Transportation Demand Management

Description and review of alternative policies for the Wisconsin Department of Transportation

WISCONSIN TRANSLINKS 21

A Multimodal Planning Process of the Wisconsin Department of Transportation

MISSION STATEMENT

TRANSLINKS 21-

Wisconsin's 21st century transportation plan will outline a comprehensive transportation system that moves people and goods efficiently, strengthens our economy, protects our environment, and supports our quality of life. Working with DOT, the public will identify Wisconsin's transportation needs - and help to make tomorrow's transportation choices.

Tommy G. Thompson,
Governor

Charles H. Thompson,
Secretary

DESCRIPTION AND REVIEW OF ALTERNATIVE TRANSPORTATION DEMAND MANAGEMENT POLICIES FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

January, 1994

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1. INTRODUCTION AND BACKGROUND

Introduction to TRANSLINKS 21

The Wisconsin Department of Transportation is currently undertaking its first statewide multimodal planning process since the adoption of two key pieces of federal legislation related to transportation, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Clean Air Act Amendments of 1990 (CAAA). This process is called TRANSLINKS 21, and involves both strategic planning and system planning for the long-term multimodal transportation needs of Wisconsin.

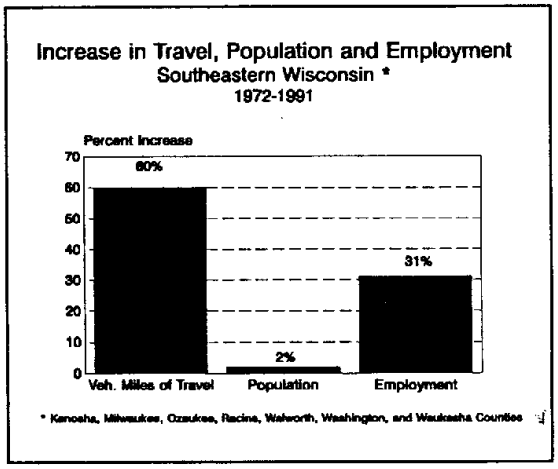
Two of the three elements that make up the strategic planning component of TRANSLINKS 21 concentrate on specific issues – environmental responsibility and economic development. The third element, urban mobility, is broader and more all-encompassing. Urban mobility focuses on the transportation and transportation-related issues and needs of Wisconsin's major cities and surrounding metropolitan areas.

TRANSLINKS 21's urban mobility effort is described in three papers that address land use, transit and transportation demand management (TDM). The purpose of this document is to identify, explore, and evaluate alternative policies the state could adopt regarding TDM. As part of its TRANSLINKS 21 planning process, WisDOT is seeking significant public input on the policy alternatives presented in this paper and welcomes comments on the ideas expressed in the document. Readers are encouraged to comment on the general issues raised, to offer support or concerns about the policy alternatives, and to contribute additional policy alternatives. Please direct any comments you may have concerning this document to the person identified on the back cover of this report.

Introduction to TDM

Over the last two decades, many of Wisconsin's Urban areas have experienced a significant increase in vehicle travel. The location where this is most clearly illustrated in is southeastern Wisconsin, the state's largest metroplitan area. In the region, vehicle miles of travel (VMT) jumped 60 percent between 1972 and 1991, far outpacing the increase in population and employment during the same period (Figure 1).

Figure 1



As a result of this growing demand for travel and a corresponding decline in the use of transportation modes other than the private automobile, some southeastern Wisconsin roadways have become increasingly congested in recent years. Less severe congestion problems have also appeared in Dane county, the state's second largest metropolitan area. In addition, some of Wisconsin's other major metropolitan areas are also beginning to show signs of increased congestion.

Besides traffic congestion, the increase in motor vehicle travel has contributed to a decline in air quality in some counties in eastern Wisconsin. Emissions from motor vehicles, as well as pollution from other Wisconsin sources, and emissions transported into the region from areas outside the state have made the region encompassing Milwaukee County and five adjacent counties one of the nine smoggiest areas of the country, according to the U.S. Environmental Protection Agency (EPA). In addition, five other counties in eastern Wisconsin are classified by EPA as lesser violators of federal air quality standards.

One of several means that has been developed to partially address these congestion and air quality issues is the concept of Transportation Demand Management (TDM). TDM is the use of incentives, disincentives, and market devices to shift travel into non-motorized or higher-occupancy modes, reduce or eliminate the need to travel, and/or shift travel onto less congested routes. In some- cases, TDM is also used to refer to the provision or expansion of alternatives to SOV travel, such as transit, bicycling, and walking.

TDM is closely related to Transportation System Management (TSM), a forerunner to TDM. However, unlike TDM, TSM does not try to significantly alter individuals existing travel behavior. Instead, TSM tries to accommodate existing travel behavior through means such as traffic engineering technique$, and strategies such as incident management.

TDM is also connected with Transportation Control Measures (TCMs), a term contained in federal air quality legislation. TCMs consist of both TDM and TSM techniques, as well as several other strategies that are uniquely related to air quality improvement (such as buy- outs of older vehicles).

Federal Legislation Related to TDM

In recent years, TDM, TSM, and TCMs have all been targeted in federal legislation as potentially important pieces of the overall strategy to address congestion and air quality issues. Two recently passed pieces of federal legislation, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), and the Clean Air Act Amendments of 1990 (CAAA), have reinforced the importance of TDM and related activities in a multimodal transportation system.

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) reaffirmed the government's commitment to move out of the interstate age and into an era of more balanced investment in transportation. ISTEA proposes broadening the scope of how transportation decisions are made by emphasizing diversity and integration of modes and preservation of existing systems over construction of new facilities, especially roads. The legislation also places a great deal of importance on planning and public participation at both the metropolitan and state levels.

A key component in ISTEA, related to TDM, is the required development of a congestion management system (CMS) by each state. As part of the CMS, WisDOT must identify areas of Wisconsin where traffic congestion is occurring, or where the potential for congestion exists. After these areas have been identified, WisDOT will work with metropolitan planning organizations (MPOs), local

communities, transit operators, and others to develop and implement the CMS. The CMS may include a number of different strategies to address traffic congestion, including TDM measures.

The Clean Air Act Amendments of 1990 (CAAA)
The 1990 Clean Air legislation is the most recent of several packages of amendments that have been made to the Clean Air Act, which established air quality standards for the United States. Under the 1990 amendments, areas that fail to meet these standards -- called nonattainment areas -- are required to take certain steps to reduce the amount of air pollution. The number of mandated requirements for transportation, industry, and area sources is dependent upon the severity of the pollution problem in each area.

Six counties in southeastern Wisconsin -- Kenosha, Milwaukee, Ozaukee, Racine, Washington, and Waukesha -- have been designated as "severe" non-attainment areas under the CAAA. In addition, five other counties in eastern Wisconsin -- Door, Kewaunee, Manitowoc, Sheboygan, and Walworth - are considered to have lesser air quality violations under the CAAA.

In the six-county southeastern Wisconsin metropolitan area, the CAAA mandates the consideration of TDM strategies as one way to address transportation-related air pollution. This includes the Employee Commute Options (ECO) program, which affects all companies within the severe non-attainment area that employ 100 or more workers at a single site. Each of these companies must develop a plan that outlines how they will achieve a 25 percent reduction in the number of motor vehicle commute trips made by their employees during peak travel periods.

Current WisDOT Involvement in TDM
WisDOT was involved in TSM and TDM activities on a limited basis during the 1970's, but it was not until 1981 that the Department became officially designated as 'the lead state agency in ride- sharing activities" by Section 85.24 of the Wisconsin State Statutes (see Appendix A for a full summary of the law). As a result of Section 85.24, which has since been broadened to include all transportation demand management activities, WisDOT has undertaken several TDM-related activities, including:

- The TDM Grant Program: Established in 1992, the TDM Grant Program has distributed $150,000 each of the last two years to public and private entities to develop and implement innovative TDM-related projects in areas experiencing significant congestion or air quality problems. Over the last two years, grants have been awarded to develop the following:
    - A vanpool demonstration project in southeastern Wisconsin.
    - A transit link between the Milwaukee and Waukesha transit systems.
    - A joint TDM demonstration program in Madison involving the University of Wisconsin and two other major Dane County employers.
    - A transportation management association in Racine to work with major employers in the area to reduce drive-alone vehicle travel.
    - A parking management and guaranteed ride home program in downtown Milwaukee.
    - A marketing campaign for express bus service in southeastern Wisconsin.

