INTRODUCTION

The review and update of the land use and transportation system plans for the seven-county Southeastern Wisconsin Region is well underway. This newsletter is being published to keep you informed of the study's progress and findings.

This is the third in a series of newsletters. The first included the announcement of an initial series of public meetings held in August 2004 and information regarding the Regional Planning Commission, the new year 2035 population and economic projections for the Region, the basic principles guiding the Commission's regional land use and transportation planning, and the existing regional land use and transportation system plans. The second issue included announcement of a second series of public meetings for May 2005, and information regarding the advisory committees on regional land use and transportation planning, the implementation to date of existing regional land use and transportation plans and historic trends in land use and transportation, and the proposed process for development of regional land use and transportation plans.

This third newsletter includes information regarding:

- A third series of public meetings scheduled for September 2005;
- The preliminary recommended regional land use plan for the year 2035; and
- Preliminary proposals for public transit, bicycle and pedestrian facilities, travel demand management, and transportation systems management being considered for inclusion in the year 2035 regional transportation plan.

PRELIMINARY RECOMMENDED YEAR 2035 REGIONAL LAND USE PLAN

The preliminary recommended regional land use plan is intended to provide a guide, or overall framework, for future land use development within the Region to the year 2035. Implementation of the plan will depend upon the voluntary actions of local, county, State, and Federal agencies and units of government in conjunction with the private sector.
The preliminary year 2035 regional land use plan, contains the following recommendations:

- The primary environmental corridors, secondary environmental corridors, and isolated natural resource areas of the Region should be preserved in essentially natural, open uses, continuing to account for about 23 percent of the area of the Region, as shown on Map 1. These areas encompass the best remaining features of the Region's natural landscape—lakes, rivers, streams, and associated shorelands and floodlands, wetlands, woodlands, prairie remnants, wildlife habitat, rugged terrain and steep slopes, unique landforms and geological formations, existing and potential outdoor recreation sites, and scenic areas and vistas.

- The prime, or most productive farmland in the Region should be preserved. The farmland with soils considered to be most suitable for agriculture is farmland covered by agricultural capability Class I and Class II soils as classified by the U.S. Natural Resources Conservation Service. As shown on Map 2, farmland with Class I and Class II soils accounted for about 36 percent of the land area in the Region and 75 percent of all farmland in southeastern Wisconsin in the year 2000. Some Class I and Class II farmland that is located adjacent to existing urban centers and within planned urban growth/sanitary sewer service areas is necessarily proposed to be converted to urban use as a result of planned and orderly growth of those urban centers. It is recommended that the counties in the Region, in cooperation with the concerned local units of government, carry out planning programs to identify and preserve prime farmland, considering farmland covered by Class I and Class II soils, and other factors including the size of individual farm units and overall size of the farming area, the availability of agricultural services, and the degree of encroachment from urban uses. Most county planning in this regard was carried out more than 20 years ago, and needs to be reviewed and updated.

- New urban development should be accommodated within and around existing urban centers as infill development, through redevelopment, and through the orderly expansion of planned urban service areas on lands proximate to these centers. Map 3...
shows these urban centers and growth areas. Particular emphasis is placed on stabilizing and revitalizing the central cities of Milwaukee, Racine, and Kenosha. The plan further proposes that the forecast increment in population and residential land be allocated to these urban centers and their planned urban growth/sanitary sewer service areas predominantly at medium and high densities—88 percent of all new housing units—in residential neighborhoods and in more mixed use settings. The plan envisions residential neighborhoods designed as cohesive units, properly related to the larger community of which they are a part, and served by an interconnected internal street, bicycle-way, and pedestrian system and by a neighborhood school, park, and shopping area. The regional plan also envisions residential development in mixed-use settings including dwellings above the ground floor of commercial uses; residential structures intermixed with, or located adjacent to, compatible commercial, institutional, or civic uses; and residential development integrated into, or located in proximity to, major employment and activity centers.

- The regional plan envisions a range of commercial and industrial areas. The largest commercial and industrial areas, in terms of employment levels, are identified as major economic activity centers. These are defined as areas containing a concentration of commercial and/or industrial land having at least 3,500 total jobs or 2,000 retail jobs. Sixty such centers would accommodate about 50 percent of all jobs in the Region in 2035. The plan envisions the continued development and redevelopment of the Region’s existing major commercial and industrial centers, and those now under development or redevelopment, as shown on Map 4.

- Development outside urban centers and their proposed urban service areas would be constrained. About 2 percent of the projected increment in households in the Region between 2000 and 2035, or about 3,700 households, would be accommodated at rural density (no more than one housing unit per five acres) in such areas, with conservation subdivision designs recommended. The only other residential development outside urban centers and their planned urban service areas would be limited to that which was already committed through approved subdivision plats and certified survey maps.
YEAR 2035 REGIONAL TRANSPORTATION PLAN DEVELOPMENT

The development of the year 2035 regional transportation system plan for southeastern Wisconsin is being guided by the following vision for the transportation system of southeastern Wisconsin:

*A multimodal transportation system with high quality public transit, bicycle and pedestrian, and arterial street and highway elements which add to the quality of life of Region residents and support and promote expansion of the Region's economy, by providing for convenient, efficient, and safe travel by each mode, while protecting the quality of the Region's natural environment, minimizing disruption of both the natural and manmade environment, and serving to support implementation of the regional land use plan, while minimizing the capital and annual operating costs of the transportation system.*

The development of each plan element of the regional transportation system plan for the year 2035—public transit, bicycle and pedestrian, travel demand management, transportation systems management, and arterial streets and highways-builds upon the current adopted year 2020 regional transportation plan, recognizing the successful implementation of approximately 15 to 20 percent of each element of the year 2020 plan since 1997. In the development of the year 2035 regional transportation system plan, consideration was given to those year 2020 plan proposals which had advanced to project planning and engineering, but which could not be implemented at the project level. Also considered was the support and opposition which has been offered on the recommendations of the current adopted year 2020 regional transportation system plan.

