

Transportation Challenges and Opportunities

In a Changing Wisconsin Economy

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An Emerging 21st Century Multimodal Transportation System

The future shape and dynamics of Wisconsin's 21st Century Transportation are gradually emerging, in response both to economic change and to a new emphasis on urban redevelopment.

One major factor is an increased emphasis on the value of time. Over the past decade, the production of goods has become dependent on "just-in-time" logistics; Corridors 2020 has interconnected every major urban center in Wisconsin; corporate planes bypass congested commercial hub travel. Yet, travel growth is clearly exceeding system development. More system capacity, coupled with new ways to travel, will be needed to maintain mobility, keep Wisconsin competitive, and contribute to an improved quality of life.

A second major factor is the growing momentum toward making our cities attractive places to live and work. Transportation can be helpful by improving streetscapes with attractive pedestrian amenities and an increased emphasis on bicycling. Passenger rail systems can focus on urban downtown redevelopment and interconnect city centers. And rebuilt freeways and urban arterials needed to serve new urban trips can be designed to integrate with and enhance adjacent neighborhoods, rather than separate them.

Projected State Travel Trends

Transportation is ultimately a derived demand, growing in direct proportion to personal travel growth fueled by the growth in jobs and disposable income and to the production of raw materials and finished goods, expanding retail sales, and new service centers.

In a healthy economy, total trip-making is likely to grow by 2-3% annually, even with a relatively stable population.

To some degree, the length of trips is related to the density of jobs and housing. The more dispersed we live, the longer the trips. However, as density increases, so does congestion as more trips are funneled into limited space. The cost to provide complex systems to serve travel in dense communities is very expensive.

From a transportation perspective, there may be optimum levels of planned density, which should be encouraged to enhance mobility. However, projected net travel differences from varying patterns of land use show little net travel change: 2-5%, over 40 years. Therefore, new land use strategies are highly unlikely to more than marginally alleviate projected growing congestion.

Wisconsin will need to develop and implement multimodal strategies that efficiently and effectively handle roughly 50% more travel demand over the next quarter century. No single strategy will suffice to meet this challenge.

Likely Emergence of Passenger Rail Systems

Wisconsin will likely develop three types of passenger rail systems over the next 25 years:

Intercity: These systems serve longer interstate and interregional trips, much like state highway and commercial aviation travel, and often cross state borders. Ideal trip lengths appear to serve the 200 to 500 mile market. Several major regional high-speed rail systems, now being planned, would compete effectively both highways and airports, on the basis of time savings and passenger amenities. Wisconsin would be served by a Chicago-hubbed system, with lines to Green Bay and the Twin Cities, through Milwaukee.

Federal and state funding is not currently available.

Commuter: These systems, like Metra in Chicago, connect suburban communities with historic downtowns and provide a convenient alternative to increasingly congested spoke highways for a limited market. A major system goal is typically downtown redevelopment. 50% federal funding is available for capital costs, on a very competitive basis. There are no dedicated state or local funds available at this time.

Urban Rail: These systems serve largely intra-urban trips, along major urban travel corridors, providing a faster trip than bus in mixed traffic. A major system goal is urban mixed-use redevelopment at fixed stations. Most of the ridership comes from existing bus service. These systems can be electrified (light rail) or use diesel propulsion, including hybrids. Current funding availability is the same as for commuter rail.

Studies to date in Wisconsin, and experience elsewhere in the country, show that these systems provide improved mobility for very limited travel markets, and provide an alternative to congested peak period travel. However, the projected increase in auto trips over the next quarter century will likely be about ten times higher than the number of vehicles diverted onto rail systems.

Therefore, auto travel will continue to be the dominant way Wisconsinites travel. Continued investment in highway systems will be critical in maintaining historic levels of mobility in the face of travel growth.

An Evolving Role for Transit

The future role for buses and vans is shifting with Wisconsin's demographics.

Historically, bus systems primarily carried commuters to downtown jobs. In addition to this core responsibility, systems will be asked to play a much larger role in two areas.

