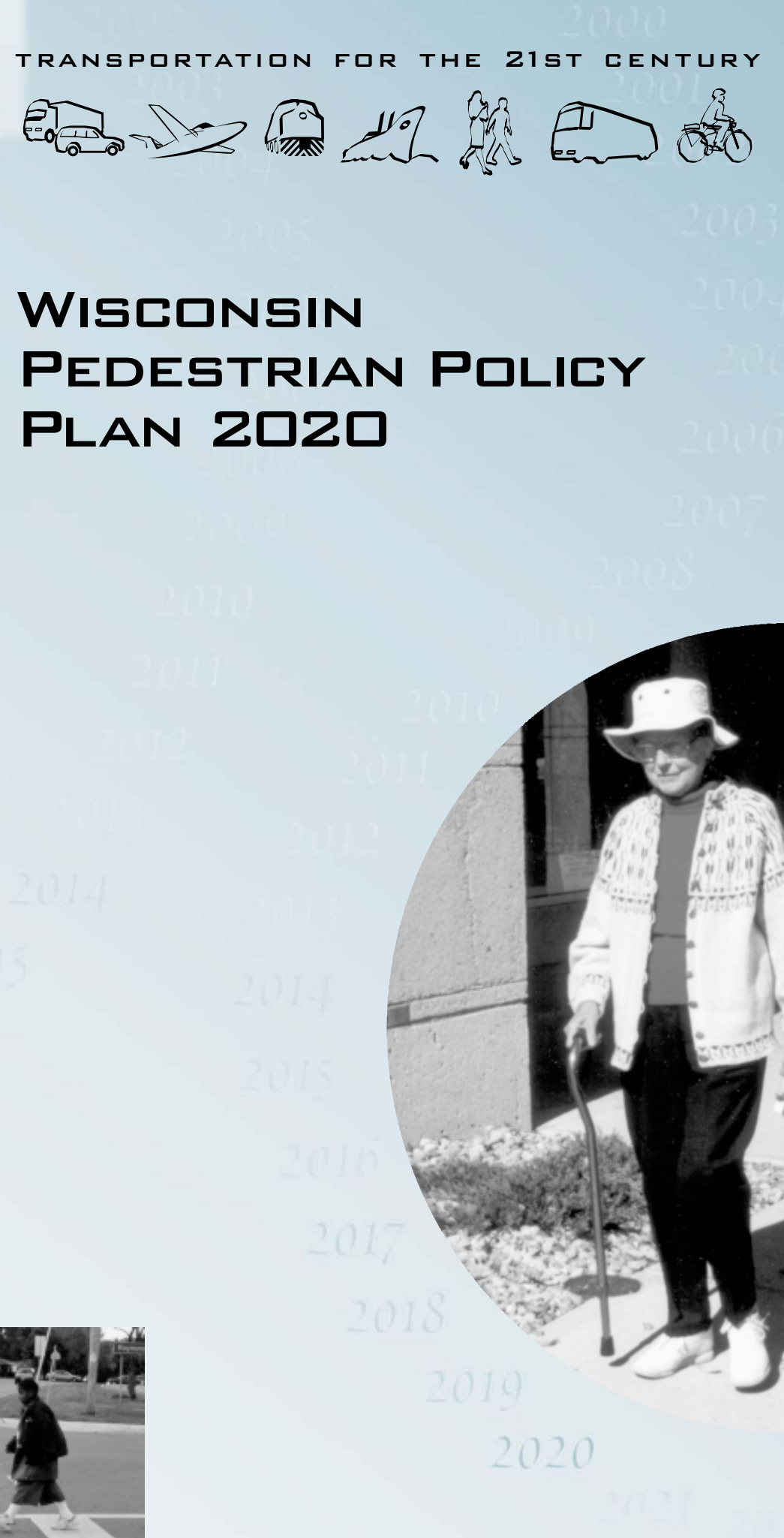


TRANSPORTATION FOR THE 21ST CENTURY



WISCONSIN PEDESTRIAN POLICY PLAN 2020





**Wisconsin Department of Transportation
Division of Transportation Investment Management
Bureau of Planning**

Citizens Advisory Committee

Ms. Karen Perzentka
(Committee Chair),
WI Council of the Blind

Mr. Tim Roets, City of
Watertown Police Dept.

Mr. Todd Temperly,
City Council Member,
City of Lake Mills

Ms. Jacki Lawton, Federal
Highway Administration

Mr. Mark Gottlieb, Director of
Public Works, City of Grafton

Ms. Becky Huncosky, Madison
Memorial High
School; Student

Mr. Brian Amundson,
Director of Public Works, City
of Eau Claire

Mr. Arthur Ross, Bicycle and
Pedestrian Coordinator,
City of Madison

Mr. Randy Thiel,
WI Department of
Public Instruction

Mr. Andy McDonald, Duluth-
Superior Metropolitan
Interstate Committee

Mr. Christopher Hiebert,
Southeast WI Regional
Planning Commission

Mr. James Ito,
Traffic Engineer,
City of Milwaukee

Mr. Al Buss, Wisconsin Council
on Physical Disabilities

Mr. Cole Runge,
Brown County
Planning Commission

Mr. Ernie Vold, Coalition of WI
Aging Groups

Ms. Jennifer Ondrejka,
WI Council on
Developmental Disabilities

Ms. Jeanne Hoffman, Bike
Federation of Wisconsin

Ms. Kit Keller,
City of Cedarburg
Pedestrian Committee

Mr. Ken Cole, Wisconsin
School Board Association

Mr. Phil Scherer,
Transportation Development
Association of WI

Mr. Tom Walker,
WI Transportation
Builders Association

Mr. Kevin Pomeroy,
Main Street Program, WI
Department of Commerce

Mr. Mark Huddleston,
Director of Transportation,
City of Oshkosh

Mr. Rob Kennedy,
New Transportation
Alliance/Citizens for a
Better Environment

Sergeant Gordon Disch, Dane
County Sheriff's Department



Wisconsin Department of Transportation

www.dot.state.wi.us

Scott McCallum
Governor

Gene E. Kussart
Secretary

Office of the Secretary
4802 Sheboygan Avenue, Rm 120B
P. O. Box 7901
Madison, WI 53707-7901

Telephone: 608-266-1113
FAX: 608-266-9912
E-mail: sec.exec@dot.state.wi.us

Dear Wisconsin Resident,

I am pleased to present to you the Wisconsin Department of Transportation's first comprehensive pedestrian plan – the *Wisconsin Pedestrian Policy Plan 2020*. This plan will guide policies, programs and efforts on pedestrian transportation through the year 2020.

Work on the plan began in late 1999 and was completed in the fall of 2001. Our Department's work on this plan received excellent assistance from the Pedestrian Plan Citizens' Advisory Committee. Citizens around the state provided additional help by offering insights, suggestions and reactions during the complete development of this plan. At public listening sessions, in focus group meetings, at public hearings, and through written and e-mailed comments, we learned about your concerns. I think we have addressed those concerns in the plan, making it a better product because of your involvement.

Progress has already been made in putting this plan into action. Our district offices are using the plan in considering the needs of pedestrians on the state highway system. Many local officials have already contacted Department staff seeking insight and guidance to meet pedestrian needs on the local road system. Department guidelines and procedures on pedestrian planning and design will be updated this year to reflect the recommendations of the pedestrian plan. Later this year, the Department will issue a companion document, the *Pedestrian Best Practices Resource Guide*, that WisDOT and local officials can use to address pedestrian needs. Public meetings will be conducted around the state to promote and highlight information contained in the guide.

I encourage you to take a good look at this plan. This plan should be considered a work in progress. We have completed a very important first step in developing the first statewide pedestrian plan, but over the years we will be reviewing and amending it, as well as integrating it with other plans. The recently initiated update to Wisconsin's multimodal transportation plan, which has a planning horizon of 2030, will consider possible changes to this plan as well as consider pedestrian transportation needs through that longer time period.

I close this letter by asking you to do what you can to help pursue the three goals of this plan: more walking, safer walking, and better knowledge and resources to accomplish these goals.

Sincerely,

Gene E. Kussart
Secretary



Wisconsin Pedestrian Policy Plan 2020

MARCH 2002

Wisconsin Department of Transportation
Division of Transportation Investment Management
Bureau of Planning



Wisconsin Department of Transportation

Project Contributors

Ruben L. Anthony, Jr., Administrator, Division of Transportation
Investment Management

Sandra Beaupre, Deputy Administrator, Division of Transportation
Investment Management

Ken Leonard, Director, Bureau of Planning

Douglas Dalton, Chief, Urban Planning Section

Tom Huber, Bicycle and Pedestrian Coordinator

John Swissler, Program and Planning Analyst/Team Leader

Joanne Lazarz, Program and Planning Analyst

Jennifer Murray, Program and Planning Analyst

Tim McClain, Program and Planning Analyst

Diane Paoni, Program and Planning Analyst

Bobbi Retzlaff, Program and Planning Analyst

Aileen Switzer, Program and Planning Analyst

Dan Thyges, Program and Planning Analyst

Acknowledgments:

The Wisconsin Department of Transportation extends its appreciation to the many citizens of Wisconsin who contributed their time and effort to the successful development of the *Wisconsin Pedestrian Policy Plan 2020*. The overall quality and content of the plan has been greatly enhanced by the diligent and dedicated participation of these citizens in public meetings, focus groups and in participation of surveys conducted by WisDOT.

We extend special thanks to the individuals who guided the development of the plan through their service on the Citizens Advisory Committee. These citizens included local officials, the general public and representatives of organizations with many different

interests in state and local pedestrian issues. The Citizens Advisory Committee was not only instrumental in identifying key pedestrian issues and concerns but also provided important assistance to WisDOT in the development and review of recommendations included within this plan.

Special thanks also goes to WisDOT's Mary Nowakowski for designing the plan's cover and layout, to Kurt Miller for all the photos (unless indicated otherwise) included in this plan, Mary McFarlane for providing the pedestrian crash statistics, and to the members of the internal WisDOT advisory committee: Pat Fleming, Marv Laspa, Mike Maierle, Mike O'Meara, and Joanne Pruitt-Thunder.

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Introduction

Pedestrian travel forms an important part of the total transportation picture in Wisconsin. Many people rely on walking as they travel from their homes to work, school, the bus stop, or to shop. For the elderly, for children, and for those who are disabled, having safe and convenient pedestrian facilities is essential to daily activities. Furthermore, pedestrian travel, as a healthy form of exercise, provides several “value-added” social and economic benefits to the community. For these reasons, the Wisconsin Department of Transportation (WisDOT) recognizes the importance of pedestrian travel as a legitimate and necessary transportation choice.

WisDOT’s pedestrian plan outlines statewide and local measures to increase walking and to promote pedestrian comfort and safety. The plan provides a policy framework addressing pedestrian issues and clarifies WisDOT’s role in meeting pedestrians’ needs. It establishes actions and policies to better integrate pedestrian facilities into the transportation system over the next twenty years.

This plan establishes goals, objectives, and actions regarding the provision of pedestrian accommodations that are realistic and can be implemented in a reasonable time frame and in a cost-effective manner.

The federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) put increased attention on pedestrian transportation. Through ISTEA, pedestrian projects became eligible for federal highway project funding.

Pedestrian issues have also gained prominence in Wisconsin as a result of planning efforts such as WisDOT’s 1993 pedestrian planning guidance, various Metropolitan Planning Organization (MPO) efforts and WisDOT policy changes under which WisDOT pays for most sidewalk construction costs along State Trunk Highways. Developing policies and guidelines that raise the importance of pedestrian facilities, such as sidewalks, to the same level as other transportation facilities, such



Figure i.1: Art Fair on the Square; Madison, WI

as highways and rail, has been part of the heightened awareness on pedestrian issues.

The plan serves as a blueprint for improving awareness of pedestrian needs in WisDOT activities on State Trunk Highways, and identifies the specific actions necessary to attain this objective.

The plan recognizes and emphasizes a strong partnership between WisDOT and local governments necessary to meet the needs of pedestrians in Wisconsin. Existing elements of this partnership include:

- ◆ design guidance for local officials found in WisDOT's Facilities Development Manual (FDM);
- ◆ state funding for local pedestrian projects provided primarily through the General Transportation Assistance (GTA) Program; and
- ◆ safety and education program funding provided by WisDOT to local agencies.

This plan envisions continued development of this partnership through a number of initiatives. They include:

- ◆ providing WisDOT staff expertise for consultation with local officials;
- ◆ offering WisDOT staff-training opportunities to local officials; and

- ◆ consulting with local officials for future design, safety, construction, and maintenance policy changes.

Designed to be a catalyst, this plan can increase attention to pedestrian transportation needs throughout the state and to improve walking conditions for all. Because most sidewalks are on local roads and streets the efforts of local governments is critical. This plan outlines how WisDOT can help local communities undertake these efforts. Although constrained by other commitments, local officials routinely seek WisDOT staff expertise. Without local initiative and effort, however, the effectiveness of WisDOT's efforts will be limited. The plan emphasizes the critical need to partner with all stakeholders: local governments, other state agencies, MPOs, Regional Planning Commissions (RPCs), and all citizens interested in improving pedestrian transportation in the state.