The new year 2035 regional transportation system plan is being designed to serve, and to be consistent with, the year 2035 regional land use plan. Future needs for public transit, street and highway, and other transportation improvements considered in the regional transportation planning process will be derived from the projected travel based upon the regional land use plan. In addition, the consistency of the regional transportation and land use plans will be evaluated by comparing the accessibility provided under the transportation plan and the location of improvements proposed under the transportation plan to the location of land use development and redevelopment proposed under the land use plan.

The process for the development of the year 2035 regional transportation plan begins with consideration and development of preliminary proposals for the travel demand management, transportation systems management, bicycle and pedestrian, and public transit elements of the plan. The effects on travel demand of a regional transportation plan alternative including these four combined plan elements will then be tested and evaluated, and compared to that of a no-build plan which would propose to maintain the existing transportation system. Only subsequent to this testing and evaluation will the year 2035 regional transportation system plan development process consider arterial street and highway system improvement and expansion. Arterial street and highway improvement and expansion will thus be considered only to address the residual highway traffic volumes and attendant traffic congestion which may not be expected to be alleviated by travel demand management, transportation systems management, bicycle and pedestrian facilities, and public transit. A plan including arterial street and highway improvement and expansion will be compared to a plan which only includes travel demand management, transportation systems management, bicycle and pedestrian, and public transit elements, and to a "no-build" transportation system plan.

Discussed in the remainder of this newsletter are preliminary proposals for the public transit, bicycle and pedestrian facilities, transportation systems management, and travel demand management being considered for possible inclusion in the 2035 regional transportation plan.

**Preliminary Proposals for Public Transit**

Preliminary proposals for public transit envision significant improvement and expansion of public transit in southeastern Wisconsin, including development within the Region of a rapid transit and express transit system, improvement of existing local bus service, and the integration of local bus service with the proposed rapid and express transit services. Map 5 displays the transit system proposals for each of the three transit system components. Altogether, service on the regional transit system would be increased from service levels existing in 2005 by about 100 percent measured in terms of revenue transit vehicle-miles of service provided, from about 69,000 vehicle-miles of service on an average weekday in the year 2005 to 138,000 vehicle-miles of service in the year 2035 (see Table 1).

The proposed expansion of public transit is essential in southeastern Wisconsin for many reasons:

- Public transit is essential to provide an alternative mode of travel in heavily traveled corridors within and between the Region's urban areas, and in the Region's densely developed urban communities and activity centers. It is not desirable, and not possible, in the most heavily traveled corridors, dense urban areas, or the largest and densest activity centers of the Region to accommodate all travel by automobile with respect to both demand for street traffic carrying capacity and parking. To attract travel to public transit, service must be available throughout the day and evening at convenient service frequencies, and at competitive and attractive travel speeds.

- Public transit also supports and encourages higher development density and in-fill land use development and redevelopment, which results in efficiencies for the overall transportation system and other public infrastructure and services.
Public transit also contributes to efficiency in the transportation system, including reduced air pollution and energy consumption.

Public transit permits choice in transportation, enhancing the Region's quality of life and economy. A portion of a region's population and businesses would prefer to have public transit alternatives available and to travel by public transit. High quality public transit helps provide a high quality of life and contributes to the maintenance and enhancement of the Region's economy.

Public transit is essential in the Region to meet the travel needs of persons unable to use personal automobile transportation. In the year 2000, approximately 64,300 households, or 8.5 percent of the Region’s households, did not have a personal vehicle available and were dependent upon public transit for travel. The accessibility of this portion of the Region's population to the metropolitan area—jobs, health care, shopping and education—is almost entirely dependent upon the extent to which public transit is available, and is reasonably fast, convenient, and affordable.

Rapid Transit Service
The proposed rapid transit service would consist of buses operating over freeways connecting the Milwaukee central business district, the urbanized areas of the Region, and the urban centers and outlying counties of the Region. Rapid transit bus service would be provided south to Racine and Kenosha, southwest to Mukwonago and East Troy, west to Waukesha and Oconomowoc, northwest to West Bend and Hartford, and north to Cedarburg, Grafton, Saukville, and Port Washington. The proposed rapid transit system would have the following characteristics:

- The bus rapid transit service would operate in both directions during all time periods of the day providing both traditional commuter and reverse-commute service.
- The rapid transit service would operate with some intermediate stops spaced about three to five miles apart to increase accessibility to employment centers and to increase accessibility for reverse-commute travel from residential areas within central Milwaukee County. The stops would provide connections with express transit service, local transit service, or shuttle bus or van service to nearby employment centers.
- The service would operate throughout the day. The frequency of service provided would be every 10 to 30 minutes in weekday peak travel periods, and every 30 to 60 minutes in weekday off-peak periods and on weekends.
An approximately 204 percent increase in rapid transit service is proposed as measured by daily vehicle-miles of bus service, from the 7,900 vehicle-miles of such service provided on an average weekday in the year 2005, to 24,000 vehicle-miles in the plan design year 2035.

Express Transit Service

The proposed express transit service would consist of a grid of eight limited-stop, higher-speed routes located largely within Milwaukee County connecting major employment centers and shopping areas, other major activity centers such as General Mitchell International Airport, tourist attractions and entertainment centers, and residential areas. The express routes would replace existing major local bus routes. Stops would typically be spaced about one-quarter mile apart. It is envisioned that this system of limited-stop express service routes would initially consist of buses operating over arterial streets in mixed traffic, and would be upgraded over time to buses operating on reserved street lanes with priority treatment at traffic signals.

As envisioned under the plan:

- The express service would operate in both directions during all periods of the day providing both traditional and reverse commute service.
- The service would generally operate with a stop spacing of about one-quarter mile with one-half mile stop spacing in outlying portions of Milwaukee County and the Milwaukee urbanized area.
- The frequency of service provided would be about every 10 minutes during weekday peak periods, and about every 20 to 30 minutes during weekday off-peak periods and on weekends.
- The overall travel speed provided would be about 16 to 18 miles per hour, a significant improvement over the average 12-miles-per-hour speed provided by the existing local bus transit service.
- No express transit service existed in the Region in 2005. As proposed, about 17,000 vehicle-miles of express transit service would be provided on an average weekday in the Region in the year 2035.