Funding for the program has been extended through the 1993-1995 biennium and has been increased to $300,000 annually.

The Wisconsin Rideshare Van Loan Program: Using Federal Highway Administration (FHWA) federal-aid funds, WisDOT has established a revolving account to provide interestfree loans to cover up to 75 percent of the purchase price of a van for an employer, provided that the van is used exclusively for ridesharing purposes and that a 25 percent local match is provided. Participants are also eligible for an annual $500 grant to offset administrative costs. Current available funding for the program is approximately $150,000.

Southeastern Wisconsin Ridesharing Program: Through its Division of Highways District 2 office in Waukesha, WisDOT provides the regional ridematching service in southeastern Wisconsin. The District 2 office is currently in the process of upgrading the existing ridesharing service through the purchase of new computer equipment and the development of new ridematching software.

Congestion Mitigation and AirQuality (CMAQ) Grants: As part of ISTEA, WisDOT annually receives several million dollars to fund transportation-related programs aimed at reducing congestion and improving air quality in those Wisconsin counties that are in violation of federal air quality standards. Each year WisDOT works cooperatively with state and regional agencies in awarding CMAQ funds to public and private applicants that fulfill the program requirements.

Park-and-Ride Lots: In several areas of Wisconsin, WisDOT has assisted in the development of Park-and-Ride lots. Generally, WisDOT provides the land for the lots, covers the costs associated with constructing the lots, and in some cases maintains the lots.

In addition to the WisDOT programs outlined above, other State of Wisconsin agencies are also involved in TDM activities. The largest of these is the State Vanpool Program, operated by the Department of Administration (DOA) through its Group Transportation Services office. The program, which primarily serves Madison area employees, is funded entirely through the monthly fees that users pay for the service. Currently, there are approximately 70 vans active in the program, with the vast majority having Madison as their primary destination. In the near future, however, the program will be expanded into southeastern Wisconsin.

II. GOALS AND OTHER EVALUATION FACTORS

Each of the policy alternatives developed for this issue paper is evaluated using two sets of factors. The first set is related to the overall goals and values of TRANSLINKS 21, while the second set is related to the feasibility of adopting and/or implementing each of the policy alternatives. Brief descriptions of each of these factors are provided below.

TRANSLINKS 21 Goals and Values

Basic Transportation Goals
Each of the policy alternatives presented in this paper is described in relation to its ability to promote each of the following TRANSLINKS 21 goals:

1. **Mobility**. Improving mobility means improving the ability to travel or move goods using any feasible mode of transportation. Mobility is improved in a variety of ways including reduced travel times, greater reliability, and making destinations more accessible by multiple modes of transportation. Actions that improve mobility may do so through such methods as decreasing the time it takes for commuters to travel between home and work.

2. **Choice**. Choice means that, whenever feasible, people have more than one option available to efficiently meet their travel needs. Actions designed to make multiple transportation modes available, affordable, and timely can broaden travelers' transportation mode choices.

3. **Connectivity**. Transportation systems that conveniently and reliably connect travel between a wide range of transportation modes improve connectivity. Actions designed to make modal transfer points readily available and convenient improve transportation connectivity.

4. **Safety**. Wisconsin has one of the safest transportation systems in the country, but TRANSLINKS 21 seeks to make the state's transportation system even safer. Actions that will improve transportation safety include those designed to improve visibility for travelers and those designed to minimize conflict between travelers using different modes such as pedestrians and automobiles.

5. **Efficiency**. An efficient transportation system is one that minimizes individual, private sector, and public sector costs, in the broadest sense of the term -- in actual dollars saved or spent, time saved or lost, use or conservation of natural resources, and other costs.

Basic Values: The Concept of Livable Communities
In an urban context, the three values of TRANSLINKS 21 -- environmental responsibility, economic development, and equity -- are important and necessary components in the attempt to create *livable communities*. In the development of alternative departmental policies, strategies,

and actions, the five basic transportation goals are interpreted in ways that promote livable communities.

Livable communities are defined in TRANSLINKS 21 as places where people live in an environment that supports their health and their economic and social well-being. Maintaining clean air, water, and other community natural resources such as parks and open space are important environmental responsibilities in Wisconsin communities. Transportation systems and services have a number of significant impacts on the environmental health of a community.

Economic development is critical to both individuals and the community as a whole. An economically vital community is one in which individuals have access to a range of viable employment opportunities. Economic vitality also means being economically competitive with a diverse and adaptable economic base. Modernizing Wisconsin's transportation system -especially the highway system -- has been and will continue to be an important contributor to urban areas' and the state's economic well-being. Transportation systems that are efficient and multimodal can promote the economic vitality of a community.

Equity is an important facet of social well-being. Equity implies that public resources are distributed in a just manner, and services and amenities are physically accessible. Equity also implies that individuals and groups have the opportunity to participate in public decisions affecting their community. Transportation systems that provide mobility and modal choice to the broad range of residents and people working in a community enhance the community's transportation equity.

A continuing balance among the three values – environmental responsibility, economic development, and equity -- is important to maintain the long-term livability of Wisconsin's communities.

Additional Descriptive Factors for Policy Alternatives

1. Political viability is the projected acceptability of a policy alternative to public officials at the state and local level, to a variety of interest groups both public and private, and to the general public. A policy that is significantly different than the status quo may be less politically viable to some interest groups than a policy that changes the status quo incrementally. However, to other interest groups incremental changes may be less acceptable than more substantial changes. A policy that responds to the needs of a variety of interest groups may be more politically viable than one that is structured in response to the interests of only one group.

2. Financial feasibility is the projected ability of a policy alternative to be fully funded and therefore implemented. Policies that are capital intensive or have significant long-term operational costs may be less financially feasible than a policy that does not require additional capital or has smaller long-term operating costs. Policies that require new

funding sources or rely on unpopular funding sources, such as the property tax, may also lack financial feasibility.

3. *Administrative operability* measures the ability to actually implement the proposed policy within the current administrative context. A policy that requires additional staff resources or significant monitoring efforts may be less administratively operable than a policy that requires existing or lower levels of staff resources or minimal monitoring.

4. *Technical feasibility* refers to the ability to perform or provide the technical activities or data required to implement a policy. Policies that need complex data or sophisticated computer modeling may be less technically feasible than a policy requiring data that are more easy to obtain.

5. *Legality* of a policy alternative describes the relationship between the proposed policy and existing laws. In some cases statutory changes may be necessary to implement a policy.

6. *Flexibility* refers to a policy' s ability to be interpreted in a variety of ways depending on the needs or specific conditions of the agency applying the policy. A flexible policy may be structured in such a way that it can be applied slightly differently by various affected agencies, while a less flexible policy would require more consistent approaches regardless of the differences between those agencies using the policy. Flexible policies may have the benefit of being able to adapt to various situations; more rigid policies may have the benefit of greater consistency and predictability in outcome.

III. INTRODUCTION TO TDM POLICY ALTERNATIVES

Identification of TDM Measures

In order to assist in the review and evaluation of TDM policy alternatives, a general summary of TDM-related measures is provided in Table 1. For a more detailed description of each of the TDM measures, please refer to Appendix B.

Table 1
TDM Measures

Alternative Transportation Modes
- Transit
- Ridesharing
- Walking
- Bicycling

Alternative Work Schedules and Sites
- Telecommuting (work-at-home, satellite work centers)
- Compressed Work Weeks
- Flextime
- Staggered Work Hours

Incentives and Disincentives
- Parking Management (adjusting cost and supply of parking)
- Transportation Allowances and Other Financial Incentives
- High Occupancy Vehicle (HOV) Facilities
- Pricing Measures (general tolls, congestion tolls, areawide pricing measures)
- Complementary Incentives (mid-day shuttles, guaranteed ride home programs, etc.)
- Trip Reduction Ordinances and Laws
- Park-and-Ride Lots

Other TDM-Related Activities
- Transportation Management Associations
- Land Use Techniques
- Ridematching

Inter-relationship and Applicability of TDM Measures

All of the measures outlined above play an important role in any TDM program. However, the effectiveness of most of these TDM measures is improved when they are combined with one or more of the other measures that is listed. For example, use of a vanpool program would be enhanced by the provision of high-occupant vehicle facilities and the institution of parking management measures. Because of such inter-relationships between TDM measures, it is not practical to view TDM in a fragmented manner, but instead it must be considered as a whole.