The plan also provides recommendations to assist local officials in meeting their communities' pedestrian transportation responsibilities. Plan appendices outline specific goals communities can seek to emphasize and supplement a bibliography identifying WisDOT pedestrian publications and resources.

Detailed design, planning, and program information and guidelines will be provided in the forthcoming *Pedestrian Best Practices Resource Guide (BPRG)*. It serves as a companion document to this

policy plan to help implement pedestrian goals, objectives, and actions.

By providing detailed, design information and guidelines, the resource guide will serve as a reference or guidebook for state and local officials to help achieve local pedestrian-oriented projects.

The *Wisconsin Pedestrian Policy Plan 2020* consists of the following:

Chapter I: Plan Vision

This chapter outlines a vision for pedestrian travel in Wisconsin and states three broad goals that will allow achievement of the vision by fostering consideration of all types of pedestrians in plans and projects. Further definition of these goals occurs through objectives and actions addressing the areas of transportation planning, engineering, construction, education, enforcement, and encouragement. This section helps establish the direction for WisDOT's pedestrian policy.

This chapter includes a summary of the public involvement process undertaken by WisDOT for the development of this plan, highlighting raised issues and concerns. The process included meetings with focus groups and the general public including staff from local communities, local officials, law enforcement, students, and citizens. Input was also received from the Pedestrian Plan Citizen's Advisory Committee (CAC) - a group of citizens, transportation officials from the public and private sectors, and pedestrian advocates.

Many of the ideas, goals, objectives, and actions included within the plan were the direct result of public input solicited from these groups.

Chapter II: The Importance of Walking and Pedestrian Facilities

This chapter defines the terms "pedestrian" and "pedestrian facilities" and outlines why pedestrian travel is important for individuals, local communities, and the state as a whole. This chapter also highlights pedestrian travel in the intermodal context, discussing how pedestrian travel shares an interconnected and beneficial relationship with all forms of transportation including bicycling, transit, roads, and railroads.

Chapter III: Conditions and Trends

This chapter introduces the unique pedestrian needs and discusses general trends affecting pedestrian travel in Wisconsin. Specific information covered in this chapter includes:

- ◆ characteristics of pedestrian trips in Wisconsin (frequency of trips, demographic differences, walking trip purposes); and
- ◆ a discussion of community development trends involving pedestrian facilities in rural and urbanizing areas.

Chapter IV: Issues and Concerns for Pedestrians in Wisconsin

This chapter provides background information on pedestrian issues and concerns. The chapter begins with a summary of public views regarding pedestrian travel gathered from public meetings held around the state. The chapter also focuses on an important theme that was often mentioned during the public participation process - pedestrian safety. The discussion of pedestrian safety includes the following components:

- ◆ an overview of Wisconsin's past pedestrian crashes and fatalities. This section examines some of the important factors that contribute to pedestrian crashes namely, the age of pedestrians involved in the crash, the speed of the vehicle when the crash occurred, and the role of alcohol consumption by drivers and pedestrians;
- ◆ a discussion of the characteristics and unique safety needs of pedestrians with special needs such as the elderly, children, and people with disabilities; and
- ◆ a discussion of current State pedestrian safety efforts, focusing primarily on education and enforcement.

Chapter V: Plans, Programs and Laws

This chapter provides an overview of plans, programs, and laws affecting the development of pedestrian policy in Wisconsin. Included are key policies, programs, and planning efforts at the following levels of government:

- ◆ Federal level: Intermodal Surface Transportation Efficiency Act (ISTEA), Transportation Equity Act for the 21st Century (TEA-21), and the Americans with Disabilities Act [(ADA), became law in 1990];
- ◆ State level: WisDOT's 1993 Wisconsin Pedestrian Planning Guidance for MPOs and local communities, financial assistance programs, an analysis of Wisconsin's existing pedestrian facilities along State Trunk Highways and local roads and streets, Wisconsin State Statutes, and the "rules of the road"; and
- ◆ Local level: MPO plans, local sidewalk policies and practices, and a survey of the needs for local education and enforcement.

***Chapter VI:
Achieve the Vision!
Recommended Plan Goals,
Objectives, and Actions***

This chapter builds upon the key issues discussed in previous chapters, and sets forth the policy recommendations including the goals, objectives, and actions. The policy recommendations provided in this chapter serve three functions:

- ◆ Provide the policy framework for statewide goals and objectives regarding pedestrian transportation;
- ◆ Identify what WisDOT will do, working in partnership with other interested stakeholders, including local, federal and other state agencies, to achieve these goals and objectives on the State Trunk Highway system; and
- ◆ Identify ways for local officials to address pedestrian needs on local roads and streets.

This chapter also provides general estimates of the anticipated costs to WisDOT of undertaking the actions identified.

I. Plan Vision, Goals and Objectives

Vision Statement

To establish pedestrian travel as a viable, convenient, and safe transportation choice throughout Wisconsin.

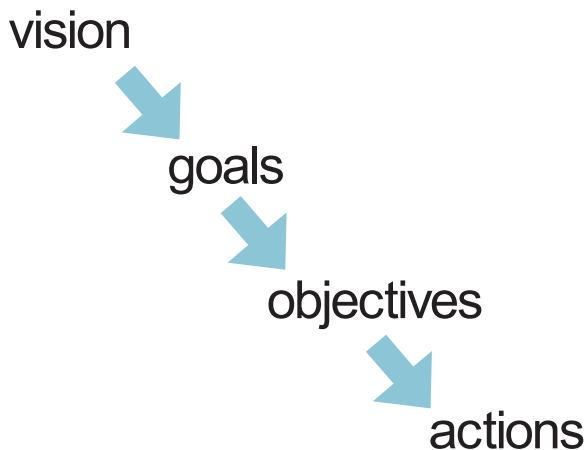
Pedestrian travel is an often-overlooked, yet important, form of transportation in Wisconsin. All people are pedestrians at one time or another, even those who generally use other modes of transportation, such as automobiles or transit. It is important that Wisconsin recognizes the role of pedestrian travel, both in making intermodal connections and as a viable travel mode in and of itself.

Wisconsin’s transportation network includes all users. As such, most facilities should be designed to accommodate those users. When designing a street or highway, consideration should be given to needs of motorists, public transit users, bicyclists, and pedestrians.

A convenient and safe travel network promotes other objectives such as improved health and fitness, decreased local vehicular traffic congestion, and established community engagement. The street becomes a place of appeal to both tourists and permanent residents alike. In addition, children, the elderly, and the disabled have unique pedestrian issues creating other demands on the multi-functioning traffic mode.

By 2020, Wisconsinites who must walk, or choose to walk, should be able to do so safely, comfortably and conveniently.

Table I.1: Wisconsin Pedestrian Policy Plan, 2020 Steps



Achieving the Vision would mean:

- ◆ An 8 year-old child, carrying a carton of milk, could walk safely to and from the local grocery store a few blocks away from his or her home.



Figure I.1: Sidewalks are often used by children



Figure I.2: Pedestrians need unobstructed paths

- ◆ An elderly person could walk safely and conveniently from his or her house to the bus stop.



Figure I.3: Accessibility for all

- ◆ A disabled person could travel by wheelchair from one retail store to another within a large, outdoor shopping center or within a central business district without barriers that block access.



Figure I.4: An accident waiting to happen?

- ◆ A tourist could walk along a State Trunk Highway (often the main street in many small communities or the commercial hub of suburbia) and safely cross it to get from his/her motel to a restaurant.

- ◆ A fifth grade child could escort his or her second grade sibling to school by themselves, confident that their trip will be safe.



Figure I.5: Following safe pedestrian practices

Quantifiable Goals

Accomplishing three goals will help Wisconsin achieve the vision. The three primary goals are to:

Goals for 2020:

Increase walking

Reduce crashes
and fatalities

Share pedestrian
facility expertise

1. Increase the number and improve the quality of walking trips in Wisconsin.
2. Reduce the number of pedestrian crashes and fatalities.
3. Increase the availability of pedestrian planning and design guidance and other general information for state and local officials and citizens.

To varying extents, these three goals are all quantifiable. Tracking and maintaining data on pedestrian transportation conditions is important to accomplish improvements in pedestrian travel. Some of this data-related responsibility falls on WisDOT, such as crash rates, fatalities, and individuals' transportation choices. Others are best suited to municipal collection, such as sidewalk inventories and hospital emergency room visits for serious falls on sidewalks. Chapter VI includes a discussion of several measurable activities toward the achievement of these goals.

Objectives: How to Achieve the Goals

The pedestrian planning process has identified five overall objectives aimed at achieving the plan's goals. (The first objective is the State Trunk Highway Objective that identifies WisDOT's direct responsibility in providing for pedestrian needs along State Trunk Highways. The State Trunk Highway Objective acts in accordance with four additional objectives that use the "4-E's" of transportation safety - engineering, education, enforcement, and encouragement as their structure).¹ A more detailed discussion of the goals, objectives and actions exists in Chapter VI. The following objectives and recommended implementation actions help to accomplish the plan's three goals.

¹ This mirrors the approach used to organize the goals and objectives in the *Wisconsin Bicycle Transportation Plan 2020*. The 4-E's approach has also been widely accepted by government bodies, agencies and advocacy groups in addressing safety concerns and planning for transportation system needs.

*Objective 1.0:**State Trunk Highway*

Working in partnership with local government and other interested stakeholders, WisDOT will increase accommodations for pedestrian travel to the extent practicable along and across State Trunk Highways.

Objective 4.0: Enforcement

Working in partnership with local governments and other interested stakeholders, WisDOT will work to improve the enforcement of laws to prevent dangerous and illegal behavior by motorists, pedestrians, and bicyclists.

*Objective 2.0:**Engineering and Planning*

Working in partnership with local governments and other interested stakeholders, WisDOT will plan, design and promote new transportation facilities where appropriate and retrofit existing facilities where appropriate to accommodate and encourage pedestrian use.

Objective 5.0: Encouragement

Working in partnership with local governments and other interested stakeholders, WisDOT will encourage pedestrian travel by promoting the acceptance and usefulness of this choice and through the promotion of pedestrian safety efforts.

Objective 3.0: Education

Working in partnership with local governments and other interested stakeholders, WisDOT will expand the range of education activities, such as driver licensing and training, pedestrian safety education, traffic law enforcement, and provision of public service information to provide consistent safety measures and training to all roadway users.

The Role of this Plan

As noted earlier, the policy framework provided in this chapter serves three functions:

- ◆ providing a framework for statewide pedestrian goals and objectives;
- ◆ identifying what WisDOT and others will do to achieve these goals and objectives; and
- ◆ identifying ways for local officials to address pedestrian needs on local roads and streets.

Depending upon the issue, addressing pedestrian needs occurs in many different ways, including:

- ◆ **planning and design** of pedestrian facilities;
- ◆ **encouragement of pedestrian travel** by promoting it as an acceptable form of transportation;
- ◆ **education efforts** involving pedestrians, motorists, law enforcement officers and public officials; and
- ◆ **enforcement** of pedestrian laws.

No single method can address every issue or concern. Rather, success in addressing any single issue will only take place through a combination of several approaches.

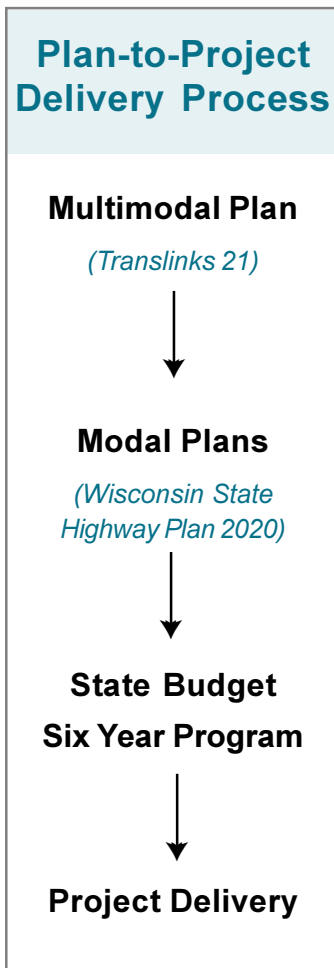
For example, education of pedestrian laws is more effective when done concurrently with actual enforcement. The *Wisconsin Pedestrian Policy Plan 2020* provides a compendium of policies and recommendations that address a broad range of pedestrian issues involving statewide consistency as well as issues of local concern.

This Plan in a Comprehensive Planning Context

Consider this plan’s vision within the context provided by WisDOT’s 1994 *Translinks 21 Multimodal Transportation Plan*. *Translinks 21* is a comprehensive transportation plan based on analysis and consideration of Wisconsin’s modal needs and on extensive public involvement. *Translinks 21* adopted a multi-modal perspective of transportation (e.g., auto, bus, truck, passenger and freight rail, air passenger and cargo, waterborne, bicycle and pedestrian modes) as official WisDOT policy.

