FUNCTIONAL AREA REVIEW
PLANNING AND SCHEDULING

The current management review of Metro Transit's Planning and Scheduling Unit is based on interviews held in the winter of 2009 and an analysis of the existing operation practices. Individuals interviewed included the General Manager and all professional staff members of the Unit and the head of the Information Systems Unit . Other interviewees included representatives from the Metropolitan Planning Organization (MPO) and the Madison City Planning Department. In this way, those individuals most directly involved in the planning and scheduling activities of the public transportation system were contacted to understand their current efforts and suggested improvements.

For the most part, the review analyzes the daily functions of the Planning and Scheduling Unit and explores various challenges that are faced, as well as searching for improvement opportunities. A number of topics were identified which are discussed in detail and include the need for increased staff levels, utilization of technology to obtain necessary planning data and staff succession. Other issues are the assignment of responsibilities for short, mid term and long range planning which are currently shared among several agencies. This would include consideration of Metro Transit's role as passive, re-active or pro-active. The review and resulting recommendations should provide timely and useful guidance to the Unit as it continues to respond to conditions in the future.

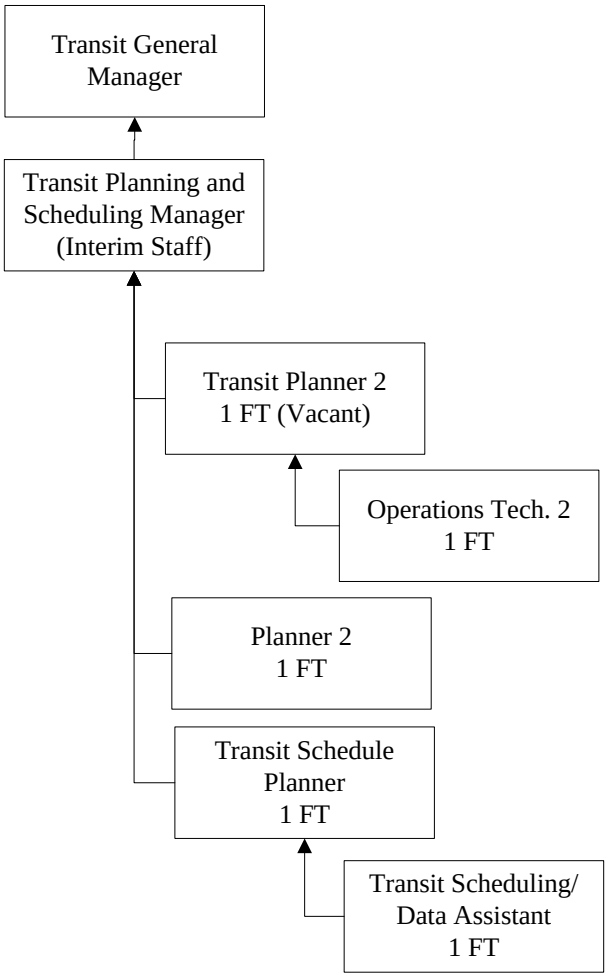
Organization and Staffing

Approved staffing levels of the Planning and Scheduling Unit are unchanged from the prior performance review. The authorized strength of the unit is four professional positions and two employees who are assistants/technicians. The four professional staff members are the Manager, two Planners and the Scheduling Manager. One technician supports the planning function while the other assists in the scheduling process. While all of the professional positions provide support and input to the overall development of the bus system, each position's title and responsibilities are reflective of the expertise and experience of the individual.

The Manager, who reports directly to the General Manager, heads the group and has senior management responsibilities. Recently, that individual retired and one of the planners is serving in that position on a provisional basis. There has been some consideration given to consolidating the Manager and Planner positions. This is not viewed favorably since the number of staff positions was recommended to be increased in the last review. In order to continue with the group's current planning capacity, the Planner position should be filled if the current individual is named the new Manager.

The Planner, who is currently the Unit Manager has responsibilities that include gathering and analyzing ridership data and assembling reports for various agencies, including h nationwide agencies and functions as the Federal Transit Administration (FTA), the American Public Transportation Association (APTA) and the National Transit Database (NTD), as well as state and local agencies like the Wisconsin Department of Transportation (WisDOT), the City of Madison and the Madison Area Transportation Planning Board, which serves as the Metropolitan Planning Organization (MPO) for the Madison Urban Area. This position also holds responsibilities for planning route detours, and special events. The Operations Technician reports to this individual, providing support and additional analysis.

Organizational Structure – Planning and Scheduling Function



The second Planner is relied upon to fill a specific technical role, as the position calls for responsibilities in geographical mapping of data from the Automatic Vehicle Locator (AVL)

system, the registering fareboxes and the Automatic Passenger Counters (APC). Other technical responsibilities include the implementation of the live bus tracking system and maintenance of the web based trip planner on Metro Transit's website, as well as maintenance of the audio and video displays. The Planner is also responsible for neighborhood development plans, schedule vetting and coordination of the ride guide, as well as assembling data for various reports either performed in-house or through outside agencies such as the MPO and some marketing responsibilities.

The Scheduler, as the title implies, performs all of the scheduling tasks and also participates in service planning. The Transit Scheduling Data Assistant works under the Scheduler and has clerical responsibilities and also arranges the supplemental school day services. This position is currently being upgraded to professional status under the title of Assistant Schedule Planner.

As mentioned in the previous management review, Metro Transit formerly had a third Planner; however, that position became the Transit Information Systems (IS) Coordinator, who deals full time with information technology and is no longer part of the Planning and Scheduling Unit. However, the IS Coordinator continues to have significant interactions with the Planning and Scheduling personnel, due to the data that he manages and is able to provide for planning and scheduling purposes. It should be noted that the IS staff should play an expanded role in the collection and analysis of the data provided by the AVL, APC and registering farebox systems with particular focus on the APC technology.

Several years ago, the Service Development Committee was created with participation of the General Manager, members of the Planning and Scheduling Unit along with Metro Transit's Marketing, Customer Service and Operations units. The committee is lead by the Planning and Scheduling Unit. As noted in the earlier review, there is no formal document that governs the Service Development Committee. Such a document is suggested as it would help direct the committee towards proper service changes and the implementation of possible new routes or service areas. That being said, the Service Development Committee is a positive activity performed by Metro Transit as it provides a regular setting for collaboration between Metro Transit employees.

As mentioned in the previous review, Planning and Scheduling Unit's staff level is less than what would be expected given the system size and unit responsibilities. Further, the unit's professional employees are often tasked with responsibilities not typically assigned to such organizations. For instance, development of website features would not be the responsibility of a Planner, while data collection and assembly could be supported by an IS staff member so that planning staff can concentrate on their designated analytical roles.

Should the Planner now serving as the provisional Manager become permanent, two Planner positions will have been vacated in recent years with no one, as yet, hired to replace either. Additionally, as the use of technology continues to increase, data will need to be

collected and properly archived so that it can be easily accessed for analysis. These points underscore the need for additional staff members to serve in a planning capacity with coordination of the IS unit.

Budget

Previous reviews have stated that the Planning and Scheduling Unit budget reflects the costs of personnel salaries, wages and benefits and services only. Excluded from the Unit's budget are costs allocated for materials, supplies, equipment and outside services, unless identified as part of a grant. While this deficiency is relatively minor, it limits the ability to identify the total cost associated with the planning and scheduling activities within Metro Transit. One additional minor point is that mid range and long term planning is performed by the MPO and Madison Planning Department which are not fully reflected in the unit or agency budget.

Goals and Objectives

Metro Transit has a Service Evaluation and Performance Measurement Program which serves as a guide for the annual service modification process and has the overall goal to "develop processes and outcome measures about service quality, customer satisfaction, financial considerations and human resources." The program, which contains broad mission and vision statements intended to serve as policy direction, consists of service goals and standards, service modification standards, a level of service assessment and route performance standards. The Service Development Committee uses these standards to identify service needs and to prepare service proposals in conjunction with data and information gathered from other sources, such as performance data and customer feedback.

