

Public Transit

Introduction

The major transit operator in the Madison Metropolitan area is Metro Transit, which is owned by the City of Madison and operates within the oversight of the Mayor, Common Council, and the City's Transit & Parking Commission. Metro contracts with local units of government, UW-Madison, and the Madison Metropolitan School District to provide service. Metro provides fixed-route service using large buses and demand-responsive paratransit service using small buses for those unable to use the fixed-route service. Other transit services in the metro area include shared-ride taxi and other demand responsive services, special event shuttles, state vanpools, and ridesharing services.

The Metro fixed-route transit system continues to serve work and school trips to the downtown Madison/UW-Madison campus area well. These trips account for the vast majority of weekday ridership on the system. The restructuring of the system from a radial to a timed transfer point system has allowed Metro to better serve the developing activity/employment centers on the urban fringe. Combined with Metro's good service coverage within the Cities of Madison and Middleton and its excellent service span, the system is able to provide a viable transportation alternative for many, if not most, trips within these communities.



A major challenge for the transit system, however, continues to be how to effectively serve the developing activity/employment centers and neighborhoods on the urban fringe, particularly those located beyond the Interstate and Beltline System. In particular, the challenge is providing a level of service that can compete more effectively with the private automobile. Most of the growing activity/employment centers have not been designed for efficient transit service, and parking is generally plentiful and free. Travel times from peripheral neighborhoods to the downtown/UW campus area are long relative to driving due to the lack of limited-stop or express commuter service.

Funding is another major challenge, given the lack of a dedicated funding source for transit and a very tight budget situation at the state and local levels. Identification of new sources of funding and a new governance structure for transit are critical tasks for the final phase of the Transport 2020 (East-West Transit Corridor) Study, which is underway.

Current Transit Services in the Madison Metropolitan Area

Metro Fixed-Route Service Rideship, and Performance Trends

Metro Transit provides bus service on regular routes and schedules, providing local, commuter, and circulator service. Metro utilizes a timed transfer point system. "Core" routes operate in high-volume corridors through the downtown/UW campus area between the transfer points, and provide all day service. "Commuter" routes provide direct weekday peak-hour service from residential areas to central and peripheral employment centers, overlapping with significant portions of the core routes. A few provide faster service with limited stops over some portion(s) of the route. "Peripheral" routes connect outlying residential neighborhoods with the transfer points for access to the core and connecting routes. Some operate only during off-peak and weekend times when direct commuter service is not available. "Connecting" routes connect the transfer points and major peripheral activity centers, providing direct cross-town service (e.g., south to west side). "Circulator" routes operate within the UW campus, downtown, and central neighborhoods. The large number of commuter routes, along with the core routes, provides most City of Madison and Middleton residents with direct service to the downtown/UW-Madison campus area without the need to transfer.

In 2005, Metro had 47 regular weekday routes (excluding UW-Madison campus and supplementary school service) with 168 buses operated in maximum peak-period service. There were 17 weekend routes. On weekdays while school was in session, Metro provided a total of 1,104 scheduled revenue hours of service on regular routes. A total of 460 scheduled revenue hours of service was provided on Saturdays and 410 on Sundays. The City of Monona contracts with a private provider for its own weekday commuter service, providing four a.m. and p.m. trips to the downtown/UW campus area.

Metro's service area is 68 square miles. The Monona transit service area covers another 1.6 square miles not served by Metro. Approximately 95% of the City of Madison's 2000 population was served by a Metro route, while 81% of the City of Middleton population was served. Around one-half of Fitchburg residents were served. Metro tracks service coverage of housing units within the City of Madison for which data can be updated on an annual basis. As of December 2005, 90% of the housing units in the City were within Metro's service area. This reflects the fact that expansion of the transit network is not keeping pace with development in new fringe area neighborhoods such as Madison's Southwest side. Figure 18, on the next page, illustrates the Metro and City of Monona fixed-route transit network and the weekday service area.

Metro Paratransit and Monona E/D Service

Metro provides paratransit service on a demand responsive, advance reservation basis for persons who are unable to use Metro's regular fixed-route service. Persons must be certified as eligible to receive the service in accordance with guidelines established by the Americans with Disabilities Act (ADA). Service is provided within three-quarters of a mile on each side of regular routes, excluding commuter routes, and is provided during the same hours that the fixed-routes operate. The service is provided door-to-door or curb-to-curb, depending upon the passenger's needs. Metro provides directly operated service on weekdays, but contracts with private providers for weeknight and weekend service and other service that it does not have the capacity to handle.