In addition, the choice of TDM strategies is also dependent on the circumstances under which they are being implemented. Given the broad spectrum of techniques that TDM encompasses, it is important to recognize that different situations may require different packages of TDM strategies. TDM should be viewed as a malleable concept, rather than as a rigid technique that

will be applied in the same manner in every situation. Consideration of this fact and recognition of the inter- relationship between TDM measures must be acknowledged when reviewing each of the TDM policy alternatives discussed below.

Development of TDM Policy Alternatives

Four policy alternatives have been developed regarding the role that WisDOT could play in TDM in Wisconsin. The policy alternatives address what an appropriate level of involvement in TDM for WisDOT would be, the degree to which WisDOT would commit resources to TDM, and the level of prioritization that TDM should receive in relation to TSM and facility expansion. Included in the discussion of each policy alternative is a policy statement, a general description of the alternative, followed by examples of specific strategies and actions which could be taken to implement the alternative. Each alternative is then reviewed in terms of each , of the evaluation and descriptive factors discussed earlier.

The policy alternatives have been arranged in such a manner that a range of different strategies and actions are covered, beginning with the lowest level of WisDOT involvement in Policy Alternative 1 and finishing with a quite high degree of WisDOT and State involvement in Policy Alternative 4. It is important to note that these alternatives are not necessarily mutually exclusive from one another, and that the strategies and actions that are discussed could be repackaged to develop different policy alternatives.

Areas of Application for TDM Wisconsin's Metropolitan Areas

The four policy alternatives that have been developed cover a broad range of TDM strategies. Although some of these strategies may be implemented in rural and small urban areas, TDM is most often applied in metropolitan areas (population of 50,000 or more), that may include several towns, cities, and/or counties within their boundaries. In Wisconsin there are 11 regions of the state that are classified as metropolitan areas. For the purpose of this paper, these 11 regions have been divided into the following four categories:

Small Metropolitan Areas (population of 50,000 to 99,999,999)

- La Crosse
- St. Croix/Pierce Counties (part of Minneapolis-St. Paul metropolitan area)
- Superior (part of Duluth-Superior metropolitan area)

Mid-Sized Metropolitan Areas (population) of 100,000 to 299,999)

- Eau Claire
- Janesville-Beloit
- Wausau
- Green Bay
- Sheboygan

Large Metropolitan Areas (population of 300,000 to 999,999)

- Appleton-Oshkosh-Neenah
- Madison

Very Large Metropolitan Areas (population of 1 million or more)

- Southeastern Wisconsin (Milwaukee and surrounding counties)

IV. DESCRIPTION AND REVIEW OF TDM POLICY ALTERNATIVES

ALTERNATIVE 1: TDM as a local responsibility

Policy Statement
"WisDOT views TDM as a local responsibility and will rely on local entities and the private sector to decide where, how, and when TDM should be implemented in each of Wisconsin's metropolitan areas."

Policy Description
WisDOT would take a "hands-off" approach to TDM whenever possible, leaving the responsibility for implementing and funding TDM activities to local entities and the private sector. WisDOT would view its role in metropolitan areas to be limited to using traffic engineering and other traditional methods to improve the movement of individuals and goods in such areas. It would be left up to individual communities to determine the extent to which TDM-related measures,would be used.

WisDOT would refrain from pursuing further state funding for TDM, but would continue to seek federal funding that would be distributed to local entities with as few provisions as possible. The limited state and federal funding that would be available would be targeted to those areas where TDM is required by federal legislation such as ISTEA and the CAAA.

In addition, WisDOT would seek to reduce its existing involvement in TDM, and would also encourage the reduction of other direct state involvement in TDM. WisDOT would seek to transfer its existing TDM programs and services to local public agencies and/or. the private sector, and WisDOT would encourage that a similar policy be adopted by other state agencies.

Potential Strategies and Actions to Implement Policy

- Seek to reduce WisDOT involvement in TDM.
    - Phase out or restructure existing TDM Grant program.
    - Phase out Wisconsin Rideshare Van Loan program or transfer program to local public agencies.
    - Transfer Division of Highways-District 2 ridesharing/ridematching program to a local or regional entity.
    - Transfer development and maintenance of park-and-ride lots to local public agencies.
- Encourage other state agencies to reduce their involvement in TDM.
    - Encourage DOA to seek local agencies or private providers to operate the State Vanpool program.

Review of Policy Alternative

Impacts on TRANSLINKS 21 Goals
In terms of each of the TRANSLINKS 21 goals, the impacts of Policy Alternative I would be dependent on the degree to which local public entities and the private sector chose to step

forward to replace and expand upon the TDM-related services and assistance currently provided by WisDOT and other state agencies. Given existing economic conditions, it is probable that local entities would not be able to do much more than maintain existing programs. Because of the fairly limited scope of these programs, Policy Alternative I would probably result in little or no change from existing conditions in most of Wisconsin's metropolitan areas.

Assuming that existing WisDOT and state programs would be maintained by local and/or private entities, current levels of choice and connectivity would probably remain unchanged. Likewise, impacts on safety under Policy Alternative I would likely be minimal.

In most metropolitan areas of the state, mobility could be maintained through a combination of local TDM efforts, capacity expansion, and traditional traffic engineering techniques (such as signalization improvements). However, in southeastern Wisconsin, which is subject to federally imposed limits on capacity expansion, it is possible that some loss in mobility could occur under Policy Alternative 1.

Finally, if it can be assumed that.local agencies and the private sector are in the best position to evaluate the viability and need for TDM in their respective regions, Policy Alternative I would likely contribute to efficiency improvements in the distribution and use of resources dedicated to TDM.

Impacts on TRANSLINKS 21
Values As with the TRANSLINKS 21 goals, the impacts of Policy Alternative 1 on the TRANSLINKS 21 values would be dependent on the degree to which local public entities and the private sector would be involved in TDM. Again, if it is assumed that the limited TDM efforts of WisDOT and the State are maintained in whole or part by local entities, Policy Alternative I would likely result in little or no change from existing conditions.

In terms of environmental responsibility, Policy Alternative I would probably not help Wisconsin attain federally-mandated air quality standards. In addition, the policy alternative would likely do little to directly attempt to slow the continued growth in trips and VMT in Wisconsin's metropolitan areas. It can be argued that this growth in travel and the corresponding need for increased capacity contributes to detrimental impacts on the environment, in terms of reduced air and water quality,. loss of natural habitat, and expanded use of land resources.

Economic development impacts of the policy alternative would likely vary across the state's metropolitan areas. In those areas where congestion problems could be addressed through a combination of strategies,. including capacity expansion, Policy Alternative I could contribute to a favorable economic climate. However, in those areas where capacity expansion is limited by federal law (i.e. southeastern Wisconsin), or is not viable due to local conditions, congestion problems could worsen under Policy Alternative 1, thus contributing to negative impacts on economic development. Negative impacts of congestion include costly delays in the movement of goods and people, as well as a reduction in the overall quality of life. Each of these factors makes it more difficult for existing firms to do business, and makes the affected area less attractive to potential new employers.

In terms of equity, since there would likely be little change in existing conditions, inequities that already exist in the system would continue. Thus, those who do not have adequate access to some services, amenities, and employment opportunities under current conditions would likely continue to have limited access under Policy Alternative 1.

Feasibility of Adopting and Implementing Policy

Political Viability - At the local level, the reaction to such a policy would likely be mixed. Small metropolitan areas that have been involved in TDM on only a limited basis in the past and that do not perceive a congestion problem now or in the near future would likely have little or no reaction to the policy. However, some mid-sized metropolitan areas could have a negative reaction to the policy, since these areas would likely receive little or none of the federal funding that the state would disburse.

Reaction to the policy in the state's largest metropolitan areas would likely be mixed. On the one hand, such areas would probably receive the vast majority of federal funding disbursed by the state with minimal strings attached. However, the buffer role which the State currently plays would no longer exist, and would instead likely be thrust upon metropolitan planning organizations (MPOs). It is possible that both the MPOs and the localities they serve would resist such a transfer of responsibilities, especially if additional resources were not allocated to them. Likewise, in areas where there is a perceived congestion problem, there could be a negative reaction to WisDOT and the State stepping back from their current commitments to TDM.

From the perspective of the general public, there would probably be little reaction, since the policy alternative would likely result in only minimal changes from existing conditions. However, there could be opposition to the policy alternative from segments of the population which would prefer to see a more extensive commitment to TDM from WisDOT and the State.

Financial Feasibility, Administrative Operability, and Technical Feasibility - From a fairly narrow perspective, WisDOT would benefit financially under Policy Alternative I to the extent that existing personnel and technical needs related to TDM would be largely reduced or eliminated. Related to this shift in resources would be a corresponding reduction in administrative needs at the state level, since most responsibilities would shift to local agencies and the private sector.

