New York and the location of the State University of New York at Albany (SUNY). Similar situations are noted in Hartford, Indianapolis, and Providence.

As a result, the 11 peer systems are not a fair representation to Metro Transit in terms of the level of service provided by Metro Transit on a per capita basis. Because the selected peer group systems are much larger than Metro Transit in terms of service area population, Metro Transit's outstanding performance in per capita measures would be understated. To remedy this situation, eight transit systems were elected with service area populations similar to Metro Transit even though other characteristics were much lower than Metro Transit. The eight systems that were selected included:

- Ann Arbor Transportation Authority in Ann Arbor, MI
- Berks Area Reading Transportation Authority in Reading, PA
- Capital Area Transit in Harrisburg, PA
- Erie Metropolitan Transit Authority in Erie, PA
- Fort Wayne Public Transportation Corporation in Fort Wayne, IN
- Knoxville Transportation Authority in Knoxville, TN
- StarTran in Lincoln, NE
- Lexington Transit Authority in Lexington, KY

The eight systems listed above are termed Population Peer Group and are compared to Metro Transit only in the area of per capita performance (Table 1). The remainder of the peer group analysis is based on data for the 11 peer systems listed at the beginning of this chapter. This peer group has been termed the Service Level Peer Group.

Using the two peer groups, this report develops performance measures for Metro Transit and the peer systems and compares Metro Transit's performance with the overall peer average for each measure; Metro Transit is then ranked against the peer systems for comparison purposes. Operating statistics are based on FY 2006, which is the most recent year that data for Metro Transit and the peer systems are available in their entirety. The peer group data was obtained from the Florida Transit Information System (FTIS) which is a web-based data source for all transit systems while Metro Transit's data was taken from its FY 2006 NTD Report that the agency provided.

The use of NTD data attempts to ensure that the data included has been compiled in a consistent manner by all transit agencies included in the peer group. The trend analysis is based on two end years – FY 2006 and FY 2002. The FY 2002 data is also derived from the data base and was used in the prior Metro Transit Management Performance Review that was completed in October 2003. In that earlier analysis, FY 2002 was the end of the trend analysis period while it is the starting point for the current review.

## **Overview of Analysis Techniques**

The peer group analysis is based on the results for the fixed route bus system using three different analysis techniques – peer group, trend line, and combination. The methodology used in each is described below.

**Peer Group Analysis** - This technique compares Metro Transit's performance at a single point in time (FY 2006) with a group of transit systems exhibiting similar characteristics. As noted previously, at the time this analysis was performed, the data for Metro Transit was not available for FY 2007 as well as the peer systems from the FTIS data base. Selection of the peer group takes into consideration a number of factors which influence the population's tendency to use transit.

As the objective of a peer group analysis is to comment on Metro Transit's performance relative to comparable systems, the presentation of the findings focuses on only the group average and range of performance. Therefore, the tables which appear in the subsequent section follow a standard format as follows:

Peer Group Performance

- Minimum value recorded
- Maximum value recorded
- Average of all peer systems
- (An unweighted value)
- Metro Transit Performance
  - Value recorded
  - Percent difference from peer group average
  - Rank within the group (With "1" always the best performer)

**Trend Line Analysis** - This second technique reviews Metro Transit's performance over time. For this analysis, the previous management performance review from October 2003 was used, with the final year (i.e., 2002) compared against the NTD results for FY 2006. The technique of this trend line analysis is to compare the trend of Metro Transit's performance with the trend of its peers. A comparison is made of the trend of each selected performance measure with the average trend of the peers. The analysis emphasizes the full five-year trend; not interim or year-to-year changes in key indicators.

**Combination Analysis** - The previous two techniques are synthesized in this third step. The combination analysis enables the reviewer to take those areas where Metro Transit performs below its peers, for example, and ascertain if this condition had declined over time, thus suggesting a critical area in need of attention. This technique can also offset a below average peer group standing by pointing out that Metro Transit has made great strides in a particular indicator over the past years even though it still was ranked below its peers in 2006. The combination analysis results in the grouping of performance into four different categories:

- 1. Better/improving better than peer group average and improving over time.
- 2. Better/declining better than peer group average but declining over time.
- 3. Worse/improving worse than peer group average but improving over time.
- 4. Worse/declining worse than peer group average and declining over time.

At the conclusion of all three analyses, it is then possible to suggest areas where Metro Transit performs well and areas where improvement opportunities should be explored. As noted previously, the analysis focuses on the fixed route bus system.

# **Classification of Performance Indicators**

Performance indicators can be used to determine how the entire agency is performing with respect to stated objectives. Our approach to performance evaluation recognizes that these indicators are made up of statistics which reflect key factors in transit service delivery. For this review of Metro Transit's relative performance, many of the performance indicators used in the prior management performance review are also used in this report. However, in some instances, data used in prior audits has been excluded from this performance review. This data includes the non-wage fringe benefits and wage and fringe benefit comparisons, which is data no longer reported in NTD reports. In addition, there are several performance measures that have not been used before, and include measures related to transportation efficiency and cost efficiency. These measures are used throughout the industry and provide additional analysis tools for the review of Metro Transit performance. The performance indicators are grouped into the following five areas:

- 1. Level of service measures
- 2. Transit revenue sources
- 3. Financial and general and administrative measures
- 4. Transportation performance measures
- 5. Maintenance performance measures

The level of service measures and transit revenue sources are not included as part of the trend analysis.

# **Peer Group Analysis**

This section compares Metro Transit's 2006 operating performance to that of the peer systems. The results of the peer analysis are presented in the aggregate for the peers. No

specific references are made to the individual systems. Rather, the information in this report presents the range of peer group performance and its unweighted group average which excludes the data for Metro Transit from the calculation. Then, Metro Transit's performance is shown as the numerical value, percent above or below the peer group average and rank within the peer group, which would be one to 12 for this analysis. With this ranking scheme, the system ranked first is always the best performer.

**Level of Transit Service Available -** This section analyzes the intensity or prevalence of transit service in the Metro Transit service area to that of the other service areas included in the peer group. As noted earlier, the Population Peer group is utilized in this section since it is similar to Metro Transit in terms of service area population. As seen in Table 1, the level of transit service available to the residents of Metro Transit's service area, on a per capita basis, is significantly higher than the average of the Population Peer Group average.

|                              | Peer Group |         |         | Metro Transit |                       |       |
|------------------------------|------------|---------|---------|---------------|-----------------------|-------|
| Characteristic               | Minimum    | Maximum | Average | Value         | Percent<br>Difference | Rank* |
| Revenue Miles per Capita     | 3.92       | 14.95   | 7.88    | 19.81         | 151.3                 | 1     |
| Revenue Hours per Capita     | 0.35       | 1.23    | 0.64    | 1.54          | 140.6                 | 1     |
| Cost per Capita              | \$20.33    | \$90.59 | \$47.45 | \$148.02      | 211.9                 | 1     |
| Passengers per Capita        | 6.96       | 26.10   | 13.33   | 50.69         | 280.3                 | 1     |
| Peak Vehicles per 10,000 Pop | 10.44      | 37.20   | 22.37   | 70.34         | 214.4                 | 1     |

 Table 1 - Peer Comparison of Per Capita Measures (Population Peer Group)

\*Rank of 1 is best, 9 is worst Source: 2006 National Transit Database

Highlights of the comparison are:

- The level of service provided by Metro Transit in terms of revenue miles and revenue hours provided on a per capita basis is approximately one and a half times higher than the peer average, while the number of peak vehicles provided by Metro Transit per 100,000 people is over two times higher than the peer average.
- Since Metro Transit provides a much higher level of service than the peer group, it is not surprising that Metro Transit exhibits the highest cost per capita compared to the peer group (\$148.02 for Madison vs. \$47.45 for the peer average). Madison residents reward the system for this higher level of service by utilizing transit much more than the peers. In fact, Metro Transit carries almost three times as many passengers per capita as the peer average.