While the Service Evaluation and Performance Measure Program provides guidance for annual service modifications, its scope is relatively limited and general in nature. There are two comments relative to goals and objectives. The first relates ranking routes based on passengers per revenue hour ant not taking additional factors into account, such as the subsidy per passenger and farebox recovery ratio. This can provide a more detailed view of the current system and will allow for a more in depth analysis of performance. The second comment relates to goals and objectives that can be used to gauge how well the Planning and Scheduling Unit is performing its function. As with past reviews, it is suggested that Metro Transit adopted a more formalized set of goals and objectives which are specifically related to the activities of planning and scheduling groups and the completion of specific projects or achieving certain milestones.

Planning

The Planning Unit is responsible for monitoring the performance of the current bus system and developing proposals in terms of alignments, frequency and span of service. Their efforts are directed towards a short range planning horizon of one year or less. The planning unit has the responsibility to integrate information received from various sources and then develops proposals based on analysis and review of these data. The planning process is often reactive in nature which is primarily attributable to staffing limitations.

Mid range transit planning is performed by the MPO, which develops a Transit Development Plan (TDP) for the Madison Urban Area every four years. Work on the next TDP, which will detail the planning direction for years 2009-2012, is currently ongoing. Two concerns with the TDP process are the inability to use results from the 2010 U.S. Census and the responsiveness to specific issues facing Metro Transit during the next few years.

Long range planning consists of two primary efforts. The first is the preparation of the long range plan for the region which is a recurring activity of the MPO and required to receive federal transit and highway funds. The second effort is the conduct of a major investment study/alternatives analysis for a potential new start commuter rail option for the area which is being led by the staff of the Madison Planning Department (Transport 2020). Should there be follow-up studies such as preliminary engineering and environmental assessment, it is assumed that these activities would continue to be directed by the Planning Department with current division of responsibilities being maintained.

Another issue that has significant implications for the public transportation system is the creation of a Regional Transportation Authority (RTA). Such an agency could extend the coverage of the transit system beyond Madison's municipal boundaries and provide a dedicated funding mechanism. This would have considerable impact on the planning function and the transit system design. Currently Metro Transit participates in the activities related to new modes and the RTA, but does not lead or direct this activity.

Metro Transit could explore the possibility of increasing their planning efforts beyond the current one year focus with efforts directed to mid and long range planning, although this would mandate an expansion of staffing levels. An expanded planning role for Metro Transit for the short, mid term and long range time periods could afford a higher level consistency in planning than the three different organizations which are currently responsible for each of the planning horizon periods. Currently, Metro Transit does participate and there is coordination between the agencies; however, its role could be characterized as passive, rather than pro-active. In addition to adding staff members to achieve such a goal, additional funding will be required for the planning budget. Another consideration would be institutional and policy related issues since it involves staff and elected officials in Madison and the region.

Staff resources are applied to short range planning which includes data collection and analysis as well as development of service proposals for the next schedule change or one year period. As noted in the prior study, a position does not exist that focuses solely on data collection activities. Data from the AVLs and registering fareboxes are archived regularly; however, analysis using these data is performed in response to inquiries or problems. Little or no use is made of the APC equipment. Many systems have a planning process to examine portions of the system annually with the entire system reviewed every three to five years.

As noted above, the APC data is not gathered or used because of concerns regarding its reliability. This is an issue that will be discussed later in this chapter. It is recognized that the volume of incoming data is massive and that an analysis of all of the data would require significant staff hours to complete. Nonetheless, these data should be gathered in a systematic basis and subject to a continuing process to routinely review the bus system. This would suggest the limitations of current staffing which restricts the extent of data analysis and formulating proposals on a systematic basis.

Metro Transit continues to employ the Transfer Point System (TPS), which has been in place for nearly a decade. Metro Transit has refined some of the bus route departure times at the hubs to eliminate platooning of vehicles in the downtown area. Other concerns relate to overcrowding, since ridership continues to increase, and the limited resources to expand service. As running times increase, there is an impact on layover and the overall cycle time. The timed-transfer nature of the system may warrant changes to route alignments, headways or required number of buses. Other innovative service options could include flex routes, ride request or other demand responsive service in outlying areas as an alternative to conventional fixed route bus service. The creation of a Regional Transportation Authority should be the focus of increased planning activities. These are all planning issues which need to be more fully explored as part of the planning function.

It is also recognized that Metro Transit needs additional service to the communities on the periphery of the City of Madison; however, service to these areas should not come at the expense of the core system. Metro Transit should continue their current practice of billing these areas for service. Additionally, Metro Transit is currently studying the possibility of reducing the number of bus stop locations to every other block, which could alleviate some of the stress on the system and help to improve on time performance. Also, Metro Transit should explore the use of a Bus Rapid Transit (BRT) features in select corridors to improve service levels, reliability and passenger amenities.

As part of this analysis, the planning function is reviewed in terms of internal unit activities and relationships within Metro Transit and other government agencies. Additionally, the status of the prior management review is presented and their relevance in the current environment. The last section presents a series of proposals that attempt to improve the planning function at Metro Transit. Reflecting the strong interrelationship between the planning and scheduling units, some of the recommendations are appropriate for both functions.

Relationships – The close proximity of the scheduling and planning units allows for coordination between the two units and the staff size of each allows for constant and needed collaboration. Each staff member leads the efforts or performs several tasks which reflect their expertise and specialization. The Planning and Scheduling Manager oversees both units and works equally with all units.

Relations with the other Metro Transit units are also maintained. Members of the planning staff perform certain functions which go beyond their scope, and are found working with the Operations, Marketing, Finance and Grants units, as well as in support of the General Manager. Furthermore, the Service Development Committee brings together each of the units on a bi-weekly basis, which facilitates coordination among the participants.

The Operations Unit maintains coordination with the Planning and Scheduling Units for a number of purposes, including dealing with detours due to construction. Operations personnel also report on current service and problems as they arise. Coordination between these units is also accomplished when deciding on bus stop locations and to program bus head signs.

The Planning and Scheduling Units work with the Maintenance Unit for detour sign placement and for farebox repairs. The Marketing Unit, responsible for generating the public timetables and other related information, is kept abreast of any changes slated for implementation. The Finance Unit, which provides information for analytical reasons and for the NTD report, also works with the Planning and Scheduling units when dealing with contracts.

Outside of Metro Transit, the Planning and Scheduling units maintain relationships with the City of Madison, Dane County and the MPO for the Madison Urban Area, as well as with the University of Madison and the Madison Area Technical College. The City of Madison performs the long range planning for Metro Transit through a committee structure.

As previously mentioned, the City of Madison's Planning Department is also working on Transport 2020, which is analyzing a commuter rail option for the Madison area. The Planning Department also provides socioeconomic and demographic data that support transit planning efforts. Additionally, Metro Transit and the City of Madison communicate regularly to discuss street alignment changes, construction issues and special events, all of which can cause detours and require route realignment. Other contacts include the review of land development proposals for the impact on the bus system and support of transit friendly design features.

Metro Transit has some communication with Dane County in regards to the fixed route service; however, the two entities have more coordination issues with respect to paratransit service. The relationship between the MPO and Metro Transit is built around the mid term planning efforts, which produces a TDP once every four years. Metro Transit has contact with municipalities and the University of Wisconsin that contract for service through the transit

agency. WisDOT maintains oversight and review of the bus system as evidenced by the current review.

Overall, the relationships identified in this recent analysis are similar to those documented five years earlier. Coordination is achieved in a variety of areas within Metro Transit, other Madison departments and agencies external to municipal government.

Inputs – The prior management review indicated that the extent of quantitative data was limited to information from registering fareboxes and reliance placed on knowledge of the system, comments from drivers and supervisors and through customer complaints. These sources continue to be used with data being routinely captured through registering fareboxes and Automatic Vehicle Locators (AVLs), and occasionally through the use of Automatic Passenger Counters (APCs).