The City of Monona contracts with a private provider for service, called Monona Lift, which is designed for the elderly and persons with disabilities, but is also available to the general public. The service is a point deviation system with scheduled stops at fixed checkpoints along a general route. Buses deviate up to three-quarters of a mile from the general route between the checkpoints to pick up/drop off elderly and disabled passengers with an advance reservation.

Shared-Ride Public Taxi and Private Taxi Service

The Cities of Sun Prairie and Stoughton contract with private providers for shared-ride taxi service. Shared-ride taxi service is a form of door-to-door, demand-responsive transit (i.e., no set routes or schedules) similar to the familiar taxicab service. The difference is that with shared-ride service, passengers with different origins and/or destinations may be transported simultaneously. Shared-ride taxi systems operate with scheduled service hours and days of operation. Requests for service may be made upon demand or up to 24 hours in advance. Subscription trips are accepted, but are purposely limited to ensure on-demand service. In 2005, the Sun Prairie and Stoughton taxi systems provided around 88,800 and 34,900 trips respectively. Youth account for almost one-half of the passengers on the Sun Prairie system, as the Sun Prairie School District provides only limited transportation for students residing in the city.

Three private taxicab operators provide individually arranged transportation services for the general public throughout the metro area. One of the operators, Badger Cab, provides shared-ride service, while the others are metered cab operations. They operate without public funding, and the fares reflect this. Private taxi service is not required to be and is generally not provided with accessible vehicles. However one of the taxi companies, Union Transit, has voluntarily purchased an accessible vehicle and offers accessible service.

Specialized Transportation Services

The Adult Community Services Division of the Dane County Department of Human Services (DCHS) administers several accessible routed group ride and demand-responsive services for the elderly and persons with physical or developmental disabilities in the metro area and countywide. DCHS contracts with private providers for these services. The services are generally provided as a supplement to Metro service for persons residing or traveling outside Metro's service area, and transport people to necessary support and medical services, jobs, and training.

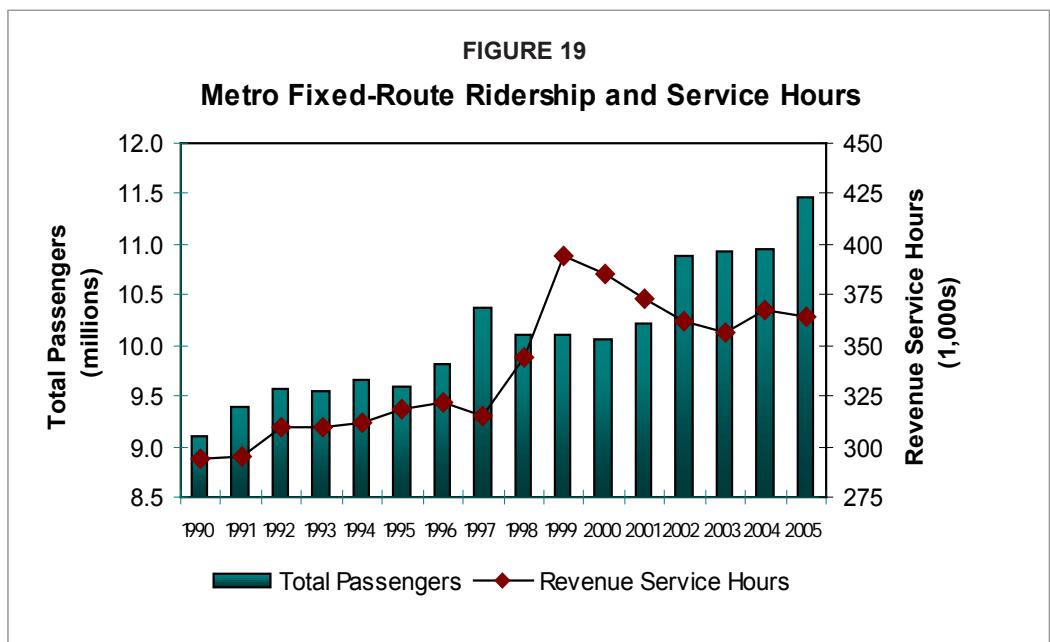
Using volunteer drivers in private vehicles, the Retired Senior Volunteer Driver Escort Program (RSVP) provides individual, and in a few cases, small group rides for the elderly when other options are not available. Most trips are for medical purposes, which is the highest priority. The City of Madison, Dane County, UW-Madison, and various non-profit organizations provide program-specific transportation services, which are targeted primarily at low-income persons.