In summary, Metro Transit provides a much higher level of service compared to the peer group. This higher level of service is attributed to the fact that Madison is home to the main campus of the University of Wisconsin, which has an enrollment of approximately 42,000 students, and is also the state capital of Wisconsin. College students typically represent a transit

dependent market, and the University of Wisconsin as well as the state offices located in the city represent major transit generators. As a result, the residents of Madison expect a high level of service from Metro Transit and in turn, utilize the service at a much higher level than the peer group systems. This high ridership level on a per capita basis is indicative of a transit riding habit in the City of Madison. The remaining sections of this report use only the Service Level Peer Group.

**Service Area and Operating Characteristics** - As seen in Table 2, Metro Transit serves the smallest service area population and operates within the smallest geographical area compared with the peer group. However, due to the compact nature of the service area, Metro Transit exhibits the highest population density at 3,298 persons per square mile compared to the peer average of 2,861 persons per square mile.

|                               |            | Peer Group |            |            | Metro Transit         | ;     |
|-------------------------------|------------|------------|------------|------------|-----------------------|-------|
| Characteristic                | Minimum    | Maximum    | Average    | Value      | Percent<br>Difference | Rank* |
| Population                    | 334,857    | 1,048,319  | 653,652    | 237,652    | -63.6                 | 12    |
| Area (Sq. Mi)                 | 142        | 1,760      | 541        | 72         | -86.7                 | 12    |
| Population Density            | 451        | 2,861      | 1,863      | 3,298      | 77.0                  | 1     |
| Peak Vehicles                 | 99         | 209        | 153        | 167        | 9.2                   | 5     |
| Revenue Miles                 | 3,577,700  | 7,651,100  | 5,618,500  | 4,703,900  | -16.3                 | 9     |
| Revenue Hours                 | 248,900    | 618,900    | 426,800    | 365,500    | -14.4                 | 9     |
| Unlinked Passenger Trips      | 3,881,100  | 19,383,000 | 10,494,800 | 12,034,500 | 14.7                  | 6     |
| Operating Expenses (in 000's) | \$17,891.4 | \$70,658.0 | \$41,160.1 | \$35,143.9 | -14.6                 | 7     |
| Operating Revenue (in 000's)  | \$3,962.7  | \$21,374.3 | \$9,105.4  | \$7,912.2  | -13.1                 | 6     |
| Miles per Hour                | 12.1       | 15.2       | 13.4       | 13.3       | -0.7                  | 7     |

 Table 2 - Peer Comparison of Peer Group with Metro Transit (Service Level Peer Group)

\*Rank of 1 is best, 9 is worst Source: 2006 National Transit Database

Metro Transit is a smaller system than the peer average in terms of revenue miles and revenue hours. As a result of this lower level of service, Metro Transit exhibits lower operating costs and lower operating revenue. However, Metro Transit carries significantly more passengers than the peer average and also operates a much higher number of peak vehicles. The average operating speed of Metro Transit buses, systemwide, is 13.3 mph, which is very similar to the peer average speed of 13.4 mph.

Although Metro Transit is a smaller system compared to its peers in terms of its overall size, it is a much larger system relative to the population that is serves compared to the peer group. As noted above, there are no transit systems in the country that serve slightly more than 200,000 people and yet provide 4.7 million miles of service with a fleet of approximately 200 vehicles. When the level of service Metro Transit provides is compared with the population peer group on a per capita basis, as is shown in Table 1, Metro Transit provides a much higher level of service compared to the peer group.

**Transit Revenue Sources** - This section reviews the amount of operating and capital assistance that Metro Transit and the peer systems obtained from directly generated, local, state, and federal sources. For the purpose of this analysis, directly generated revenue sources does not include the revenue collected from passenger fares or other revenue sources such as advertising. Instead, directly generated revenue includes revenue obtained from local taxes. The information is presented in Table 3 and is based on data from Fiscal Year 2006. Because of the different funding sources for combined operating and capital assistance, the results are presented as averages in terms of total operating and capital sources. Another point to note is that funding levels reported to the NTD include both fixed route and demand responsive services and are not separated by mode.

|                             | Peer       | Group               | Metro      |                     |       |
|-----------------------------|------------|---------------------|------------|---------------------|-------|
| Characteristic              | Average    | Percent<br>of Total | Value      | Percent<br>of Total | Rank* |
| Operating Funding           |            |                     |            |                     |       |
| Directly Generated          | \$7,924.7  | 21.3                | \$0.0      | 0.0                 | 12    |
| Local                       | \$5,427.8  | 14.6                | \$14,119.7 | 40.6                | 4     |
| State                       | \$17,354.2 | 46.6                | \$15,532.4 | 44.7                | 7     |
| Federal                     | \$6,525.6  | 17.5                | \$5,127.2  | 14.7                | 6     |
| Total                       | \$37,231.1 | 100.0               | \$34,779.3 | 100.0               | 7     |
| Capital Funding             |            |                     |            |                     |       |
| Directly Generated          | \$423.6    | 6.4                 | \$0.0      | 0.0                 | 12    |
| Local                       | \$477.2    | 7.3                 | \$1,013.3  | 20.0                | 3     |
| State                       | \$1,409.5  | 21.4                | \$3,305.5  | 65.2                | 2     |
| Federal                     | \$4,274.7  | 64.9                | \$747.7    | 14.8                | 10    |
| Total                       | \$6,585.1  | 100.0               | \$5,066.5  | 100.0               | 6     |
| Total Operating and Capital |            |                     |            |                     |       |
| Directly Generated          | \$8,348.3  | 19.1                | \$0.0      | 0.0                 | 12    |
| Local                       | \$5,905.0  | 13.5                | \$15,133.0 | 38.0                | 4     |
| State                       | \$18,763.8 | 42.8                | \$18,837.9 | 47.3                | 6     |
| Federal                     | \$10,799.2 | 24.7                | \$5,874.9  | 14.7                | 9     |
| Total                       | \$43,816.3 | 100.0               | \$39,845.8 | 100.0               | 9     |

| Table 3 - Peer Comparison of Transit Funding Sources |
|--|
| All dollar (\$) amounts in thousands                 |

\*Rank of 1 is best, 12 is worst Source: 2006 National Transit Database

• The largest source of operating funds for Metro Transit comes from the state (44.7%), with a majority of the state funding coming from the general revenue fund. Local funds account for 40.6 percent of Metro Transit's operating assistance, with a majority of these funds coming from the City of Madison's general revenue fund. Federal funding comprises the remaining portion of Metro Transit's operating funding sources (14.7%).