Local Transit Service

The improvement and expansion of local bus transit service over arterial and collector streets, with frequent stops throughout the Kenosha, Milwaukee, and Racine urbanized areas is also proposed. Service would be provided on weekdays, and during weekday evenings, Saturdays, and Sundays. An approximately 59 percent increase in local bus service is proposed from the 61,100 vehicle-miles of local bus service provided in 2005 on an average weekday to 97,000 vehicle-miles in the plan design year 2035. The service improvements and expansion proposed include expansion of service area and hours, and improvements in the frequency of local transit service provided, particularly on major local routes. The proposed frequency of local bus service is shown in Table 2.

Paratransit Service

Paratransit service is proposed to be provided consistent with the Federal Americans with Disabilities Act (ADA) of 1990. Under the provisions of this Act, all transit vehicles that provide conventional fixed-route transit service must be accessible to persons with disabilities, including those persons using wheelchairs. All public entities operating fixed-route transit systems must also continue to provide paratransit service to those disabled persons within local transit service areas who are unable to use fixed-route transit services consistent with federally specified eligibility and service requirements. The complementary paratransit services must serve any person with a permanent or temporary disability who is unable independently to board, ride, or disembark from an accessible vehicle used to provide fixed-route transit service; who is capable of using an accessible vehicle, but one is not available for the desired trip; or who is unable to travel to or from the boarding or disembarking location of the fixed-route transit service. The planned paratransit service must be available during the same hours and on the same days as the fixed-route transit service, be provided to eligible persons on a "next-day" trip-reservations basis, and not limit service to eligible persons based on restrictions or

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### Table 1

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<tr>
<th>Service Characteristics</th>
<th>Existing 2005&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Proposed 2035</th>
<th>Increment</th>
<th>Percent Change</th>
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<tbody>
<tr>
<td>Revenue Vehicle -Miles</td>
<td>Rapid: 7,900&lt;sup&gt;b&lt;/sup&gt;</td>
<td>24,000</td>
<td>16,100</td>
<td>203.8</td>
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<tr>
<td></td>
<td>Express: 61,100</td>
<td>97,000</td>
<td>35,900</td>
<td>58.8</td>
</tr>
<tr>
<td>Total</td>
<td>69,000</td>
<td>138,000</td>
<td>69,000</td>
<td>100.0</td>
</tr>
<tr>
<td>Revenue Vehicle -Hours</td>
<td>Rapid: 350&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1,100</td>
<td>750</td>
<td>214.3</td>
</tr>
<tr>
<td></td>
<td>Express: 4,750</td>
<td>8,900</td>
<td>4,150</td>
<td>87.4</td>
</tr>
<tr>
<td>Total</td>
<td>5,100</td>
<td>11,100</td>
<td>6,000</td>
<td>117.6</td>
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<sup>a</sup> Estimated.

<sup>b</sup> Includes the existing commuter bus route operated in the Kenosha-Milwaukee-Racine corridor. While portions of this route operate with express stop spacing, the long trips served by, and average operating speeds of, this route are typical of those for rapid service.

Source: SEWRPC.
Upgrading to Rail Transit or Bus Guideways

Rapid and express transit service is proposed to initially be provided with buses. This bus service would ultimately be upgraded to commuter rail for rapid transit service and to bus guideway or light rail for express transit service. Map 6 displays four potential future commuter rail lines and six potential future bus guideway/light rail lines within southeastern Wisconsin. Upgrading rapid transit service to commuter rail and express transit service to bus guideway/light rail is essential to meeting the needs for public transit within southeastern Wisconsin. Public transit cannot offer convenient accessibility to metropolitan area services for those without an automobile, offer an attractive alternative in heavily traveled corridors and dense urban activity centers, or provide a true choice for travel if it is caught in traffic congestion, and its travel times are not comparable to those of automobile travel. Upgrading to exclusive guideway transit unaffected by congestion like commuter rail and bus guideways or light rail is essential to meeting the basic needs for public transit in southeastern Wisconsin. Upgrading to exclusive guideway transit may also be expected to promote higher density land development and redevelopment at and around the stations of the exclusive guideway transit facilities, promoting implementation of the regional land use plan.

Local governments, which are the sponsors and operators of transit systems, would determine whether to upgrade to commuter rail for rapid transit service, and to bus guideway/light rail for express transit service by conducting in each of the four potential commuter rail corridors and six potential bus guideway/light rail corridors detailed corridor transit alternatives analysis studies. Such studies are required by the U.S. Department of Transportation, Federal Transit Administration for potential guideway development to be eligible for Federal funding. At the conclusion of the corridor studies, decisions would be made by the concerned local government sponsors whether to provide rapid transit service through buses operating over existing freeways or through commuter rail, and whether to provide express transit service through buses operating over reserved lanes on surface arterials, exclusive bus guideways, or light rail. If a local government sponsor does determine to implement exclusive fixed guideway transit commuter rail or light rail/bus guideway and proceeds to preliminary engineering, the Commission would formally amend the regional plan to include the fixed guideway at the request of the local governmental sponsor.

There are two efforts currently underway in southeastern Wisconsin considering upgrading to fixed guideway transit. Milwaukee County in cooperation with the City of Milwaukee and Wisconsin Center District is conducting the Milwaukee downtown connector study which is considering implementation of express transit electric bus guideway technology and buses operating in reserved street lanes. Rapid transit commuter rail in the Milwaukee-Racine-Kenosha corridor was recommended for implementation at the conclusion of a corridor transit alternatives analysis study. The Counties and Cities of Milwaukee, Racine, and Kenosha are currently conducting further study addressing funding and refinement of the proposed commuter rail extension. The 2005-2007 State budget included legislation creating a three County regional transit authority for Kenosha, Milwaukee, and Racine Counties, which would be the operator of the proposed commuter rail service.

