

2013-2017 Transit Development Plan for the Madison Urban Area Executive Summary

Introduction

The Transit Development Plan (TDP) is a short- to medium-range strategic plan intended to identify transit needs and proposed improvements for a five-year planning horizon. The Madison Area Transportation Planning Board (TPB) – A Metropolitan Planning Organization (MPO) is responsible for developing and maintaining the TDP. The MPO works in cooperation with the City of Madison – Metro Transit (Metro) and other transit providers, funding partners, and jurisdictions in the Madison area. The TDP is developed within the overall framework of the long-range regional transportation plan. The TDP recommendations are approved by the MPO and the City of Madison as the major transit operator.

The following goals were developed to guide preparation of the TDP and ongoing service planning:

1. Meet people's daily mobility needs.
2. Increase transit ridership to manage congestion in constrained travel corridors.
3. Increase transit's mode share to achieve sustainability goals and reduce climate change.
4. Provide cost efficient and effective transit service.
5. Provide reliable transit service that is convenient, comfortable, and affordable.
6. Provide for the safety and security of transit passengers, operators, and facilities.
7. Maximize connections to other transportation modes, including intercity rail and bus lines.
8. Provide transportation that is accessible to all.
9. Support land use development that maximizes the safety and efficiency of the transportation system.

Metro Transit's ridership increased 30% between 2005 and 2011, while annual service hours increased only 5% from 364,500 to 383,100. This ridership increase is a positive development; however, overloading and crowded buses



have become a problem during peak periods and occasionally at other times. Metro's bus storage and maintenance facility on East Washington Avenue has reached its capacity and expanding the bus fleet to provide additional service is impossible without expanding storage space. Another continuing challenge is the need to provide new service or faster, more effective service to growing peripheral employment centers and neighborhoods and suburban communities. Funding is a major challenge, given the lack of a dedicated funding source for transit, reduced state operating assistance, reduced federal capital funding, and tight local budgets. Many of the service recommendations in this TDP will not be possible without a new funding source and/or the state covering the share of operating costs it did in the 1990s. The TDP makes recommendations intended to address these issues and other service and capital needs in order to continue to maintain, improve, and expand transit in the Madison region.

Key TDP study areas include:

► Fixed Route Service Improvements

A detailed analysis of Metro's operating characteristics and ridership patterns was completed. This information is useful to determine where and how riders are using the system as well as how it is performing. The results are new, updated Transit Service Planning/Design Guidelines and Performance Standards as well as a set of recommendations for potential service changes and expansions. These recommendations range from immediate service changes moving towards implementation to longer term concepts to address needs of the system.

► Bus Stop Spacing

Many of Madison's transit corridors (Johnson and Gorham Streets, Jenifer Street, Monroe Street) have bus stops every block – this condition has not substantially changed since these corridors were served by streetcars in the early twentieth century. While closely spaced bus stops are convenient for riders in these corridors, they result in delay for all riders along the line. A bus stop consolidation program is recommended to achieve a more balanced approach to bus stop placement while meeting the needs of riders with mobility limitations and maintaining or providing stops near high ridership generating land uses.

Besides the TDP, there are several other ongoing studies related to public transportation. The TDP references these studies and to the extent possible incorporates their findings and recommendations. These include the Metro Maintenance Facility study, Bus Rapid Transit study, Metro Bus Size study, and an update to the Coordinated Public Transit – Human Services Transportation Plan for Dane County. Other related studies to be initiated in 2013 include planning for a new inter-city bus terminal and the City of Madison's Transportation Master Plan.

Summary of Current Transit Services

Metro Transit, which is owned by the City of Madison, is the major operator, providing fixed-route and paratransit service. Metro operates under the oversight of the Mayor of Madison, the Common Council, and the city's Transit and Parking Commission. Metro Transit contracts with other communities, UW-Madison, and the Madison Metropolitan School District to provide service. Some other communities, including Monona, Stoughton, and Sun Prairie, provide transit or shared-ride taxi service available to the general public.

Metro Transit Fixed-Route – In 2011, Metro operated 61 regular fixed-route bus routes – 17 full time, 9 weekday only, 18 peak only, 6 mid-day only, 6 weekend only, and 5 campus circulators. In addition, it provides supplemental school service targeted towards middle- and high-school students.