The peer group obtains almost one-half of its operating funding from state sources (46.6%). The next largest source of operating funds for the peer group comes from directly generated tax revenue (21.3%). This funding source reflects the ability of certain

transit systems to collect local tax revenue from their respective communities. Four of the 11 peer systems obtain a portion of their operating funding from revenue generated by the local sales tax or local property tax. Metro Transit has not been granted this ability to collect tax revenue from the City of Madison for the purpose of funding transit. The remaining funding sources come from the federal government (17.5%) and local sources (14.6%).

Overall, Metro Transit is below the peer average and ranks in the middle of the peer group (rank of 6 or 7) in terms of state, federal, and total operating funding. However, Metro Transit obtained over two times more local funding compared to the peer average and was near the top of the peer group with a ranking of 4.

• In terms of capital assistance, the state of Wisconsin is the primary entity that funds capital projects for Metro Transit (65.2%), with the funds coming from the general revenue fund. Only six out of the 11 peer systems obtain capital funding from their respective states. In fact, capital funding for the peer group largely comes from the federal government (64.9%). The remaining portion of Metro Transit's capital assistance comes from local sources (20.0%) and the federal government (14.8%), while the peer group receives 21.41 percent of capital funding from the state and 13.7 percent from local and directly generated sources.

Overall, Metro Transit is well above the peer average in terms of state and local capital funding and is ranked 2 and 3, respectively. However, Metro Transit receives the third lowest amount of capital funding compared with the peer group, which is largely attributed to the federal funding formula that provides funds based on population size. The total amount of capital funding Metro Transit obtained in FY 2006 was approximately \$1.5 million less than the peer average and placed Metro Transit in the middle of the peer group with a rank of 6.

• In terms of total funding, the largest percentage of Metro Transit's operating and capital funding comes from the State of Wisconsin (47.3%). Local funding (38.0%) comprises the second largest source of funding assistance, with federal funding (14.7%) providing the remaining operating and capital funding.

State governments provide the largest funding source to the peer group systems (42.8%), with the federal government being the second largest funding source (24.7%). Directly generated taxes account for 19.1 percent of the total operating and capital funding of the peer group. Local government provides the lowest amount of total assistance with 13.5 percent.

Metro Transit is above average in terms of the total amount of operating and capital funding contributed by the State of Wisconsin and local governments, but the low level of federal funding places Metro Transit in the lower half of peer group for total operating

and capital assistance. It is important to note that the amount of federal funding provided to transit systems is based on a formula that includes population, so it is not surprising that Metro Transit is below the peer average in this area. Metro Transit is last in terms of directly generated taxes, because it does not have the legal authority to levy taxes within the service area; however, less than half of the peer systems have such a revenue source. As noted previously, funding levels for Metro Transit and the peer systems are for all modes (i.e., fixed route bus and demand responsive).

**Financial, and General and Administrative Measures** - Table 4 presents a number of key financial, and general and administrative (G&A) performance measures. In this analysis, the ranking represents performance in terms of general and administrative activities from best (1) to worst (12), as opposed to highest and lowest in the prior tables.

|                                     |           | Peer Group |           |           | Metro Transit         |       |  |  |
|-------------------------------------|-----------|------------|-----------|-----------|-----------------------|-------|--|--|
| Variable                            | Minimum   | Maximum    | Average   | Value     | Percent<br>Difference | Rank* |  |  |
| Cost Measures                       |           |            |           |           |                       |       |  |  |
| Cost per Passenger                  | \$3.19    | \$5.66     | \$3.97    | \$2.92    | -26.4                 | 1     |  |  |
| Cost per Revenue Mile               | \$4.66    | \$9.92     | \$7.17    | \$7.47    | 4.2                   | 8     |  |  |
| Cost per Revenue Hour               | \$64.10   | \$128.49   | \$94.30   | \$96.14   | 2.0                   | 7     |  |  |
| Cost per Peak Vehicle               | \$162,734 | \$494,323  | \$267,417 | \$210,443 | -21.3                 | 3     |  |  |
| Overall Financial                   |           |            |           |           |                       |       |  |  |
| Revenue per Passenger               | \$0.69    | \$1.10     | \$0.85    | \$0.66    | -22.4                 | 12    |  |  |
| Farebox Recovery Ratio              | 13.0%     | 30.3%      | 22.1%     | 22.5%     | 1.7                   | 7     |  |  |
| General & Administrative            |           |            |           |           |                       |       |  |  |
| G&A Costs per Total Operating Costs | 10.0%     | 25.1%      | 16.2%     | 12.2%     | -24.5                 | 2     |  |  |
| G&A Employees per Total Employees   | 8.4%      | 11.9%      | 9.9%      | 8.6%      | -13.1                 | 3     |  |  |

 Table 4 - Peer Comparison of Financial and G&A Measures

\*Rank of 1 is best, 12 is worst Source: 2006 National Transit Database

- The cost per passenger at Metro Transit was \$2.92 during FY 2006, which was the lowest (best) among the peer group and was 26.4 percent lower than the peer average of \$3.97. This favorable performance can be attributed to Metro Transit carrying more riders than the peer average while also having lower operating costs.
- Financial efficiency is measured utilizing three factors. These factors are cost per revenue mile, cost per revenue hour, and cost per peak vehicle. These measures indicate the value metro Transit attains in terms of vehicle usage in comparison to its peer systems. In terms of costs per revenue mile, Metro Transit was higher than the peer average cost of \$7.17. This productivity measure assesses and compares the cost of each mile of service provided. Metro Transit was 4.2 percent higher than the peer average for this measure. Cost per revenue hour measures the fully allocated cost of system operation per each hour of revenue service for each of the peer systems. Metro Transit was two percent above the peer average of \$94.30 with an hourly rate of \$96.14. The

third measure assesses the amount of operating costs expended per peak vehicle, which allows for a comparison of costs while controlling for the general size of the transit system. For this indicator, Metro Transit was 21.3 percent below the peer average of \$267,417, with a cost per peak vehicle of \$210.443.

• Metro Transit's revenue per passenger in FY 2006 was \$0.66 which was the lowest figure of the peer group and was 22.4 percent lower than the peer average of \$0.85. Metro Transit's lower revenue per passenger is attributed to the fact that the system offers Unlimited Ride Pass Agreements with several local institutions and major employers including UW-Madison and the City of Madison; in addition, Metro Transit also offers discounted fare programs such as the 31-Day Pass and the EZ Rider Semester Youth Pass. These programs offer free or deeply discounted rides, which lower the average fare that is paid by the riders. The low revenue per passenger figure is viewed negatively in the peer group context, although it is not necessarily negative from a policy standpoint. Rather, it reflects local policy of encouraging ridership by providing low or discounted fares.

Metro Transit's low revenue per passenger performance coincided with a farebox recovery ratio that was slightly better than the peer average. In FY 2006, Metro Transit's farebox recovery was 22.5 percent compared to the peer average of 22.1 percent. This above average performance can be attributed to the fact that Metro Transit had a much higher ridership level than the peer group, which in turn helped to offset some of the effects of providing discounted fares to Metro Transit riders.