Recognized nationally as a model, *Translinks 21* responds to the broad array of complex planning issues identified in the federal Intermodal Surface Transportation and Efficiency Act (ISTEA). It recognized the critical relationship between land use and transportation planning, along with the importance of enhancing environmental responsibility in WisDOT’s provision of facilities and services.

Translinks 21 committed WisDOT to produce detailed statewide plans for each



transportation mode, including this pedestrian plan. Other modal plans already developed within the framework of *Translinks 21* include the *Wisconsin State Airport System Plan 2020*, the *Wisconsin Bicycle Transportation Plan 2020*, and the *Wisconsin State Highway Plan 2020*. A state rail plan is currently under development. The *Plan to Project Delivery Process* (on previous page) depicts a schematic of Wisconsin's multi-modal transportation planning process and delivery.

Translinks 21 Goals

The multimodal perspective in *Translinks 21* goals is applicable to the development of this plan. These goals include:

Mobility

Wisconsin's economy and quality of life depend upon the state's ability to move people and goods both within its boundaries and to worldwide destinations. This includes a focus on improving travel mobility in terms of timeliness, reliability, accessibility to destinations and costs.

Choice

Whenever feasible, practical, and economical, people should have more than one transportation choice - highways, transit, air, rail, waterways, and bikeways - available to meet a wide variety of mobility needs. WisDOT's role is to support, and not limit, transportation choices.

Safety

Every transportation user expects and deserves a safe trip. Wisconsin has one of the safest transportation systems in the nation but not only can WisDOT make safety improvements, those improvements are a top priority.

Connectivity

A seamless transportation system with convenient and reliable opportunities to use more than one mode in a single trip provides a wider range of cost-effective travel options.

Efficiency

Wisconsin expects its 21st century transportation system to be efficient and economical. Opportunities to reduce the monetary and time costs involved with building, using, improving and maintaining the transportation system will be aggressively pursued.

Summary of Public Involvement

Promoting communication and the sharing of ideas between the public and WisDOT is key to creating a plan that meets the needs of Wisconsin's residents. Therefore, the Department strongly encouraged active public participation throughout the development of the *Wisconsin Pedestrian Policy Plan 2020*. As a result, a three-phase public outreach plan was developed:

Phase 1: Issues Identification and Draft Plan Scope

Phase 2: Draft Plan Outreach and Review

Translinks 21 Goals:

Mobility

Choice

Safety

Connectivity

Efficiency

Phase 3: Final *Wisconsin Pedestrian Policy Plan 2020*

Public outreach included numerous opportunities for feedback from the broadest cross-section of the public by:

- ◆ involving all potential public interests, including traditionally under-represented groups, community leaders, law enforcement officials, youth, elderly, and the general public;
- ◆ incorporating comments received throughout the process into the plan, as appropriate; and
- ◆ providing an opportunity for two-way communication between WisDOT and public officials.

Citizens Advisory Committee (CAC)

In addition to efforts to obtain feedback from the public, establishing CAC ensured that WisDOT received continual feedback throughout the planning effort. The advisory committee included a broad cross-section of stakeholders interested in and affected by the long-range pedestrian planning process. Membership included representatives from local governments, transit operators, environmental interests, groups representing people with disabilities, state and federal transportation interest groups, education interests, a middle school student, a college student, and

regional and metropolitan planning interests.

The twenty-seven member committee met regularly throughout the development of the draft plan. Briefed on information and findings relevant to the planning effort members were asked to provide feedback on key pedestrian issues. The committee provided a forum for WisDOT to educate its customers and stakeholders about the pedestrian planning process; address questions and concerns raised by the committee; obtain feedback; and formulate a mutually agreed upon process to develop the plan.

Environmental Justice & the Plan Development Process

Environmental justice is an important component of an inclusive public outreach process. Environmental justice is a federal mandate that seeks to strengthen decision-making processes by making sure that they consider the perspectives of all people, including minority and low-income populations. In 1994, President Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The order requires that communities and neighborhoods are informed about and involved in the planning and implementation process.

Environmental justice provisions cover all federally funded transportation programs or activities that have the potential to adversely affect human health or the environment. The central objective of the mandate is to ensure that the

planning and programming process considers these effects on minority and low-income populations. Identification of potentially adverse impacts on communities and neighborhoods because of transportation projects is dependent upon location specific design and alignment decisions made during the project planning and development phase.

Because statewide plans generally focus on regional and statewide impacts of transportation decisions, they are limited in their ability to identify potential adverse affects of transportation investments on minority and low-income communities.

Investments for disadvantaged groups in urban areas could include building median crossing areas, providing longer walk signal times, and designing transit-friendly streets. In rural areas, efforts could include building wider shoulders along highways to improve the comfort and safety of those who must walk. Building wider shoulders or underpasses under busy highways also helps accommodate walking by Amish children and adults as well as their travel by horse and buggy.

Maintenance issues, such as properly clearing and maintaining pedestrian facilities, also are very important to meeting the transportation needs of these diverse groups.

The *Pedestrian Best Practices Resource Guide* (a document meant to follow-up this policy plan) will cover these issues and further discuss why pedestrian facilities are critical to the daily life of these many groups.

Environmental Justice

Providing access through adequate pedestrian facilities is critical to the needs of various disadvantaged groups, such as:

- ◆ **low-income urban communities** whose members often lack access to automobiles and must rely on walking and transit to meet their travel needs;
- ◆ **low-income rural communities** who must walk to town for school, shopping, work and other needs;
- ◆ **urban minority neighborhoods** whose members often suffer negative impacts from earlier transportation projects or from inadequate pedestrian facilities. Such communities most commonly include Hmong, African-American and Hispanic communities in urban areas;
- ◆ **rural minority communities** that walk to meet many transportation needs. Communities include Native Americans (on and off reservation), Amish communities throughout the state, and others;
- ◆ **persons with disabilities** who cannot drive and rely on walking and transit to participate in the larger community; and
- ◆ **elderly residents** who cannot or choose not to drive, yet wish to remain active.

Extensive efforts ensured that an inclusive public outreach process throughout the plan development process addressed this limitation. As described in the following sections, efforts to include minority and low-income populations occurred throughout the development of the plan.

Public Involvement Kick-Off

Early public involvement activities included developing a brochure outlining the public involvement process and anticipated schedule for development of the plan. The brochure was mailed to 2,800 contacts around the state, was also available at WisDOT's Transportation District Offices. The official state newspaper published the public involvement process through, *A Notice of Availability of the State Pedestrian Plan*. The public was given forty-five days to review and provide comment to WisDOT on the public involvement plan.

Phase 1: Issues Identification and Draft Plan Scope

The objectives of this outreach were to:

- ◆ identify the issues and concerns facing pedestrians in Wisconsin;
- ◆ prioritize the identified issues;
- ◆ define the scope of the plan; and
- ◆ develop the draft plan.

Before the development of the draft plan, guidance regarding pedestrians was limited to information related to the design and construction of pedestrian facilities. Additionally, because pedestrian trips are generally made on local roads, the decisions to address pedestrian needs have generally rested with the local

communities. As a result, developing a statewide pedestrian plan presented a challenge for WisDOT.

In Phase 1 of the outreach effort, WisDOT staff conducted listening sessions to give the public an opportunity to identify issues and concerns facing Wisconsin's pedestrians. These listening sessions helped define the scope of the plan, and determine WisDOT's role in addressing pedestrian needs. The listening sessions held between late 1999 through early 2000, were a combination of focus group discussions with identified stakeholders, and open public meetings. Additionally, the CAC met regularly to provide feedback and guidance to further refine the identified issues and scope of the plan and to identify WisDOT's role in addressing pedestrian issues.

Conducting focus groups was an important element of WisDOT's early outreach. Focus groups consisted of small group discussions with participants that have some characteristic(s) in common. Focus groups ensure the reception of feedback from targeted stakeholder groups typically under-represented at other types of public meetings. The groups targeted during this effort included children between the ages of ten and fourteen, law enforcement professionals, the elderly, people with disabilities, minority populations, and low-income populations. Between December 1999 and May 2000, twelve focus groups were held around the state.

Five open meetings took place with the public in early 2000. The locations for these meetings were

Madison, Milwaukee, Waukesha, Stevens Point, and Rice Lake. Similar to the focus groups, these meetings were conducted to obtain feedback from the public on what their issues and concerns were, and what WisDOT's role should be regarding addressing pedestrian needs in Wisconsin.

The CAC first met in March 2000. Discussions focused on the issues and concerns identified during the public meetings and their potential prioritization. Early discussions with the committee helped define the scope of the draft plan. One of the key decisions resulting from these early discussions led WisDOT to commit to the development of both the *Wisconsin Pedestrian Policy Plan 2020*; and a technical resource document, called the *Pedestrian Best Practices Resource Guide*, for use by community decision-makers addressing pedestrian needs.

Phase 2: Draft Plan Outreach

WisDOT released the draft *Wisconsin Pedestrian Policy Plan 2020* in February 2001. WisDOT distributed copies of the draft plan's Executive Summary to stakeholder interests identified during Phase 1 including all villages, cities and counties, towns over 2,500 population, all public school districts, many private schools, and many environmental and community groups. Copies were also distributed to each of WisDOT's eight Transportation District offices and made available on the WisDOT website. Published Legal Notices in eleven newspapers around the

state informed the public of the draft plan's release and of the planned Public Meetings. Outreach efforts also included a meeting with the CAC. The public had forty-five days to provide comments on the draft plan by mail, e-mail, or at public meetings held around the state. WisDOT received twenty-eight written comments (either by letter or e-mail) from twenty-four individuals. Public meetings, on three different days around the state, included two stand-alone public meetings and a statewide videoconference from the State Capitol hooked up to eight sites around the state. Seventeen people attended the stand-alone meeting in Stevens Point, eight in Milwaukee, and twenty-three at the various sites hosting the statewide videoconference. The objectives of this second phase of public involvement efforts were:

- ◆ to determine whether there is general acceptance of the draft plan;
- ◆ to determine the level of agreement on specific themes and/or policy statements; and
- ◆ to assist WisDOT in refining the draft plan into the final plan.

Phase 3: Final Plan Outreach

WisDOT distributed copies of the final plan to stakeholder interests identified throughout the public involvement process and upon request. Additionally, copies are available at WisDOT Transportation District offices. A

public hearing held in Madison on October 11, 2001, heard formal oral testimony from the public. Their submitted verbal and written comments are now part of the official record, and were considered during the finalization of the *Wisconsin Pedestrian Policy Plan 2020*. The Secretary of the Wisconsin Department of Transportation adopted the final plan in March 2002.

Pedestrian Best Practices Resource Guide of the Pedestrian Policy Plan

Subsequent to final approval of the *Wisconsin Pedestrian Policy Plan 2020*; WisDOT will produce another separate document, the *Pedestrian Best Practices Resource Guide*. The resource guide will serve as WisDOT's implementation plan for the *Wisconsin Pedestrian Policy Plan*

2020; and as a resource for WisDOT, MPOs, and local government officials to use when planning and designing pedestrian facilities. The resource guide will cover in greater depth many of the issues addressed in the policy plan. Additionally, the resource guide will provide a best practices review and technical guidance to planners and designers for use in addressing pedestrian needs on street and highway projects. Local officials can also use the resource guide as they draft their local comprehensive land use plans and develop pedestrian projects. The resource guide will discuss how land use decisions influence pedestrian travel and raise questions that local officials should consider when making land use decisions. In addition, the resource guide will include a section on education and enforcement to help local officials devise new local initiatives.

II. The Importance of Walking and Pedestrian Facilities

Who is a “Pedestrian”?

A *pedestrian* is any person walking, standing or in a wheelchair. Wisconsin State Statutes 340.01(43) defines *pedestrian* as “any person afoot or any person in a wheelchair, either manually or mechanically propelled, or other low-powered, mechanically propelled vehicle designed specifically for use by a physically disabled person.” Everyone is a pedestrian at some point in his or her trip, whether it is from the doorstep to public transportation, or from the parking lot to an office building, or for an entire trip.

Most pedestrians are able to use different forms of transportation such as automobiles or bicycles. However, other pedestrians may have no other transportation options except to walk or to use public transit. Examples include people who use wheelchairs and other people with disabilities, the elderly and children. For these pedestrians, providing and maintaining facilities for access to destinations is crucial for daily life.

It is not always easy to be a pedestrian. Pedestrians face many obstacles when forced to contend with facilities designed primarily for the automobile. Although pedestrians are prohibited from

using certain high-volume, high-speed highways such as Interstates, the vast majority of State Trunk Highway miles are open to pedestrian use. Even though these highways and streets allow pedestrian use they often act as barriers to pedestrian travel rather than facilitating walking. Such “barriers” can limit or prohibit pedestrian travel either along or across a highway.

Pedestrian travel is difficult *along* a highway on bridges and in areas of commercial development when sidewalks and shoulders do not exist. Pedestrian travel is made difficult *across* a highway when sidewalks are not provided on bridges crossing over rivers or other highways, when large intersections do not provide sufficient crossing times or crossing refuges, or when heavy traffic operates at high speeds. The effect of such “barriers” separates and severely limits those dependent on walking from large sections of their community.