Metro's fixed-route transit service is grouped into four categories: core routes, peripheral routes, commuter routes, and circulator routes. Core routes, like Metro Routes 2, 4, and 6 operate at relatively high frequencies throughout the day and connect transfer points. Peripheral routes like Routes 13 and 32 provide service coverage and connect neighborhoods. Commuter routes like Routes 38 and 75 provide weekday peak-period service from residential areas to education and employment centers – primarily UW-Madison and the Madison CBD. Circulator routes like

Routes 10 and 80 operate shorter routes within the geographical confines of major activity centers, or between an activity center and a nearby residential area.

Metro has four major transfer points, which were opened in July 1998 to implement Metro's route restructuring that decentralized the system, which was previously centered on transfers at the Capitol Square. A fifth minor transfer point was added in the City of Middleton in 2007 as part of the service restructuring in that community. The transfer point system substantially reduces travel times in outer Madison neighborhoods by providing cross-town service and eliminating many arduous transfers at the Capitol Square. Most routes continue to be oriented to serve the Madison CBD and UW-Madison campus, where about 70% of weekday transit trips are oriented. Pulse scheduling is used to provide timed transfers generally at 0 and 30 minutes past the hour.

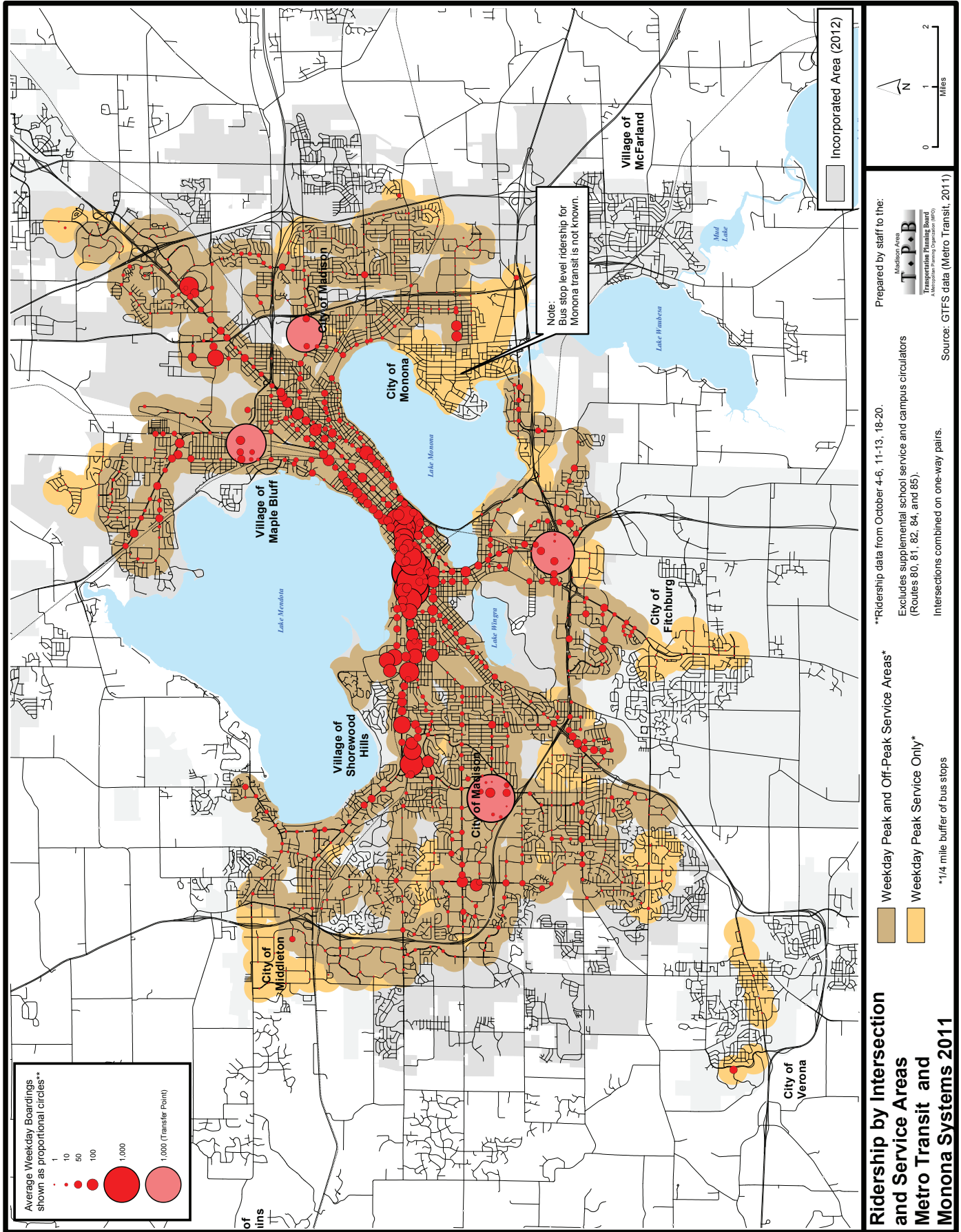
In 2011, Metro Transit provided 1,275 daily service hours on weekdays while school was in session. A total of 508 service hours were provided on Saturdays and 451 hours were provided on Sundays. Fixed-route bus service provided about 383,000 annual revenue hours of service and served 14.9 million one-way unlinked passenger trips with an operating expense of about \$42 million.