Metro Fixed-Route Service, Ridership, and Performance Trends

Metro Transit provides a much higher level of service and has much higher ridership than similarly sized communities around the country. Metro provides 2.5 times more hours of service and four times as many riders per capita than other urban areas with similarly sized population.

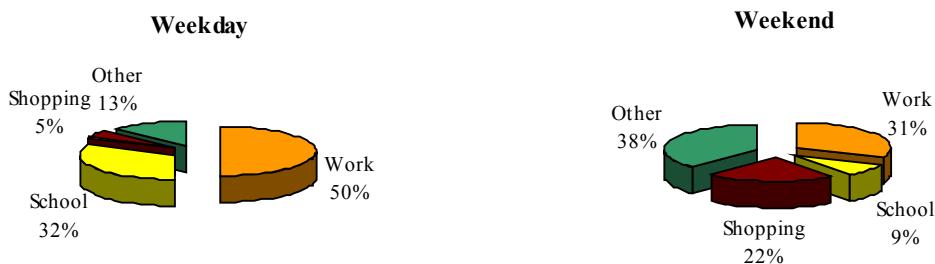
Service frequencies are highest (<5 to 15-minute peak, <15 to 30-minute off-peak headways) in the greater Isthmus area where many routes converge in transit corridors leading to the downtown/UW campus area. The weekday span of service for most areas with all-day service is excellent, with routes running 17-19 hours a day.

Since an inevitable period of adjustments with the new transfer point system in 1998-'99, ridership has increased and service efficiency has improved. As illustrated by Figure 19, the overall ridership trend has been positive since 1990. In 2005, total ridership was 11.48 million, a 4.7% increase compared to 2004 and the highest total since 1985. Metro carried 31.5 passengers per revenue service hour. Most of the increase in ridership the past few years has been on the commuter routes and the UW-Madison campus route, which was made free in 2002. Implementation of unlimited ride pass programs for UW-Madison and MATC students and employees, and City of Madison and St. Mary's Hospital employees has helped boost ridership along with service improvements and high gas prices in 2005.



As illustrated by Figure 20, work and school trips account for the vast majority of weekday passengers on Metro's regular fixed routes. The distribution of transit trip purposes is more even for weekend trips.

**FIGURE 20
DISTRIBUTION OF TRIP PURPOSES FOR TRIPS ON METRO'S REGULAR FIXED ROUTE SYSTEM**



As illustrated by Figure 19, the overall trend in revenue service hours has been positive since 1990. The number of service hours increased 25% between 1997 and 1999, the first full year the new transfer point system was in place. From 2000-2003, the number of overall service hours was then reduced each year to improve efficiency and achieve a more financially sustainable level of service. Service improvements were still made through strategic reallocation of service hours. Service hours increased 2.7% in 2004 with implementation of East side service improvements, but dropped slightly again in 2005. The total number of service hours was still 15.6% higher in 2005 than 1997—prior to implementation of the transfer point system—and 24% higher than in 1990. Table 16 provides service level and ridership statistics for 2000-2005.

**TABLE 16
METRO FIXED-ROUTE TRANSIT SYSTEM ANNUAL SERVICE LEVELS AND RIDERSHIP: 2000-2005**

Transit System Characteristics	Year					
	2000	2001	2002	2003	2004	2005
Transit Service Area Population ¹	233,400	233,400	233,400	233,400	233,400	233,400
Transit Service Levels						
Revenue Vehicle Hours Operated	385,072	373,331	363,095	356,137	365,826	364,491
Revenue Vehicle Miles Operated	4,792,120	4,654,434	4,560,152	4,515,478	4,675,185	4,675,350
Number of Vehicles Operated in Maximum Service	166	166	167	167	167	168
Transit Ridership and Service Utilization						
Total Passengers	10,065,495	10,210,834	10,895,089	10,934,125	10,962,345	11,475,597
Passengers per Capita	43.13	43.75	46.68	46.85	46.97	49.17
Passengers per Revenue Vehicle Hour	26.1	27.4	30.0	30.7	30.0	31.5
Revenue Vehicle Mile	2.10	2.19	2.39	2.42	2.34	2.45

¹ Based upon 2000 Census data. Updated population figures by small area not available.