Action 1.3: WisDOT will minimize the barrier effect in STH designs; addresses the preceding issue.

Please see Chapter VI for more details.



Figure II.1: University areas commonly experience high numbers of pedestrians

Everyone is a pedestrian at some point in their daily lives



Figure II.2: People with disabilities often rely on transit to get around while needing good pedestrian facilities

In recent design guidance, the Federal Highway Administration underscores the need to develop facilities that address the whole range of pedestrian needs:

The challenge for transportation planners, highway engineers and bicycle and pedestrian user groups is to balance their competing interests in a limited amount of right-of-way, and to develop a transportation infrastructure that provides access for all, a real choice of modes, and safety in equal measure for each mode of travel.²

What are “Pedestrian Facilities”?

No specific definition for *pedestrian facilities* exists within Wisconsin Statutes.³ However, for purposes of this plan, *pedestrian facilities* are defined as the physical infrastructure that allows for or promotes walking and other forms of pedestrian movement (such as wheelchairs) as a form of travel.

Examples of pedestrian facilities can include: sidewalks, walkways, streetscaping,⁴ crosswalks, traffic controls (such as walk/don’t walk signals), overpasses and underpasses, multiuse paths, as well as

curb cuts and ramps to provide easy access for all pedestrians. Pedestrian facilities also include transit stops, such as the connection to the stop and the waiting pad, other loading areas and grade separations. Although paved shoulders are not by definition considered pedestrian facilities, these treatments can still act to provide pedestrians with an important safety zone away from traffic along busy highways.

Pedestrians and Their Unique Needs

While it can generally be stated that everyone is a pedestrian at some point in their daily lives, each person has different reasons for being a pedestrian. There are essentially two groups of pedestrians: (1) the *general pedestrians* who walk, and (2) pedestrians with limitations that make walking difficult or impossible. The *general pedestrian* is anyone who can walk along and across streets without being limited by physical, sensory, or cognitive impairments. However, other pedestrians, such as the elderly, children, and people with physical or mental disabilities, may have limitations that make walking more challenging.

Because there are different people with different abilities,

² U.S. Department of Transportation, Federal Highway Administration. *Design Guidance, Accommodating Bicycle and Pedestrian Travel: A Recommended Approach. A U.S. DOT Policy Statement on Integrating Bicycling and Walking into Transportation Infrastructure.* April 2000. Page 4.

³ The nearest definition of pedestrian facilities is *Pedestrian Way*. It is defined in Wis. Stat. 346.02 as a “walk designated for the use of pedestrian travel.”

⁴ The term *streetscaping* refers to the physical setting shaped by the relationships and design of the buildings, parking lots, streets, sidewalks, trees, lighting, street furniture (such as benches, planters, kiosks and bus shelters) and public art. The relationships between all of these elements and the quality of their design are what shape the image and scale of communities.

understanding which facilities can and cannot be used by diverse groups of pedestrians is the first step for policy-makers, planners and designers in creating accessible facilities. Often the *needs* of disabled people and other special groups should determine accessible design and what is accessible for the majority of users.

Many people often have few transportation choices other than pedestrian and transit travel. For example, children are too young to drive, the elderly often give up or reduce their driving with advancing age, and some citizens are too poor to afford other forms of transportation. Sidewalks and walkways serve as critical links in the transportation network by providing these various types of pedestrians with access to commercial districts, schools, businesses, government offices, employment sites, residences, and recreation areas. Providing these important links can have a very significant impact on influencing the quality of life found within the community.

Opportunities Created with Pedestrian Facilities

Many people choose to walk, especially when good pedestrian facilities are provided and are integrated within the entire transportation system. Well-designed transportation facilities include pedestrian components such as sidewalks and pedestrian crossings in urban areas and paved shoulders in rural areas. Such



Figure II.3: Well-designed pedestrian infrastructure promotes walkers' feelings of safety and comfort

inclusions make walking a comfortable and safe experience.

Other groups who benefit from pedestrian facilities include those people who choose to walk as their preferred transportation mode for reasons that include:

- ◆ health benefits,
- ◆ cost savings,
- ◆ personal convenience, and
- ◆ personal pleasure.

Well-designed pedestrian infrastructure allows comfortable, efficient, and safe walking conditions.

The development of good pedestrian facilities can also result in economic benefit for communities. Tourist destinations and other recreational areas are



Figure II.4: Motor vehicle and pedestrian conflicts exist

often dependent upon pleasant walking opportunities. If visitors and shoppers cannot walk around comfortably to sightsee and shop, they are less likely to return for a subsequent visit. In this way, an enjoyable walking environment enhances the economic vitality of the area's shops and institutions.

All areas of Wisconsin need sufficient pedestrian facilities, but tourism and recreational areas provide special opportunities and challenges toward assessable pedestrian travel. Not only do the larger cities of Milwaukee and Madison contain pedestrian zones filled with tourists but so do tourist destinations such as Door County, Wisconsin Dells, Minocqua, Hayward, and Bayfield. As of this writing, tourism in Wisconsin is a \$7 billion industry accounting for over 185,000 jobs. According to a poll conducted by the Wisconsin Department of Tourism, 72% of the respondents indicated shopping to be the most popular tourist activity.

In communities in both urban and rural downtown areas, parking and pedestrian facilities are vital to the shopping experience for local customers as well as out-of-town visitors.

Pedestrian facilities account for a significant number of projects funded by WisDOT under the Transportation Enhancements program. Many of the pedestrian projects in the enhancement program were funded on the basis of providing vital transportation linkages between neighborhoods and the local retail and service centers in the community. Pedestrian walkways and bicycle paths have been incorporated into many industrial park designs recognizing the significance walking and bicycling as an important means for workers get to and from their job sites.

Pedestrian Travel and the Intermodal Context

Often taken for granted, pedestrian facilities form an important and fundamental part of the total transportation picture. Pedestrian facilities, when linked with other transportation modes and networks, such as transit stops and rail connections, create opportunities and choices for individuals and for the communities in which they live. Sidewalks and trails provide important linkages through their interconnected relationships to all modes of transportation including bicycling, transit, roads, and railroads.

Motor Vehicles

Pedestrian travel and motor vehicle travel are interrelated. Almost every automobile trip begins and ends with the vehicle occupants walking to and from the automobile. Furthermore, pedestrian facilities often run parallel to the road, becoming part of the transportation corridor. Because pedestrians frequently travel along and across roadways, pedestrian facilities should be considered a basic feature of any roadway design.

Pedestrian facilities are especially important in concentrated areas of activity where multiple destinations are involved and driving becomes difficult, such as in the central business district of a city or between stores within commercial strip developments. The most dangerous part of any pedestrian trip is usually at sites where pedestrian routes cross roads. Pedestrian travel can benefit motor vehicle travel by eliminating certain trips such as short trips along busy urban and suburban streets. Therefore, good pedestrian facilities can help improve traffic flow on roads. If people are able to walk to multiple destinations in a concentrated area, some people will choose to walk and avoid driving between such nearby destinations. This is especially true in commercial areas.

Roadway design can benefit pedestrian travel in several ways:

- ◆ by providing trees and amenities that make walking a more pleasant experience;
- ◆ by designing roads with features such as medians, sidewalks along bridges that make crossing easier; and
- ◆ by promoting traffic speeds through enforcement and roadway design that is appropriate for safe pedestrian travel.

Transit

Most transit riders are also pedestrians because each transit trip starts and ends with a pedestrian trip. Adequate pedestrian connections from bus stops to passenger origin and destination points are vital to a successful transit operation.

Bicycles

Pedestrian travel shares many characteristics of and problems with bicycle travel. Pedestrians and bicyclists often share the same facilities. For example, both modes



Figure II.5: Pedestrians boarding at bus stop



Figure II.6: Pedestrians and bicycles often share pathways

often share trails, crosswalks, pedestrian bridges, and shoulders. Some municipalities even allow bicycles to share sidewalks with pedestrians. Both modes commonly experience lack of respect of their rights from motorists resulting in difficult maneuvering along and across busy roads and highways.

Conflict between the two modes exists. A pedestrian can suffer serious injury if a bicyclist using a sidewalk fails to yield the right-of-way and crashes into the pedestrian.

Railroads

In Milwaukee, business travelers frequently walk from their train to nearby destinations. In other cities, downtown rail stations promote walking within the central business district to shop or sightsee. Pedestrian connections to rail stations improve interconnectivity.

A more universal situation however, occurs at pedestrian crossings of railroad tracks. Pedestrian needs should be addressed in rail-street/highway crossing designs and in land use planning decisions to reduce the potential for pedestrian-train crashes.

Overall, walking plays an important role in making travel connections. Traveling from home to a destination and back again can involve several pedestrian trips and several modes of transportation (e.g., home to bus to train to destination and back again). In the future, as travel arrangements become more complex, the need for well-designed pedestrian

facilities to make connections between travel modes will become even more important.

Reducing the Competition between Transportation Modes

All pedestrians face barriers that make walking difficult. At times, the demands of vehicular traffic make it difficult to provide adequate pedestrian facilities, especially for the crossing of highways. Because WisDOT is committed to fostering individual transportation choices, the Department strives to design roadways that balance the impact that different modes have on each other. Inadequate connections between highways and other modes, diverts traffic. Additionally, walking combined with transit and bicycling improves congestion and reduces pollution levels.

Carefully designed pedestrian facilities improve the safety of pedestrians. By creating an accessible pedestrian environment, designers give all people greater mobility and more freedom to make transportation choices.

Pedestrian Travel and “Walkable Communities”

Ultimately, the goal of any effort to facilitate pedestrian travel is *walkable communities*. A *walkable community* is thoughtfully planned, designed, or otherwise retrofitted to integrate pedestrian travel into the community’s fabric. In a walkable community, walking is

considered a normal transportation choice and is not a distraction or obstacle to motor vehicle traffic.

As noted earlier, a walkable community endures for many reasons. Walking is the most feasible and economical form of transportation for many people, especially those with special needs. Many people are choosing to walk for their shorter trip needs because walking supports a healthy lifestyle. Advocates of pedestrian travel claim marked decreases in property crime because of the higher number of people walking, circulating, and watching the neighborhood.

Action 5.2: WisDOT will promote walking as part of a multimodal transportation system; addresses the preceding issue.

Please see Chapter VI for more details.

The concept of walkable communities is not new. Late Nineteenth Century town planning in Scotland and England incorporated walkways and paths to integrate activities inside the village and to make important connections to the surrounding countryside. *Greenbelt communities* such as Greendale, Wisconsin (see on next page), built in the 1930's, used pedestrian oriented facilities as an important urban design tool for furthering community development.

Today, similar urban design and development concepts can be found

in such places as Seaside, Florida; Harbor Town in Memphis, Tennessee; Kentlands in Gaithersburg, Maryland; the Middleton Hills subdivision in Middleton, Wisconsin; Disney's Celebration project in Kissimmee, Florida; and several newer projects such as the Stapleton Airport redevelopment project in Denver. The Alvarado project (a twelve block redevelopment project in downtown Albuquerque) and several projects underway in Madison, Wisconsin also seem similar in scope.

These developments incorporate pedestrian-friendly concepts by mixing land uses, reducing distances between destinations, and providing for necessary pedestrian amenities. Walking is an attractive alternative to the automobile for shorter trips.

Specific examples of the planning and design principles used in these developments to achieve a pedestrian-friendly environment include:

- ◆ placement of most dwellings within a five minute walk of the village green or town center;
- ◆ placement of the elementary school close enough for most children to walk; and
- ◆ placement of playgrounds near all dwellings so children can walk to them.

Examples of community planning and design efforts that include "pedestrian-friendly" concepts and principles will be included in the forthcoming *BPRG*.

Old ideas still work...
the sidewalk links the
cul-de-sac to other
neighborhood streets



Courtesy: Greendale Historical Society.

Figure II.7: Photograph, c. 1938; new housing development in Greendale, Wisconsin

Greendale, Wisconsin

One of three *Greenbelt Communities* built in the United States during the Great Depression, Greendale was one of President Franklin D. Roosevelt's New Deal initiatives. Planned and designed to provide jobs and good housing at reasonable rents, the community was developed with three objectives in mind:

- ◆ To demonstrate a new kind of suburban community planning which would combine many of the advantages of both city and country life.
- ◆ To provide good housing at reasonable rents for moderate-income families.
- ◆ To give thousands of unemployed workers jobs that would result in a lasting economic and social benefit.

To achieve these goals, the government bought 3,400 acres of farmland three miles southwest of the city limits of Milwaukee. The planned community consisted of a *greenbelt* of park land, garden areas, and farms encircling the entire urban development. Although Greendale was primarily to be automobile-oriented, the development of sidewalks inter-linking with cul-de-sacs that connected residential areas and neighborhoods promoted the walkability concept. This network of sidewalks also connected to commercial and civic developments, as well as with surrounding parks and countryside areas. The result was a very successful urban design project that thoughtfully integrated many, if not all, community activities and functions.⁵

⁵ For more information about Greendale's history, see <http://www.greendale.org/history.htm>.

III. Conditions and Trends

Who Walks in Wisconsin?