The City of Monona contracts with a private provider for weekday commuter service to central Madison and limited point deviation service. The weekday peak period service area for the Metro and Monona transit systems is 62 square miles. The 2010 population within the service area was approximately 235,100 persons. This includes 85% of the City of Madison's population, 70% of the Middleton population, and 51% of the Fitchburg population. Figure 1 shows the weekday service area and Metro Transit boardings by intersection.

Metro Transit Paratransit – Paratransit service is provided by Metro on a demand-responsive, advance reservation basis within $\frac{3}{4}$ mile of fixed-route all-day transit service (excluding peak-only commuter routes), as required by the Americans with Disabilities Act. The service, which is for persons unable to use the regular fixed routes, is available during the same span as the fixed-route service that it supplements. Service is provided with a combination of Metro's fleet of 20 cutaway vans and contracted service from several private operators.

Monona Transit – The City of Monona provides public transportation service within its city limits and to central Madison. The service consists of one peak period fixed route called Monona Express and one point deviation mid-day route called Monona Lift. Monona Express operates in a counter-clockwise loop around Lake Monona in the

Figure 1



morning and a clockwise loop in the afternoon. Monona Lift makes three similar clockwise trips as well as three trips that circulate within Monona during the weekday mid-day. Elderly and disabled riders may call and arrange to be picked up or dropped off within one-half mile.

Sun Prairie Shuttle and Shared-Ride Taxi – The City of Sun Prairie provides one shuttle route, open to the public between west Sun Prairie and East Towne Mall in Madison. The fare for the service is \$3.50, and three week-day round trips are provided with minibuses. Sun Prairie also provides a shared-ride taxi service within the city that is open to the general public with a standard adult fare of \$3.50. Discounts are available for youths, seniors and people with disabilities.

Stoughton Shared-Ride Taxi - Shared-ride taxi service is provided within the city of Stoughton. The service is available weekdays, Saturdays, and Sunday mornings, but no evening service is provided. General fares are a flat rate of \$3.00 for adults within the city. Some trips are available outside the city limits, but special charges are assessed. Discounts are available for seniors and people with disabilities.

Specialized Transportation Services – Several programs are available throughout the Madison area and Dane County that provide specialized transit service to meet the needs of people that are low-income, elderly, and/or have a disability. Most of this service is administered by the Adult Community Services Division of the Dane County Department of Human Services (DCDHS) and is accessible, routed group ride or demand-response service with specific