• Metro Transit exhibits favorable performance in terms of G&A costs as percent of total operating costs, and G&A employees as a percentage of total employees. G&A costs at Metro Transit account for 12.2 percent of total operating costs compared to the peer average of 16.2 percent. This is a difference of almost 25 percent and is the second lowest figure of the peer group. G&A employees at Metro Transit account for 8.6 percent of total employees, which is the third lowest figure of the peer group and is about 13 percent lower than the peer average of 9.9 percent. These statistics indicate that a much lower proportion of Metro Transit's costs are dedicated to administrative activities when compared to its peers.

The Metro Transit performance in the above areas is favorable. Metro Transit costs on a per revenue mile and per revenue hour basis are similar to its peers, but the agency has a lower cost per passenger, a higher farebox recovery ratio, and exhibits lower G&A costs and a lower number of G&A employees. Although Metro Transit collects a smaller amount of revenue per passenger, this decision to keep fare prices low may be contributing to Metro Transit's higher ridership when compared to the peer average (See Table 2).

**Transportation Performance** - Table 5 shows the performance measures related to transportation activities at Metro Transit. These performance measures relate to the efficiency of

day-to-day operations including scheduling, street supervision, dispatching and training. Several different categories of transportation performance are presented below:

|                                |         | Peer Group |         |        | Metro Transit         |       |  |
|--------------------------------|---------|------------|---------|--------|-----------------------|-------|--|
| Characteristic                 | Minimum | Maximum    | Average | Value  | Percent<br>Difference | Rank* |  |
| Transportation Efficiency      |         |            |         |        |                       |       |  |
| Operations Cost/Total Costs    | 46.9%   | 64.2%      | 59.8%   | 69.0%  | 15.4                  | 1     |  |
| Operation Employ/Total Employ  | 62.7%   | 73.5%      | 69.6%   | 73.6%  | 5.8                   | 1     |  |
| Vehicle Hours/Operations       |         |            |         |        |                       |       |  |
| Employee                       | 976     | 1,855      | 1,507   | 1,302  | -13.9                 | 10    |  |
| Transportation Effectiveness   |         |            |         |        |                       |       |  |
| Passengers per Revenue Mile    | 1.01    | 2.64       | 1.84    | 2.56   | 39.1                  | 2     |  |
| Passengers per Revenue Hour    | 13.9    | 32.1       | 24.2    | 32.9   | 36.1                  | 1     |  |
| Passengers per Peak Vehicle    | 39,203  | 95,483     | 67,343  | 72,063 | 7.0                   | 4     |  |
| Passengers per Total Employees | 15,906  | 29,958     | 22,359  | 28,484 | 27.4                  | 2     |  |

 Table 5 - Peer Comparison of Transportation Performance Measures

\* Rank of 1 is best, 12 is worst Source: 2006 National Transit Database

- The total cost of the transportation function accounts for 69.0 percent of the total cost of the Metro Transit system. This is highest relative cost of the peer comparison. Along with the G&A measures, this demonstrates that Metro Transit spends more of its funds on placing bus service on-the-street and fewer funds on administrative activities when compared to its peers. Operating employees at Metro Transit comprise almost three-quarters of the work force, which is the highest percentage of the peer group. However, the high number of operating employees may indicate an inefficient use of resources at Metro Transit in that the agency had the third lowest number of vehicle hours per operating employee in FY 2006 (1,302), and was 13.6 percent lower than the peer average of 1,507.
- Metro Transit performs better than the peer average for all measures related to transportation effectiveness including passengers per revenue mile, passengers per revenue hour, passengers per total employees, and passengers per peak vehicle. The four measures are each ranked near the top of the peer group, and indicate that the service provided by Metro Transit is being utilized at a higher rate compared to the overall peer average.

In summary, Metro Transit spends a considerably higher share of its expenses compared with its peers on operations, and indicates that the agency is focused on providing the greatest amount of bus service possible. However, the provision of service might not be as efficient as the peer group based on the fact that Metro Transit has a below average vehicle hours per operating employee ratio. **Maintenance Performance -** The information on Table 6 provides a summary of the relative efficiency of the Metro Transit maintenance program. Maintenance efficiency measures and maintenance cost performance are reviewed below:

|   |          | Peer Group |          | Metro Transit |                       |       |
|---|----------|------------|----------|---------------|-----------------------|-------|
| Characteristic                              | Minimum  | Maximum    | Average  | Value         | Percent<br>Difference | Rank* |
| Maintenance Measures                        |          |            |          |               |                       |       |
| Spares Ratio                                | 11.9%    | 30.8%      | 18.7%    | 18.1%         | -2.9                  | 6     |
| Vehicle Miles per Active Bus                | 23,405   | 46,134     | 34,118   | 23,396        | -31.4                 | 9     |
| Vehicle Miles per                           |          |            |          |               |                       |       |
| Maintenance Employee                        | 49,145   | 121,130    | 87,478   | 80,010        | -8.5                  | 8     |
| Vehicle Hours per                           |          |            |          |               |                       |       |
| Maintenance Employee                        | 4,076    | 8,578      | 6,450    | 6,016         | -6.7                  | 8     |
| Buses per Maintenance                       |          |            |          |               |                       |       |
| Employee                                    | 1.60     | 3.84       | 2.60     | 3.03          | 16.5                  | 3     |
| Miles per Gallon                            | 2.77     | 5.18       | 3.97     | 4.24          | 6.8                   | 5     |
| Vehicle Miles per<br>Maintenance Road Calls | 1,430    | 21,184     | 7,252    | 7,057         | -2.7                  | 5     |
| Maintenance Costs                           |          |            |          |               |                       |       |
| Per Active Bus                              | \$17,767 | \$60,429   | \$39,810 | \$28,350      | -28.8                 | 3     |
| Per Peak Bus                                | \$25,664 | \$74,898   | \$48,736 | \$34,631      | -28.9                 | 3     |
| Per Vehicle Mile                            | \$658    | \$2,110    | \$1,209  | \$1,074       | -11.1                 | 6     |

 Table 6 - Peer Comparison of Maintenance Measures

\* Rank of 1 is best, 12 is worst Source: 2006 National Transit Database

- Metro Transit's spare ratio (18.1%) is similar to the peer average of 18.7 percent and ranks in the middle of the peer group. According to the Federal Transit Administration (FTA), a spare ratio of 20 percent or higher may indicate an inefficient use of resources, since more vehicles have been purchased than are needed for normal operations. However, a small spare ratio of 10 percent or less may indicate potential service reliability problems due to the fact that not enough vehicles are available to substitute for other vehicles in the fleet undergoing regular maintenance or for vehicles that have broken down during the day. Metro Transit's spare ratio is appropriate.
- Metro Transit operates the fourth lowest number of vehicle miles per active bus. This can indicate a less efficient use of resources. However, the fact that Metro Transit operates at an average speed (13.3 MPH) which is practically equal to the peer average (13.6 MPH) indicates that Metro Transit uses its vehicles at a similar level of efficiency as its peers. One contributing factor could be the inclusion of vehicles that are not typically used in daily operation in the list of active buses. This issue will be investigated further as part of the functional area review.
- The Metro Transit maintenance workforce is below the peer average in terms of vehicle miles and vehicle hours per maintenance employee (-8.5 % and -6.7 %, respectively).

This finding is in line with the fact that Metro Transit operates fewer vehicle miles per active bus in the fleet. The fact that Metro Transit has 3.03 buses per maintenance employee, which is 16.5 percent higher than the peer average of 2.60, could be indicative of more efficient use of maintenance employees when compared to the peers, or an indication of understaffing in this area. Again, this will be further assessed in the functional area review.