Before launching efforts to improve pedestrian travel, it is important to understand who walks and for what purposes. A recent survey conducted for WisDOT asked a randomly selected group of Wisconsin residents about their travel patterns, especially by bike and walking. Of the 1,266 people who were contacted and who participated in the survey, 250 agreed to complete “trip diaries” for all trips during a three-day period. These diaries were kept during the months of October and November 1998 and May, June and July of 1999. Walking trips were defined as any trip on foot at least one block in length. Reported trips did **not** include partial walking trips made in conjunction with transit or other transportation choices.

Survey Results

Frequency of Trips

Walking accounted for 8.1% of all trips taken during the most recent week by 1,266 telephone respondents. These trips were taken by almost one-third (30.8%) of respondents and, for them, walking trips constituted more than one-fourth (26.7%) of all their trips that week. Respondents who walked took an average of 6.3 one-

way trips that week. As noted above, these trips did not include partial walking trips made in conjunction with transit or other forms of transportation.

In a separate survey, conducted by the Wisconsin Department of Health and Family Services, 42.8% of respondents answered that walking was the type of physical activity (or exercise) most engaged in within the past month. While 24.2% of respondents indicated they were inactive, walking outweighed all categories as the most frequent form of exercise or physical activity.⁶

Age Differences

Responses from trip diaries indicated some differences in walking patterns in terms of age. Walking trips accounted for 16.3% of all trips by respondent’s ages 5-14. This percentage declined significantly until age 45 after which over 10% of all trips were taken by walking (See Table III.1: *Walking and Age Differences*).

Walking Trip Purposes

Trip diaries also indicated that the most common types of walking trips were recreational and personal or family-related trips. Other

Walking accounted for 8.1% of all trips taken in Wisconsin in 1999

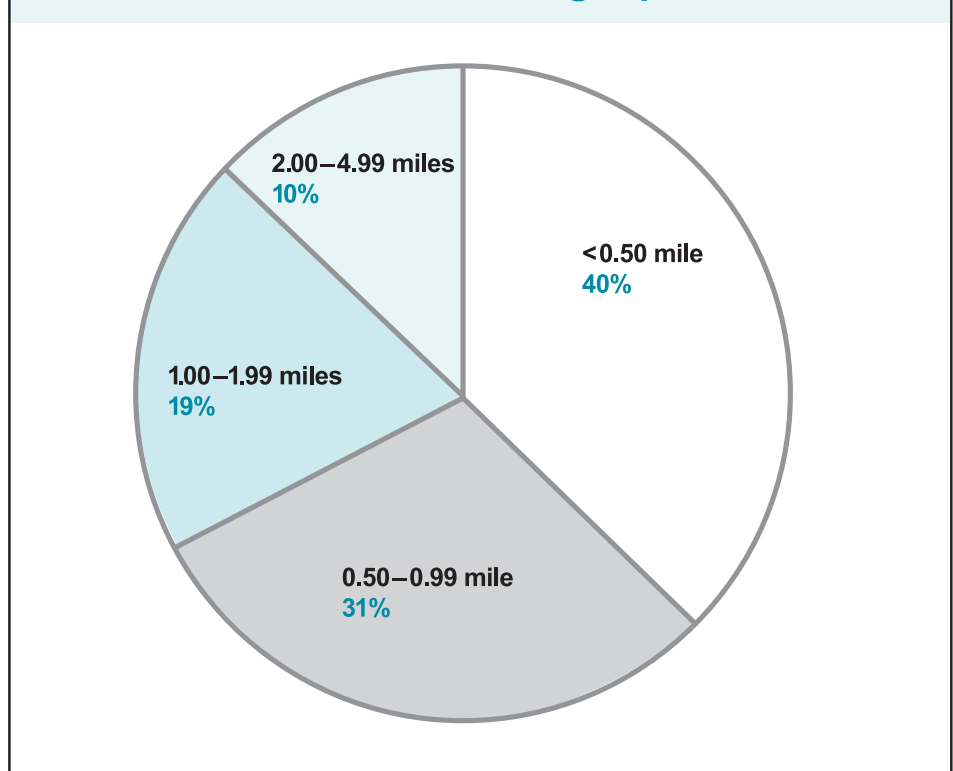
⁶ Wisconsin Department of Health and Family Services. *Wisconsin Behavioral Risk Factor Survey 1998*.

Table III.1: Walking and Age Differences

Age Group	Total Number of Trips*	Number of Walking Trips	Percent of Age Group Trips	Percent of all Walking Trips
5 - 14	326	53	16.3%	21.3%
15 - 19	226	16	7.1%	6.4%
20 – 24**	208	0	0.0%	0.0%
25 - 34	315	10	3.2%	4.0%
35 - 44	672	22	3.3%	8.8%
45 - 54	679	71	10.5%	28.5%
55 - 64	425	48	11.3%	19.3%
65 +	272	29	10.7%	11.6%
TOTAL	3,123	249	8.0%	100.0%

* 60 trips are not included in this table since they did not list the age of the participant.
 ** The number of walking trips for this group (zero) appears to be an anomaly because many of the college student respondents who normally walk were absent during the period of time which the surveys were administered. However, data collected from college students at UW-Madison shows that over 50% of the population chose walking as their primary mode of travel to class. While this cannot be used to explain travel patterns for the entire age 20-24 cohorts statewide, it does at least point to the importance of walking for college age students in specific urban locations.

Table III.2: Distance of Walking Trips in Wisconsin



reasons cited for walking trips included work, shopping and school.

Trip Length Information

Although 40% of all diary-reported walking trips were one-half-mile or less, 31% were between one-half and one mile, 19% were between one and two miles, and 10% were between two and five miles. The longer trips were predominantly for recreation. Table III.2: *Distance of Walking Trips in Wisconsin*, shows the frequency of walks by length.

Community Development Trends: Pedestrian Facilities in Rural Communities and Urbanizing Areas

Small rural communities and larger urbanizing areas share similar concerns regarding the lack of pedestrian facilities. For example, in northern Wisconsin, commercial development located along state highways often includes such land uses and activities as small taverns, local grocery stores, post office, and local tourist destinations. Frequented by both local residents and tourists, these areas often lack adequate sidewalks. Forced to use the narrow shoulder of the highway or, in some cases, the adjacent ditch, pedestrians face significant safety hazards and deterrents to walking. As noted earlier, pedestrians can experience great difficulties crossing the highway especially when compounded by the lack of sidewalks.

Near urbanizing areas, state highways pose similar safety problems since development often occurs along the state highways themselves. Critical consideration of expected development patterns and land use changes is necessary when planning highway improvement projects in such areas. This foresight can help reduce the risk of inadequate pedestrian transportation facilities. Likewise, local communities also should establish their own land use goals, plans, and enforcement tools to include areas through which State Trunk Highways pass.

Pedestrians also need to be able to cross state trunk highways safely. The *barrier effect* occurs when a heavily used or a physically large highway impedes or blocks walking trips. Examples of this effect include multi-lane arterial highways that are very difficult for pedestrians to cross and/or a freeway where few crossings are available.

Sidewalks serve to help alleviate the barrier effect problem. Sidewalks and trails provide safe and comfortable facilities for pedestrians. Sidewalks are a recognized walkway in state statutes. According to statute, sidewalks are constructed for pedestrian use. Yet, in the absence of a usable sidewalk, pedestrians often use shoulders and roadways. This is a more common means of walking within rural areas of the state.

In spite of this, the legal use of highways by pedestrians is conditional. Pedestrians must walk



Figure III.1: Lack of safe pedestrian facilities along commercial strip



Figure III.2: The absence of pedestrian facilities can create dangerous conditions for walkers

facing traffic along the left side of the highway upon meeting a vehicle pedestrians must, if practicable, move to the extreme outer limit of the traveled portion of the highway. Furthermore, because shoulders are considered part of the roadway, pedestrians are required to follow the same laws that they would follow for walking in a narrower street without shoulders. Even a wide shoulder (eight to ten feet wide), requires pedestrians to follow the same laws as when using roadways without shoulders. Regardless of the location - rural highway, or neighborhood street - pedestrians are required to follow these laws.

Shoulders, both paved and unpaved, are not classified as walking facilities under state law. Shoulders often increase the separation distance between pedestrians and motorized traffic as well as providing a more comfortable place for pedestrians to walk. Shoulders should not be considered, however, as suitable for more than occasional pedestrian use. At best, they should be considered a roadway enhancement that sometimes improves conditions for walking. Even with a wide shoulder (eight to ten feet wide), pedestrians are obligated to follow the same laws as when using roadways without shoulders.

Often considered a safety feature, pedestrian facilities also contribute to the social, economic, and recreational facets of Wisconsin communities. By providing adequate pedestrian facilities in Wisconsin's urban and rural areas, the support of local tourism and economic activity occurs by allowing easy and pleasant non-driving trips for residents and tourists alike. As a result, a community or region increases in value.

Action 1.2: WisDOT will evaluate pedestrian needs on STH projects; addresses the preceding issue.

Please see Chapter VI for more details.

IV. Issues and Concerns for Pedestrians in Wisconsin

Introduction

This chapter provides background information on various pedestrian issues and concerns. The chapter begins with a summary of public views regarding pedestrian travel gathered from public meetings held around the state. The chapter then focuses on an important theme often brought up in public meetings - *pedestrian safety*. The discussion of pedestrian safety includes an overview of pedestrian crashes and fatalities in Wisconsin and examines the most common factors contributing to pedestrian crashes:

- ◆ the *age* of pedestrians and drivers involved in the crash,
- ◆ the *speed of the vehicle* when the crash occurred, and
- ◆ and the *role of alcohol*.

Pedestrians with special needs also have unique safety needs. Special needs citizens are most dependent on walking as a form of transportation and nevertheless experience the most difficulties in walking due to physical or mental limitations. These individuals are primarily comprised of children, the

elderly and people with disabilities. The chapter concludes with a discussion of current state programs that address pedestrian safety concerns focusing primarily on education and enforcement.

Public Views at the Listening Sessions

During the issues identification and scoping phase, WisDOT conducted seventeen listening sessions with the public. Five of the sessions were conducted in an open house format, while the remaining twelve took the form of focus group meetings. Participants at the meetings included senior citizens, law enforcement officials, community leaders, people with disabilities, and other transportation stakeholders. Participants shared perspectives on: issues and concerns currently facing pedestrians in Wisconsin; ways to improve conditions for pedestrians; and WisDOT's role in addressing pedestrian needs.

This section provides a summary of:

- ◆ concerns and issues identified by meeting participants;
- ◆ ways to improve and address these areas of concern;

“Accommodations for pedestrians should be included whenever a road project is considered. Sidewalks are often an afterthought in the planning process. Changing this attitude would greatly improve the situation for pedestrians in Wisconsin.”

Citizen at a public meeting in Stevens Point on the draft pedestrian plan.

- ◆ the public’s perceived role for WisDOT in addressing pedestrian issues; and
- ◆ areas of special interest including the results of the law enforcement focus group.

Concerns and Issues

Participants attending listening sessions discussed issues ranging from whether their community provided a comfortable, walkable environment to whether enforcement of motorist and pedestrian laws was adequate. They also discussed which public education efforts potentially worked best. Several major themes emerged during these meetings, including the need for:

- ◆ improved education of the public about motorist and pedestrian rights and responsibilities, including state laws regarding blind pedestrians;
- ◆ strong enforcement of state laws to address actions of both motorists and pedestrians;
- ◆ improved pedestrian signs and additional signals, especially at busy intersections within communities;
- ◆ improved lighting and provisions for signalized crossings along pedestrian facilities;

- ◆ improved accommodations for pedestrians with disabilities (many sidewalks are not wheelchair accessible and some are not designed to accommodate the needs of blind pedestrians);
- ◆ improved sidewalk maintenance; and
- ◆ improved pedestrian safety around schools.

Brainstorming Improvement Approaches

After identifying concerns, the public brainstormed ideas on addressing the identified concerns. Participants identified a range of suggestions including:

Safety, Education and Marketing

- ◆ promoting pedestrian safety and awareness among motorists and bicyclists through the development of informational materials provided during vehicle license and/or bike license renewal;
- ◆ improving outreach to youth through educational materials for children of all ages (especially between the ages of five and sixteen years of age), and improved in-class activities with an emphasis on making it fast-paced, fun and interesting;

- ◆ marketing pedestrian safety and awareness in radio announcements and during prime-time TV ads;
- ◆ improving driver education (for new and “seasoned” drivers) to promote understanding of state laws governing motorist and pedestrian responsibilities and rights, including proper conduct when encountering blind pedestrians;
- ◆ supporting law enforcement agencies in their efforts to educate motorists through warnings and citations when violations of pedestrian laws occur. Participants stressed that without community support, this is not a viable option; and
- ◆ improving school safety by providing better crossing guard programs, enforcing speed limits, improving school siting away from busy streets, and locating school bus stops on lower volume roads;
- ◆ improving the connectivity of pedestrian facilities to encourage walking;
- ◆ creating more marked crosswalks to provide additional non-signalized crossings;
- ◆ identifying worn paths that denote commonly used pedestrian routes and building facilities to meet the obvious pedestrian need;
- ◆ eliminating the right-turn-on-red at heavily traveled pedestrian intersections;
- ◆ improving and providing more lighting along sidewalks;
- ◆ improving sidewalk maintenance (e.g., greater enforcement of local ordinances; enforcing snow removal, addressing reconstruction needs, and controlling vegetation growth along the facility);

Facility Improvements that Should be made Routine

- ◆ installing flashing lights on pedestrian signs that would be operational at specific times during the day;
- ◆ considering the need to construct sidewalks when building or reconstructing highways;
- ◆ providing accommodations on pedestrian facilities for people with disabilities such as curb cuts, minimal inclines and slopes, ensuring sidewalk connectivity, and increasing signal times at crossings; and
- ◆ providing a median refuge for pedestrians on multi-lane roads routinely.