There is no data management plan which directs the data to be gathered, the analysis to be performed and reports generated. Such a plan would indicate the frequency of analyzing each bus route and the entire system. The information that is currently being gathered is accessed on an as needed basis in response to specific problems and concerns. Other transit agencies employ staff members to analyze available data on a regular basis, which allows for a more pro-active approach to the planning process. A deficiency at Metro Transit process is the ability of staff to utilize the large data base being created which relates to the size of the planning staff.

Another area of concern is the failure to utilize the APC generated information on passenger boardings, alightings and loads. Discussions with staff indicate concerns regarding the accuracy of the data which has resulted in not utilizing this equipment. Some use of the APC data has resulted in the number of ons not matching the number of offs for each or several bus trips. There is a dichotomy of views among staff as to how large an error is introduced by using the APC data. Further, there is the issue of what reliability is acceptable for planning purposes.

The current process of using AVLs and the registering fareboxes to produce information on boarding locations is time consuming and very limited since it does not provide data on offs and passenger loads. APCs can provide similar data without having to compute results from two separate sources. In order to rectify this situation, Metro Transit should first quantify what is an acceptable reliability (e.g., 5 to 10 percent) and the nature of the decisions to be made using the APC data. Metro Transit should invest the necessary staff time and possibly incur costs for outside assistance to be able to obtain useful data. Many systems have found APCs to be a cost effective means to obtain detailed ridership information. Some of the system experienced some problems at the outset, but did devote the time and energy to resolve any problems. Many transit systems are installing APC units on all of their vehicles because the cost of the technology is relatively low, while the data received is timely and useful.

As already mentioned, Metro Transit staff utilizes demographic and land use data provided by the City's Planning Department, reflecting the working relationship between the two

entities. Metro Transit staff has training and capabilities in Graphical Information System (GIS) technologies, which is employed to analyze the data provided by the City.

A set of guidelines used for assessing current routes and developing new services is provided by the Service Evaluation and Performance Measurement Program. The program offers a relatively complete set of service standards that are used in the planning process, including route categories and standards for frequency and headways, route design and bus stops design and location. Standards are also presented for restructuring, adjustments and extensions. Levels of service performance standards are quantified through a rating system that examines service frequency and passenger loads, among other categories.

While the service standards provide useful information, all of the guidelines necessary to fully support planning and scheduling are not addressed. For instance, on-time performance – an important measure for a Transfer Point System which relies heavily on timed transfers – on the route level is not included in the service standards. There is no process to estimate individual route costs which precludes financial measures such as the farebox recovery ratio and subsidy per passenger in the service standards document.

Other inputs to the planning and scheduling process include customer, driver and operations feedback, all of which are reviewed regularly. Customer feedback is maintained by the customer service unit in a database. Most of the customer feedback is acquired through Metro Transit's web based feedback program, which is available through their website. For driver and operations feedback, Metro Transit practices an "open door" policy, where drivers and operations personnel can discuss complaints and issues in an open and frank manner. A more formal process for driver and operations feedback could be employed that would require communication on a more regular basis. Some transit agencies have found it helpful to have a process with forms to be completed by operating personnel or brief meetings during report times. Some agencies pay a sample of drivers to attend quarterly meetings to bring issues to the planning staff.

Reporting – Data is more readily available since the prior review with the use of registering fareboxes and AVL equipment. The failure to utilize the APCs results for necessary and useful information for route planning purposes is a deficiency. Expanded use of existing data will provide for a more thorough vetting of route performance, enhance internal and external reporting of route and system performance and allow for further refinement to the existing system.

Status of Prior Audit Recommendations

The current analysis represents the continuation of the past practice of the prior management and performance reviews of Metro Transit at regular intervals. For this reason, the last performance review was examined and recommendations reviewed with staff. Proposals

with respect to planning were examined in terms of their implementation status. In some cases, the prior recommendations relate to both planning and scheduling and for this reason they are discussed here and in the next section, which describes the scheduling function. The status of implementing the planning proposals is summarized below:

- Obtain Useful Ridership Information.

  Metro Transit utilizes the information provided by the registering fareboxes and AVLs with little or no use of the APC equipment. Metro Transit staff will need to specify realistic accuracy requirements for the APC equipment recognizing that errors occur with on-board personnel. Since other transit systems have found the technology beneficial, Metro Transit needs to invest further time and effort into the APCs to get them to function properly. The IS staff is a resource that should be brought in to assist with getting the APCs to meet staff expectations. As mentioned earlier, other systems are installing APCs on all of their vehicles because of the relatively low cost of data acquisition and the benefits and utility of the resulting data.

- Create a Data Management Plan.

  The prior study suggested that a data management plan should specify information not only used by staff, but also provide information to the Transit and Parking Commission. To date, no data management plan has been developed.

- Review Planning Function Staffing Levels.

  Related to the data management plan is the number and organization of staff to process and analyze the data that is available. The earlier analysis suggested the addition of a planner and two technician positions. This has not been accomplished because of funding constraints. Moreover, one planning position has been lost with the retirement of the unit head and one planner serving in that position on a provisional basis.

- Continue to Explore Modifications to the Transfer Point System.

  Since the last management review, Metro Transit has altered some of the routes to eliminate a concentration of some of the vehicles in the downtown area during certain periods of the day. These changes detail the Planning and Scheduling Unit's willingness to improve the functionality of the system and that they are aware of the need to constantly monitor the performance of their routes. As with prior reviews, it is concluded that the staff's actions have been consistent with this recommendation. It should be recognized that this activity will need to be

continued since the system faces other challenges such as increased cycle times and overcrowding.

- Explore suggested alternates to the Transfer Point System.

  The previous review mentioned two ways to undertake revisions to Metro Transit's current Transfer Point System, an analysis of groups of routes by geographic sector or an analysis of the entire system since changes in one sector could have unintended consequences in another area due to the nature of the Transfer Point System. While prior discussions with staff indicated a preference for the first approach, neither method of analysis of the current system is being performed. This is an area where the planning process should be more systematic, rather than respond to problems. As noted previously, the remedy to this situation would include additional planning staff.

- Create a formal process for the Service Development Committee.

  The Service Development Committee, which meets every other week, is the forum for discussing service options and selecting preferred changes to Metro Transit's system. Metro Transit's continued reliance on this committee is to be commended as it reflects the importance of planning and the need for participation from many of Metro Transit's units as well as the General Manager. The past review suggested that the committee should follow a more formal and deliberative process when substantial changes involving several routes are proposed. The six steps process which was recommended is currently not being followed as staff levels limit the ability of the planning unit to accomplish these tasks.

- Update Service Standards.

  While a set of service standards was previously created in response to a prior management review, the document should be updated to include additional criteria, such as on-time performance and financial measures like the farebox recovery ratio. Additionally, the only measure that is currently being used by the Planning and Scheduling Units is productivity by route (passengers per revenue hour). The Planning Department should take full advantage of the service standards when evaluating routes during the planning process.

- Calculate route level financial performance measures.

  As mentioned above, route level performance monitoring should include financial measures, such as the farebox recovery rate and the subsidy per passenger level. These standards, which are not currently being calculated, would provide a much

broader vision of the current system's performance and provide additional measures that can be used in the planning process.

- Utilize a three variable cost model.

  Currently, Metro Transit's Financial Unit relies on the single unit of cost per hour. The previous review presented a model that employs three different cost variables: vehicle hours, vehicle miles and peak vehicles. The benefit of a multi-variable cost model is that it reflects differences in operating speed and vehicle utilization. This recommendation, to date, has not been implemented.

- Minimize manual data collection.