- The Metro Transit bus fleet has a better fuel efficiency (4.24 miles per gallon) than the peer average (3.97 miles per gallon). However, this performance is down from the 2003 performance review when Metro Transit buses averaged 4.34 miles per gallon. Modest improvements in fuel efficiency could have significant cost benefits in light of today's high fuel prices. This may also be a function of changes in fleet mix (i.e., a higher percentage of full sized buses).
- The next category measures the number of vehicle miles operated for each maintenance road call performed for mechanical reasons. It is an indicator both of maintenance quality and the age and condition of the bus fleet. Higher values generally indicate better performance. Metro Transit exhibited a slightly higher road call rate than the peer average, with 7,057 miles between road calls compared with 7,251 miles for the peer group. This performance places Metro Transit in the middle of the peer group with a ranking of 5. Metro Transit exhibited a much better road call rate during the 2003 performance review when the system exhibited 12,371 miles between road calls while the peer average was 5,806 miles between road calls.
- Metro Transit's maintenance costs per active bus and per peak bus are the third lowest of the peer group and are approximately 29 percent lower than the peer average. Metro Transit's maintenance cost per vehicle mile is approximately 11 percent lower than the peer average and places Metro Transit in the middle of the peer group with a rank of 6. This may be a favorable performance in that it indicates efficiency, or could be an indicator that maintenance expenditures are too low. This will be investigated further as part of the functional area review.

In summary, Metro Transit's vehicle maintenance performance is generally favorable. The agency performed better than the peer average in the areas of spares ratio, fuel efficiency, and maintenance costs, and is comparable with the peer group in terms of maintenance workforce efficiency. Although Metro Transit's road call performance was similar to the peer average, this performance exhibited a significant decline from the 2003 performance review.

## **Trend Analysis**

The second analysis technique reviews Metro Transit's performance over time rather than a single "snapshot" as in the preceding peer group analysis. Many of the same indicators are

used as those used in the peer group analysis. The results of the two analyses are combined in the next section. Only the Service Level Peer Group is used in this section, rather than the smaller group of systems and communities from the Population Peer Group for the per capita analysis.

The information presented here focuses on the two end years (i.e., FY 2002 and FY 2006) since five years should provide sufficient time to delineate discernable trends. The overall rate of change is calculated. FY 2006 was used since it is the last year in which peer data was available for all of the systems.

In the analysis that follows, the average of the peer systems for the evaluation measures is computed for both 2002 and 2006. The percent change between 2002 and 2006 is computed. The Metro Transit information for both 2002 and 2006 is reported along with the percent change. Therefore, the relative change in the peer average can be compared with the change in performance by Metro Transit for the same period.

In performing the peer analysis, only the results of the Service Level Peer Group data (Table 2), the financial and G&A measures (Table 4), transportation performance measures (Table 5), and maintenance performance measures (Table 6) are compared with 2002 data. Funding levels (Table 3) which indicate the sources of operating and capital assistance for both fixed route and demand responsive services was not examined in the trend analysis. While there was some fluctuation in capital funding which is affected by specific projects, the operating funding sources were similar between 2002 and 2006.

**Peer Group Characteristics Trend Comparison** - As seen in Table 7, the change in the peer system averages between 2002 and 2006 are compared with the change in the same statistics for Metro Transit between 2002 and 2006. Comparisons with population and population density were not performed because both end years are based on the 2000 U.S. Census and thus, population statistics are the same.

|                               |            | Peer Group |                   |            | Metro Transit |                   |  |
|-------------------------------|------------|------------|-------------------|------------|---------------|-------------------|--|
| Characteristic                | 2002       | 2006       | Percent<br>Change | 2002       | 2006          | Percent<br>Change |  |
| Revenue Miles                 | 5,785,000  | 5,618,500  | -2.9              | 5,373,200  | 4,703,900     | -12.5             |  |
| Revenue Hours                 | 414,500    | 426,800    | 3.0               | 363,100    | 365,500       | 0.7               |  |
| Peak Vehicles                 | 156        | 153        | -1.9              | 167        | 167           | 0.0               |  |
| Unlinked Passenger Trips      | 10,245,200 | 10,494,800 | 2.4               | 10,895,100 | 12,034,500    | 10.5              |  |
| Operating Expenses (in 000's) | \$32,488.0 | \$41,160.1 | 26.7              | \$29,385.6 | \$35,143.9    | 19.6              |  |
| Operating Revenue (in 000's)  | \$7,499.7  | \$9,105.4  | 21.4              | \$6,172.1  | \$7,912.2     | 28.2              |  |
| Miles per Hour                | 15.9       | 13.4       | 15.7              | 13.2       | 13.3          | 0.8               |  |

### Table 7 - Trend Analysis of Overall Statistics

Source: 2002 & 2006 National Transit Database

Highlights of the peer group trend analysis inlcude:

- The amount of service provided by Metro Transit declined relative to the peer group average during the review period. Metro Transit's revenue miles decreased by 12.5 percent, while the amount of revenue hours increased by less than one percent. The peer group exhibited a 2.9 percent decline in terms of revenue miles and a three percent increase in revenue hours.
- The peak vehicle requirement at Metro Transit did not change during the review period, while the peer average exhibited a 1.9 percent decline in peak vehicles.
- Ridership on the Metro Transit system increased by 10.5 percent during the review period, while the peer group average increased by 2.4. The fact that Metro Transit's ridership increased at a much higher rate than revenue hours indicates an increase in productivity and suggests that the slight service increase has been concentrated in the core of the service area.
- In terms of financial measures, Metro Transit's total operating costs increased by 19.6 percent, which was lower than the 26.7 percent increase experienced by the peer group. Metro Transit's operating revenue increased by approximately 28 percent during the review period compared to a 21.4 percent increase exhibited by the peer group. This increase in revenue is consistent with Metro Transit's increase in ridership.
- Finally, the average operating speed of Metro Transit buses in FY 2006 was 13.3 miles per hour, which was about the same speed as in FY 2002 when Metro Transit averaged 13.2 miles per hour. This was better than the peer average, which exhibited a 15.7 percent decline in average speed during the review period.