A common theme at public meetings was a call for increased enforcement of pedestrian-related violations-both on drivers and pedestrians.

Other Areas

- ◆ using pedestrian fines to support the development and maintenance of pedestrian facilities; and
- ◆ educating construction workers and others to not place construction debris on sidewalks as this impedes safe pedestrian travel.

WisDOT's Role

Generally considered local in nature, pedestrian issues and solutions usually rest with local governments. So, WisDOT asked the meeting participants to discuss their perspective on what WisDOT's role should be when addressing pedestrian needs *not* on state facilities. Potential options presented to participants included: whether WisDOT should recommend, educate, promote, require, build, or assist in funding pedestrian facilities on urban state highways.

Overall, meeting participants agreed that WisDOT should be an active advisor and educator providing policy guidance, technical expertise, and educational materials for all ages. In addition, most agreed the state should advocate for pedestrian facilities when there is a need, such as a worn path along a heavily traveled road. However, the majority of participants indicated that WisDOT should not require specific facilities be built in communities; preferring to allow communities to continue to make these decisions.

Many meeting participants felt that WisDOT should take a lead role in promoting pedestrian awareness and safety. Several suggestions included developing ad campaigns similar to the "Give 'Em A Brake" and the "Walk on the Safe Side" campaigns, and providing more educational and promotional materials especially directed at children. This was further reinforced during the focus groups conducted with youth between the ages of ten and fourteen years. When presented with informational materials currently available, they all agreed that ad campaigns on television and radio would be more effective, since children are more likely to remember information provided in those formats than in a brochure format.

Special Area of Interest: Law Enforcement

WisDOT staff conducted two focus group meetings with law enforcement officials in central Wisconsin and southeastern Wisconsin. Participants included representatives from county sheriff's departments in the area as well as community police departments. Both discussions focused on education and enforcement issues related to pedestrians.

Although they are responsible for enforcing pedestrian laws, most law enforcement officials indicated it is not a high priority for their departments. They cited lack of support from both the public and from municipal leaders. Officers indicated that if they had the support of municipal judges and attorneys, they would be more likely to issue

warnings and citations. However, because there is very little support behind the enforcement of pedestrian laws, it is not cost effective for a police department to issue a citation and appear in court, only to have the judge and attorney dismiss the case without further review.

In addition, staff and financial constraints require many departments to prioritize their enforcement efforts. As a result, pedestrian enforcement has lower priority unless a grant can provide support a specific safety effort targeted at pedestrian travel.

When asked what they would do if they received additional funding, a few participants indicated they would focus their efforts on education and develop more materials to educate pedestrians of all ages. They also indicated they would assign officers to targeted areas for additional enforcement.

Even though most meeting participants indicated that increased law enforcement help, they agreed that would only temporarily solve the problems. They stressed that education efforts would have more lasting effects. Several officials indicated that they have noted drivers tend to focus only on other vehicles and forget the potential presence of pedestrians traveling along sidewalks. This results in high numbers of pedestrian/vehicle crashes at driveways and in parking lots. Participants also stressed lack of courtesy of both pedestrians and drivers, both of whom act

defensively and often times do not respect others rights other.

Overall, public forums opened discussion, stressed education, and outreach, and pointed to issues of concern. As mentioned previously, the goals, objectives, and actions included within this policy plan reflect a large amount of information taken from the public process. In addition to this document, the forthcoming *BPRG* will address many of these concerns; especially those related to facilities improvements. WisDOT will release it in 2002.

Pedestrian Safety Issues and Concerns

Wisconsin Pedestrian Crashes and Fatalities

In the United States, on average, seventeen pedestrians are killed every day, totaling approximately 6,500 annually. An additional 92,000 pedestrians are injured annually, representing more than 250 daily. From 1994 through 1998, Wisconsin averaged 1,885 pedestrian crashes per year or approximately five pedestrian crashes daily.⁷ Resulting fatalities have averaged about 58 per year or about 3.1 % of all pedestrian crashes, as shown in Table IV.1: *Statewide Pedestrian Crashes, 1994-1998*. The number of crashes has declined in each of the past five years. Although this decrease is welcome news, it may be related to decreases in the number of pedestrians who are

Officers indicated that if they had the support of municipal judges and district attorneys, they would be more likely to issue warnings and citations for pedestrian-related violations.

Nearly 60 pedestrians are killed every year in Wisconsin by vehicle crashes.

⁷ The Wisconsin pedestrian crash data used in this plan was tabulated from the state's MV4000 reporting system and includes data from 1994 through 1998.

Table IV.1: Statewide Pedestrian Crashes, 1994-1998

	1994	1995	1996	1997	1998	Average
Statewide Crashes	2059	1939	1842	1807	1778	1885
Fatal Crashes	49	61	54	61	63	58
% of Crashes that are Fatal	2.4%	3.1%	2.9%	3.4%	3.5%	3.1%

Youth, speed and alcohol are the three most common elements in pedestrian crashes - both for drivers and for pedestrians.

actually walking rather than from improvements in the safety of pedestrian transportation.

When considered on a regional basis, Southeastern Wisconsin has far more pedestrian crashes than the rest of the state, due to population, density, and land use. Southeastern Wisconsin also has a higher per capita rate of pedestrian crashes. The six most urbanized counties of Southeastern Wisconsin (Kenosha, Milwaukee, Ozaukee, Racine, Washington and Waukesha) had 0.59 pedestrian crashes per 1,000 occupants between 1994 and 1998. In comparison, the rest of the state had a pedestrian crash rate of 0.23 per 1,000 occupants. *Appendix F: Pedestrian Crash Rates for Individual Counties in Wisconsin, 1994-1998* outlines crash figures for individual counties.

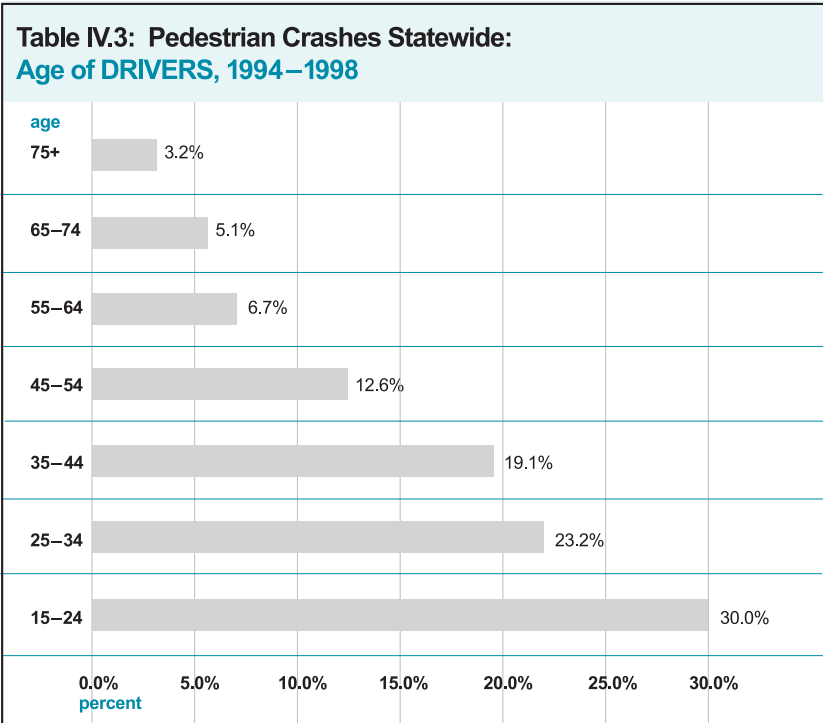
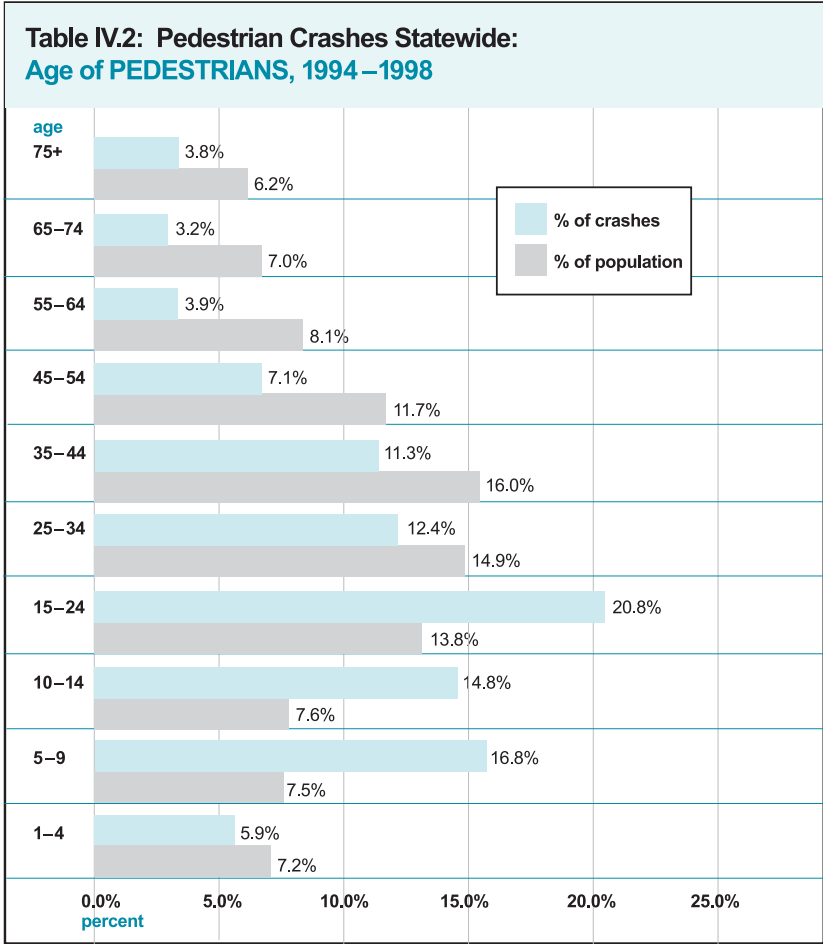
Wisconsin's past pedestrian crashes and fatalities resulted mostly from three specific factors: **the age of pedestrians and drivers** involved in the crash, the **speed of the vehicle** when the crash occurred, and the **role of alcohol**. Appendices B, C, D, and E include detailed information on the types and occurrences of

crashes, statistics on Wisconsin fatalities and an analysis of safety-related data comparing Wisconsin with the rest of the United States.

Age, Speed and Alcohol - Primary Factors in Wisconsin's Pedestrian Crashes

Age of Pedestrians and Drivers

Children are most likely to be involved in pedestrian crashes. For example, children age 14 and younger account for over 37% of all crashes; see Table IV.2: *Age of Pedestrians in Statewide Crashes, 1994-1998*. Pedestrians between the ages of 15 and 24 are the next group most at risk of a pedestrian-vehicle crash (approximately 21% of all crashes). This age group is also the most common among drivers involved in pedestrian crashes. Between 1994 and 1998, more than one half (53%) of the drivers involved in pedestrian crashes were between 15 and 34 years of age; see Table IV.3: *Age of Drivers, Statewide Pedestrian Crashes, 1994-1998*. This age group accounts for less than 41% of the miles traveled by vehicles in Wisconsin.



Posted Speeds at Pedestrian Crash Sites

As shown in Table IV.4: *Posted Speed at Pedestrian Crash Locations, 1994-1998*; more than 90% of Wisconsin's pedestrian crashes occur on roadways where the posted speed is 40 miles per hour or less. Nearly 80% of the state's pedestrian crashes occur on roadways where the speed limit is either 25 or 30 miles per hour. This means that most pedestrian crashes are occurring on local roads and streets. This is consistent with the fact that most pedestrian travel is in urban areas. Because most pedestrian crashes occur on lower-speed local roads, greater law

enforcement on local roads could have a significant beneficial effect for pedestrian safety.