  The prior study recommended that once new technologies are delivered and their use is implemented, manual techniques for acquiring data should be eliminated. Due to the ongoing issues with the APC system, this recommendation has not been fully followed. Data from the registering fareboxes and AVL equipment are useful sources of information. An alternate approach has been to utilize the registering fareboxes in conjunction with AVL so boardings can be identified by location. This is rather time consuming and does not yield passenger offs or loads. Currently, Metro Transit is exploring alternate ways of collecting data, such as installing video cameras on every bus which can be used to count passengers. It is suggested that a more cost effective approach would be to invest resources into getting the APCs to function properly.

- Provide staff training in technology areas.

  As additional technologies are acquired by Metro Transit, staff should be trained on their proper use so that the information obtained is both complete and accurate. Further training is needed as there are continuing issues with the APC data collection system.

- Create a Work Plan.

  The previous review recommended that a work plan should be created to detail the planning activities to be accomplished. The plan would include assignment of responsibilities, resources required, a schedule and products to be delivered. The plan would provide a means to compare progress during the year. While senior management does follow a work plan, both the Planning and Scheduling Units should also follow such a plan.

The review of these past proposals suggests that some of the recommendations have been implemented; however, others have not been accomplished. The main concern continues to be

a lack of a data management plan to aid with the collection and analysis of the information provided by the registering fareboxes, AVLs and APCs. Staff should work towards a detailed data management plan, which will allow for greater use of the data collected by these new technologies. Such a plan was also recommended as part of the review of the information technology review.

Conclusions and Recommendations – During the last review, the transit system was facing two major challenges: (1) the installation of technology to obtain data to support the planning and scheduling function and (2) the refinement of the Transfer Point System to respond to current deficiencies and opportunities. Other issues were also identified and proposals made to improve the situation. As noted above, some of the recommendations were implemented while others have not and should be part of any recommendations of this more recent review. Accordingly, some of the previous proposals have been included again since they continue to be relevant and valid. Other proposals are made to respond to new challenges facing the planning function and emerged from this current review.

- One of the more important recommendations is for Metro Transit to direct staff resources to get the APCs to function properly. Currently, the perceived inaccuracy of the APCs is minimizing their use. An analysis of the data provided by the APCs should be undertaken, with results from the units compared to manual ridership counts, so that the exact level of accuracy can be determined and related to what is reasonable and acceptable. Proper calibration of the units, and perhaps further training of their use by staff is required. Since other transit systems utilize APCs, there is no reason why Metro Transit cannot join this group of transit agencies that have benefited from this technology. The use of video cameras or time referencing the registering fareboxes is not viewed as cost effective replacement of the APC equipment. The data provided by the APC units along with the information provided by the registering fareboxes and the AVLs, can be invaluable for the planning process. Additionally, Metro Transit should consider purchasing APC units for all new vehicles once the current situation is rectified.

- The review of the Information Technology function recommended the completion of an information management plan. This information management plan should specify the way that data is collected from the various technologies and address its use in terms of storage, analysis and reporting method. The plan would also outline what information is used for in-house analysis and data that is provided to outside agencies, such as the Transit and Parking Commission. As noted in prior reviews, the level of detail and information presented would be less than that used by the planning staff for their internal use. It would be beneficial for Metro Transit to contact various outside agencies to solicit comments about their potential use of the gathered data.

- Staffing levels need to be increased to permit the gathering and analysis of data to better gauge the performance of existing bus routes and propose changes. It is

suggested that the Planning and Scheduling Manger and the Planner 2 position both be filled, along with one additional Planner. It should be noted that Metro Transit is currently considering upgrading on technician position to a Planner position. The relationship with the Transit Information Systems (IS) Unit seems to work well and any staffing plans should be made in coordination with IS. A review of staffing to address data systems was an element recommended as part of the information management plan.

- A specific set of goals and objectives along with an annual work plan should be specified for both planning and scheduling activities. The results of this review would suggest items to be included in the work plan.

- Currently, the focus of the Planning Unit is on monitoring the current bus system and developing short range proposals. Metro Transit needs to consider whether it wishes to pursue a more pro-active role with respect to mid range and long term transit proposals. This decision would need to be made on the basis of technical and policy/institutional considerations as well as consistency with staffing levels. The mid term planning is performed by the MPO as part of the TDP process while long range planning is done by the MPO and Madison Planning Department as part of the rail feasibility analysis. It is recognized that additional moneys would be required in order for Metro Transit to begin planning on these two additional levels; however, the investment would produce a more coordinated approach and one where Metro Transit would more directly control its destiny.

- The TDP that is currently underway should be completed and include the same activities that were performed as part of the previous TDP. It should also respond to problems facing Metro Transit now and in the future. This includes such issues as increasing the system size to respond to ridership gains, inability to maintain cycle times and expansion of system coverage. While Metro Transit staff examines these items to some extent from a near term or tactical perspective, the TDP should include a strategic review for a five year horizon period. As part of this effort, fleet and facility needs should be addressed since the system appears to be approaching capacity of the current physical plant. Other relevant issues for exploration are the impacts of a Regional Transportation Authority and what would be an appropriate transit plan with an RTA.

- Metro Transit's Planning Unit should continue to monitor the use and effectiveness of the Transfer Point System and make timely adjustments as necessary. Furthermore and as mentioned in the previous review, the unit should consider analyzing the system in one of two ways, either by studying a grouping of routes by geographical sector, or by looking at the system as a whole as changes to one sector may inversely affect another area due to the nature of a timed-transfer system.

- In addition to continued monitoring of the current system, Metro Transit should explore other service types which can complement the existing Transfer Point System. Potential service options include Bus Rapid Transit or elements of BRT in heavily utilized corridors. It is possible that short range proposals could be formulated that would represent start up improvements that include BRT features. Other possible service options that should be explored for use are flex routes, where vehicles can deviate from their routing to pick up passengers who request a pick-up or drop-off. Another program is ride request, where demand service connects people to the bus system.

- The Service Development Committee process is working well and should be continued. The active participation of senior management underscores the importance of the planning function. The previous management review suggested a six step process which should be followed as listed: (1) – problem statement and definition of the routes and study area; (2) – analysis of ridership, travel time and other data; (3) – identification of deficiencies and opportunities; (4) formulation of alternatives; (5) – impact of preferred alternatives; and (6) – recommended plan. The Planning and Scheduling Unit would have responsibility for preparing an informal memorandum for each of the six analysis phases listed above.

  The Planning Unit would shape the information and process in each of the steps above, which would be presented to the Service Development Committee for discussion and further guidance. As noted above, the Service Development Committee would be an appropriate forum for considering mid term and long range proposals should Metro Transit expand its role in this area. The selection of a recommended plan for any potential service change, regardless of magnitude, would be the responsibility of the Service Development Committee.

- The Service Evaluation and Performance Measurement Program, adopted since the previous study, provide a number of service measures which should be used to evaluate the performance of the operated routes. While standards were created for passengers per revenue hour, revenue miles and cost per ride, the only measure that is currently being employed by the Planning and Scheduling staff is passengers per revenue hour. Use of all of the standards within the Service Evaluation and Performance Measurement document should be used by Metro Transit so a better understanding of the current system and the system's performance by route can be attained.

  Additionally, other performance measures should be added to the document and used through a routine monitoring process. On-time performance, farebox recovery ratio and subsidy per passenger are among these other standards which should be considered for implementation. The objective of this recommendation is that the planning process consider several statistical measures, which – when combined with

other quantitative and qualitative information, and agency policies and priorities – will assist with service decisions.

- Related to the above item, as well as with costing activities, is the method used to estimate costs. The Finance unit has established procedures that are used for service contracts, as well as service changes. Differences reflect incremental and fully allocated costs along with charges for capital expenditures in some instances. One common element of the costing methods is that they rely on the single unit of cost per hour. As with the previous review, the recommended approach for determining costs is to calibrate and apply a three-variable cost model. The model could be used for different purposes throughout the agency, but not necessarily for all cost purposes.