In summary, Metro Transit provided about the same level of service in 2006 for two of the three operating statistics as it provided in 2002. For revenue miles, the amount of service declined between 2002 and 2006. The peer group exhibited a slightly higher increase in service during the review period, with its operating costs increasing at higher rate compared to Metro Transit accordingly. Although Metro Transit's level of service stayed about the same during the review period, ridership on the transit system increased by 10.5 percent. The increase in ridership and average fare at Metro Transit resulted in a significant increase in revenue

**Financial and G&A Trends** - Table 8 presents trends between 2002 and 2006 for a number of key financial and G&A performance measures.

|                                   |           | Peer Group |          | Metro Transit |           |          |
|-----------------------------------|-----------|------------|----------|---------------|-----------|----------|
| Characteristic                    | 2002      | 2006       | % Change | 2002          | 2006      | % Change |
| Cost Measures                     |           |            |          |               |           |          |
| Cost per Passenger                | \$3.43    | \$3.97     | 15.7     | \$2.70        | \$2.92    | 8.1      |
| Cost per Revenue Mile             | \$5.60    | \$7.17     | 28.0     | \$5.47        | \$7.47    | 36.6     |
| Cost per Revenue Hour             | \$77.57   | \$94.30    | 21.6     | \$80.94       | \$96.14   | 18.8     |
| Cost per Peak Vehicle             | \$206,500 | \$267,417  | 29.5     | \$175,962     | \$210,443 | 19.6     |
| <b>Overall Financial Measures</b> |           |            |          |               |           |          |
| Revenue Per Passenger             | \$0.78    | \$0.85     | 9.0      | \$0.57        | \$0.66    | 15.8     |
| Farebox Recovery                  | 23.6%     | 22.1%      | -6.0     | 21.0%         | 22.5%     | 7.2      |
| General & Administrative          |           |            |          |               |           |          |
| G&A Costs per Total Costs         | 16.8%     | 16.2%      | -3.7     | 12.0%         | 12.2%     | 1.8      |
| G&A Employ per Total Employees    | 12.4%     | 9.9%       | -20.7    | 9.0%          | 8.6%      | -4.8     |

Table 8 - Trend Analysis of Financial and G&A Measures

Source: 2002 & 2006 National Transit Database

- Metro Transit's cost per revenue hour increased by 18.8 percent compared to the peer average increase of 21.6 percent, and Metro Transit's cost per peak vehicle increased by 19.6 percent compared to a 29.5 percent increase exhibited by the peer group. Further, Metro Transit's cost per passenger increased at a lower rate than the peer average during the review period, 8.1 percent versus 15.7 percent. The only area where Metro Transit's costs increased at a greater rate than the peer group was cost per revenue mile, which increased 36.6 percent compared to a 28 percent increase exhibited by the peer group. Overall, this is favorable performance.
- Metro Transit's revenue per passenger increased by \$0.09 or about 16 percent between 2002 and 2006, while the revenue per passenger for the peer group increased by nine percent. Metro Transit's farebox recovery increased 7.2 percent during the review period compared to a six percent decline in farebox revenue exhibited by the peer group.
- The G&A costs at Metro Transit increased to 12.2 percent of total costs in 2006, which is only about two percent higher than the statistic was in 2002. The peer average exhibited a 3.7 percent decline in G&A costs during the review period, but the peer group G&A costs still represented 15.8 percent of total costs in 2006 which is higher than the Metro Transit figure of 12.2 percent. The number of Metro Transit G&A employees as a percent of total employees declined by 4.8 percent during the review period, while the percentage of G&A employees per total employee for the peer group declined by almost 21 percent. In FY 2006 almost 10 percent of the peer group workforce was made up of G&A employees compared to about nine percent for Metro Transit.

In summary, the Metro Transit performance in the above measures is generally favorable. Three of the four cost measures were below the peer average, while an increase in passenger revenue at the agency resulted in a higher revenue per passenger figure and a better farebox recovery compared with the peer group. Although the peer group lowered administrative costs and reduced the administrative workforce as a percent of total costs and employees at a rate higher than Metro Transit during the review period, Metro Transit's G&A measures were still lower than the peer average at the end of FY 2006.

**Transportation Performance Trends** - As shown in Table 9, transportation performance of Metro Transit is compared with the peer average for the 2002 and 2006 review period, with the following results:

|                                | Peer Group |        |                   | Metro Transit |        |                   |
|--------------------------------|------------|--------|-------------------|---------------|--------|-------------------|
| Characteristic                 | 2002       | 2006   | Percent<br>Change | 2002          | 2006   | Percent<br>Change |
| Transportation Efficiency      |            |        |                   |               |        |                   |
| Operations Cost/Total Costs    | 59.6%      | 59.8%  | 0.3               | 65.0%         | 69.0%  | 6.1               |
| Operation Employ/Total Employ  | 68.0%      | 69.6%  | 2.4               | 72.2%         | 73.6%  | 2.0               |
| Vehicle Hours/Operations       |            |        |                   |               |        |                   |
| Employees                      | 1,540      | 1,507  | -2.1              | 1,410         | 1,302  | -7.7              |
| Transportation Effectiveness   |            |        |                   |               |        |                   |
| Passengers per Revenue Mile    | 1.77       | 1.84   | 4.0               | 2.03          | 2.56   | 26.1              |
| Passengers per Revenue Hour    | 24.1       | 24.2   | 0.2               | 30.01         | 32.9   | 9.7               |
| Passengers per Peak Vehicle    | 64,546     | 67,343 | 4.3               | 65,240        | 72,063 | 10.5              |
| Passengers per Total Employees | 21,489     | 22,359 | 4.0               | 27,522        | 28,484 | 3.5               |

 Table 9 - Trend Analysis of Transportation Performance Measures

Source: 2002 & 2006 National Transit Database

- In terms of transportation efficiency, operations cost as a percent of total costs at Metro Transit increased by approximately six percent, while the peer average exhibited a very modest increase of 0.3 percent. A total of 73.6 percent of the Metro Transit work force is employed in operations, which is a slight increase from 72.2 percent in 2002. The percentage of peer group employees who were employed in operations increased from 68.0 percent to 69.6 percent during the review period. The number of vehicle hours per operations employee at Metro Transit decreased by 7.7 percent during the review period, while the peer average exhibited a decrease of 2.1 percent.
- In the four measures related to passengers, Metro Transit was increasing at a higher rate than its peers in three of the four measures including passengers per revenue mile, passengers per revenue hour, and passengers per peak vehicle. Although the number of passengers per total employees at Metro Transit increased 3.5 percent during the review period, the peer average increased at a higher, but similar, rate of four percent. However, Metro Transit still carried more passengers per employee in FY 2006 compared with the peer average.

In summary, Metro Transit continues spending a larger portion of its total costs on

placing service on the street which has resulted in a positive trend in ridership and effectiveness during the review period.

**Maintenance Performance Trends -** As shown in Table 10, the trend in Metro Transit maintenance performance between 2002 and 2006 was reviewed with the following results:

|                              | Peer Group |          |         |          | Metro Transit |         |  |
|------------------------------|------------|----------|---------|----------|---------------|---------|--|
|                              |            |          | Percent |          |               | Percent |  |
| Characteristic               | 2002       | 2006     | Change  | 2002     | 2006          | Change  |  |
| Maintenance Measures         |            |          |         |          |               |         |  |
| Spares Ratio                 | 17.9%      | 18.7%    | 4.1     | 15.2%    | 18.1%         | 19.1    |  |
| Vehicle Miles per Active Bus | 34,913     | 34,118   | -2.3    | 27,275   | 23,396        | -14.2   |  |
| Vehicle Miles per            | 00 770     | 07 170   | 1.2     | 76 541   | 80.010        | 15      |  |
| Maintenance Employees        | 00,270     | 07,470   | -1.5    | 70,341   | 80,010        | 4.5     |  |
| Vehicle Hours per            | 6 308      | 6 450    | 23      | 5 800    | 6.016         | 3.6     |  |
| Maintenance Employees        | 0,508      | 0,430    | 2.5     | 5,809    | 0,010         | 5.0     |  |
| Buses per Maintenance        |            |          |         |          |               |         |  |
| Employees                    | 2.55       | 2.60     | 2.0     | 2.81     | 3.03          | 7.8     |  |
| Miles per Gallon             | 4.04       | 3.97     | -1.7    | 4.40     | 4.24          | -3.6    |  |
| Vehicle Miles per            | 7 4 4 5    | 7 252    | 26      | <u> </u> | 7.057         | 15.0    |  |
| Maintenance Road Calls       | 7,443      | 1,232    | -2.0    | 8,390    | 7,037         | -13.9   |  |
| Maintenance Costs            |            |          |         |          |               |         |  |
| Per Active Bus               | \$33,221   | \$39,810 | 19.8    | \$29,427 | \$28,350      | -3.7    |  |
| Per Peak Bus                 | \$40,358   | \$48,736 | 18.3    | \$34,714 | \$34,631      | -2.4    |  |
| Per Vehicle Mile             | \$973      | \$1,209  | 24.3    | \$1,079  | \$1,074       | -0.5    |  |