Speed and Pedestrian Fatalities

Table IV.5: *Injury Severity of Pedestrian Crashes, 1994-1998*; shows that the higher the posted speed, the more likely a pedestrian crash will be fatal. Fewer than 2% of crashes involving pedestrians resulted in a pedestrian fatality when occurring on roadways where the speed limit is 25 miles per hour. On the other hand, more than 14 % of pedestrian fatalities occurred on roadways where the posted speed was 55 miles per hour or greater. *Posted speed* is different from the speed a vehicle is traveling at the

Table IV.4: Posted Speed at Pedestrian Crash Locations, 1994-1998

	Speed (M.P.H.)	Avg. No. of Crashes	Percent
Urban Locations	5	2	0.1%
	10	5	0.3%
	15	56	3.1%
	20	10	0.6%
	25	901	50.0%
	30	523	29.0%
	35	134	7.5%
Rural Locations & Expressways	40	30	1.7%
	45	30	1.7%
	50	5	0.3%
	55	87	4.8%
	60	3	0.0%
	65	15	0.9%
TOTAL		1,801	100.0%

Note: Does not include cases where the posted speed was unknown.

time of a crash. Law enforcement officials frequently report that vehicles involved in pedestrian crashes were likely to have been traveling faster than the posted speed at the time of the crash. If enforcement affects driver behavior, the number of pedestrian crashes, injuries, and fatalities would decline.

Action 4.5: WisDOT will promote education and enforcement of the 25 m.p.h. speed zones; addresses the preceding issue.

Please see Chapter VI for more details.

Beyond Statistics - The Human Toll of Pedestrian Crashes

The following provides just two of the many tragic stories of people who have either been hit or killed in pedestrian accidents. Exactly who should take the blame for these accidents is not always clear. Sometimes the blame lies with the motorist, sometimes it is the pedestrian's fault and sometimes it is the conditions that created the accident. However, it can be argued that in many cases, these accidents could have been prevented through a combination of safety strategies focusing on education and enforcement, as well as through the provision of safe pedestrian facilities.

Elderly Woman Run Over in Parking Lot

Elsewhere, Man Killed While Getting Mail

Wausau, Wis., Associated Press, Updated 11:06 a.m. CST December 15, 1999—A 91-year-old woman using a walker was killed after being run over by a septic tank truck as she stepped from the curb in the parking lot of a discount store and into the path of the vehicle, authorities said today.

The cab of the truck was so high, the driver never saw the woman and he left the scene unaware that he had hit her, Lt. Gary Schneck of the Marathon County Sheriff's Department said.

"He had a hard time believing anything had happened," Schneck said.

Delores Conrad was pronounced dead outside a west side Wausau K-mart on Tuesday.

The 43 year-old driver was at K-Mart loading used kitchen grease from the store's entrance doors just before the fatal accident, authorities said.

In another accident, Ralph Thomas, 74, died Tuesday evening after being struck by a car in front of his home about three miles east of Loyal while getting mail, authorities said.

Thomas and his wife had just arrived home. He crossed Wisconsin 98 to get his mail and stepped into the path of a westbound car, the Clark County Sheriff's Department said.

The driver said she did not see Thomas because he was wearing dark clothes, according to deputies, and there were no lights in the immediate area. *Reprinted with permission of The Associated Press.*

In the tragic event that a vehicle does hit a pedestrian, slower speeds reduce the risk of serious or fatal injury. At 20 m.p.h., 5% of pedestrians involved in a crash are killed; corresponding fatality rates at higher speeds are 45% at 30 m.p.h. and 85% at 40 m.p.h.. As shown in Table IV.7: *Stopping Distance on Dry Pavement*; slower speeds also help reduce the distance a driver needs to stop. The majority of pedestrian crashes in Wisconsin occur on lower-speed local roads (e.g., in residential areas where children play). Therefore, reducing travel speeds on these roads would not only reduce the severity of some pedestrian crashes, but would also eliminate some crashes by reducing the distance drivers need to stop the vehicle.

The Role of Alcohol in Pedestrian Crashes

Table IV.6: *Statewide Alcohol Related Pedestrian Crashes, 1994-1998*; shows that nearly 12% of all pedestrian crashes in Wisconsin are alcohol-related. Over the past five years, Wisconsin has suffered an annual average of 216 alcohol-related pedestrian crashes. This includes incidents where the driver and/or the pedestrian had been drinking. Statistics show it is more common in pedestrian crashes for the pedestrian to have been drinking than the driver. It is also more common for alcohol-related pedestrian crashes to be located in the northern, more rural parts of the state based on the aggregation of county statistics (see *Appendix F*).

Ultimately, alcohol is a major factor in pedestrian crash fatalities.

Table IV.5: Injury Severity of Pedestrian Crashes, 1994-1998

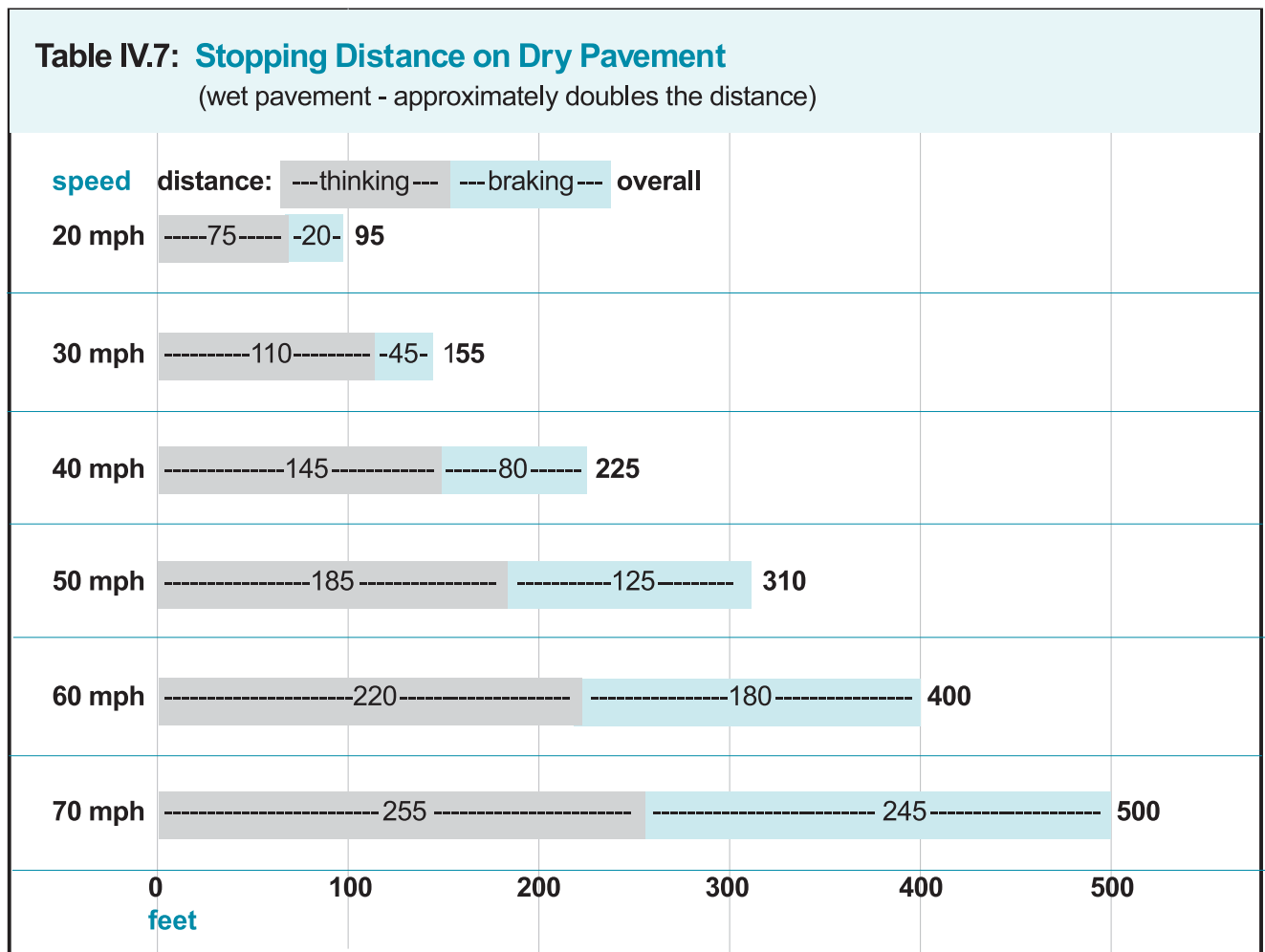
Posted Speed (M.P.H.)	Fatality	Serious Injury	All Others
25	1.5%	20.4%	78.1%
30	2.0%	20.9%	77.1%
35	4.5%	30.3%	65.2%
40	7.8%	23.4%	68.8%
45	10.1%	38.0%	51.9%
55	16.2%	35.1%	48.7%
65	15.7%	27.0%	57.3%
All Crashes	3.0%	22.3%	74.7%

Note: Does not include cases where the posted speed was not reported.

During the years 1994-1998, nearly one third (30%) of fatal pedestrian crashes involved pedestrians who had been drinking. Additionally, 14% of **drivers** in the fatal crashes had consumed alcohol. Both of these rates are higher than the 11.5% alcohol involvement rate for all state pedestrian crashes.

Table IV.6: Statewide Alcohol Related Pedestrian Crashes, 1994-1998

	1994	1995	1996	1997	1998	Average
Alcohol Related Ped. Crashes	226	226	193	219	218	216
Pedestrian had been Drinking	148	139	120	145	141	139
Driver had been Drinking	47	61	47	45	53	50
Both had been Drinking	31	26	26	29	24	27
Total Ped. Crashes	2,059	1,939	1,842	1,807	1,778	1,885
% Alcohol Related	11.0%	11.7%	10.5%	12.1%	12.3%	11.5%



Special Needs Pedestrians: The Elderly, Children and People with Disabilities

Pedestrians are extremely vulnerable to vehicular traffic. Pedestrians share the right of way with automobiles and this creates conflict with the pedestrian at a significant disadvantage. Some pedestrians are at an especially endangered disadvantage due to mobility difficulties brought about by individual physical or mental limitations. These include the elderly, children, and people with disabilities. The elderly experience greater risk due to reduced physical and perceptual skills. Children, while younger and more agile, are also very vulnerable in traffic because their physical and cognitive skills are not yet fully developed. People who are disabled are at risk in difficult traffic situations or when facilities are not adapted to their abilities.

Designing transportation facilities for pedestrians with special needs -- the elderly, children and the disabled -- helps all pedestrians and society as a whole.

Pedestrians with special needs are the most dependent upon a good pedestrian system and yet, have the most difficulty using it.

Action 5.3: WisDOT reaffirms efforts to address pedestrians with special needs; addresses the preceding issue.

Please see Chapter VI for more details.

Older Pedestrians

According to population estimates provided by the Wisconsin Department of Administration (DOA), 13.2% of Wisconsin's population in 1998 was 65 years of age or older. With the baby boomer generation aging, the ranks of the elderly are expected to grow substantially over the next 20 years. According to DOA projections, that figure is expected to rise to 17.1% of the state's total population by the year 2020, representing an additional 305,000 elderly people. Safety concerns arise when elderly people walk because of difficulties



Figure IV.1: Perceptions of a safer and more pleasant walk can encourage more elderly walking

encountered due to decreasing physical and perceptual skills.

Expected to remain active as they grow older elderly people require a transportation system that includes good pedestrian facilities. If elderly workers and volunteers have limited travel choices due to an inadequate pedestrian transportation system, the state could suffer negative economic and social consequences.

Some elderly people choose to walk for exercise and recreation. Other elderly citizens walk in order to reduce how much they drive or to stop driving altogether. These decisions often increase their use of transit and require walking to the bus stop. Safe and convenient pedestrian facilities can have a positive impact on an elderly person's independence.

Not only must good pedestrian facilities be provided for the growing number of elderly, but

pedestrian facilities must also be designed to accommodate the unique *characteristics* of older people as well. In general, aging usually causes a deterioration of physical, perceptual and sensory abilities. Because the elderly become physically fragile, crashes may have consequences that are more serious for them over younger age groups. Limitations commonly experienced by older adults include:

- ◆ Vision limitations which can make it difficult to see approaching cars;
- ◆ Slow walking speeds which can make it difficult to cross a signalized crossing within the allotted time;
- ◆ Reduced range of joint motion which can make curbs and steep ramps difficult to negotiate;

Nearly 1 in 5 Wisconsinites will be 65 or older in 2020. Meeting their transportation needs, especially walking, is imperative.



Figure IV.2: Pedestrian medians calm traffic and make crossings safer

- ◆ Reduced ability to detect, localize and differentiate sounds which can make it difficult to hear approaching vehicles;
- ◆ Limited attention span, memory, and perceptual abilities which can lead to confusion at complex intersections and traffic situations;
- ◆ Reduced endurance which can make benches and shady trees useful complements to the system; and
- ◆ Decreased agility making sudden dangers more difficult to maneuver around.

Improving traffic situations and pedestrian amenities helps facilitate elderly travel and provides a measure of safety. There are a number of design, traffic and enforcement efforts that can make walking a viable transportation choice for Wisconsin's elderly. Curb bulb-outs for example, can reduce crosswalk distance while also slowing traffic speeds.