Summary and Conclusions—Public Transit

The proposed expansion of public transit in southeastern Wisconsin would represent a near doubling of transit service in southeastern Wisconsin by the year 2035. As shown in Figure 1, this would entail about a 2.5 percent annual increase in transit service to the year 2035, or about the same level of annual increase as proposed under the year 2020 plan. Significant implementation of the year 2020 plan occurred between 1997 and 2000 as transit service expanded by over 25 percent. However due to State and local budget problems, transit service was significantly reduced from 2000 to 2005.

Implementation of this proposed expansion is dependent upon the continued commitment of the State to be a partner in the maintenance, improvement and expansion, and attendant funding of public transit. The State has historically funded 40 to 45 percent of transit operating costs, and has increased funding to address inflation in the cost of providing public transit, and to provide for transit improvement and expansion. State transit funding to the Milwaukee County Transit System increased by 29 percent from 1995 to 2000 and by 70 percent for all other transit systems in the Region, but only by 5 percent between 2000 and 2005 for the Milwaukee County Transit System and by 12 percent for all other transit systems. In comparison, local funding of public transit increased between 1995 and 2000 by 30 percent for the Milwaukee County Transit System and by 62 percent for other transit systems in the Region, and increased between 2000 and 2005 by 20 percent for the Milwaukee County Transit System and 73 percent for other transit systems in

Table 2

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<th>Area</th>
<th>Average Weekday Headways on Local Bus Service (minutes)</th>
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<tr>
<td></td>
<td>Morning and Afternoon Peak Periods</td>
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<tr>
<td>Within Milwaukee County</td>
<td></td>
</tr>
<tr>
<td>Central Milwaukee County</td>
<td>5-15</td>
</tr>
<tr>
<td>Remainder of Milwaukee County</td>
<td>15-20</td>
</tr>
<tr>
<td>Outside Milwaukee County...</td>
<td>15-30</td>
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</table>

Source: SEWRPC.
the Region. The 2003-2005 State budget provided no funding increase for public transit Statewide and the 2005-2007 budget only provides a 2 percent annual increase. An annual 4 to 5 percent increase may be essential to address rising costs, including inflation and real increases in fuel costs, and to support system improvement and expansion.

Implementation of the proposed expansion of public transit in southeastern Wisconsin will also be dependent upon attaining dedicated local funding for public transit. The local share of funding of public transit in southeastern Wisconsin is provided through county or municipal budgets, and represents about 15 percent of the total operating costs and 20 percent of total capital costs of public transit. Thus, the local share of funding public transit is largely provided by property taxes, and public transit must annually compete with mandated services and projects. Increasingly, due to the constraints in property tax based funding, counties and municipalities have found it difficult to provide funding to address transit needs, and to respond to shortages in Federal and State funding. Most public transit systems nationwide have dedicated local funding, typically a sales tax of 0.25 to 1.0 percent. A sales tax provides funding which should increase with inflation and area growth, thereby addressing funding needs attendant to inflation in the costs of providing public transit and transit system expansion.

The development of a regional transit authority could also assist in implementing the proposed transit system expansion. A number of the proposed transit services extend across city and county boundaries. A regional transit authority could assist in the implementation of these proposed services.

Preliminary Proposals for Bicycle and Pedestrian Facilities

Preliminary proposals for bicycle and pedestrian facilities are intended to promote safe accommodation of bicycle and pedestrian travel, and encourage bicycle and pedestrian travel as an alternative to personal vehicle travel. The preliminary proposals envision that as the surface arterial street system of 3,300 miles in the Region is resurfaced and reconstructed segment-by-segment, the provision of accommodation for bicycle travel would be considered and implemented, if feasible, through bicycle lanes, widened outside travel lanes, widened shoulders, or separate bicycle paths. The surface arterial street system of the Region provides a network of direct travel routes serving virtually all travel origins and destinations within Southeastern Wisconsin. Arterial streets and highways, particularly those with high-speed traffic or heavy volumes of truck or transit vehicle traffic, require improvements such as extra-wide outside travel lanes, paved shoulders, bicycle lanes, or a separate bicycle path in order to safely accommodate bicycle travel. Land access and collector streets, because of low traffic volumes and speeds, are capable of accommodating bicycle travel with no special accommodation for bicycle travel.

The level and unit of government responsible for constructing and maintaining the surface arterial street or highway should have responsibility for constructing, maintaining, and funding the associated bicycle facility. A detailed evaluation of the alternatives for accommodation of bicycles on surface arterial streets or highways should necessarily be conducted by the responsible level and unit of
government as part of the engineering for the resurfacing, reconstruction, and new construction of each segment of surface arterial. It is proposed that the Regional Planning Commission prepare an assessment of the priority of need for bicycle accommodation on each segment of the surface arterial street and highway system considering such factors as traffic volume, composition, speed, and congestion.

It is also proposed that a system of off-street bicycle paths be provided between the Kenosha, Milwaukee, and Racine urbanized areas and the cities and villages within the Region with a population of 5,000 or more located outside these three urbanized areas. This system of off-street bicycle paths was initially also proposed in the adopted park and open space plans prepared by the Commission for each of the seven counties of the Region. These off-street bicycle paths would be located in natural resource and utility corridors and are intended to provide reasonably direct connections between the Region’s urbanized and small urban areas on safe and aesthetically attractive routes with separation from motor vehicle traffic. Some on-street bicycle connections will be required to connect segments of this system of off-street paths. These connections if provided over surface arterials would include some type of bicycle accommodation—paved shoulders, extra-wide outside travel lanes, bicycle lanes, or separate parallel bicycle paths—or if provided over a nonarterial collector or land access street would require no special accommodation. The proposed system of on- and off-street bicycle facilities is shown on Map 7, and includes 575 miles of off-street bicycle paths with 147 miles of surface arterial and 83 miles of nonarterial connections. Approximately 203 miles of the planned 575 miles of off-street bicycle paths currently exist. Also shown on Map 7 is the surface arterial street and highway system within the Region proposed to be provided with bicycle accommodation.