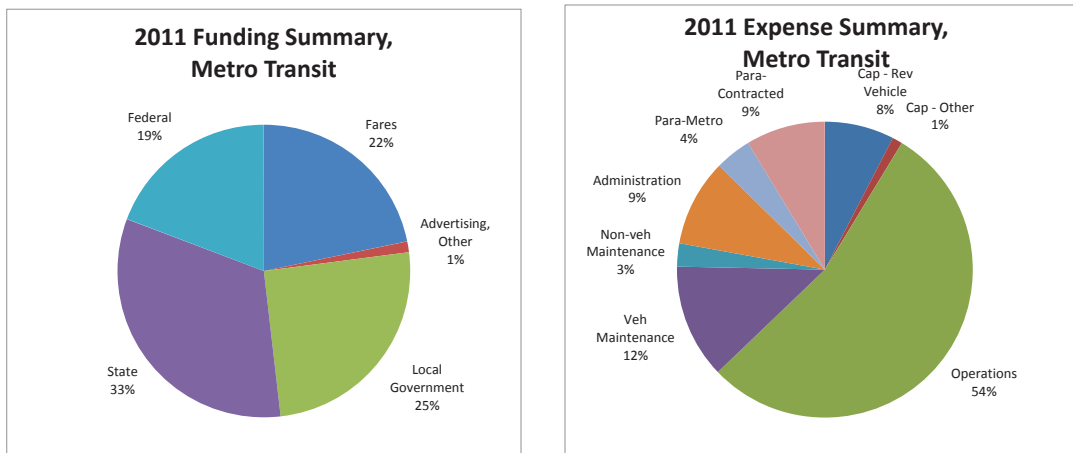
requirements for eligibility and trip purposes. The YWCA provides a JobRide service, which operates 24 hours per day and provides rides for low-income people to and from work where other transit options are not available.

Metro Transit Costs and Revenues

Metro Transit collected \$11.7 million in fares in 2011, covering 28% of its operating budget. Local funding sources include the City of Madison, partnering entities that contract with Metro for service in their jurisdiction, and Dane County, which provides mostly pass-through federal and state funding for paratransit service. State operating assistance funding constitutes the largest share of Metro’s overall budget although the percentage has been declining since the mid-1990s. Federal capital grants from the Federal Transit Administration make up most of the remainder of Metro’s funding other than a small amount of non-passenger revenue, mostly from advertising on the buses.

More than half of Metro’s budget is spent on fixed-route transit operations, including transit operator wages, supervision, fuel, vehicle maintenance, and other expenses. On average, Metro paid about \$93 per revenue hour for fixed-route bus service, including operations and vehicle maintenance, and \$110 per revenue hour, including administration and non-vehicle maintenance.

Figure 2



In 2011, Metro Paratransit provided about 269,000 one-way trips at an operating expense of \$6.8 million, which included both directly operated transit and purchased transit.

Metro Transit System Characteristics and Performance

Metro Transit's fixed-route ridership has improved substantially since the late 1990's, growing from 10 million rides per year to 15 million. Substantial increases in service levels accompanied the transfer point restructure in 1998; however, service levels dropped in the early 2000's and have since increased slightly. Since 2005, ridership has been increasing at about 4.5% per year while service levels have been increasing at about 0.8% per year. These trends can be seen in Figure 3.

Metro's service consists of routes with mostly 30- to 60-minute headways that overlap on many shared corridors, resulting in some areas with regular 15-minute service or better. Buses are generally scheduled to arrive at offset times to avoid duplication and the bunching of buses. The average weekday productivity for the data set analyzed (October, 2011) was about 48 boardings per scheduled weekday revenue service hour for Routes 1-85; almost 60,000 daily boardings. Saturday and Sunday productivity was about 37 and 26 boardings per revenue service hour, respectively. Throughout the year, ridership peaks in the winter months when school is in session. July ridership dipped to a low of about 830,000 boardings to a high of 1,510,000 in October. Annually, 75% of Metro's 14.9 million fixed-route boardings occurred on main line routes, 18% occurred on UW campus circulators, and 7% occurred on supplemental school service.