At the local level it is unknown whether public agencies and the private sector could, or would be willing to, take over TDM responsibilities. It is questionable whether local agencies in all but Wisconsin's largest metropolitan areas have the technical capability to effectively implement TDM without WisDOT involvement. Perhaps more importantly, it is possible that local communities in Wisconsin would not be willing to commit the resources necessary to implement TDM, given the economic constraints which many local agencies are currently working under.

In addition, under Policy Alternative 1, WisDOT would likely reduce the degree, to which it provides coordination and oversight of multiple programs. Unless a strong regional force were to take over this role, the potential for inconsistent and ineffective programs would be increased.

Legality - Current state statutes would need to be revised under Policy Alternative 1, because state law currently designates WisDOT as the lead state agency in TDM activities. In addition, given the requirements of the CAAA, it is questionable whether WisDOT could limit its TDM involvement in southeastern Wisconsin to the extent outlined in Policy Alternative 1.

Flexibility - From WisDOT's perspective, such a policy would be fairly rigid, in that WisDOT would have little or no involvement in how TDM is implemented at the local level. However, at the local level, there is the potential for maximum flexibility, given that local agencies and the private sector would be allowed to use available TDM resources as they see fit.

Conclusion With the exception of southeastern Wisconsin (where federal legislation requires TDM), and possibly Dane County (the fastest growing metropolitan area in the state), it is likely that Policy Alternative 1 would result in little being done in TDM in the short-term. Local entities in other metropolitan areas of the state may choose to experiment with TDM to a limited degree, but capacity expansion and traffic engineering techniques would likely continue to be the primary means of addressing congestion problems in these areas.

ALTERNATIVE 2 ***: Limited state role in TDM***

Policy Statement

"WisDOT views TDM as primarily a local responsibility, but recognizes a limited role for itself through the provision of technical assistance and a minimal commitment of resources to local entities and the private sector. WisDOT supports the concept of addressing traffic congestion problems primarily through TSM measures and facility expansion, except in those areas where such actions are restricted by federal legislation."

Policy Description

Policy Alternative 2 is similar to Policy Alternative 1, in that WisDOT would view funding and implementing TDM as primarily a local responsibility. However, unlike Policy Alternative 1, WisDOT would see a role for itself in the research and evaluation, and to a limited extent, promotion of TDM. This would include providing a limited amount of funding and technical assistance to local agencies, developers, and employers to develop and implement innovative TDM programs. Because the primary role of such funding would be to assist in the evaluation and promotion of TDM in a Wisconsin environment, WisDOT would have an active role in determining how and where such funding would be provided. Priority for such assistance would be given to areas where TDM is required by federal legislation. However, a limited amount of assistance would be available to other areas if an adequate need were demonstrated.

In addition, WisDOT would review and evaluate its existing involvement in TDM and determine if any services currently provided by WisDOT would be better handled by another entity. WisDOT would encourage that a similar review be performed by other state agencies as well.

Potential Strategies and Actions to Implement Policy

- Pursue increased TDM-related research in Wisconsin and the Midwest.
  - Develop a joint research program between WisDOT and one or more state universities.
  - Work with surrounding states to develop coordinated and cooperative research efforts.
- Maintain or moderately increase resources to existing WisDOT TDM financial assistance programs.
  - Maintain or moderately expand TDM Grant program.
  - Maintain or moderately expand Wisconsin Rideshare Van Loan program.
- Transfer direct WisDOT TDM responsibilities to local governments or the private sector.
  - Transfer Division of Highways-District 2 ridesharing/ridematching program to a local or regional entity.
- Maintain or moderately increase existing WisDOT financial assistance programs that support/promote transportation alternatives to the single-occupant vehicle.
  - Operating and capital assistance to transit providers.
  - Bicycle and pedestrian assistance.
  - Park-and-Ride lots

Review of Policy Alternative

Impacts on TRANSLINKS 21 Goals

Policy Alternative 2 would essentially maintain the existing situation, with some slight alterations that could moderately increase the use of TDM measures in some situations. In most metropolitan areas of Wisconsin, present levels of mobility would be maintained through a combination of TDM, capacity expansion, and traffic engineering techniques. However, in southeastern Wisconsin, where there-are federally-imposed restrictions on capacity expansion, implementing Policy Alternative 2 could result in increased traffic congestion and a reduction in mobility.

Policy Alternative 2 would also probably lead to marginal increases in choice and connectivity through the provision of new programs and the moderate expansion of existing programs. However, it is unlikely that such programs would be extensive enough to have any measurable impact in slowing VMT growth.

No significant changes in the safety of the existing transportation system would likely occur, despite the probable continued increase in VMT and motor vehicle trips. Trends from the past 30 years show that even as VMT and trips have increased (while use of other modes has decreased), fatality rates on Wisconsin roadways have declined.

Finally, in most metropolitan areas, Policy Alternative 2 would not impose any significant new costs on WisDOT or the state, nor would any new costs be imposed on individuals or the private sector. In addition, individual metropolitan areas would maintain a high degree of flexibility in

determining the extent to which TDM would be implemented in their areas. This combination of low costs and localized decision-making would likely contribute to an *efficient* use of scarce resources.

Impacts on TRANSLINKS 21 Values

In terms of environmental responsibility, Policy Alternative 2 would probably not be extensive enough to help those areas of Wisconsin that suffer from air quality problems meet federal standards. In addition, it is unlikely that the policy alternative would result in a measurable reduction in the growth in VMT and motor vehicle trips. It can be argued that such travel growth contributes to detrimental impacts on the environment, in terms of reduced air and water quality, loss of natural habitat, and expanded use of land resources.

In most metropolitan areas of the state, Policy Alternative 2 would have little or no impact on economic development, since congestion problems would be managed through a combination of capacity expansion, TDM, and traffic engineering techniques. However, in southeastern Wisconsin, where there are federally-mandated limitations on capacity expansion, Policy Alternative 2 would likely not be extensive enough to address congestion problems. Such congestion problems could hinder economic development in the region, due to increased costs of moving goods and a reduced quality of life.

As in Policy Alternative 1, the impacts of Policy Alternative 2 on equity would likely be minimal,, since the existing situation would be expected to remain largely unchanged.

Feasibility of Adopting and Implementing Policy

Political Viability - Since there would be little change from existing conditions under Policy Alternative 2, it is likely that such a policy would be acceptable to most parties. However, the environmental community may view the policy as not being progressive enough. It may also be possible that some entities in Wisconsin's larger metropolitan areas would prefer to see WisDOT take a more active role in TDM, and would encourage greater State involvement in TDM.

Financial Feasibility, Administrative Technical Feasibility - Policy Alternative 2 would likely require only minimal financial, administrative, and technical changes from existing levels. Therefore, it is unlikely that there would be significant opposition to the policy on these grounds. There would likely need to be a moderate increase in the provision of TDM-related resources at the State level, primarily to improve existing methods of monitoring and evaluating TDM programs. In addition, administratively, there would need to be some increased commitment of resources to improve coordination with other State of Wisconsin agencies, local entities, and neighboring states.

Legality - Policy Alternative 2 would likely be legal under existing state statutes, and would require few changes in state law.

Flexibility - WisDOT would have greater control in determining how and in what cases TDM resources would be allocated, increasing its flexibility. However this same control would limit flexibility at the local level.

Conclusion

Policy Alternative 2 would be a cautious and pragmatic approach to implementing TDM, keeping State involvement at a moderate level while further exploring the potential of TDM in a Wisconsin environment. The potential risk of this approach is that there may be a realization at a later point that there is a need to go much further. Such a realization could result in greater future financial and social costs that could have been mitigated had action been taken sooner.

ALTERNATIVE 3: Proactive state role in TDM

Policy Statement

"WisDOT views TDM as a joint responsibility with local entities and the private sector, and will become more directly involved in providing TDM services and supporting local and private sector involvement in TDM. To the extent that it is feasible and practical, WisDOT supports the concept of addressing traffic congestion problems through both TSM and TDM measures before addressing such problems through facility expansion."

Policy Description

As under Policy Alternative 2, WisDOT would pursue a research and technical assistance role in TDM. However, WisDOT would also become more proactive in its direct involvement in and support of TDM. WisDOT would aggressively pursue greater state and federal resources for TDM programs throughout the state, and would play a significant role in deciding where and how such resources would be used. A portion of these resources would be used to directly support the expansion of existing WisDOT programs and the development of new programs. Although priority in the use of these resources would be given to areas where TDM is required by federal legislation, an effort would be made to use a portion of such resources in other areas of the state as well, provided a present or future need were evident. In addition to expanding its existing TDM programs and developing new programs, WisDOT would also encourage other state agencies to pursue similar policies to encourage TDM.