The pedestrian facilities portion of the proposed bicycle and pedestrian facilities plan element is envisioned as a policy plan, rather than a system plan. It proposes that the various units and agencies of government responsible for the construction and maintenance of pedestrian facilities in southeastern Wisconsin adopt and follow a series of recommended standards and guidelines with regard to the development of those facilities, particularly within planned neighborhood units. These standards include the provision of sidewalks in the urban portions of the Region.

**Preliminary Proposals for Transportation Systems Management**

Preliminary proposals for transportation systems management for possible inclusion in the year 2035 regional transportation plan include measures intended to manage and operate existing transportation facilities to their maximum carrying capacity and travel efficiency, including: freeway traffic management, surface arterial street and highway traffic management, and major activity center parking management and guidance.

**Freeway Traffic Management**

Proposed measures to improve the operation and management of the regional freeway system include operational control, advisory information, and incident management measures, as well as a traffic operations center supporting these measures. Essential to achieving freeway operational control, advisory information, and incident management is the WisDOT traffic operations center (TOC) in the City of Milwaukee. At the TOC all freeway segments in the Milwaukee area are monitored, freeway operational control and advisory information is determined, and incident management detection and confirmation is conducted. The TOC is important to the safe and efficient operation of the regional freeway system and is in operation from 6:00 a.m. to 12:00 midnight, 365 days a year and will be expanded to 24 hour operation in the summer of 2005.

**Operational Control**

Measures to improve freeway operation during average weekday peak traffic periods and during minor and major incidents through monitoring of freeway operating conditions and control of entering freeway traffic include traffic detectors, freeway on-ramp-meters, and ramp-meter control strategy. Traffic detectors measure the speed, volume, and density of freeway traffic, and are used in operational control, as well as advisory information and incident management. Existing freeway system traffic detectors consist of detectors embedded in the pavement at one-half mile intervals on the freeways in Milwaukee County and on IH 94 in Waukesha County, and at about one to two mile intervals on IH 94 in Kenosha and Racine Counties. The data collected from these traffic detectors is monitored by the WisDOT at the TOC for the purposes of detecting freeway system travel speed and time, traffic congestion, traffic flow breakdowns, and incidents. Freeway ramp-meter traffic entry rates can be modified based upon the traffic volume and congestion.
indicated by the traffic detectors. Travel information on traffic congestion and delays can be provided to freeway system users through the WisDOT website and on variable message signs. Traffic speeds and congestion indicated by traffic detectors can instantaneously identify the presence of a freeway incident. It is proposed that existing freeway system traffic detectors be maintained, and that traffic detectors be installed on the freeway system throughout the Region at one-half mile intervals.

Ramp-meters are traffic signals located on freeway entrance ramps or, in some cases, freeway-to-freeway entrance ramps, and are used to control the rate of entry of vehicles onto a freeway segment to achieve more efficient operation of the adjacent freeway segment and the downstream freeway system. To encourage ridesharing and transit use, preferential access for high-occupancy vehicles is provided at ramp-meter locations to allow the high-occupancy vehicles to bypass traffic waiting at a ramp-metering signal. There are 120 freeway on-ramps currently in the Milwaukee area equipped with ramp-meters. Buses and high-occupancy vehicles currently receive preferential access at 62 of the 120 on-ramp-meter locations. It is proposed that ramp-meters be installed on all freeway on-ramps within the Region with high-occupancy vehicle preferential access provided at all metered ramps, particularly those which would be used by existing and planned public transit.

Another element of freeway operational control is the strategy used in the operational control of ramp-meters. The existing ramp-meters on the southeastern Wisconsin freeway system are controlled in two ways. Some are controlled in a "pre-timed" mode, operating during specified peak traffic hours of the weekday at specified release rates of vehicles. Others are controlled as well during specified peak traffic hours of the weekday, but the vehicle release rates are based upon adjacent freeway system traffic volume and congestion. It is proposed that the strategy of controlling ramp-meters through consideration of adjacent congestion be expanded throughout the freeway system, and that an operational control strategy be considered which would consider downstream freeway traffic congestion and seek to minimize total travel delay on the freeway system while providing for equitable average and maximum delays at each ramp-meter, and avoiding the extension of vehicle queues onto surface streets. It is also proposed that the need for expanded vehicle storage on freeway on-ramps be considered, and addressed, during the reconstruction of the regional freeway system.

**Advisory Information Measures**

Providing advisory information to motorists is an integral part of providing an efficient street and highway system. By providing information on current travel conditions, motorists can choose travel routes which are more efficient for their travel, and the result is a more efficient transportation system. Advisory information measures include permanent variable message signs (VMS), the WisDOT website, and provision of information to the media. The WisDOT uses the permanent VMS to provide real time information to travelers about downstream freeway traffic conditions, such as current travel times to selected areas, information about lane and ramp closures, and where travel delays begin and end. There are 23 permanent VMS located on the freeway system, primarily in the Milwaukee area, and 13 on surface arterials which connect with the freeway system primarily located in western Milwaukee County. It is proposed that variable message signs be provided on the entire freeway system, and on surface arterials leading to the most heavily used freeway system on-ramps.
The WisDOT also provides substantial information about current freeway system traffic conditions on a website using data collected from freeway system traffic detectors. The information includes maps depicting the current level of freeway traffic congestion and the locations of confirmed incidents, views of freeway system traffic available from the freeway system closed circuit television camera network, and current travel times and delays on the major freeway segments in the Milwaukee area. The data on the website is also available to the media and used in daily radio and television broadcasts. It is proposed that WisDOT continue to enhance and expand the information provided on its website and to the media, and consider deployment of a regional 511 traveler information system which would allow the public to dial "511" and receive automated messages about current travel conditions along their desired route through a series of predetermined automated menus.