Figure 3

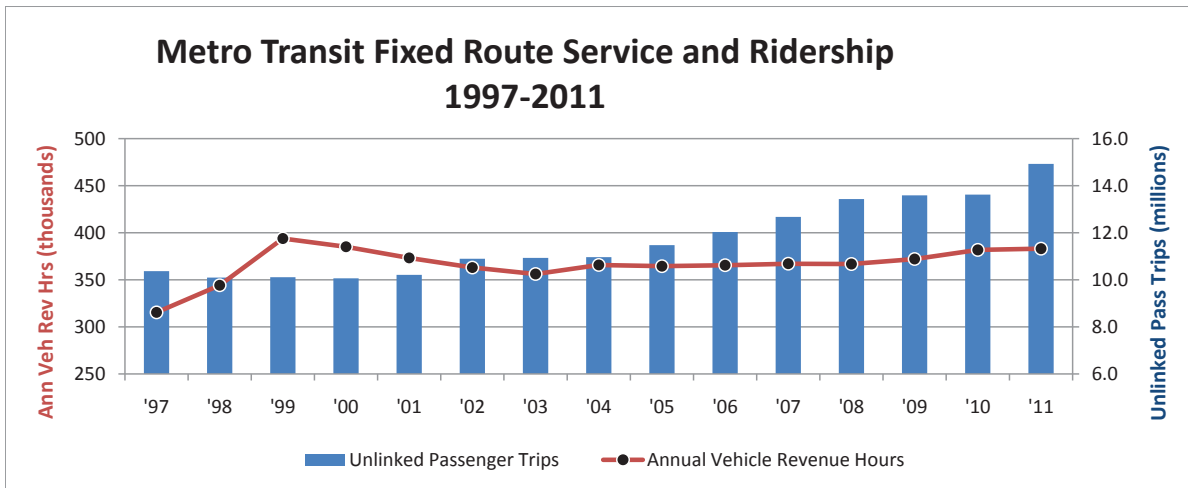
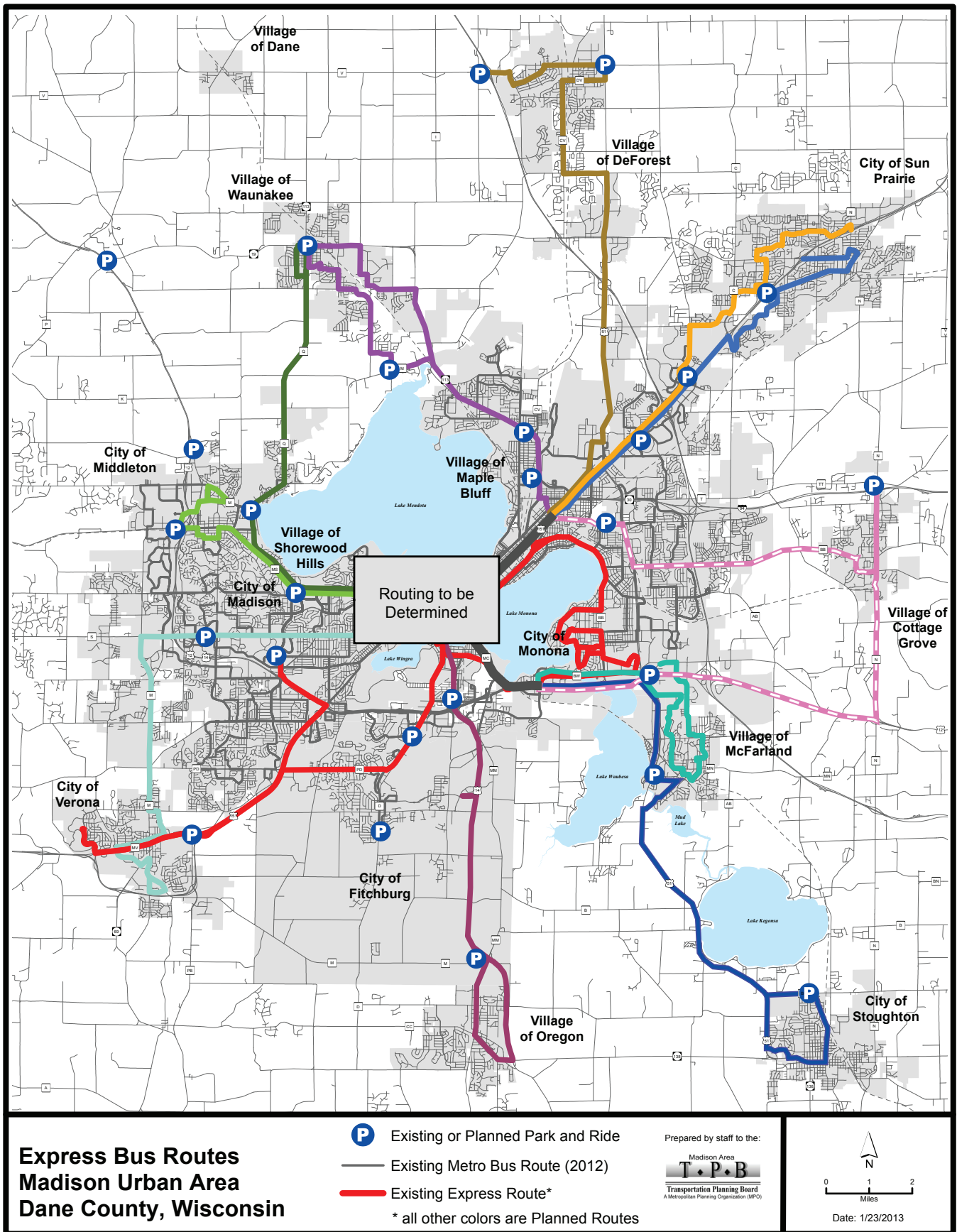