Potential Strategies and Actions to implement Policy

- Increase scope and size of existing WisDOT TDM financial assistance programs.
    - Expand TDM Grant program
    - Expand Wisconsin Rideshare Van Loan program
- Significantly increase existing WisDOT financial assistance programs that support/promote transportation alternatives to the single-occupant vehicle.
    - Operating and capital assistance to transit providers.
    - Bicycle and pedestrian assistance.
    - Park-and-Ride lots
- Seek and promote greater direct WisDOT involvemet in TDM at the local and regional level.
    - Expand existing Division of Highways-District TDM involvement

- Develop new WisDOT technical assistance programs to support/promote transportation alternatives to the single-occupant vehicle.
    - Develop a Commuter Assistance Program (CAP) network, made up of a State CAP and several regional CAPS.
- Increase WisDOT commitment to new technologies to support/promote transportation alternatives to the single-occupant vehicles.
    - Promote development of HOV facilities.
    - Promote new transit technologies such as light rail and busways.
- Pursue increased TDM-related research in Wisconsin and the Midwest.
    - Develop a joint research program between WisDOT and one or more state universities.
    - Work with surrounding states to develop coordinated and cooperative research efforts.
- Encourage joint efforts among private entities and between the private and public sectors to develop TDM programs.
    - Transportation Management Associations (TMAS)
- Encourage enhanced local land use efforts to support/promote transportation alternatives to the single-occupant vehicle.
    - Develop model trip reduction ordinances for use by local agencies.
    - Develop model site design guidelines for use by local agencies.
- Encourage enhanced intergovernmental coordination at the regional level.
    - Regional Transportation Authorities
- Establish the State as a leader in employer-based TDM programs.
    - Institute progressive TDM programs at WisDOT work sites throughout the state.
    - Encourage other state agencies to institute progressive TDM programs at work sites throughout the state.
- Work with other state agencies to develop.programs to encourage TDM programs.
    - Provide tax benefits for employers to implement TDM measures.
    - Establish state-operated satellite offices/telework centers in urban and rural areas in cooperation with local and private sector entities.

Review of Policy Alternative

Impacts on TRANSLINKS 21 Goals

Policy Alternative 3 would likely lead to at least some improvements in choice by bolstering existing alternatives to the automobile and creating new transportation options. Safety could also be enhanced through improvements to transit, bicycle and pedestrian facilities.

With the state taking a more active role in determining where and how TDM investments are made, Policy Alternative 3 would also likely result in some improvements in connectivity and coordination. Also contributing to improved connectivity would be an increase in the service areas of existing alternative modes and the development of new modes, resulting in increased opportunities to link multiple modes.

There are two viewpoints on what the impacts of Policy Alternative 3 would be on mobility and efficiency. One viewpoint is that the largely incentive-based strategies in Policy Alternative 3 would result in a significant increase in the number of users of transportation alternatives

(transit, bicycling, walking, etc.). In addition, some highway users would shift their travel to times other than peak periods or would have the option of not traveling at all because of TDM measures such as alternative work schedules and telecommuting. As a result of such strategies, growth in traffic volumes would be slowed, and the need for capacity expansion could be delayed or eliminated. Assuming the savings from these measures would be greater than the costs, there would be gains in efficiency. Improvements in mobility would occur for both users of transportation alternatives (who would gain through service and facility improvements), and those who would continue to use the highway system (who would gain through improved traffic flow and a higher level of service).

Another viewpoint is that the largely incentive-based strategies of Policy Alternative 3 would result in only marginal changes in travel behavior. Under this scenario, growth in VMT and trips would continue at their current pace, and the need for capacity expansion would not be significantly altered. Thus significant new costs would have to be absorbed (expanding 'alternative modes, setting up new programs, etc.) without an offsetting amount of savings. This could be considered an inefficient use of resources. If the policy included limitations on capacity expansion as a response to congestion, some loss of mobility could also occur.

Impacts on TRANSLINKS 21 Values

If it is assumed that Policy Alternative 3 could limit the growth in VMT and trips and control congestion, it could have a positive impact in terms of environmental responsibility. A slowdown. in the growth in VMT and vehicle trips could contribute to improved air and water quality, preservation of land resources, and preservation of natural habitat. Reduced congestion could also contribute to economic development. Existing businesses would be able to move their goods more efficiently, and more individuals would be able to reach employment opportunities with limited difficulty. Such factors would enhance the attractiveness of urban areas, which could attract new businesses, thus increasing employment opportunities.

However, if it is assumed that Policy Alternative 3 would have little impact on existing travel conditions, it would have at best a neutral impact on environmental responsibility and economic development. It is possible that it could have a negative impact on both values, if the strategies used were not effective in controlling congestion.

Policy Alternative 3 could lead to a more equitable environment. Assuming an increase in the number of travel options users would have to choose from, employment opportunities could be expanded for individuals throughout urban areas. In addition, many individuals would have greater access to services and amenities than is currently the case, thus further improving the equity of the overall system.

Feasibility of Adopting and Implementing Policy

Political Viability - Depending on the level at which WisDOT chose to become directly involved in TDM and the communities involved, there would be the potential for conflict with local agencies and the private sector. However, it is possible that in those metropolitan areas where there are congestion and/or air quality problems, greater WisDOT involvement in providing and

coordinating TDM activities would be welcomed. There would, however, likely be opposition from rural and smaller urban areas that do not have congestion or air quality problems. Such areas may view Policy Alternative 3 as serving only the interests of the state's larger metropolitan areas at their expense.

These areas would likely be joined in their opposition by other groups such as developers, highway construction interest groups, and automobile-user interest groups. Developers would probably perceive a threat of increased regulation, while highway construction and automobile-user interest groups would both oppose the potential diversion of funds from highway uses. It can be argued that since a majority of funding for transportation comes from user fees paid by drivers, it would be unfair to shift significant amounts of such funding away from the users and toward alternative modes. If congestion problems worsened as a result of the policy alternative, the general public would also likely oppose the policy. However, initially it is likely that there would be little reaction from the general public to the policy.

Proponents of Policy Alternative 3 would include users of alternative transportation modes and the environmental community. However, there would likely also be some sentiment among such groups that the alternative is not extensive enough, and that regulatory and pricing mechanisms are also needed (see Policy
Alternative 4).

Financial Feasibility, Administrative Operability, Technical Feasibility - Under Policy Alternative 3, resources would be needed to increase funding for alternative modes of transportation and programs to encourage their use, and to provide increased staff and other technical resources to oversee such programs. If the policy resulted in cost savings by delaying the need for capacity expansion, it is possible that such savings could offset the added expenses of the program. However, if the policy did not result in a substantial change in travel behavior, it would require a significant new source of revenues or a major reallocation of existing funds at WisDOT to be effectively implemented.

Legality - Policy Alternative 3 would likely require modifications to existing state statutes. For "ample, providing tax incentives to individuals and employers to encourage TDM would probably require changes in state law.

Flexibility - The State's flexibility in determining how and where TDM resources could be provided would be maximized under Policy Alternative 3. However, in order to effectively implement the policy, significant organizational and financial changes would be required. If such changes were made, they would likely be difficult and costly to reverse, limiting the flexibility of the policy. Local flexibility would be limited under the alternative in terms of local agencies' ability to use resources as they wished, since the state would play a decisive role in the allocation of TDM resources.

Conclusion

Policy Alternative 3 would require significant changes in the way WisDOT approaches congestion problems. In southeastern Wisconsin, such changes are mandated by federal requirements contained in the Clean Air Act Amendments. However, the applicability of such

a policy in other metropolitan areas of the state is uncertain. In metropolitan areas where current congestion problems are limited and future growth is expected to be slow or moderate, such a policy may not lead to the most efficient use of resources. There are also questions about the potential effectiveness of such a policy in Wisconsin's larger and more rapidly growing metropolitan areas. Such questions stem in part from a relative lack of experience and research into broad applications of voluntary and incentive-based TDM measures, particularly within Wisconsin and the Midwest.