**Incident Management Measures**

Incident management measures have as their objective the timely detection, confirmation, and removal of freeway incidents. As noted earlier, the WisDOT freeway system TOC and freeway system traffic volume detectors are essential to incident management, as well as freeway operational control and advisory information. Other incident management measures include closed circuit television, enhanced freeway location reference markers, freeway service patrols, crash investigation sites, the Traffic Incident Management Enhancement Program, ramp closure devices, and alternate route designations.

Closed-circuit television (CCTV) cameras provide live video images to the WisDOT and the Milwaukee County Sheriff's Department which allow for the rapid confirmation of congested areas and the presence of an incident, immediate determination of the appropriate response to the incident and direction of the proper equipment to be deployed in response to the incident. There are currently 83 closed-circuit television cameras on the southeastern Wisconsin freeway system, covering Milwaukee County freeways, IH 94 and USH 41/45 in eastern Waukesha County, and IH 94 in Kenosha and Racine Counties. It is proposed that the CCTV camera network be provided on the entire regional freeway system.

Enhanced reference markers assist motorists in identifying specific locations along a freeway segment when reporting incidents. These markers are typically small signs provided at one-tenth mile intervals along the freeway system which typically display the highway shield and mile marker. Enhanced reference markers are currently provided in Milwaukee County in the freeway median at each one-tenth mile on USH 45 from the Zoo Interchange to the Milwaukee-Waukesha County line, and on IH 94 from the Mitchell Interchange to the Illinois-Wisconsin State line, including the freeway segments of IH 94 in Kenosha and Racine Counties. It is proposed that enhanced reference markers be provided on the entire regional freeway system.

Freeway service patrols provide for rapid removal of disabled vehicles and initial response to clearing incidents. Freeway service patrols consist of specially equipped vehicles designed to assist disabled motorists and assist in clearance of incidents. Freeway service patrol vehicles may be equipped to provide limited towing assistance, as well as minor services such as fuel, oil, water, and minor mechanical repairs. Freeway service patrols currently operate in a limited role on the Milwaukee County freeway system and on IH 94 in Kenosha, Racine, and Waukesha Counties. In each of these four counties, service patrols operate during weekday peak traffic periods. In Milwaukee County service patrols also operate all day during weekdays, and in Kenosha and Racine Counties, service patrols also operate all day during weekends. In Kenosha, Racine, and Waukesha Counties, one service patrol vehicle serves 12 to 15 miles of freeways, and in Milwaukee County one service patrol vehicle serves 70 miles of freeways. Expansion of the freeway service patrol is recommended to serve the entire regional freeway system, and to provide greater coverage including all day weekday and weekend service, evening service, and increased vehicle coverage of one vehicle per 12 to 15 miles of freeway.

Crash investigation sites are designated safe zones for distressed motorists to relocate to if they are involved in a crash or an incident on the freeway. There are 35 crash investigation sites on the southeastern Wisconsin freeway system, with the largest concentration—24 of the 35, or about 69 percent—located on the system in Milwaukee County. It is proposed that the WisDOT evaluate the extent of use and attendant benefits of existing crash investigation sites, and consider expansion as needed to serve the entire regional freeway system.

The Traffic Incident Management Enhancement (TIME) Program, sponsored by the WisDOT, has served to bring together, and coordinate, the transportation engineering, law enforcement, media, emergency responders, transit, tow and recovery, and other freeway system operational interests at monthly meetings. The goals of the TIME program are to improve and enhance freeway incident management, improve freeway safety, and enhance the quality and efficiency of freeway travel. It is proposed that the TIME program continue to be operated and sponsored by WisDOT.

Ramp closure devices have been deployed on IH 94 in Kenosha, Racine, and Waukesha Counties. The ramp closure devices are either Type III barricades or swing arm gates. These ramp closure devices allow for the closure of freeway on-ramps during planned and unplanned major incidents, such as special events and severe inclement weather. It is proposed that WisDOT evaluate the use and attendant benefits of existing ramp closure devices, and consider their application throughout the Region.

Alternate routes are designated, clearly marked and signed surface arterial street and highway routes which generally parallel freeway segments. These routes would be intended to be used by motorists during major freeway incidents and ramp closures and
during particularly extreme congestion. Motorists would be directed through advisory information to these routes during major incidents and periods of particularly extreme congestion. It is proposed that WisDOT and the Regional Planning Commission, together with the concerned and affected local governments, examine the potential for the designation of alternative routes, and consider implementation of a pilot effort in a designated corridor.

**Surface Arterial Street and Highway Traffic Management**

This group of proposed transportation system management measures would attempt to improve the operation and management of the regional surface arterial street and highway network, and include improved traffic signal coordination, intersection traffic engineering improvements, curb lane parking restrictions, access management, and advisory information.

Coordinated traffic signal systems provide for the efficient progression of traffic along arterial streets and highways allowing motorists to travel through multiple signalized intersections along an arterial route at the speed limit minimizing or eliminating the number of stops at signalized intersections. In the Region, coordinated traffic signal systems currently generally range from systems comprising two traffic signals to systems comprising about 100 traffic signals. Approximately 1,100 of the 1,700 traffic signals in the Region, or about 65 percent, are part of a coordinated signal system. It is proposed that Commission staff work with State and local government to document existing and planned arterial street and highway system traffic signals and traffic signal systems, and develop recommendations for improvement and expansion of coordinated signal systems.

It is also proposed that State and local governments aggressively consider and implement needed individual arterial street and highway intersection improvements, such as adding right- and/or left-turn lanes; improvements in the type of traffic control deployed at the intersection, including two- or four-way stop control, roundabouts, or signalization; or improvements in signal timing at individual signalized intersections. This measure proposes that State, county, and municipal governments each prepare a prioritized short-range (two to six year) program of arterial street and highway intersection improvements under their jurisdiction, pursue aggressive implementation of the programs, and review and update the programs every two to five years.

It is also proposed that local governments consider implementation of curb-lane parking restrictions during peak traffic periods in the peak traffic direction as traffic volumes and congestion increase. These parking restrictions would be implemented rather than the widening with additional lanes or construction of new arterial streets.