Table 1

System Characteristics	2006	2007	2008	2009	2010	2011
Transit Service Levels and Utilization						
Total Revenue Vehicle Hours	365,547	367,083	366,774	372,134	381,768	383,107
Total Revenue Vehicle Miles	4,703,901	4,717,515	4,707,127	4,709,101	5,566,675	4,818,879
Total Passenger Trips	12,034,468	12,672,265	13,433,221	13,588,426	13,623,461	14,923,970
Operating Expenses						
Total Expenses	\$35,143,898	\$36,199,459	\$39,237,204	\$40,547,797	\$40,434,049	\$42,090,315
Cost per Revenue Vehicle Hour	\$96.14	\$98.61	\$106.98	\$108.96	\$105.91	\$109.87
Cost per Revenue Vehicle Mile	\$7.47	\$7.67	\$8.34	\$8.61	\$7.26	\$8.73
Cost per Passenger	\$2.92	\$2.86	\$2.92	\$2.98	\$2.97	\$2.82
Revenue						
Total Fare Revenue *	\$7,912,169	\$8,721,876	\$9,083,451	\$9,992,237	\$10,737,634	\$11,712,963
Revenue per Passenger	\$0.66	\$0.69	\$0.68	\$0.74	\$0.79	\$0.78

* Total fare revenue includes revenue from unlimited ride passes.

Figure 4



Key Recommendations

The TDP recommends service and facility improvements and planning activities to take place between 2013 and 2017. Some actions – particularly long range items like expanding the Metro Transit maintenance facility and implementing bus rapid transit – will likely extend beyond the traditional limits of the TDP planning horizon; however, specific activities are necessary within the next five years to eventually achieve those outcomes.

The majority of the recommendations are targeted towards Metro Transit's fixed-route system, which constitutes the bulk of public transportation in the region. A total of 33 recommendations are included related to service planning, facilities, and other aspects of the transit service in the Madison area. In addition, new, updated Transit Planning Guidelines and Performance Standards were developed to guide annual service changes.

The following are some of the key recommendations:

- ▶ **Improve the utility of existing transit service by improving the directness and frequency of routes where appropriate.**

The TDP presents potential future service change concepts that have been identified by Metro staff, MPO staff, and others to improve service and reduce overcrowding. They range from small adjustments and extensions to more systematic changes that involve restructuring several different routes. Potential service changes are presented in three categories – Priority 1 (short term, 1-3 years), Priority 2 (medium term, 3-5 years), and Priority 3 (long term, new service as development and funding allow). These recommendations, shown in Section IV – Transit Development Plan, include new service, route extensions, frequency improvements, express service, and route changes. A new funding source would likely be necessary to implement all or most of these improvements.

- ▶ **Extend service to areas that are currently unserved by transit, including new commuter express service.**

Planning work for a network of regional express bus service primarily serving Dane County communities that are currently unserved by transit was refined. This service would be designed to serve home-based work trips during the conventional weekday commuting hours. The routes are primarily designed to serve trips to the Madison CBD and UW Campus areas, but would also serve reverse commutes to employment areas in suburban communities.