  To illustrate this approach, financial and operating statistics from the most recent NTD submission (FY 2007) have been inserted into a three-variable cost model shown below:

Development of Three Variable Cost Allocation Model

Variable	Allocated Amount	Operating Statistic	Unit Cost
Vehicle Hours	$21,545,100	407,600	$52.86
Vehicle Mile	$9,791,400	5,357,400	$1.83
Peak Vehicles	$4,862,800	167	$29118.56
Total	$36,199,300		

  With this approach, the cost of service is determined by multiplying each of the three unit costs by the appropriate operating statistic and then summed. Different cost models could be obtained by whether fixed, variable or capital costs are included. The model above includes all operating costs. The benefit of this approach is that it reflects differences in operating speed and vehicle utilization.

  Reflecting the different uses that costing procedures are applied, the recommendations are oriented to the intended audience. For example, existing contracts rely on a single unit cost per hour. Since this is relatively simple and accepted by the parties, no revisions for this costing purpose are suggested. For budgeting, elements of the three variable model are used already. In the area of estimating the cost of current service as part of monitoring or incremental cost with a change, the three variable method would be beneficial. In light of this intended in-house use, staff might try a limited demonstration program to cost out proposals and gauge the benefits of the suggested approach.

- A more formal approach to driver and operations feedback could be employed to acquire additional qualitative data. Currently, Metro Transit utilizes an "open door"

policy when it comes to discussing issues and complaints from these groups of employees. A program developed around regular discussions with drivers and operators – perhaps once per month or quarterly - will create an environment where these employees will expect to be approached for their opinions on a regular basis, thus increasing the amount of qualitative data and create an inclusionary atmosphere and a sense of ownership for the drivers and operators. As with any such feedback mechanism, there should be a response to all suggestions.

The above recommendations illustrate improvements which Metro Transit can implement in order to improve its Planning Unit and the overall planning process. Individually, each suggestion represents an improvement on existing practices and policies. When considered collectively, they provide an ambitious program which will provide better information, create a more thorough analysis process and will produce more informed choices in allocating finite transit resources.

Scheduling

Transit is a labor intensive industry where drivers' wages and benefits account for more than half of all bus operating costs. Because of this, scheduling has a significant influence on transit expenditures as proper scheduling can maximize the use of drivers while attempting to minimize operating costs. Additionally, Metro Transit's Transfer Point System relies on timed transfer hubs that require specific running and cycle times, adding to the importance of the Scheduling Unit. The schedule process also influences the attractiveness of service in terms of convenience and reliability.

As with the Planning section of this review, this portion describes scheduling in terms of relationships within the unit and other units of Metro Transit, inputs and reports of the process and the individual steps that comprise the schedule building process. Next, the status of the prior management review recommendations is reviewed. Finally, specific recommendations are listed which can improve the performance of this activity of the Planning and Scheduling Unit.

Relationships – Since the planning and scheduling activities are within the same unit, both efforts are well coordinated. Operations planning considerations are easily incorporated into the scheduling process since the Scheduler also serves as a key individual in terms of route proposals. Further, there is recognition by all that scheduling is critical with the Transfer Point System. As the discussion in the planning section noted, quantitative data has greatly increased within Metro Transit. To the extent that information is available from the Planners, the data is provided for use in the scheduling process.

Relationships between the Scheduling Unit and the other Metro Transit units remain mostly unchanged since the prior management review. Communication continues with the drivers, supervisors and operations staff through Metro Transit's "open door" policy. The Scheduler participates on the Service Development Committee, providing lines of

communication with all of the units involved with the committee. Metro Transit patrons provide input through comments and complaints given through Metro Transit's web based feedback program. These comments are regularly reviewed and actions taken as appropriate.

Relationships with outside agencies remains limited, with little interaction between the Scheduler and the City of Madison, Dane County, the MPO of the Madison Urban Area or WisDOT. Primary responsibility for this coordination is the responsibility of the Planning Unit. It should be recognized that the Scheduler is an active participant of the planning function. The Scheduler does communicate with the transportation unit at the University of Wisconsin to discuss service related issues. Similarly, the Scheduler has a relationship with the Assistant Superintendant of the Madison Area School District and representatives of the Madison Area Technical College. Other communication is maintained where bus arrival and departure times rely on specific activities and their start and end times.

Inputs – Since the prior study, when the key ingredients to the scheduling process were policy guidelines and quantitative data mostly acquired through manual checks, a stronger reliance on automated data collection has unfolded in addition to the continued use of the policy guidelines. As mentioned previously in the planning section, the policy guidelines provide headways and level of service standards, but lack a standard for on-time performance. The Scheduler utilizes both the guidelines and past practices to establish line specifications.

The use of technology to acquire data has increased with the further use of AVLs and registering fareboxes. As noted previously, the failure to use the APC equipment is a deficiency in the scheduling process. The Scheduler does use the AVL and registered farebox data to calculate running times and create headway tables. Similar to the Planning Unit, the Scheduling Unit gathers specific data items to respond to problems or concerns. An information management plan, as described in the information technology review element of this audit, and increased IS staff support, would further support the scheduling function with increased and improved data.

Another issue related to the scheduling function is the time needed to proceed from a service plan to the actual runs that can be posted for the drivers' "pick". In some bus systems, the necessary time to prepare the schedule can range from six weeks to three months. Often last minute changes require "patches" which are usually more costly to operate. This undesirable situation is not the case with Metro Transit as the Scheduler is actively involved in the planning process and members of the Service Development Committee are cognizant of the time required to prepare a run cut. Additionally, the Scheduler strives to complete the scheduling process in a month or less. Further, reliance on scheduling software and staff capability in its use insures adequate lead time.

Other inputs to the scheduling process include the special requirements for the trips operated for the area's middle and high schools, the University of Wisconsin schedule (as there is a 40 percent drop in ridership during the summer months when the University is not in

session) and customer, driver and operations feedback. The Scheduler receives customer feedback as well input from the drivers and operations staff through Metro Transit's "open door" policy. As mentioned in the planning section, a more formalized driver feedback program would increase communication and qualitative data, mirroring the scheduler's wishes.

Reporting – Various outputs from the scheduling process are achieved by reliance on the scheduling software – a combination of TRAPEZE for DOS and TRAPEZE for Windows. The Scheduler believes that the DOS version is superior to the Windows version in terms of runcutting. It should be noted that Metro Transit does not have the later and more costly Windows version of the software which would eliminate the use of two programs. Additionally, numerous statistics are generated by the Scheduling unit which are used by the Operations and Finance Units. As noted in the prior review, the Scheduler has developed software that supports the Finance Unit in determining drivers' pay records and paychecks.

An important gauge of the scheduling process is the computation of the Pay to Platform Ratio (PPR). Since the previous study, the process used to create the run cuts has not changed, which leads to the stability of the relatively low PPR of Metro Transit. To assess the reasonableness and efficiency of the run cut, the Scheduler examines the types of runs generated and the different categories of pay hours by service day. It should be recognized that these results are also influenced by the nature of service (i.e., peak/base ratio and span) and terms of the labor agreement (e.g., spread premium and percent part-time operators). Because the Scheduler utilizes computerized scheduling, several iterations are made until a preferred run cut is selected. One feature of the runcutting process is that an attempt is made to create assignments that are attractive to the drivers.

Scheduling Steps – Each of the scheduling steps were examined and relevant comments made as appropriate. For the most part, and to the benefit of Metro Transit, there have not been significant changes from the process noted in the earlier review.

- **Headway Determination** – To a great extent, determination of headways rely on knowledge of the system, past policies, experiences with overcrowding and by responding to comments of riders, drivers and supervisors. The step has benefitted with the creation of the Service Evaluation and Performance Measurement Program, as noted previously. It would be improved further with other measures added to the service guidelines and information from the APC equipment.