The first is serving the elderly and disabled. As Wisconsin's population ages, there will be concerted efforts to maintain individuals in their own homes. Extensive and often customized transit services will be needed to provide access to services, shopping, and recreational needs. This service will be very expensive to provide.

Second, transit systems are being increasingly asked to connect under and unemployed workers with jobs in other communities. This service is also expensive, because it must be customized to job sites and non-traditional job hours, but the combination of an expanded workforce for employers and the reduction in unemployment workers justifies the cost.

Continued Surge of Aviation

Aviation is easily the fastest growing way Wisconsinites select to travel.

However, due to limited air traffic system and airport capacity, the system is become extremely congested.

Business travelers are increasingly using corporate planes to bypass crowded commercial airports, but general aviation facilities in Wisconsin need improvements to handle these planes.

Developing an expanded Milwaukee hub is a major opportunity that must not be lost. It will provide a convenient alternative for Wisconsin travelers, rather than having to use Chicago, Detroit, or Minneapolis.

Exemptions from ad valorem airline property taxes needed for airport repairs statewide can and should be made up with general revenues, that result from increased jobs and services in Milwaukee and connecting airports. The most direct way to do this is to dedicate the sales tax paid on airplanes, repairs, and parts to the state airport improvement program.

Continuing Core Role of Streets and Highways

Wisconsin has 111,500 miles of streets and highways that carry about 60 billion vehicle miles of travel annually. The system is virtually seamless. Its extensiveness is co-terminous with Wisconsin's complex economy.

The state owns nearly 100% of principal arterials and much of the remaining arterial system. Arterials (the red lines on the state highway map) serve an interregional travel

function, providing little or no access to adjacent property. The State Highway System is 100% financed with state or federally collected highway user fees.

Counties own most of the collector system, which distributes traffic from arterials to communities and to local roads, and also provides property access. County trunks carry 12% of statewide travel. Most of the roughly 60,000 mile town road system provides access to property, but carries only 7% of statewide travel. Villages and cities own an array of arterials, collectors and local streets, and carry 21% of statewide travel.

Non-state highways are funded from a mix of highway fees and property taxes, reflecting their dual role: mobility and property access.

Importance of the State Highway System

About 60% of state vehicle miles of travel occurs on the State Highway System, which comprises only 11% of the state's road system. Nearly 70% of commercial travel uses state highways, with most of the balance using local connectors to reach production facilities.

Since 1982, state highway system travel has grown by about 65%, including more than a 100% increase in commercial truck travel. During the same time period, state highway lanes increased by only 5%.

The most effective way to evaluate state highway system needs is to divide it into two sub-systems. The Corridors 2020 system was designated in 1988, comprising the entire Interstate System and most other principal arterials. It includes 3700 miles, or 31% of all state highways, and carries 61% of state highway system travel.

The Corridors 2020 system is literally the backbone of the state's economy. At a minimum, Wisconsin's highest transportation priority has to be preservation of that system's pavement and bridge infrastructure at a consistently high performance level, coupled with added lanes and other improvements needed to maintain a high level of safe travel performance.

For the balance of the system, given limited resources, somewhat lower performance standards may be acceptable in the short run, *provided* minimal safety standards are not compromised, the physical integrity of the existing system is preserved, and congestion does become excessive.

Current and Projected Condition and Performance of Wisconsin's State Highways

The Wisconsin Department of Transportation (WisDOT) has been a national leader in developing ways to effectively identify the physical condition or integrity of each system mile, and its operational problems, under current and forecasted travel conditions.

This allows the Department to select system performance goals that can be achieved and maintained over time, at varying funding levels, and to fashion multi-year investment programs that will actually achieve those goals.

The key issue, then, is selection of appropriate long-term performance levels and generating sufficient funding to implement them.

Corridors 2020 System (not including SE WI Freeways):

Due to recent increases in state and federal investment levels, Wisconsin's Corridors 2020 System is improving, although many substandard segments remain. If maintained in real purchasing power, current investment levels will be nearly sufficient to gradually achieve relatively high pavement and bridge performance standards by 2020, but will still leave about 7% of the Corridors 2020 System congested.