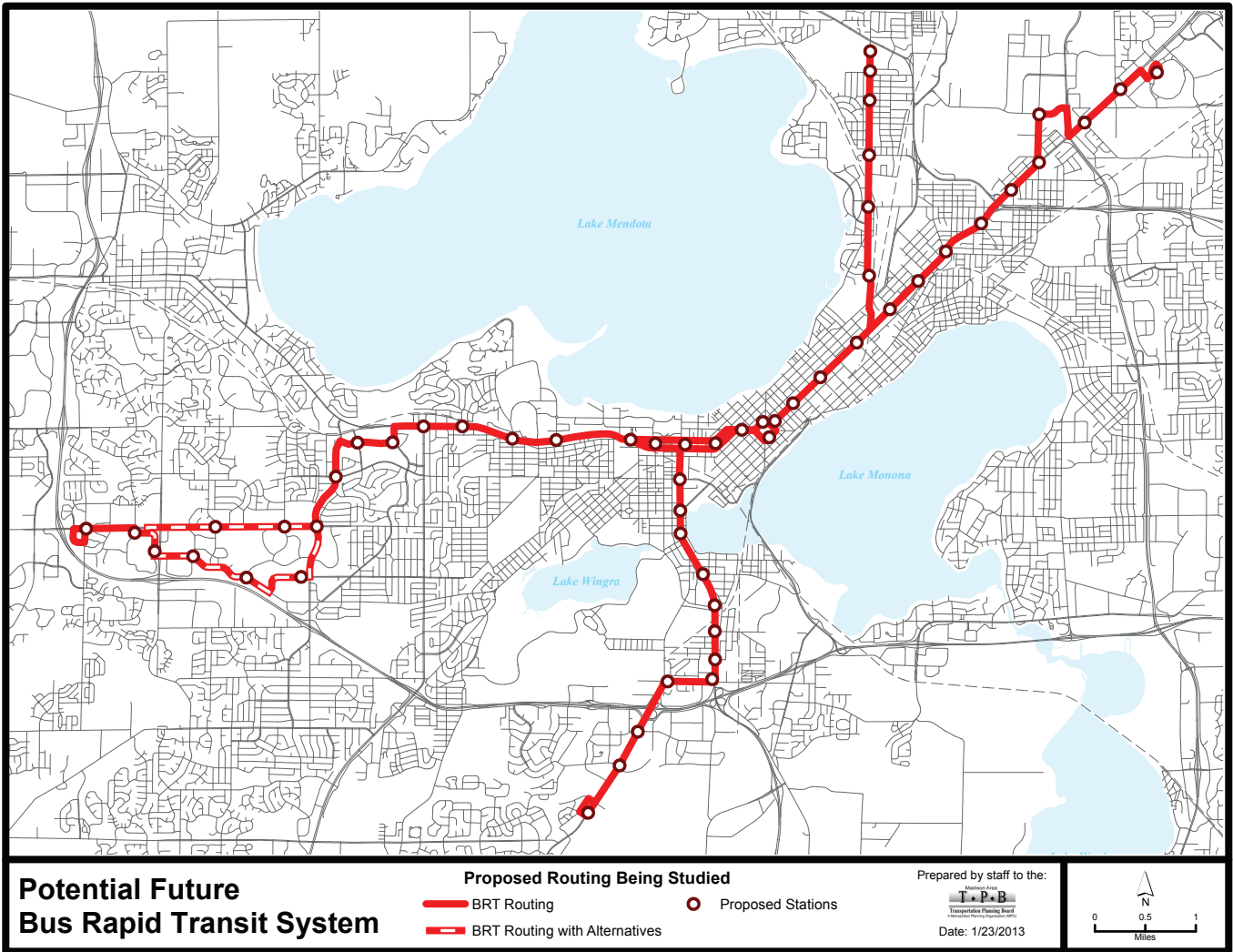
- ▶ **Adopt a bus stop consolidation program to remove or relocate excessive bus stops in central Madison, particularly on the Jenifer Street, Johnson Street, Gorham Street, and Monroe Street corridors.**

A bus stop consolidation program is recommended based on the analysis of bus stop spacing along central Madison transit corridors. This project will include a detailed stop-by-stop analysis and engage the public as well as staff and policy makers in order to minimize the impacts to transit users with limited mobility. The results of the analysis in the TDP show that a significant number of bus stops in central Madison could be removed in these and other corridors without reducing service area coverage. This would have several major benefits for Metro, transit users, and the environment, including faster service; improved reliability; and reduced fuel use, emissions, and maintenance costs.

- ▶ **Develop concepts for bus rapid transit (BRT) and plan for its implementation in the next five to ten years pending the outcome of the Transit Corridor Study (BRT Study).**

The Transit Corridor Study, led by the MPO, and funded through the Capital Region Sustainable Communities grant, will be completed in 2013. It will likely recommend four corridors for bus rapid transit development: University Avenue to West Towne, Park Street to Fitchburg, East Washington Avenue to East Towne, and Sherman Avenue to north Madison. A map showing the full system included in the study is shown in Figure 5. Staff and policy makers will continue to collaborate to move this project towards fruition.

Figure 5



For more information contact:



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