| Table 10 - Frend Analysis of Maintenance Performance Measures | Table 10 - | Trend A | Analysis o | of Maintenance | Performance | Measures |
|---|------------|---------|------------|----------------|-------------|----------|
|---|------------|---------|------------|----------------|-------------|----------|

Source: 2002 & 2006 National Transit Database

- The spares ratio at Metro Transit has increased by 19.1 percent between 2002 and 2006 while the peer average increased at a lower rate of 4.1 percent. However, the Metro Transit spare ratio was 18.1 percent in 2006, which was very similar to the peer group average of 18.7 percent. Further, this spares ratio is an appropriate value and is now more in line with Federal Transit Administration guidelines regarding this issue than it was in 2002.
- Metro Transit has decreased the number of miles per active bus by 14.2 percent, which is higher than the 2.3 percent decline exhibited by the peer group.
- Metro Transit's maintenance staff productivity measures (i.e., miles per maintenance employee, hours per maintenance employee, and buses per maintenance employee) have improved at a greater rate than the peer group.
- The fuel efficiency of Metro Transit buses declined by 3.6 percent during the review period compared to a 1.7 percent decline exhibited by the peer group. However, in FY 2006, Metro Transit's bus fleet attained better mileage (4.24 mpg) compared with the

peer group (3.97 mpg). The declining trend in fuel efficiency could be the result of changes in the fleet mix.

- Metro Transit exhibited a declining trend in the area of road call performance. Between 2002 and 2006, the number of vehicle miles per road calls declined by 15.9 percent compared to a 2.6 percent decline exhibited by the peer group. This change in performance may be the result of changes or improvements in recordkeeping. Further, a review of Metro Transit's maintenance department will be conducted as part of this performance review, and will provide the necessary analysis needed to determine whether or not Metro Transit is deficient in the area of road call performance.
- Metro Transit exhibited an improving trend in terms of maintenance efficiency in that maintenance costs per active bus, per peak bus, and per vehicle mile all declined during the review period. Conversely, the peer group's maintenance costs increased at a rate of between 18.3 percent and 24.3 percent.

In summary, the maintenance trend performance at Metro Transit is generally favorable. Metro Transit showed an improving trend in the areas of maintenance staff productivity and maintenance costs, and was very similar to the peer average in terms of the spares ratio. Although the fuel efficiency of the Metro Transit bus fleet declined relative to the peer average, Metro Transit buses still attained better mileage in 2006 compared to the peer group. The one area where Metro Transit was clearly outperformed by the peer group was in the area of road call performance. As noted, this may be the result of how these figures have been reported. The detailed review of Metro Transit's maintenance function to be conducted by study team will investigate these issues further.

# **Combination Analysis**

This final technique combines the results of the peer group analysis and the trend analysis. Placing these results side by side enables each indicator to be assigned to one of four categories:

- 1. <u>Better</u> than the peer group average and <u>improving</u> relative to the peer group average over time. For any performance in this category, Metro Transit should be commended.
- 2. <u>Better</u> than the peer group average and <u>declining</u> relative to the peer group average over time. This performance indicates that symptoms of future problems may be evident. In the case of the Metro Transit, it may also mean that the past performance levels were so high that a decline relative to its peers is reasonable.

- 3. <u>Worse</u> than the peer group average but <u>improving</u> relative to the peer group average over time. This performance indicates a positive trend but where additional work is needed.
- 4. <u>Worse</u> than the peer group average and <u>declining</u> relative to the peer group average over time. This performance indicates a problem that may require attention.

The results of this combination approach are presented below.

**Financial and Per Capita Measures** - As seen in Table 11, Metro Transit performs better than the peer group average in the areas of cost per passenger and cost per peak vehicle, farebox recovery, and G&A employees per total employees and G&A costs per total costs.

| Characteristic                    | Metro Transit<br>Performance<br>Relative to Peer Group<br>For FY 2006 | Metro Transit<br>Performance for Trend<br>FY 2002 – FY2006 | Rating |  |  |  |
|-----------------------------------|---|--|--------|--|--|--|
| Cost Measures                     |   |  |        |  |  |  |
| Cost per Passenger                | Better  | Improving  | 1      |  |  |  |
| Cost per Revenue Mile             | Worse   | Declining  | 4      |  |  |  |
| Cost per Revenue Hour             | Worse   | Improving  | 3      |  |  |  |
| Cost per Peak Vehicle             | Better  | Improving  | 1      |  |  |  |
| Overall Financial Measures        |   |  |        |  |  |  |
| Revenue per Passenger             | Worse   | Improving  | 3      |  |  |  |
| Farebox Recovery                  | Better  | Improving  | 1      |  |  |  |
| G&A Measures                      |   |  |        |  |  |  |
| G&A Costs per Total Costs         | Better  | Declining  | 2      |  |  |  |
| G&A Employees per Total Employees | Better  | Declining  | 2      |  |  |  |

Table 11 - Combination Analysis of Financial and G&A Measures

In terms of the trend comparison, Metro Transit exhibited improving performance relative to the peer average in five of the eight measures. Metro Transit exhibited declining trends in both G&A measures and cost per revenue mile. However, Metro Transit's G&A measures still outperformed the peer group in 2006.

**Transportation Performance Measures** - As seen in Table 12, Metro Transit performed above the peer average in two of the three transportation efficiency measures including operations cost per total costs and operations employees per total employees. In terms of trend analysis, Metro Transit's performance was reversed - declining relative to the peer average in two of three measures including operations employees per total employees and vehicle hours per operations employees. However, the ratio of operations employees to total employees did improve during the review period, but just not at the same rate as the peer average.

| Characteristic                     | Metro Transit<br>Performance<br>Relative to Peer Group<br>For FY 2006 | Metro Transit<br>Performance for Trend<br>FY 2002 – FY2006 | Rating |  |  |  |
|------------------------------------|---|--|--------|--|--|--|
| Transportation Efficiency          |   |  |        |  |  |  |
| Operations Cost/Total Costs        | Better  | Improving  | 1      |  |  |  |
| Operations Employ/Total Employ     | Better  | Declining  | 2      |  |  |  |
| Vehicle Hours/Operations Employees | Worse   | Declining  | 4      |  |  |  |
| Transportation Effectiveness       |   |  |        |  |  |  |
| Passengers per Revenue Mile        | Better  | Improving  | 1      |  |  |  |
| Passengers per Revenue Hour        | Better  | Improving  | 1      |  |  |  |
| Passengers per Peak Vehicle        | Better  | Improving  | 1      |  |  |  |
| Passengers per Total Employees     | Better  | Declining  | 2      |  |  |  |

| Table 12 - Transportation refiormance weasures |
|--|
|--|

In terms of transportation effectiveness, Metro Transit was above the peer average and improving relative to the peer group average in three of the four measures including passengers per revenue mile, passengers per revenue hour, and passengers per peak vehicle, and was above the peer average but declining in the area of passengers per total employee. However, Metro Transit still carried more passengers per employee compared to the peer average in 2006.