- **Headway Table** – Timed transfers and similar headways are required to assure a convenient service and ameliorate the time penalty normally associated by trip makers with transferring. An issue brought up through the prior study was vehicles platooning in the downtown area. As mentioned earlier, this has been addressed by rescheduling some of the routes so that not all of the buses leave at the top of the hour or half past. Quantitative information on running times is provided by the AVL system as well responding to problems and concerns by customers and operations

staff. Because the Scheduler is actively involved in the planning process, ambiguities on line specifications are avoided.

- **Vehicle Assignment (Blocking)** – The challenge facing this aspect of the scheduling process is that Metro Transit has the Transfer Point System which mandates schedule coordination among routes and clock face headways. In some instances, this adds layover to a route with an increase in unproductive time. Scheduling staff now has considerable experience with the Transfer Point System and the implication for this aspect of scheduling and resources. Future challenges facing the transit system have been discussed as part of the planning review.

- **Driver Assignment (Run Cutting)** – Run cutting usually takes a month to complete and are distributed to the Planning and Scheduling Manager, the Finance Unit, the union stewards and the General Manager. Numerous iterations are tried utilizing the scheduling software to explore options and achieve efficiency. The benefits of monitoring the scheduled and ultimate pay/platform ratios on an ongoing and continuous basis have been achieved. One change since the last review is the creation of a limited number of four, ten hour workdays.

- **Rostering** – The concluding step of the scheduling process is to assign each full-time driver consecutive daily assignments during the week. Currently, rosters are all for five day period; however the next pick will have a few four day options, each with ten hours per day. This adjustment has been made due to driver recommendations. There are four picks per year. There are 251 full time drivers and 29 part-timers. Metro Transit could explore the possibility of creating greater flexibility with their part-time drivers by not limiting their service to school runs. The extraboard is established to cover absences. No formal calculation process is used to gauge the size of the extraboard and the number of drivers; instead, the scheduler relies on a headcount and experience. One factor in the rostering process is to maintain good relations with drivers.

The discussion above summarizes the scheduling process and the key features of the activities performed by the Scheduler and the Scheduling Assistant. The scheduling process appears to be performed in a competent and professional manner. Since the Transfer Point System has been in place for nearly a decade, many of the implications from a scheduling perspective are known. Similar to planning, the impact and consequences of changes or modifications to the bus network should be continually analyzed and explored.

One issue that should be addressed for the Scheduling Unit is determining a succession plan. While the current Scheduler has no plans to retire now, the position may become vacant within five years. The Scheduler has an unparalleled knowledge of the process and systems used to create Metro Transit's schedules. While the Assistant Scheduler is versed in scheduling and has had some training, additional guidance and an altered job scope will be needed in order for

Assistant to seamlessly transfer into the Scheduler position. Another requirement will be the use of a single software package without resort to customized software.

Computerized Process – Metro Transit utilizes two versions of Trapeze software; the old DOS based version of the program, and the more recently purchased Windows based version. The Scheduler uses the DOS version to create run cuts, while the Windows version is used for other portions of the process. This practice, seen as temporary in the prior review, continues to this day. One option that will eliminate the need for the use of both versions of the software is to explore a later version of the Trapeze software, with an improved run cutting process. One concern with the current hybrid approach is that it mandates custom software developed by the Scheduler.

Status of Prior Audit Recommendations

Metro Transit's Planning and Scheduling Units went through a similar management review process in the Fall of 2003. A number of items were identifies with specific improvement recommendations. In some instances, these suggested actions addressed deficiencies and opportunities across both Units. The status of the earlier proposals for the Scheduling Unit are presented below:

- Service Standards

  While some service standards have been created by the Service Evaluation and Performance Measurement Program, additional refinement to the program should be considered. Such measures as on-time performance and the farebox recovery rate would increase Metro Transit's assessment of route performance and allow for improved planning and scheduling.

- Data Management Plan

  As mentioned in the planning section of this review, a data management program was recommended in the prior review. Such a program would allow the Scheduler to rely more heavily on quantitative data and help to create a scheduling process that is less reactive to comments, problems and complaints. While a stronger reliance on available data processed from the AVLs and registering fareboxes has been achieved, a comprehensive data management program, including APC equipment derived data has not been put into place.

- Trapeze for Windows

  The Windows based version of Trapeze has been installed; however the software has not demonstrated its usefulness for all of the Scheduling Unit's needs.

Parallel processing continues through the use of the DOS and Windows based Trapeze packages.

- Trapeze as an Analytical Tool

  Metro Transit does utilize the Trapeze software to analyze their current route performance; however, this practice can be expanded.

- Pay to Platform Ratio

  The last study suggested that pay to platform ratios should be computed with imputed values associated with premiums and that acceptable threshold should be established and serve as a benchmark for gauging scheduling efficiency. In accordance with this recommendation, Metro Transit now factors overtime into their computed pay to platform ratio. The Scheduler attempts to keep the pay to platform ratio for all routes under 1.09.

- Service Development Committee

  The Scheduler remains an active participant on the Service Development Committee.

- Manpower Planning

  The previous review suggested that the Scheduler remain an active participant in manpower planning. This practice has not been implemented and the Scheduler should be engaged in establishing extraboard and driver staffing levels.

- Scheduling Timeline

  It was recommended that the Scheduling Unit create a timeline to further clarify the activities associated with schedule service changes and run cutting. With the need for a staff transition plan transit mentioned previously, it would be worthwhile to document the scheduling process.

While some of the recommendations from the prior study have been implemented, others continue to await implementation. Some of these issues, such as the use of the two versions of the Trapeze software, should be addressed in a timely manner to improve the effectiveness of the scheduling process.

Conclusions and Recommendations – As with the Planning Unit, the Scheduling Unit is operated in a professional and proficient manner. The ability to quickly make scheduling adjustments continues to be impressive and reflects positively on the wealth of knowledge and

capabilities of the Scheduler and the coordination with the Planning Department. That being said, there are opportunities for further refinement. The recommendations listed below include some from the prior review, as well as those emerging from this study.

- The Scheduling Unit is important to the operations of Metro Transit's bus system. There is currently no clear succession plan to replace the current Scheduler once the position becomes vacant. Metro Transit should create such a plan and provide training to assure continuity in the scheduling function.

- One way to improve the transition with new scheduling personnel is to purchase the latest version of the Trapeze software which includes an improved runcutting feature. This would eliminate the need for two version of Trapeze being used and custom written software. Further, it would improve the transition process.

- A scheduling timeline should be documented along with any other processes to assure an orderly succession plan.

- As suggested in the Planning section of this review, the current service standards outlined in the Service Evaluation and Performance Measurement Program should be expanded to include such metrics as on-time performance and farebox recovery ratio. The Scheduling Unit currently relies heavily on computed value of passengers per hour. The inclusion of other measures will afford additional refinement to the scheduling process.

- In accordance with the previously presented recommendation, the Scheduling Unit should increase its reliance on data collected through the available technologies. This is similar to what has been recommended for the Transit Operations Unit. The current usage of data received from registering fareboxes and the AVL system should be expanded with the APC equipment. Once the issues with the APC system have been fixed, the scheduling process should include an analysis of the data provided from this technology.

- A more formal process to receive comments from drivers and operations personnel should be implemented. The current "open door" policy is helpful, but a more formal process can produce additional benefits to the planning and scheduling function.

- A related issue to the previous recommendations, and as stated in the Planning section of this review, is the need for a data collection program which will allow the collection, archiving and analysis of data to occur in a more routine manner. This is related to the recommendation included in the review of Information Technology function which called for an information management planning effort to be undertaken.

- While it is recognized that Metro Transit does use Trapeze as an analytical tool, expanding these functions of the software will improve the efficiency of the scheduling process. Staff performed an analysis of implementing four, ten hour work days which led to its implementation. Using the scheduling software as analytical tool should be continued and expanded. This would include investigation of expanded use of part time drivers as well as the cost associated with runs that are more attractive to drivers. Clearly, the focus of the scheduling process should be on achieving efficient use of drivers and minimizing labor costs.