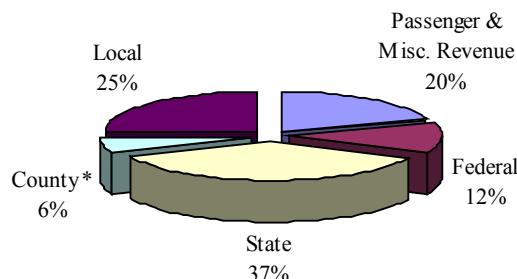
Source: Metro FTA National Transit Database (NTD) Reports and Madison Area MPO

With the vast majority of weekday transit trips destined for the downtown/UW-Madison campus areas, ridership is by far the highest in the University Avenue/State Street corridor. The East side corridors through the Isthmus—Johnson/Gorham Street, East Washington Avenue, and Jenifer St./Atwood Avenue—also have very high ridership. The Sheboygan Avenue/Hill Farms area, East and West Towne Malls, MATC, Allied Drive, Monroe Street, and Park/Mills Street Corridor are among other areas with high ridership. Figure 21, on the next page, shows average weekday ridership by bus stop.

Metro Service Operating Costs and Revenues

As with all modes of transportation, the cost of public transit service is not paid for by transit users alone, but is supplemented by public funding.⁵ In addition to passenger fares, Metro relies on federal, state, and local funding to cover the costs of operating the transit system. The percentage of system costs covered by passenger fare revenue dropped to a low of 17% in 2003 before increasing to 20% in 2005 following recent increases to discounted fares. Increasing paratransit costs have contributed to the drop in the percentage of costs covered by passenger revenue. State revenue has also not kept pace with cost increases due to inflation and the increase in service hours with the transfer point system. The percentage of costs covered by state revenue decreased from 45% in 1996 to 37% in 2005. Metro has made up the difference by allocating more federal capital funding towards operating costs⁶, and most recently by increasing local funding. Metro has also been able to work out an arrangement with Dane County to receive pass-through Federal Medicaid funding to support the paratransit system. Figure 22 illustrates the 2005 percentage distribution of operating revenue for the Metro transit system.

FIGURE 22
2005 Metro Transit Operating Revenue Distribution



*County funds consist primarily of pass-through federal MA Waiver Program and state Section 85.21 Program funding.

TABLE 17
METRO FIXED-ROUTE TRANSIT SYSTEM OPERATING COSTS, REVENUE, AND DEFICITS: 2000-2005

System Characteristics	Year					
	2000	2001	2002	2003	2004	2005
Service Expenses and Revenue						
Operating Expenses ¹						
Total Expenses	\$28,232,128	\$28,637,012	\$30,029,568	\$30,283,752	\$31,732,151	\$32,974,246
Cost per Total Vehicle Hour	\$65.96	\$68.60	\$73.63	\$75.90	\$78.34	\$81.33
Cost per Total Vehicle Mile	\$5.09	\$5.23	\$5.59	\$5.77	\$5.70	\$6.08
Cost per Passenger	\$2.80	\$2.80	\$2.76	\$2.77	\$2.89	\$2.87
Passenger Revenue ²	\$5,821,511	\$6,308,430	\$6,172,079	\$5,910,084	\$6,295,638	\$7,361,203
Revenue per Passenger	\$0.58	\$0.62	\$0.57	\$0.54	\$0.57	\$0.64
Percent of Expenses Recovered						
Through Passenger Passenger Revenue	20.6%	22.0%	20.6%	19.5%	19.8%	22.3%
Operating Deficit						
Total Deficit	\$22,410,617	\$22,328,582	\$23,857,489	\$24,373,668	\$25,436,513	\$25,613,043
Deficit per Passenger	\$2.23	\$2.19	\$2.19	\$2.23	\$2.32	\$2.23

¹Excludes interest and depreciation.