**Maintenance Performance Measures -** As seen in Table 13, the maintenance performance of Metro Transit is mixed. Overall, Metro Transit was below or worse than the peer average in five of the seven maintenance measures, with three of these measures also exhibiting a declining trend relative to the peer group average. Only one measure (i.e., buses per maintenance employee) was above the peer average and showing an improving trend. Even though Metro Transit was below average and declining in terms of spares ratio, the 18.14 percent spares ratio Metro Transit exhibited in 2006 is appropriate. Further, even though Metro Transit's bus fleet exhibited declining fuel efficiency during the review period, the bus fleet still attained better mileage than the peer group in 2006. Finally, Metro Transit's below average and declining road call performance is inconclusive until further review can determine if this is a result of reporting. These results may be more indicative of anomalies in the data over the five year period and differences in reporting in spite of using NTD information.

| Characteristic                           | Metro Transit<br>Performance<br>Relative to Peer Group<br>For FY 2006 | Metro Transit<br>Performance for Trend<br>FY 2002 - FY 2006 | Rating |  |  |  |
|--|---|---|--------|--|--|--|
| Spares Ratio                             | Worse   | Improving   | 3      |  |  |  |
| Vehicle Miles per Active Bus             | Worse   | Declining   | 4      |  |  |  |
| Vehicle Miles per Maintenance Employees  | Worse   | Improving   | 3      |  |  |  |
| Vehicle Hours per Maintenance Employees  | Worse   | Improving   | 3      |  |  |  |
| Buses per Maintenance Employees          | Better  | Improving   | 1      |  |  |  |
| Miles per Gallon                         | Better  | Declining   | 2      |  |  |  |
| Vehicle Miles per Maintenance Road Calls | Worse   | Declining   | 4      |  |  |  |
| Maintenance Costs                        |   |   |        |  |  |  |
| Per Active Bus                           | Better  | Improving   | 1      |  |  |  |
| Per Peak Bus                             | Better  | Improving   | 1      |  |  |  |
| Per Vehicle Mile                         | Better  | Improving   | 1      |  |  |  |

#### Table 13 - Maintenance Performance Measures

However, Metro Transit excelled in the area of maintenance costs, with the three related measures being above the peer average and improving at a much greater rate than the peer group. In fact, Metro Transit's maintenance costs declined during the review period while the peer average maintenance costs increased at a rate of between 18.3 percent and 24.3 percent.

The combination analysis results in a mostly favorable performance review of Metro Transit. As seen in Table 14, Metro Transit exhibited above average and improving performance in 44 percent of the review areas, and was above the peer average in 16 of the 25 categories, or 64 percent. Of the nine areas with below average performance, five were in maintenance, three were in financial and G&A, and one was in transportation. Four categories, or 16 percent, were below the peer average and declining.

|                    | Financ  | ial and  | Transp  | ortation | Maint   | enance  | E       |         |
|--------------------|---------|----------|---------|----------|---------|---------|---------|---------|
|                    | G&A M   | leasures | Mea     | sures    | Mea     | sures   | 10      | ital    |
| Category           | Ratings | Percent  | Ratings | Percent  | Ratings | Percent | Ratings | Percent |
| 1-Better Than Peer |         |          |         |          |         |         |         |         |
| and Improving      | 3       | 37.5     | 4       | 57.1     | 4       | 40.0    | 11      | 44.0    |
| 2-Better Than Peer |         |          |         |          |         |         |         |         |
| and Declining      | 2       | 25.0     | 2       | 28.6     | 1       | 10.0    | 5       | 20.0    |
| 3-Worse Than Peer  |         |          |         |          |         |         |         |         |
| and Improving      | 2       | 25.0     | 0       | 0.0      | 3       | 30.0    | 5       | 20.0    |
| 4-Worse Than Peer  |         |          |         |          |         |         |         |         |
| and Declining      | 1       | 12.5     | 1       | 14.3     | 2       | 20.0    | 4       | 16.0    |
| Total              | 8       | 100.0    | 7       | 100.0    | 10      | 100.0   | 25      | 100.0   |

| Table 14 -  | Summary | Performance   | Rating |
|-------------|---------|---------------|--------|
| 1 abic 14 - | Summary | I CITOI mance | naung  |

The Wisconsin Department of Transportation has six measures that it uses to evaluate the overall performance of its transit systems. These measures include farebox recovery, expense

per passenger, expense per revenue hour, revenue hours per capita, passengers per capita, and passengers per revenue hour. As seen in Table 15, the performance of Metro Transit is very good compared with its peers in these six measures. The system outperforms the peer average in most measures and ranks as the best performing system in four of the six measures.

|                             |         | <b>Performance Relative</b> |
|-----------------------------|---------|-----------------------------|
| Performance Measures        | Ranking | To Peer Average             |
| Farebox Recovery            | 7 of 12 | 1.7%                        |
| Expense per Passenger       | 1 of 12 | -26.4%                      |
| Expense per Revenue Hour    | 7 of 12 | 2.0%                        |
| Revenue Hours per Capita    | 1 of 9  | 151.3%                      |
| Passengers per Capita       | 1 of 9  | 280.3%                      |
| Passengers per Revenue Hour | 1 of 9  | 36.1%                       |

 Table 15 - Metro Transit Performance Relative to State Measures

## Summary

The results of the peer group and trend analysis show that Metro Transit is a smaller system than the peer average in terms of the amount of service supplied and the dollar amount needed to maintain the current level of service in the Metro Transit service area. Metro Transit also receives a lower level of operating and capital funding compared with the peer average, which has a direct effect on the amount of service that can be provided and hinders Metro Transit's ability to plan and implement new projects and services that would improve public transit in the service area. However, because the City of Madison is the location of a major university and is also the state capital, Metro Transit has the advantage of having a large market of residents who are typically more likely to ride transit and as a result, carries more passengers and exhibits much better passenger productivity levels compared to the larger peer systems. Further, Metro Transit far exceeds its service area population peers in terms of the level of service on a per capita basis.

Metro Transit is generally a more cost efficient and cost effective agency compared to the peers, with half of the cost measures being better than the peer average and the other half only slightly below average. In addition, Metro Transit generally does a better job than the peer group at containing cost increases, which is an improvement from the 2003 performance review when Metro Transit's operating costs increased at a higher rate than the peer average. However, the cost increases at that time were justified on the basis that Metro Transit had to provide a higher level of service to meet higher demand. Although ridership increased on the Metro Transit system during the most recent review period, the agency did not provide a substantial increase in service which would have resulted in higher operating costs that are allocated for operations. This performance indicates that Metro Transit spends more of its resources on providing service while spending less on administrative functions.