ALTERNATIVE 4: Expanded state role in TDM

Policy Statement

"WisDOT views TDM as both a state and local responsibility and will seek a maximum commitment to TDM at both levels, including the use of broad regulatory and pricing mechanisms. WisDOT supports the concept of addressing traffic congestion problems through TSM and TDM measures (including pricing and regulatory mechanisms) before addressing such problems through facility expansion."

Policy Description

As under Policy Alternative 3, WisDOT would pursue a more direct and proactive level of involvement in TDM. However, WisDOT would also seek the use of regulatory and pricing mechanisms to reduce SOV travel, alter the time that travel occurs, and/or alter the mode of travel that is used. WisDOT, other state agencies, and local entities would likely share in the responsibility for implementing and enforcing the regulatory and pricing measures that would be used.

Potential Strategies and Actions to Implement Policy

- Pursue all strategies and actions discussed under Policy Alternative 3.
- Develop trip reduction laws for the largest, most congested metropolitan areas of the state.
- Pursue controls on SOV travel in congested areas.
    - Pursue the institution of congestion tolls on congested facilities.
    - Pursue the institution of areawide pricing measures in congested zones of urban areas.
    - Pursue the institution of mandatory no-drive days in congested regions.
- Increase fees associated with automobile use and dedicate additional funds to TDM programs and providing transportation alternatives to the SOV.
    - License and registration fees.
    - Fuel taxes.
    - General tolls.
    - Regional parking pricing.
- Pursue truck management strategies in congested areas.
    - Night shipping/receiving requirements.
    - Peak period freeway truck ban.

- Pursue statewide land use regulations that support/promote transportation alternatives to the single-occupant vehicle (SOV).
    - Require developments exceeding certain employment, size, and/or trip generation thresholds to create or join Transportation Management Association.
    - Require developments exceeding certain employment, size, and/or trip generation thresholds to use site design techniques that encourage the use of transportation alternatives to the SOV.
- Pursue enhanced intergovernmental coordination at the regional level.
    - Regional Transportation Authorities

Review of Policy Alternative

Impacts on TRANSLINKS 21 Goals

The impacts of Policy Alternative 4 on the goals of TRANSLINKS 21 would be dependent on which types of regulatory and pricing mechanisms were implemented. However, regardless of the measures used, the results would likely be mixed.

In terms of mobility and efficiency, congestion pricing measures and increases in broad-based fees (such as fuel taxes) could be detrimental to those motor vehicle users unable to absorb the increased costs associated with these measures. Such users may be forced to either choose not to make a trip or to make the trip at a less convenient time or using a less convenient mode. However, for those users who could absorb the increased costs, mobility and efficiency could be enhanced if the pricing mechanisms resulted in less congested facilities.

It is possible that pricing measures and fee increases could contribute to improvements in both choice and connectivity. This would be the case if a portion of the revenues collected were dedicated to increasing the availability of alternatives to the automobile. However, to the extent that pricing mechanisms limit motor vehicle use, it can also be argued that choice would be limited for some individuals. Other types of strategies included in Policy Alternative 4 also limit choice, including no-drive days and limitations on shippers, such as truck bans on freeways during peak periods.

Policy Alternative 4 could promote safety by improving and increasing the availability of facilities for users of alternative modes such as bicycling and walking. Improved facilities could decrease the number of conflicts between motor vehicles and other modes. In addition, to the extent that Policy Alternative 4 could limit traffic congestion, safety improvements could result from smoother traffic flow.

Impacts on TRANSLINKS 21 Values

To the extent that VMT and trips would be reduced, Policy Alternative 4 could have a positive impact in terms of environmental responsibility. Such a policy could enhance air quality, and lead to preservation of land resources, water resources, and natural habitat.

The *economic development* impacts of Policy Alternative 4 would be decidedly mixed. The reduced congestion which could result from Policy Alternative 4 could mean significant savings

to businesses in their ability to move goods more efficiently. However, if regulatory requirements significantly increased costs, it could hinder economic development by making the affected areas less attractive to businesses and others.

The *equity* impacts of Policy Alternative 4 are closely related to the "TRANSLINKS 21 Goals" discussion above. Several groups would benefit under the measures included in Policy Alternative 4, including:

- Users who were previously using alternative modes, and would gain an improved level of service due to increased resources being committed to alternative modes.
- Users who would gain access to previously unavailable alternative modes.
- Users who would be able to shift to an alternative mode without a significant loss in time and convenience.

However, those who could benefit from Policy Alternative 4 would be at least partially offset by those who would have their options limited under several of the potential strategies contained in Policy Alternative 4. In some cases, the measures included in Policy Alternative 4 could result in users being forced to travel using a less efficient mode, during a less convenient time, and/or along a less convenient route.

Feasibility of Adopting and Implementing Policy

Political Viability - Significant opposition to any of the potential measures under PolicyAlternative 4 could occur at both the state and local level, although the degree of opposition would vary depending on the locations where measures were required, and the degree to which such measures already exist.

Changes in existing programs, such as increasing fuel taxes or raising vehicle fees, would be less difficult than imposing new regulations. However, even with existing programs, instituting large enough changes to effectively alter travel behavior may be very difficult to accomplish politically. In addition, any efforts to even minimally increase such fees and apply them to alternative modes of transportation would face stiff opposition from rural constituencies, highway construction interest groups, and automobile-user interest groups.

Instituting congestion pricing mechanisms could also be politically difficult to implement. cities and individuals directly subject to such measures would probably uniformly oppose them, while even those not directly affected by such measures may oppose the concept primarily for equity reasons. As with tax and fee increases, any proposed pricing mechanisms that involved applying funds to transportation alternatives would likely be opposed by a number of groups.

Strong support for any of the potential measures under Policy Alternative 4 would be likely from the environmental community, and groups which would benefit directly from the policy such as transit operators.

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V. SUMMARY

To date, the role of TDM in Wisconsin's transportation system has been largely undefined, primarily because until recently there has been little perceived need for it. Unlike in California and several eastern states, the transportation-related problems that TDM tries to address have either not existed in Wisconsin until the very recent past or have been handled through other means. However, in today's environment, TDM is one of several options that must at least be considered in Wisconsin.

However, one hindrance in determining the role of TDM in Wisconsin's transportation system is the limited amount of information available regarding the effectiveness of TDM in a Wisconsin environment, and in some cases (such as congestion pricing), an American environment. In part because of this uncertainty, there is a degree of risk associated with each of the four policy alternatives that have been developed as part of this paper.

Both Policy Alternative 1 and Policy Alternative 2 are fairly conservative approaches to WisDOT involvement in TDM. Policy Alternative I acknowledges WisDOT's uncertainty about TDM, and seeks to minimize the Department's involvement in it, relying instead on local agencies and the private sector to organize, fund, and implement TDM activities. In Policy Alternative 2, WisDOT recognizes the relative lack of experience with TDM in Wisconsin and seeks to alleviate this problem by becoming moderately involved in encouraging its use.

The risk of both these alternatives is that neither would likely provide definitive evidence regarding the effectiveness of TDM, nor would either likely slow the increase in VMT, and corresponding increases in traffic congestion, air pollution, and energy consumption. It is possible that focusing only on short-term cost reductions today could result in greater future financial, social, and environmental costs that could have been mitigated had action been taken sooner. Policy Alternative 3 and Policy Alternative 4 are much more aggressive approaches to WisDOT involvement in TDM, as both call for a high degree of commitment to TDM.

Policy Alternative 3 would require a significant commitment of resources to bolster existing TDM efforts, create new programs, and expand the availability of transportation alternatives, such as transit, bicycling, and walking. Policy Alternative 4 builds on Policy Alternative 3 by adding the consideration and use of pricing and regulatory measures to implement TDM.

There are significant risks associated with both these alternatives, primarily related to the scale of the activities that would be required to implement either of them. The potential exists for either a dramatic success or a disastrous failure under both alternatives. On the one hand, the strategies and actions associated with these two alternatives could significantly alter existing travel behavior and result in reduced congestion, improved air quality, and decreased fuel consumption. On the other hand, it is possible that a significant amount of resources could be allocated to TDM and related activities without a corresponding impact on existing problems.

Depending on the perspective that it is viewed from, TDM could be a panacea to many of today's transportation problems or it could provide only limited relief in a minimal number of situations. In actuality, the role of TDM in today's transportation environment probably lies somewhere between these two extremes - the challenge facing Wisconsin and its decision makers is to determine where.

APPENDIX A: WISCONSIN STATE STATUTE 85.24 85.24

Demand management and ride-sharing program. (1) Purpose. The purpose of this section is to promote the conservation of energy, reduce traffic congestion, improve air quality and enhance the efficient use of existing transportation systems by planning and promoting demand management and ride-sharing programs and providing technical and financial assistance to public and private organizations for the development and implementation of demand management and ride-sharing programs.