SE Wisconsin Freeway Sub-System:

This 305-mile sub-system, an integral part of Corridors 2020, is absolutely critical to the entire economy of eastern Wisconsin. Its design is obsolete and its pavements, bridges, and interchanges rapidly deteriorating. The system needs complete reconstruction over the next 20-25 years, including significant safety modernization, selected capacity increases, and other improvements to assure it operates efficiently for the next 50-75 years. Reconstruction also provides a "once-in-a generation" opportunity to redesign the system to meld into the urban neighborhoods it traverses.

Reconstruction is estimated to cost \$5-\$9 billion, with relatively little funding available in current state budgets.

Remainder of the State Highway System:

For these routes, WisDOT has set relatively lower performance standards, accepting, for example, somewhat rougher pavements before an improvement is scheduled. Of particular concern is the Department's dramatic shift in accepting a much higher level of congestion on this system.

As a result of this new policy, 610 state highway miles facing congestion will not be improved. Congestion will have to approach gridlock performance before new capacity is added. Many of these routes are in urbanizing areas, and serve major job centers.

Summary: Real progress is being made on some, but not all portions of the State Highway System. However, just meeting WisDOT-adopted performance standards will

require *at least* a 35% increase in funding for state highway improvements (>\$250 million annually). Meeting system needs statewide will cost even more.

These costs do not include the growing impact of new environmental restrictions, that are increasing the cost of road-building materials or major new requirements for construction mitigation on water resources.

Local Roads and Streets Problems

Local governments are responsible for about 100,000 miles of local roads and streets. For the most part, only anecdotal information is available to determine local road conditions. However, there is a general consensus that system conditions are getting worse.

In cooperation with local government organizations, WisDOT is developing a computerized system that will allow each local government to objectively measure the condition of its system, now and over time. It will also provide for the first time a realistic way to track the performance of the entire local road system, making it possible to quantify the statewide investment level needed to achieve desirable local road and street conditions. Each local government will be able to develop multi-year investment programs to meet and maintain the performance standards it chooses.

Wisconsin currently provides a higher than average portion of all state collected highway fees to local governments. For local roads and streets, most of this funding is in the form of General Transportation Aids (GTA), which is basically shared revenue. While there is a statutory requirement that GTA be spent on transportation, many local government prefer to use increases in GTA to simultaneously reduce other local revenues allocated to roads, rather than increasing overall road spending to meet growing needs.

A relatively small portion of state fees is returned to local government in the form of categorical programs that can only be use for road or bridge improvements and require a local match. By comparison to GTA, these state investments effectively produce identifiable improvements to local roads and bridges.

In the long term, Wisconsin will need to increase state investments in local roads, *and* develop new mechanisms to assure that these new state resources are invested in identifiable local system improvements.

Transportation Funding Outlook

It is clear that Wisconsin's current transportation revenue system will generate virtually no new revenues in coming years and therefore, will be unable to address even critical needs emerging in all transportation modes.

State Revenues: Wisconsin is unique among the 50 states in how it funds transportation. It relies on highway fees that are static to pay for 98% of state transportation investments in all modes. Other states regularly employ other mechanisms that effectively broaden their transportation revenue bases at the state level, and provide alternatives at the local level to property taxes.

The Wisconsin fuel tax rate is indexed to the Consumer Price Index. This means that fuel tax purchasing power is maintained, but only as long as fuel consumption does not decline. A combination of higher fuel prices, concerns about greenhouse gases and energy use, and shifts to hybrid-powered vehicles and eventually to fuel cell technology will over time dampen fuel tax revenues. Our fuel tax rate is already fifth nationally, and is approaching 10 cents per gallon higher than in Minnesota, Iowa, and Illinois. Further increases in Wisconsin are extremely unlikely.

Auto and truck registration fees are already well above average. Concerns about equity among auto users and impacts on interstate commerce for trucking dependent industries will likely limit future increases. Registration fee income grows only 1-2% per year, in a healthy economy.