- The Scheduling Unit should continue to be an active participant of the Service Development Committee. The Scheduler should continue to monitor and refine the Transfer Point System in order to create more favorable service. Similarly, other service options, such as BRT service, express service, flex routes and demand responsive service, should be explored to complement the existing system.

The list of recommendations, along with those from the planning review, represent a full agenda, although each of the proposals are not of equal importance or will require the same level of necessary resources. They provide a constructive set of proposals that will assure the efficient use of operators and respond to challenges in the future. In many cases, the recommendations reinforce the actions taken during the last five years.

FUNCTIONAL AREA REVIEW
FINANCE

This assessment covers the major functions of the Finance Unit, including accounting, budgeting, treasury and grants management. The evaluation reviews the previous performance audit's findings and includes recommendations for future action.

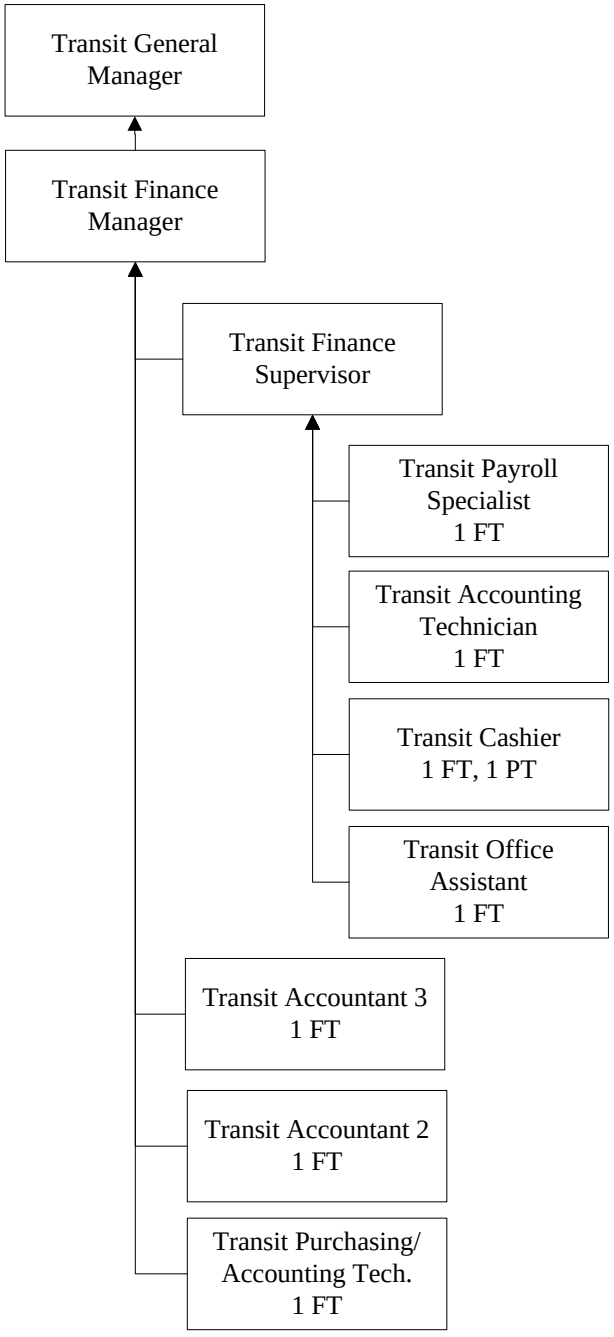
Organization and Staffing

The Finance Unit is lead by the Transit Finance Manager, who reports directly to the Transit General Manager. There are eight full-time equivalent staff positions within the unit, including four direct reports to the Transit Finance Manager. This represents a decrease of one from the last audit. A Transit Employee Relations specialist formerly within the Finance Unit now reports to the Transit Service Manager. The structure of the unit is depicted in Figure 1.

The Finance Unit develops capital and operating budgets; grant applications, and is responsible for financial administration including grant balances, payments, drawdowns, and reporting; sending billings to funding partners as per prior contract arrangements; cash handling from fareboxes and ticket sales; payroll; accounts payable and receivable; fixed asset inventory; periodic financial reports and overall, maintaining appropriate accounting mechanisms to properly process and track all financial transactions related to Metro.

As an operating agency within the City of Madison, Metro Transit uses the City's financial systems, supplemented by certain, defined Metro Transit pre- and post-processing software applications, to make the interface with the City's system work and produce the required reports for both the City and the Finance Unit. However, as will be discussed later, the Finance Unit is currently working with the City Comptroller's office in exploring a new enterprise software package which may ultimately be more seamless in its application. While there have been improvements in the city's software systems over time, and there are presently "work-arounds" in place to allow computer systems to interface, there is a hope that a new system will be produce superior results

Organizational Structure – Finance Function



Metro Transit's Finance Unit develops operating and capital budgets which are then integrated into the City's budget process. The Grants Management function is now well integrated into the Finance Unit and appears to be working well. This is currently the responsibility of the Accountant 3 position. Metro Transit is currently in the process of re-classifying this position as the Transit Grants Program Analyst. Parenthetically, the Finance

Unit employee currently responsible for grants management served, temporarily, as the acting Transit Finance Manager as that position was recently unfilled during a transition period. The existence of this function within the unit provided another important set of senior-level personnel who were able to fill-in during the transition. This review showed that the existence of the Grants Management function within the Finance Unit has improved grants management procedures, including the timely close out of open grants.

Despite some recent transition of leadership within the Finance function, based on this review, it appears that the Finance Unit has put in place the proper procedures and processes to manage the financial systems of Metro Transit successfully. While there is comparatively new management in the position of the Transit Finance Manager, historically the unit has been proactive in responding to recommendations of prior audits that were within this group's control, resulting in incremental improvements within the Unit and with the City of Madison. Officials representing other agencies within the City of Madison, who were interviewed as a part of this review process, expressed appreciation at the close cooperation with which the Finance Unit has approached issues such as the procurement of the new enterprise software system.

Budget

As stated earlier, as an agency within the governmental structure of the City of Madison; the city controls the procedures and timing of Metro Transit's budget preparation. Relevant elements of Metro Transit's budget are described below.

Funding Sources - Within the city, the Metro Transit budget process is somewhat unique, since Metro Transit receives a variety of federal and state funds from outside the city's normal processes, while also receiving capital and operating funds from the city. With regard to operating funding, the State of Wisconsin budgets on a two-year cycle, while the city budget is an annual process. The state budget includes a separate funding process for Madison and Milwaukee, which in recent years has resulted in a cap on the amount of state funding for Metro Transit. Slightly less than 50 percent of the system's transit operating expenses are comprised of federal 5307 funds (for preventative maintenance and limited other purposes) and state operating assistance. A somewhat larger percentage of 5307 funds is currently being used for eligible operations and maintenance-related purposes because of the state funding cap.

The city share of operating funds allocated to Metro Transit has been quite constant, while Metro, over the years, has received increased funding for certain services (e.g. for clients eligible for ADA services) from Dane County. This year, a proposed Metro Transit fare increase has lead to controversy and confusion and ultimately, delay in implementation which, due to the delay, has cost Metro anticipated revenue. In addition, while having engaged in highly beneficial purchase agreements for diesel fuel in past years, the procurement cycle was not favourable to Metro Transit this past year and the city purchased contracts when diesel fuel was quite high as compared to subsequent months. This circumstance has been addressed through the Contingency Fund, which Metro Transit has maintained for some time.

Revenue Sources – Other than traditional passenger fare revenue sources, Metro also has unlimited ride pass agreements with several regional institutions which provide free passes to their employees or students. Metro is very fortunate to have made these mutually-advantageous agreements for a number of reasons and the list of participating institutions has grown since the last performance audit. The list currently includes University of Wisconsin (UW) and UW Hospitals, St. Mary's Hospital, Meriter Hospital and the City of Madison for employees, and UW, MATC, and Edgewood College for students.