(2) Definitions. In this section:

(a) "Demand management" means policies and programs designed to reduce the number of automobile trips, especially during peak hours of traffic congestion, including policies and programs designed to do any of the following:

1. Promote the reduction of unnecessary single-occupancy automobile trips.

2. Promote alternatives to automobile travel, such as biking and wailing.

3. Encourage the use of high-occupancy modes of travel, such as ride sharing and all forms of public transportation.

4. Increase the convenience of alternatives to single-occupancy automobile trips, such as appropriate land-use planning and preferential parking privileges for car and van pools.

(b) "Ride sharing" means the use of a single motor vehicle by 2 or more persons for the purpose of commuting to and from their places of employment or attendance at postsecondary institutions, and includes commuting by means of a car pool or a van pool.

(3) Administration. (a) The department shall be the lead state agency in demand management and ride-sharing activities and shall have all powers necessary to develop and implement a state demand management and ride-sharing assistance program which shall include the coordination of demand management and ride-sharing activities in this state, the promotion and marketing of demand management and ride-sharing activities, the dissemination of technical information, the provision of technical and financial assistance to public and private organizations for the planning, development and implementation of demand management and ride-sharing programs, and the development and distribution of computer and manual ride-matching systems.

(b) The department may apply for and receive federal grants on its own behalf or as requested on behalf of other private and public organizations.

(c) The department may administer a program for the distribution of any federal funds for ride sharing and demand management that are made available to the state.

(d) The department may award grants from the appropriation under s. 20.395 (1) (bs) to public and private organizations for the development and implementation of demand management and ride-sharing programs. As a condition of obtaining a grant under this paragraph, a public or private organization may be required to provide matching funds at any percentage. The department shall give priority in the awarding of grants to those programs that provide the greatest reduction in automobile trips, especially during peak hours of traffic congestion. The department shall have all powers necessary and convenient to implement this paragraph, including the following powers:

1. To promulgate, by rule, procedures and criteria for the review and award of grants under this paragraph.

2. To receive and review applications for grants and to prescribe the form, nature and extent of the information which shall be contained in applications.

3. To audit and inspect the records of grant recipients.

4. To require reports from grant recipients as needed.

History: 1981 c. 20; 1991 a. 39.

APPENDIX B: IDENTIFICATION/DESCRIPTION OF TDM MEASURES

In order to further define the types of activities that are considered to be TDM-related, this appendix identifies and describes several specific TDM measures. Each measure has been classified within one of three categories:

- Alternative Transportation Modes
- Alternative Work Schedules and Sites
- Incentives and Disincentives

In addition, a fourth section discusses Transportation Management Associations, organizations which are created to integrate and coordinate TDM measures.

ALTERNATIVE TRANSPORTATION MODES

Transit

Although transit is discussed in greater detail in the Transit Issue Paper, it is important to at least briefly note the critical role that transit plays in the context of TDM. In efforts to reduce single-occupant vehicle (SOV) travel, adequate provision of transit service is essential. In Wisconsin, such service currently is limited primarily to traditional fixed-route bus service. However, it is likely that over the next three decades there will be an expansion into more specialized areas, such as express services, subscription services, and vanpooling. In addition, new technologies such as light rail and alternative fuel vehicles may also be introduced and utilized. It is anticipated that such changes will be critical to the continued viability of transit a vital component of TDM.

Ridesharing

The concept behind ridesharing is fairly straightforward; reduce the number of vehicles on the road by shifting drivers of single- occupant vehicles into multi-occupant vehicles. In part because of this, ridesharing is the most widely utilized and most commonly recognized of all the TDM measures. The two oldest and most common forms of ridesharing are carpooling and vanpooling, while sedanpooling is a more recent addition to the ridesharing family that combines characteristics of its older predecessors. The following are brief descriptions of each:

- Carpooling: An informal arrangement between at least two individuals to share driving duties and/or costs, using the participants' private vehicles. The pools can be arranged independently or with the assistance of a ridematching service.

- Sedanpooling: A more formal type of carpooling that uses a vehicle other than the participants' private automobiles. The vehicles instead are most often provided by an employer, a Transportation Management Association, a private contractor, or a public agency. Often the provider also assists in the creation of the pools and the administration of the program, although in some cases the two tasks are handled by separate entities.

- Vanpooling: Similar to sedanpooling, except 7-to-15 passenger vans are used instead of automobiles. In general, vanpools are only used for longer commute trips due to time, cost, and convenience factors.

Walking and Bicycling

Two of the most basic transportation modes which TDM measures attempt to encourage are bicycling and walking. Because a detailed discussion of techniques that can be used to improve the existing bicycling and pedestrian network can be found in the MPO Planning Guidelines for bicycles and pedestrians, discussion here will be limited. Among the techniques included in the MPO Planning Guidelines are:

- Providing wide curb lanes for bicyclists.
- Providing designated bike lanes (with appropriate striping and signing).
- Providing off-road bicycle paths.
- Providing sidewalks on both sides of arterial and collector streets.
- Providing marked crosswalks.
- Installing traffic control devices allowing pedestrians to safely cross at intersections.
- Installing bicycle-sensitive loop detectors to enable bicyclists to trip traffic signals.
- Providing facilities to allow pedestrians and bicyclists to bypass natural and man-made barriers.

In addition to these types of measures, which are primarily the responsibility of local government agencies, there are also several TDM measures that developers and employers may control. These include:

- The provision of sidewalks around sites.
- The provision of showers and locker rooms on-site.
- The provision of adequate bicycle storage facilities on site.

Ridematching

Although it is not an alternative transportation mode, ridematching is included in this category because of its close relationship to transit and ridesharing. Ridematching is a service that assists individuals in the creation or expansion of carpools and vanpools, and also provides information on vanpool and transit routes, and the location of park-and-ride lots. Such a service can be limited to a specific employer or an individual site, or it can be organized through a regional ridematching provider. The actual service can be as simple as a bulletin board or as complex as a GIS-based computer system.

Land Use Techniques

Although not an alternative mode, land use techniques are mentioned in this category because of their importance in encouraging the use of alternative modes. Land use techniques that enhance the viability of alternative modes center primarily around zoning requirements to encourage high-density, mixed-use development that is easily accessible to transit, and provides quality bicycle, pedestrian, and transit links between homes, shops, and jobs. A more detailed discussion of land use issues is included in the Land Use Issue Paper.

ALTERNATIVE WORK SCHEDULES AND SITES

Telecommuting

Telecommuting is a work and transportation alternative that allows employees to work at a location other than their conventional office, in order to reduce or eliminate their normal commute. The most common alternative site is the employee's home, although in some cases "satellite" work offices are also used. Although research on telecommuting to date has been fairly limited, some general statements about the measure can be made, including:

- Depending upon the work being performed, the technology necessary for telecommuting may be only a telephone, or it may involve more complex equipment, including a computer.
- Additional costs associated with telecommuting from an employee's home may be covered entirely by the employer, entirely by the employee, or jointly between the two. Costs may include computer hardware and software, additional phone lines, and utility costs.
- Telecommuting is most often applied on a part-time basis,with the majority of participants only telecommuting one or two days per week.

Alternative Work Schedules

Alternative work schedules (AWS) is a TDM technique that seeks to relieve congestion and air quality problems by altering the hours an employee reports to and leaves the worksite, and/or the days on which (s)he reports to the worksite. The types of AWS are:

- Flextime: Employees are allowed to set their own workday start and finish times, provided that they work an agreed upon number of hours. Generally, employees are required to be at work during a "core" period each day (for example, between 9 a.m. and 3 p.m.).
- Compressed Work Week: Employees work more hours per day, but work fewer days per week. The most common programs involve employees working four 10-hour days in a oneweek period, or working 80 hours in nine days during a two- week period.
- Staggered Work Hours: Employees' work times are staggered in such a way that their arrival and departure times are spread over a longer period of time.

INCENTIVES AND DISINCENTIVES

Parking Management

The availability and cost of parking are key factors underlying travelers' choice of travel mode. In short, if parking is expensive and scarce, individuals will be more likely to select alternative modes of transportation such as transit and ridesharing. A range of methods to alter parking supply and costs involving both the public and private sector are available. Measures that can be used by government agencies include:

- Establishing differential parking fees at public parking facilities, based upon the number of vehicle occupants, with single-occupant vehicles (SOVS) paying the highest fee.
- Reserving the most desirable parking locations at public parking facilities for high occupancy vehicles (HOVs).
- Installing on-street parking controls (meters, timed zones, neighborhood preferential parking).
- Imposing parking pricing through regional regulations.