²Excludes miscellaneous operating revenue (e.g. advertising).

Source: Metro FTA National Transit Database (NTD) Reports and Madison Area MPO.

In 2005, the operating expense per vehicle hour for the fixed-route system was \$81.33, a 3.8% increase from 2004. This is considerably higher than peer transit systems, mostly due to higher driver wages and benefits. From 1998 to 2004, the average annual increase in expense per vehicle hour was just over 3% compared to an annual average inflation rate of 2.5%. The cost per fixed-route passenger was \$2.87 in 2005, while revenue per passenger was \$0.64, a 12% increase from 2004. The increase in revenue per passenger is attributable to the recent fare increases and an increase in the contract rate per trip for the UW-Madison unlimited ride pass program. Table 17 shows operating costs, revenues, and deficits for Metro's fixed-route system from 2000-2005.

⁵ A 1994 Highway Cost Pricing Study prepared for WisDOT as part of the Translinks 21 planning process concluded that around 44% of total public roadway expenditures were covered by non-user fees (primarily property taxes) based on a review of 1992 data.

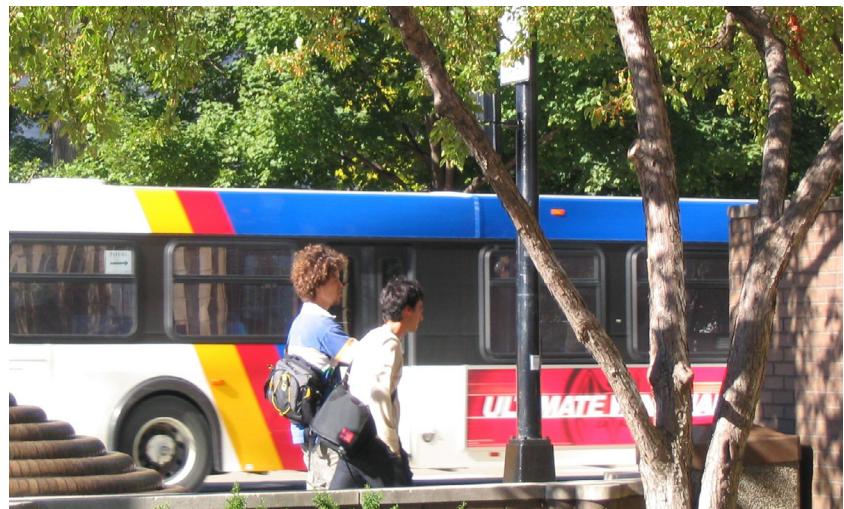
⁶ Federal rules allow some operating costs under the category of "preventive maintenance" to be covered with capital funding under the Federal Section 5307 Urbanized Area Formula Program. This includes all direct costs, including labor costs, associated with maintaining vehicles and facilities.

Transit Service Needs

The Madison area has an excellent and well-used transit system, comparing very favorably to systems in similarly sized areas as well as peer transit systems with similar service levels. However, there are still unmet needs, particularly in some of Madison's peripheral neighborhoods and in suburban communities. These include:

- Improved UW-Madison campus service, including direct service from the South and West Transfer Points and a better connection between the campus route and regular city routes.

Ridership by UW students and employees has increased significantly in recent years due to the university's unlimited ride pass program, an increase in parking costs, and other transportation demand management (TDM) activities. UW students and employees now account for well over 1/3 of system-wide ridership on Metro's regular routes.



Campus service improvements implemented in August 2006 include: (1) addition of a new South Campus Loop (Route 85) connecting new dormitories and offices to other campus areas; (2) a new direct connection from the West Transfer Point into campus through new Route 11; and (3) a new direct connection from the South Transfer Point into campus via new Route 44. Park-and-ride service from the Villager Mall on Park Street was eliminated, however.

- Improved and additional limited-stop commuter service to downtown/UW campus from peripheral neighborhoods and suburban communities.

Only a few routes provide limited-stop service for a significant portion of the route. As a result, travel times from many neighborhoods are 45 to 50 minutes or longer, more than twice the time of driving.