Access management is also proposed to improve transportation systems operations and provide for full use of roadway capacity. Access management involves applying standards for the location, spacing, and operation of driveways, median openings, and street connections. It is proposed that State, county, and municipal governmental units with arterial streets and highways under their jurisdiction adopt access management standards, consider and implement these standards as development takes place along arterials under their jurisdiction, and prepare and implement access management plans along arterials which currently are developed and have access which violates these standards.

Advisory information should also be provided to motorists concerning the surface arterial street and highway network in the Region. It is recommended that the WisDOT improve and expand the data provided on its website (travel times, congestion maps, and camera images) concerning freeway travel to include surface arterial street and highway travel, beginning with the pilot route designated as an alternative route to a segment of the freeway system.

**Major Activity Center Parking Management and Guidance**

Another proposed transportation system management measure would attempt to improve traffic operation conditions by reducing the traffic circulation of motorists seeking parking in major activity centers. The City of Milwaukee currently has an initiative to construct a SummerFest shuttle bus parking management and guidance system. This initiative would provide static and dynamic signing indicating the location of parking structures and the availability of parking in those structures for a number of parking structures in the central business district (CBD) which are near SummerFest shuttle bus routes. This proposed measure supports the City of Milwaukee initiative and proposes expansion of parking management and guidance systems to incorporate all of the Milwaukee CBD at all times of the year.

**Regional Transportation Operations Program**

It is also proposed that WisDOT in cooperation with SEWRPC and all transportation system operators in the Region work to prepare a Regional Transportation Operation Program (RTOP). It is envisioned that the RTOP would program high priority short-range (three to five year) operational improvement projects for implementation, in part based upon the transportation systems management recommendations in the regional transportation system plan.

**Preliminary Proposals for Travel Demand Management**

Preliminary proposals for travel demand management measures for possible inclusion in the year 2035 regional transportation plan include measures intended to reduce personal and vehicular travel or to shift such travel to alternative times and routes, allowing for
more efficient use of the existing capacity of the transportation system. These measures are in addition to the public transit and pedestrian and bicycle measures previously described.

Seven categories of travel demand management measures are proposed for inclusion in the year 2035 plan: high-occupancy vehicle preferential treatment, park-ride lots, transit pricing, personal vehicle pricing, travel demand management promotion, transit information and marketing, and detailed site-specific neighborhood and major activity center land use plans.

**High-Occupancy Vehicle Preferential Treatment**

This group of proposed travel demand management measures would attempt to provide preferential treatment for transit vehicles, vanpools, and carpools on the existing arterial street and highway system. The proposed preferential treatment category consists of four specific travel demand management measures: the provision of high-occupancy vehicle (HOV) queue bypass lanes at metered freeway on-ramps; reserved bus lanes along congested surface arterial streets and highways; transit priority signal systems; and preferential carpool and vanpool parking.

The provision of HOV queue bypass lanes at metered freeway on-ramps currently exists at 62 of the 120 metered freeway on-ramp locations within the Milwaukee area. The proposed travel demand management measure recommends that consideration be given to providing HOV bypass lanes at all existing metered freeway on-ramps within the Region, dependent upon right-of-way and on-ramp geometric design constraints, as well as consideration of HOV bypass lanes at all future ramp-meter locations throughout southeastern Wisconsin. For this measure to be truly effective, strict enforcement of HOV bypass lanes will be required.

Reserved bus lanes similar to those along Blue Mound Road in Waukesha County allow transit vehicles to bypass vehicle queues attendant to traffic signals on congested arterial streets and highways. These reserved lanes may be expected to reduce transit travel times and improve transit travel time reliability during peak travel periods. This proposed travel demand management measure would expand the use of reserved bus lanes throughout the Region on the congested surface arterial streets and highways which currently, or may be expected in the future, to accommodate express and major local transit routes, and on the surface arterial portion of rapid transit routes.

The third proposed travel demand management measure within the high-occupancy vehicle preferential treatment category is transit priority signal systems. This proposed measure would allow transit vehicles to extend the end of the green phase of traffic signals as they approach a signalized intersection. This proposed measure would include transit priority signal systems along all express and major local transit routes, and the surface arterial portion of rapid transit routes within the Region.

The fourth proposed travel demand management measure within the high-occupancy vehicle preferential treatment category is preferential carpool and vanpool parking. This proposed measure would be voluntary and would propose that employers providing free/subsidized parking for their employees consider providing and enforcing preferential parking for those employees who carpool or vanpool to the employment site. This proposed measure may reduce vehicle trips by encouraging ridesharing.

**Park-Ride Lots**

To promote carpooling and the resultant more efficient use of the Region's transportation system, a network of park-ride lots are proposed to facilitate carpooling. Map 8 shows the proposed system of park-ride lots including existing park-ride lots and those proposed to be served by public transit. Park-ride lots are proposed along all major routes at their major intersections and interchanges where sufficient demand may be expected to warrant provision of an off-street parking facility.

**Transit Pricing**

This group of proposed travel demand management measures would build upon existing transit pricing programs conducted by the transit operators in the Region. The proposed transit pricing category consists of three specific travel demand management measures: annual transit pass programs, monthly or weekly pass programs, and vanpool programs.

The Milwaukee County Transit System has implemented a pass system at four colleges and universities which provides for free transit use with a reduced fee included in student tuition and fees. This annual transit pass program should be expanded to include the other local public transit operators in the Region and additional colleges and universities within the Region. This annual pass program should also be expanded to employers, with the Region's transit operators negotiating an annual fee with individual employers, which would allow those employers to provide each employee with an annual transit pass.