- Placing controls on the amount of parking built and operated in an area.
- Altering parking codes to discourage oversupplying parking.

Measures that can be used by developers, employers, and Transportation Management Associations include:

- Eliminating, reducing, or "cashing out" employer-provided parking subsidies.
- Establishing differential parking fees at sites, based upon the number of vehicle occupants, with single-occupant vehicles (SOVS) paying the highest fee.
- Reserving the most desirable parking locations at sites for high-occupancy vehicles (HOVs).
- Giving HOVs priority in constrained parking situations.
- Eliminating "early bird" or monthly discounts favoring long-term commuter parking

Transportation Allowances and Other Financial Incentives

In order to encourage the use of transportation alternatives to the SOV, a number of different incentives are available. The majority of such incentives are usually provided by employers and developers, however there are several incentives that can be provided by public agencies. Employer-based incentives include the following:

- General Transportation Allowances: Employer provides each employee with a fixed amount of money to cover their transportation costs, regardless of the commute mode which is selected. Parking fees are generally increased in combination with the allowance in one of two ways:
    - Parking fees are increased by an amount equivalent to the allowance. In this way, individuals are provided with an incentive to use a transportation alternative, yet they are still not penalized for driving.
    - Parking fees are increased by an amount greater than the allowance. In this way, individuals are penalized for driving, while users of alternatives are not. Often the excess revenue which is collected from SOVs is used to help fund the allowance program.
- Targeted Transportation Allowances: Employer provides those employees who travel by selected modes with a set amount of money to cover their transportation costs. The most frequently used allowance is a free or reduced-cost transit pass, although in some cases the allowance is broadened to include carpooling, vanpooling, bicycling, and/or walking.
- New Vanpooler Benefits: In order to attract new vanpoolers, employers cover all or part of the vanpool fares for the first 1-6 months of usage.
- Miscellaneous Financial Incentives: Employer provides those employees who travel by selected modes with incentives which, although they are not a direct payment, still provide a financial benefit to users of alternative modes. Examples include:
    - Allowing the use of fleet vehicles for ridesharing.
    - Providing free or discounted fuel for pooling vehicles.
    - Providing free or discounted maintenance and repair for pooling vehicles.
    - Providing free or discounted equipment for users of alternative modes. For example, providing bicyclists with a helmet.
    - Awarding additional vacation time to users of alternative transportation modes.

Financial incentives under the control of public agencies include:

- Transit Fare Incentives: A local agency provides employers with the opportunity to purchase transit passes at reduced fees, which the employers then provide to their employees for a free or reduced price.
- New Vanpooler Benefits: In order to attract new vanpoolers, a local agency pays for all or part of the vanpool fares for the first 1-6 months of usage.

HOV Facilities/Park-and-Ride Lots

HOV facilities serve as an incentive to use buses, carpools, and vanpools by providing travel time savings to its users. Typically, an HOV lane is available to buses and vehicles with 2 or 3-plus occupants, although in some cases it is limited to buses only. Such facilities are generally oriented to serve the major downtown core of a metropolitan area along radial corridors, and are focused on downtown-oriented work trips. In many cases the facilities are in operation only during the morning and afternoon peak periods.

Park-and-Ride lots are often developed in conjunction with HOV facilities, although they are also used in areas that do not have a designated HOV facility. In general, park-and-ride lots are developed to serve as a collection point for individuals using HOV modes such as transit, vanpooling, and carpooling.

No-Drive Days

The concept behind no-drive day programs is fairly simple - reduce congestion and air pollution problems by restricting the number of vehicles that are allowed to use the roadways. Although mandatory no-drive days have been established in several foreign cities, including Athens and Mexico City, only voluntary no-drive days have been tried in the United States, most notably in Phoenix and Denver.

Generally, such programs are aimed at private automobile users and are tied to their license plate numbers. For example, individuals whose plate numbers end with the numbers one and two are asked not to drive alone on Mondays, those whose plate numbers end with three and four are asked not to drive alone on Tuesday, and so on.

Pricing Measures

Pricing measures related to TDM can be classified under one of the following three categories:

- General Tolls: Flat fees that users of a transportation facility are charged regardless of the time of day that the facility is used. The same fee is enforced throughout the day.
- Congestion Tolls: Variable fees that users of a specific transportation facility are charged that are dependent upon the time of day that the facility is used. Generally, congestion tolls are set at a relatively high level during peak periods, and are set at a very low rate (or eliminated altogether) during off-peak periods.
- Areawide Pricing Measures: Congestion tolls that motor vehicle users are charged for entering a congested zone, regardless of the facility that is utilized.

Of these measures, only general tolls have been used extensively to date. Numerous areas of the United States have general toll facilities (i.e. Illinois East-West Tollway, Pennsylvania

Turnpike, Chicago Skyway, etc.), however the primary reason for using tolls on such facilities is not to manage transportation demand. Instead, the major impetus for using tolls to date has been to provide another means to finance a facility that otherwise may not have been built.

Congestion tolls and areawide pricing measures have been studied and proposed for implementation in several areas of the United States over the past 25 years. However neither has ever been implemented primarily because of political barriers and public opposition.

Trip Reduction Ordinances

Trip reduction ordinances (TROS) are local, regional, or state regulations requiring developer and employer participation in the implementation of TDM. TROs can be applied based on a variety of different criteria, including number of employees, size of development, type of development, and motor vehicle trip generation.

In most cases, the key component of the TRO is the creation and implementation of a TDM plan. Generally, TDM plans must include a description of what measures will be used to meet the requirements of the TRO, and a timetable for implementing the TDM program. Once an initial plan has been developed, it is then reviewed and updated on a regular basis by a regulatory agency. If the review shows the plan is not meeting the requirements of the TRO, further action is often required.

The enforcement of TROs can vary widely, from no penalties at all (in voluntary programs) to a scale of fines for failing to meet the requirements of the TRO. Generally, fines are not assessed if an entity fails to meet trip reduction requirements. In most cases, punitive action is taken only if an entity fails to make a good- faith effort to meet the requirements of a TRO.

Complementary Incentives

Although the measures described above are generally regarded as the most effective means of encouraging the use of transportation alternatives, several other TDM measures are also often identified as playing a complementary role, primarily by addressing the reasons individuals frequently give for using SOVS. These measures include:

- Providing fleet vehicles for at-work trips, in order to offset the need to drive a personal vehicle to work for work-related use during the day.
- Providing shuttle service between multiple sites of an individual employer, to offset the need for a personal vehicle to make at-work trips between sites.
- Providing on-site day care, to offset the need for a vehicle to pick up and drop off children before and after work.
- Providing mid-day shuttle service to nearby activity centers, to offset the need for a vehicle to run errands or go to lunch over the noon hour.
- Establishing a guaranteed ride home program, to offset the need for a vehicle should an employee need to leave work during the day in the case of an emergency or should they need to work overtime.

All of these complementary measures are in most cases primarily the responsibility of an individual employer or a Transportation Management Association.

Control of Truck Movements

Trucks can be major contributors to congestion and air pollution problems in urban areas, particularly during peak travel periods. Because of this, methods of controlling and directing truck movements are often explored as one means to address congestion and air quality problems. Such methods include TSM techniques such as incident management programs, adjustments in sign placement, and variable message signs. In addition, other techniques that have been explored but not implemented in other parts of the country include:

- Requirements that businesses do most of their shipping and receiving at night when there is generally excess capacity available.
- Bans on truck travel on freeways during peak periods.

TRANSPORTATION MANAGEMENT ASSOCIATIONS

Transportation Management Associations (TMAS) are organizations that are made up of clusters of employers in close proximity to one another. In most cases, they are formed to assist members in planning and implementing TDM measures, and to provide the private sector with an organized means of providing input into public sector planning, decision-making, and project development. The central assumption behind TMAs is that individual employers will be able to create more effective TDM programs by pooling their resources with other employers than they would be able to in isolation. TMAs are especially beneficial to their smaller members who are able to offer their employees more transportation options than they would be able to in isolation.

Among the services provided by TMAs to their members are:

- Ridematching;
- Vanpools;
- Guaranteed Ride Home programs;
- Coordination of alternative work schedules;
- Shuttle services between work sites and commercial areas, and;
- Promotion and marketing of TDM strategies.

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