Service improvements implemented in August 2006 include service modifications for Routes 12, 14, 15, and 47, which will result in faster, more direct commuter service. Service between Middleton and Madison was also improved. Route 5, a core route, was modified to provide 45-minute vs. 60-minute service between the South and East Transfer Points. Addition of new commuter service from suburban communities such as Sun Prairie, Oregon, and Monona could provide an opportunity for adding more limited-stop service in the future. Metro has been working with several suburban communities to explore potential routed commuter service.

The Transport 2020 (East-West Transit Corridor) Study, which is in its second Draft Environmental Impact Study/Preliminary Engineering phase, is evaluating the costs, benefits, and impacts of a high-capacity transit system (most likely some type of rail) on dedicated right-of-way in the east-west corridor. The corridor runs from the airport and East Towne on the North and East sides to Middleton and West Towne on the West side. All of the alternatives being considered include supplemental express bus service. In addition to developing more detailed plans for the alternative improvements (route, stations, operating plans) and selecting a preferred alternative, the study will also identify funding and management mechanisms. A new funding source would be required to fund both the capital and operating costs for such a system. The outcome of the study will be an application for Federal New Starts funding for the recommended alternative.

- Additional park-and-ride facilities and service.

Construction of a park-and-ride lot at the East Transfer Point is planned for 2006-2007.

- New or improved service to peripheral employment centers in Middleton, Fitchburg, and the American Center on Madison's Northeast side.

Some of these employment centers have either very limited service or no service at all. Improvements have been made in the last two years. Commuter service to Epic System's new campus on the West side of Verona was added in 2005. The initial service consists of three limited-stop express a.m. and p.m. trips between the site and the West Transfer Point (WTP). Service to the West side employment centers was just improved in August 2006. Service was extended to Middleton's developing Discovery Springs and Airport Road Business Parks with direct service from the WTP. More frequent off-peak service was provided between Old Sauk Trails Office Park and the WTP. Middleton service was redesigned to provide transfer opportunities at three different locations, connecting the employment centers with the City's residential neighborhoods east of USH 12 and downtown Madison. Commuter service was also extended down to the Fitchburg Center.

- New or improved off-peak and weekend service in some neighborhoods and communities (e.g., South side, Middleton, Monona).

Off-peak service frequency between Middleton and downtown Madison was increased from 90 to 60 minutes as part of the August 2006 service improvements. Service was removed on Monona Drive north of Pflaum Road as part of implementation of the South to East Transfer Point (ETP) connecting route.

- Improved off-peak and weekend service frequency in some areas and corridors leading to the downtown/UW campus area.

Off-peak service on the South side (e.g., Southdale), including the Fish Hatchery Road and Park Street corridors, could be improved. The South side has several neighborhoods with higher concentrations of transit-dependent persons. The August 2006 service changes eliminated service from some street segments on the South side, but added connecting service to the East Transfer Point. Peak period service on Fish Hatchery Road was improved with Route 47 no longer alternating between Park Street and Fish Hatchery Road. Regent Street and Mineral Point Road are other corridors that should be considered for higher frequency service.

Frequency of weekend service along the Jenifer and Johnson Street corridors was increased through improved bus phasing as a result of use of an offset pulse at the ETP implemented in August 2006. Weekend service frequency on Monroe Street and Odana Road was reduced from 30 to 60 minutes, however.

- Improved pedestrian access to the transit system.

Pedestrian facility improvements (sidewalks, curb ramps, improved street crossings, etc.) are needed in a number of areas around bus stops. Many bus stops lack concrete bus pads with connections to the sidewalk. This is particularly problematic for persons using wheelchairs and others with a mobility limitation.

- Local shared-ride taxi service in more suburban communities (e.g., Verona, Oregon).

Such service is a cost-effective way to address the mobility needs of persons without a car in smaller communities that cannot support fixed route service. The service can also be used as a "feeder" service to Metro's fixed route system. The Village of Oregon is considering setting up a shared-ride taxi system.

Metro's Major Transit Capital Needs

- Replacement and expansion of the fixed-route and paratransit bus fleets
- Renovation and expansion of Metro's administration, operations, bus storage, and maintenance facility
- Renovation of the State Street Transit Mall
- Bus shelters and other bus stop amenities