Net state transportation revenues are virtually static, growing at less than the rate of inflation, unless higher rates are enacted. By comparison, state General Revenues are dynamic, because they are effectively indexed to the economy and are projected to grow by about 8% annually, in the coming biennium. This allows new state strategic investments in non-transportation areas without raising taxes.

For these reasons, states are increasingly turning to General Fund revenue growth, to address some portion of their transportation problems, especially when resolving them will improve the state's economic climate. One option is for Wisconsin to enact a phased transfer of the vehicle sales tax to the Transportation Fund, as an alternative to still higher fees.

Federal Revenues: At the federal level, Congress has ended the decades-long practice of allowing the balance in the Highway Trust Fund to grow. With all available revenues now being distributed, further increases in federal transportation spending, especially for highways, would require fuel tax increases which are politically inconceivable. Moreover, Wisconsin's share of federal highway funds could actually decline in the next Reauthorization Bill, due in 2003, as we consume more ethanol-based fuel, which is exempt from 8.4 cents per gallon of the federal gas tax. Each state's share is dependent in part on the tax it pays. The more ethanol we consume, the less tax we pay, and the less funding we are likely to receive.

Wisconsin will need to find a solution to our looming ethanol problem, just to maintain current federal revenues. In addition, our Congressional delegation needs to much more aggressively pursue discretionary funding for highways and transit that is available and will otherwise go to other states.

Local Revenues: In most states, commuter and urban passenger rail is a partnership between the state and urban communities. Most commuter and light rail systems are successfully funded, in part, through a local or regional sales tax, dedicated to transit. In Illinois, for example, transit development in northern Illinois is funded through federal grants, state general revenues and bonding, and an RTA sales tax.

Summary: Virtually none of the serious problems summarized in this paper can be addressed without major structural transportation funding reform. Other states are moving forward and have already put in place and begun to fund long-term plans that create the multimodal transportation system Wisconsin's economy will surely need.

General Summary

- Critical transportation needs must be addressed to maintain the physical investments we have made and to provide sustained mobility in the face of significant travel growth, estimated at 50% over the next 25 years. Investments in every transportation mode will be required:
 - ◆ Passenger rail systems can provide an alternative to congested highways and airports for peak period use in limited dense travel corridors. Projected new ridership, however, will barely dent the growth in auto travel.
 - ◆ Transit will be asked to focus more and more on providing rides for the elderly and disabled, and connecting workers in older communities to suburban jobs. These customized services will be relatively expensive to provide.
 - ◆ Airport capacity is becoming a real problem. Alternative solutions include better general aviation facilities that allow business travel to bypass congested hubs, and a major new hub in Milwaukee, with improved connections to other Wisconsin cities.
 - ◆ The state highway system will continue to dominate Wisconsin's commercial and personal travel. New funding will be required to:
 - ◇ Completely rebuild the SE Wisconsin Freeway System to handle travel for the next 50-75 years, at a cost of \$5-\$9 billion.
 - ◇ Fully provide high performance levels for the Corridors 2020 system, which carries 61% of state highway travel and most commercial traffic.

- ◇ Gradually increase performance standards for the rest of the state highway system, avoiding projected rough pavements and gridlock congestion.
 - ◆ Provide new funding to local governments for local roads and streets, restricted to road improvements rather than for property tax relief.
- Wisconsin's transportation funding system is virtually static and generates no revenue growth to meet any of these needs. Unlike every other state, Wisconsin in fact has added more and more new programs to highway fees over the last 25 years, rather than expanding revenue sources.
- Wisconsin's highway fees are already very high. Increases are extremely unlikely.
- Wisconsin should consider two major structural changes in how it funds transportation, that are common in many other states:
 - ◆ Dedicate a portion of general fund growth to state transportation investments. The most direct way to accomplish this is through a phased transfer of the vehicle sales tax to transportation programs.
 - ◆ Enable local governments to enact a small sales tax dedicated to transit.