Monthly or weekly discount pass programs currently exist for three of the Region's public transit operators—the Milwaukee County Transit System, the Racine Belle Urban System, and the Waukesha Metro Transit System. This proposed monthly or weekly pass program would allow employers to offer their employees discounted monthly or weekly passes, where the employer and the transit operator have negotiated an agreement in which they both agree to subsidize a portion of the monthly or weekly pass.
The third proposed travel demand management measure within the transit pricing category is expansion of existing vanpool programs. Currently, the Milwaukee County Transit System operates a vanpool program with about 20 vanpools in which a group of employees who live in the same general area split the operation, maintenance, and a portion of the capital costs—currently 20 percent—of a van. Currently, the Milwaukee County Transit System vanpool program requires one end of the work trip to be in Kenosha, Milwaukee, Ozaukee, Racine, Washington, or Waukesha Counties, and that one end of the work trip is outside the regular Milwaukee County Transit System service area.

**Personal Vehicle Pricing**
The proposed personal vehicle pricing group of travel demand management measures would propose to allocate a larger percentage of the full costs of construction, maintenance, and operation of street and highway facilities and services directly on the users of the system. The proposed personal vehicle pricing category consists of two specific travel demand management measures—cash-out of employer-paid parking and auto pricing.

Cash-out of employee paid parking would propose that employers currently providing free/subsidized parking to employees would voluntarily begin charging their employees the market value of parking. Employers could offset the additional cost of parking through cash payment or salary increases to employees. This proposed measure would also allow employers to subsidize all, or a portion of, the parking costs for employees who carpool or vanpool to the employment site. This proposed measure would potentially reduce vehicle-trips and vehicle-miles of travel through the increased use of transit, ridesharing, walking, and bicycling, as some employees may “pocket” the cash payment and use other modes of travel.

The second proposed travel demand management measure within the personal vehicle pricing category encourages the continued and expanded use of user fees to pay the costs of construction, maintenance, and operation of street and highway facilities and services. Currently, user fees primarily include the Federal and State motor fuel tax and vehicle registration fees. These user fees currently fund 100 percent of the costs associated with State highways and about 20 to 25 percent of the costs associated with county and municipal streets and highways. There is substantial and growing opposition to increases in motor fuel taxes. In addition, there is the potential in the future for technological advances, such as increased fuel efficiency and alternative fuels, to render the current motor fuel tax obsolete. However, there is merit in having the users of the transportation system pay the actual costs of constructing, maintaining, and operating the transportation system. Travel behavior is affected by the cost of travel, and user fees can encourage more efficient travel.

**Travel Demand Management Promotion**
A regionwide program to aggressively promote transit use, bicycle use, ridesharing, pedestrian travel, telecommuting, and work-time rescheduling, including compressed work weeks is proposed to encourage alternatives to drive alone personal vehicle travel. The program would include education, marketing, and promotion elements.

**Transit Information and Marketing**
Proposed transit information and marketing measures would include the continuation and expansion of the joint marketing efforts of the transit operators within southeastern Wisconsin. It is also proposed that a single website be developed in which transit users could
access all necessary information for each transit system in southeastern Wisconsin. This proposed website would allow a potential transit user to enter such information as beginning and ending addresses of a desired trip within the Region, and then would display the most feasible transit routing of the desired trip including all fares, transfers, and schedules.

The third proposed transit information and marketing measure is real-time travel information. This proposed measure would utilize global positioning system (GPS) data to provide real-time transit information to transit riders at transit centers and transit stops, including transit vehicle arrival times, and real-time maps, showing where on the route a transit vehicle is currently located.

**Detailed Site-Specific Neighborhood and Major Activity Center Land Use Plans**

The preparation and implementation by local governmental units of detailed, site-specific neighborhood and major activity center plans to facilitate travel by transit, bicycle, and pedestrian movement and reduce dependence on automobile travel is proposed, as recommended in the regional land use plan.

**WHAT'S AHEAD...**

The following are the key remaining milestones, and when each is expected to be completed:

- Consideration and evaluation of transportation system plan alternatives—Summer/Fall 2005.
- Adoption of transportation system plan—Spring 2006.

**PUBLIC INVOLVEMENT IN THE REGIONAL LAND USE AND TRANSPORTATION SYSTEM PLAN REVIEW AND UPDATE PROCESS**

The Commission will work throughout the plan review and update process to inform units of government and the general public about plan development, and will work to obtain input on land use and transportation system needs and problems, and land use and transportation system alternatives. Land use and transportation system plans—alternative, preliminary, and final recommended plans—will attempt to incorporate the input received from elected officials and the general public.

The following are means that will be used by the Commission to inform interested persons and groups about the progress of the plan review and update and the issues under consideration, and to encourage the sharing of comments and perspectives.

- A website—www.sewrpc.org/regionalplans—has been established as a source of information regarding the review and update of the regional land use and transportation system plans. The website includes notifications of upcoming meetings, summary information on work progress, and an opportunity to submit comments. Draft plan materials and Advisory Committee agendas, minutes, and materials are posted as they become available.
- A series of newsletters—this being the third—will be produced and distributed, including at public meetings and on the website noted above.
- Public meetings will be held throughout the Region, with the third series announced on the front page of this newsletter. Four series of meetings will be held: the first series at the initiation of the review and update of the plans; the second series following analysis of land use and transportation inventory data, and early in the development of the regional land use plan and transportation plan; the third series upon the development of the preliminary recommended regional land use plan and during the initial consideration of transportation plan alternatives; and, the fourth series during the consideration and evaluation of alternative transportation system plans.
- The Advisory Committees on Regional Land Use Planning and Regional Transportation System Planning will meet throughout the review and update of the regional land use and transportation plans. The Advisory Committees are comprised primarily of local officials from the Region, providing a link to the municipalities and counties that the Advisory Committee members represent.
- The Commission will seek opportunities to notify and inform the Region's population, and obtain their input. Outreach efforts will particularly be made to notify and inform, and obtain input from, low-income and minority populations—including the African American, Hispanic, Hmong, and Native American communities. Commission staff is available to provide briefings and receive comments from all interested persons, community and other groups, and units of government.
CONTACT INFORMATION

The following is contact information should a person wish to submit a comment, obtain additional information, or to request a briefing:

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This newsletter was mailed directly to a list of individuals and organizations that have expressed interest in receiving such information. If you did not receive this newsletter directly, and would like to receive future issues directly, please contact the Commission using the contact information above.