In addition, Metro Transit provides transit service in a number of neighbouring municipalities, with which it has service agreements. Metro is compensated for its delivered service based on actual, experienced costs. Costs are estimated at the beginning of the year (based on fully burdened expenses), billed quarterly and then redressed, based on actual, experienced costs, at the end of the year. The institution of a contingency fund for many of these agreements has helped the funding agencies avoid unfunded balances at year's end as any required additional funds are likely to be absorbed by the partner's contingency fund. This allows for a more orderly, less contentious budgeting and authorization process with Metro Transit's municipal partners.

However, discussions with city officials have shown that this process of annual operating agreements with neighbouring communities is not ideal and is not a sustainable model for the regional expansion of Metro Transit service. There have been recent instances in which Dane County provided the unfunded portion of an annual service budget for one of the communities purchasing service from Metro Transit, when that community was unwilling to increase its level of funding. County funding is not guaranteed, and cannot be relied upon for continued service. Therefore, a more stable funding regimen for regional services will need to be addressed if this is pursued more in the future.

Capital Budget - The local share of Metro Transit's capital budget is funded by the city using general obligation bonds with a ten-year life. The capital budget is a five years process. As the city ultimately assumes responsibility for funding the budget's local share, Metro Transit competes with other city departments/divisions in the capital budgeting process. Currently, Metro Transit has budget approval to fund the purchase of 15 buses each year, on average, though 2012. The other projects on Metro's list include building refurbishment, replacement of the bus vacuum system, a variety of comparatively small upgrades to current systems, including a project to place security cameras on all buses and farebox replacement. Although not just a Metro Transit initiative, the replacement of the city's enterprise software system will also benefit Metro Transit, especially in financial systems which must interface with the city's system.

Employee Wages and Benefits - As city employees, Metro Transit employees are entitled to city benefits including longevity pay (applied every third year) and wage/salary increases established by the city through contract negotiations (for represented employees) or otherwise for non-represented employees. Wage increases usually occur annually and identically city-wide. City wage or salary increases are not subject to an annual performance review process for either represented or unrepresented employees. The city entered into a new, two-year collective bargaining agreement with the union representing Metro's hourly employees

(Teamsters Union, Local 695) on January 1, 2008. The contract calls for wage increases of approximately three percent, reduced by a fraction of the cost increase in healthcare premiums above a certain rate. The new contract made changes to the work rules, imposing discipline for abuse of "absence without pay" provisions of the contract. Non-represented Metro employees traditionally receive the same increases negotiated with represented employees, after labor negotiations with all of the various unions representing city employees throughout the City are completed, making the collective bargaining process all the more important.

Organizational Relationship - The relationship of Metro with the city is one with both obvious advantages and disadvantages. While the affect of wage adjustments and particularly unique work rules might make it preferable to be a stand-alone entity, Metro benefits from its relationship with the City in areas such as making use of the City's borrowing capability in underwriting the local share of capital improvements and using the City's size and economies of scale in areas such as fuel purchases and securing insurance. Even in times of national economic stress, Madison as both a university as well as a government town has shown considerable resiliency as a local economy. All parties interviewed as a part of this audit were pleased with the relationship and level of cooperation that Metro has with the city.

Accounting

The City of Madison makes payments on Metro's behalf. As may be expected, the Vehicle Maintenance Unit is the largest purchaser within the agency. Maintenance produces its own purchase orders using Fleetmate software. The City also has provided a Contract Release Order (CRO) process for some vendors, to purchase a variety of items ranging from computer-related supplies to fuel. This can be an effective method to purchase and control frequently-used items, particularly consumables bought in bulk.

Payroll is developed using a spreadsheet approach. Payroll changes are handled on an exception-basis by the payroll clerk within the Finance Unit. While Metro has considered using Trapeze software to develop payroll for processing, this change has not yet occurred.

Treasury

The Treasury functions of cash and revenue control are the responsibility of the Finance Unit at Metro Transit. The duties of the personnel responsible for accounting of fares include counting cash in the cash room, reconciling cash deposited into the vault through the fareboxes, and reconciling the cash return from outlets that distribute the different fare media. They also prepare tickets and passes for delivery to the outlets.

Metro Transit expects to replace its existing fareboxes in 2010 and may be able to retrieve additional revenue data from the new fareboxes. Questions to all parties related to a recommendation for a specific audit of revenue handling included in a previous performance audit revealed no concerns in this area.

Grants Management

Grants administration is also a responsibility of the Finance Unit, which is an organizational change from previous audits. One benefit of this structure has been a greater focus on the number of open grants which has now been reduced to approximately eight. As noted earlier, this is the responsibility of the Accountant 3 position. Metro Transit is currently in the process of re-classifying this position as the Transit Grants Program Analyst.

The capital budgeting function for Metro Transit is the responsibility of the Transit Grants Program Analyst (Accountant 3).

Status of Prior Audit Recommendations

- Continue to resolve shortfalls to City's computer system through new databases and in-house acquisition of new software.

  The city is in the process of specifying a new enterprise software package and Metro has been a party to the process of developing the specification process. It should be noted that Metro was specifically commended for their part in this process. It is expected that the specification-writing process will conclude shortly with an RFP which will be issued in April. While the shape of the final product is not clear at this point, it is hoped that the final, installed product will require fewer custom-developed "bridges" to allow all parties the retrieve the information they require.

- Work with all units, especially operations, in the preparation of Metro's budget.

  In the most recent budget process, all unit heads were met with and prior year results were reviewed as well as current-year trends and anticipated, required expenses.

- Make the city aware of the importance of establishing conservative wage and benefit objectives in citywide negotiations in terms of their effect on Metro's budget.

  The most recent collective bargaining agreement with the Teamsters included a work rule change intended to address abuse of "absence without pay provisions of the prior contract. Recent wage increases, appear to be somewhat above three percent, as calculated for the highest paid operators, reduced somewhat by one-tenth of the year-to-year percent increase in healthcare premiums above 11 percent. In including the provision for reduction by healthcare premium increases, negotiated wage increases for 2009 have been negotiated to be not less than 2.5 percent.

Conclusions and Recommendations

As stated earlier, the Finance Unit, in particular, has had a positive history in being responsive to the results of prior audits. This review found no major issues with the policies and procedures followed to perform this function. The three recommendations resulting from this review are designed to support already sound practices.

- An important budget issue from the current fiscal year relates to the process through which the most recent fare increase was handled. This issue was also addressed in the Policy and Decision Making Process element of this audit. The Policy and Decision Making analysis recommended that all decisions of the Transit and Parking Commission (TPC) which affect Metro Transit's budget should be made in a timely manner and within the timeframe of the city's annual budgeting process. While there are governance benefits to this recommendation, the ramifications to Metro Transit's budget must also be noted. In this instance, the time necessary for political resolution of the issues raised by the proposed fare increase exceeded the needs of the operating agency to begin to receive the additional expected revenue. This can create an unfunded portion of the annual budget.

- While Metro Transit develops a five-year capital plan, there is no specific program to develop an articulated, longer-range vision for the system as a whole. Metro Transit should use the capital planning process to guide an intermediate and long term strategic plan which would be supported by the capital plan. This strategic vision, in turn, could then be used to guide subsequent capital plans. This need for intermediate and longer term strategic planning was also recommended as part of the Planning and Scheduling functional review element of this audit.

- This review did not result in any particular current concerns related to Metro's revenue-handling. A previous management performance audit had included the recommendation for a full security audit of revenue handling. Metro Transit has maintained the position that this is not necessary since there is no indication of any problems. Based on experience throughout the transit industry, it is recommended that Metro Transit develop a program for the ongoing review of this important, and unique, function. The annual CPA audit of Metro Transit could be an important input to this ongoing review program. While making no statement about Metro's veracity and effectiveness in processing and protecting its collected revenue, this is an area worthy of the highest level of vigilance in safeguarding the public's funds.