Prohibiting right-turns-on-red in areas with high concentrations of elderly can raise the safety confidence of the elderly. They feel they can cross at a signalized intersection without fear of being hit by a car making a right-turn-on-red.

Stricter enforcement of posted speeds could also ease some difficulties faced by elderly pedestrians. Speeding motorists

approach crosswalks faster than expected and require quick thinking and rapid evasive action by the pedestrian. Such reactions are increasingly difficult for many elderly pedestrians.

Sidewalk maintenance requires special attention. If sidewalks deteriorate to the point that panels are cracked or uneven, older walkers face tripping hazards that may not threaten most other walkers. In addition, failure to remove snow and ice from sidewalks poses a threat to elderly walkers who are more prone to slips and falls. Poor sidewalk and/or unmaintained shoulders sometimes force pedestrians to walk on the street or road.

Sidewalk falls commonly result in broken hips or other life threatening injuries for the elderly. WisDOT crash data does not report injuries and deaths resulting from falls on sidewalks as pedestrian injuries/deaths because they are not motor vehicle related and, generally, death does not occur immediately after the fall. This deficiency in pedestrian-related data will be addressed in the next few years. Because of 1997 Wisconsin Act 231, an *Emergency Department Database* will be created from reports by emergency rooms at all Wisconsin hospitals. Efforts are being made to also collect information from border-area hospitals in Minnesota, Iowa and Illinois. In addition to many other uses, data in this database will provide information on serious injuries and fatalities resulting from slips and falls on sidewalks.

Children as Pedestrians

Children fourteen years old or younger make up 23.3% of the state's population (Department of Administration data). Children spend a great deal of time outside and on the sidewalks. They travel by foot more than any other age group. This includes their walk to and from school during the school year. Due to their developmental immaturity and lack of experience, however, children have fewer capabilities than most adults in negotiating street crossings and other difficult pedestrian-vehicle conflicts.

Younger children, therefore, are particularly vulnerable road users, because their abilities to cope with traffic evolve slowly with age and remain severely limited in the first decade of their lives. Lack of sidewalks, crosswalks, or walk/don't walk traffic signals pose even greater risks to this age group. Heavy or fast motorized traffic, limited visibility for both drivers and pedestrians, or focused driver attention on turning vehicles, causes motorists to tend to forget about pedestrians - especially smaller children posing high risk.

In this way, sidewalks providing a safe and convenient connection from the home through the neighborhood and to school are an important consideration for all communities. As new subdivisions are planned and designed, and older neighborhoods are retrofitted due to some development change, careful consideration must be given to travel patterns that children take from home to school. This will



Figure IV.3: Children travel by foot more than any other group

require that the designer 'walk in the same shoes' as the child, considering the needs of the child (in addition to other groups) so that the subdivision design or neighborhood plan reflects not only the needs of adults, but those of children as well.

Facilities designed to separate and protect children, and one's that seek to communicate potential hazards on a child's level of comprehension, will provide children with mobility and an added measure of safety. Unfortunately, Wisconsin children under age fifteen account for nearly 38% of victims in reported pedestrian crashes. The national average reports 30% under age fifteen.

General limitations of children pedestrians include:

- ◆ One-third less peripheral vision than adults, making it difficult to see turning vehicles or those down the road;
- ◆ Less cognitive ability and experience to judge speed and distance, making safe crossings more difficult;

Nearly one-fourth of Wisconsinites are younger than 15.

Children do not develop adequate sight, thinking and hearing abilities necessary to cross streets safely until age 10 or later.

- ◆ Lower auditory development, making it difficult to localize the direction of vehicle sounds;
- ◆ Overconfidence in their judgments resulting in poor decisions on crossing timing;
- ◆ Inability to read or comprehend warning signs, traffic signals, and directional aides;
- ◆ Inexperience in dealing with complex traffic situations, resulting in poor decisions and being unaware of looming dangers; and
- ◆ No sense of fear.

Both children and elderly pedestrians share their need for strict traffic enforcement. In addition, reducing travel speeds on

roads would not only reduce the severity of some pedestrian crashes, but would also eliminate some crashes by reducing the distance drivers need to stop the vehicle.

Other approaches to help make a child's walk safer include traffic calming techniques on local roads and streets. For example, a traffic calming "lane splitter" or a "traffic island" not only decreases traffic speed but also provides a crossing refuge. Such a refuge allows two stage crossings, so that children could cross to the refuge with their attention focused on traffic coming from the left, stop in the refuge, and then complete the crossing with their attention focused to their right. These design techniques would also benefit elderly pedestrians.

Pedestrians with Disabilities

There are more than one million Wisconsin residents with one or more disabilities, representing



Figure IV.4: People in wheelchairs are pedestrians too

20.5% of the state’s population. Persons with disabilities include anyone with a physical, sensory, or mental impairment that affects their movements or decision-making.

A disability can impair one’s ability to walk. As stated earlier, people with disabilities often must rely on pedestrian and transit transportation options over other segments of the population. Traffic moving too fast combined with drivers’ ignorance of pedestrian crossing rights creates additional problems. In effect, one pedestrian barrier can render the whole network useless to the pedestrian with a disability.

Design practices sensitive to the majority of users can help to alleviate user stresses. For example, a wheelchair user will find the absence of a curb ramp or an un-

even sidewalk to be a barrier. This may require them to retrace their movements in order to find an accessible route to their destination. Similarly, a visually impaired pedestrian may find a busy street impassable without audible aids, common in *more sensitive* applications.

Characteristics of Disabilities: Mobility, Sensory and Cognitive Impairments

People with disabilities often use assistive devices or technologies such as canes, wheelchairs, hearing aids, prosthetics, and seeing-eye dogs. Although these technologies help the user, there may be limitations or constraints unique to their use that become especially pronounced when they travel as a pedestrian. The broad categories of disabilities include:

Pedestrians with disabilities are very dependent upon a good pedestrian transportation system to get around and to access transit systems.

Total Persons with Disabilities	1,069,613
Physical Disabilities	825,574
Visual	108,629
Hearing	570,632
Developmental	100,000
Mental Illness	100,903
Note: Persons may be counted more than once.	

⁸ Source: Wisconsin Office for Persons with Physical Disabilities, Wisconsin Department of Health and Family Services. January 1998. According to the Department of Health and Family Services, a *person with a disability* is an individual who meets any of these criteria: uses a wheelchair or is a long-term user of a cane, crutches or walker; has difficulty performing one or more functional activities (seeing, hearing, speaking, lifting/carrying, using stairs or walking); has difficulty with one or more activities of daily living (ADL), including getting around inside the home, getting in or out of bed or chair, bathing, dressing, eating, and using the toilet; has difficulty with one or more instrumental activities of daily living (IADL), including getting outside the home, keeping track of money and bills, preparing meals, doing light housework, taking prescription medicine in the right amount at the right time, and using the telephone; is limited in ability to do housework; is 16-67 years old and limited in ability to work at a job or business; or receives federal benefits based on an inability to work.



Figure IV.5: When a sidewalk is under construction, alternative facilities marked appropriately become critical for blind pedestrians who are unable to read signs by sight

- ◆ *Mobility Impairments.* People with mobility impairments include those who use wheelchairs, crutches, canes, walkers, orthotics and prosthetic limbs. Some are temporarily impaired. Others are permanently impaired. Characteristics common to people with mobility limitations include substantially altered space requirements to accommodate use of an assistive device, difficulty negotiating soft surfaces such as grass, sand or gravel or surfaces that are not level or need curb ramps. For example, manual wheelchairs have an average turning radius of 60 inches and require a minimum width of 3 feet of sidewalk.
 - ◆ *Sensory Impairments.* Sensory impairments include problems with depth perception, deafness, tunnel vision, blindness, or color blindness. Assistive technologies might include hearing aids, corrective lenses, “white canes,” or guide dogs. For visually impaired users, intersections are easiest to negotiate when the line of travel from the edge of the sidewalk to the opposite curb is straight and unimpeded by obstacles rather than skewed as at some irregularly shaped intersections. Vehicular traffic laws concerning legal right turns on red especially affect visually impaired pedestrians. Drivers may be looking for traffic from the left and not see a blind pedestrian entering the crosswalk from their right. Pedestrians with hearing problems cannot hear vehicles approaching. Driveways pose a challenge because the hearing-impaired pedestrian is unable to hear the vehicle, especially when shrubs or fences block the view.
 - ◆ *Cognitive Impairments.* People with cognitive impairments have difficulty perceiving, recognizing, understanding, interpreting, and responding to information. Cognitive disabilities can hinder a person’s ability to think, learn and reason. Facility designers might consider that such a reduced capacity for sensory processing and problem solving may cause people with cognitive impairments to experience more difficulties negotiating unfamiliar environments.
- Overall, level sidewalks and well-designed ramps and crossings complement people with disabilities. The absence of such facilities can:
- ◆ Potentially cause users who have difficulty lifting their feet off the ground to trip and fall when they are faced with abrupt changes in level
 - ◆ Create tripping hazards for those whose reduced vision may cause difficulty-detecting changes in level

- ◆ Cause both the blind and those people using wheelchairs and scooters to lose their balance and trip over sidewalk cracks. This danger also exists where the lip at the bottom of a ramp causes a steep drop to the roadway pavement; and
- ◆ Create difficulties, for wheelchair users, in rolling over larger changes in level because of the work required lifting the wheelchair over the elevation change.



Figure IV.6: Appropriate sidewalk treatments can accommodate wheelchair users and all pedestrians

The Universal Design Concept

The idea of designing facilities for the majority of users - including the elderly, children, and people who are disabled - is known as *universal design*. Universal design means that a functioning pedestrian system serves *all* users and not simply a *standard* user. Accessible designs for persons with pedestrian-related limitations can also benefit able-bodied users by reducing fatigue, increasing pedestrian speed and decreasing the potential for pedestrian judgment error.

Receiving U.S. Federal Highway Administration (FHWA) support, universal design addresses the needs of pedestrians. Its beginning traces back to the Americans with Disabilities Act (ADA) which states are required to follow. To appreciate the concept of universal design, one must understand the goals of the ADA, which will be addressed in Chapter V.

Response to Pedestrian Safety: Education Efforts

WisDOT's efforts in pedestrian safety education can be divided into three broad areas:

- ◆ grants and reimbursement contracts;
- ◆ educational materials; and
- ◆ driver licensing.

Grants and Reimbursement Contracts

WisDOT administers a pedestrian/bicycle education and enforcement reimbursement program. Eligibility for the program is determined by the community's size and its history of crashes. If a community is eligible, it is offered the opportunity to participate. In

...drivers “must do everything [they] can to prevent striking a pedestrian...”

Wisconsin Motorists' Handbook

2000, WisDOT awarded more than \$87,000 for fifty-six contracts, of which more than \$31,000 was awarded to projects specifically related to pedestrians. In many instances, the funds are used to fund increased enforcement of pedestrian laws. The enforcement may be aimed at pedestrians and/or motorists. These efforts are often focused on intersections with a high level of pedestrian traffic or a history of crashes. In other instances, police departments used the funds to increase enforcement efforts during special events that result in an increase in pedestrian traffic. In 2000, pedestrian *road* expenses were coordinated to show that pedestrian charettes were funded alongside enforcement projects.

WisDOT also administers a Safe Community Coalition grant program aimed at injury prevention. In Wisconsin, there are nineteen safe community coalitions serving over 1.1 million Wisconsin residents (see *Appendix I: Safe Community Coalitions in Wisconsin*). WisDOT provides limited grant funding for up to three years. In 2000, nine communities received funding totaling \$123,164.

Pedestrian-Related Safety Educational Materials

WisDOT distributes a variety of materials aimed at educating both motorists and pedestrians about

their respective rights and responsibilities. Much of this material is designed for children to teach them safe pedestrian behavior. Examples of these materials include:

- ◆ *Roadsharing: Street Smarts in the 90's*, a pamphlet providing safety tips for pedestrians, bicyclists, in-line skaters and motorists;
- ◆ *BusWatch: When You see a School Bus, Watch for Kids*, a pamphlet reminding motorists of their duties when encountering a school bus; and
- ◆ *Getting There Safely by Foot, by Bike, by Bus, by Car*, a coloring book that reviews traffic safety tips.

In addition, WisDOT distributes pedestrian safety education materials prepared by the U.S. Department of Transportation (U.S. DOT) and other organizations such as the American Automobile Association. Materials are typically distributed on a per request basis. A variety of safety-related materials is also available at DMV Service Centers.

Driver Licensing

WisDOT is responsible for licensing drivers. To educate drivers, WisDOT publishes the

Motorist's Handbook and administers written examinations to first-time license applicants.

The *Motorist's Handbook* is one of the primary tools for educating new drivers. The handbook covers a range of topics including the rules of the road, safe driving tips, and what to do in emergencies. In regard to pedestrians, the handbook notes that drivers, "...must do everything [they] can to prevent striking a pedestrian ...regardless of the circumstances." The handbook also states that at intersections:

- ◆ Drivers must yield where necessary to avoid striking pedestrians who are crossing the road;
- ◆ Drivers crossing a sidewalk, entering or exiting a driveway, alley, or parking lot must yield to pedestrians; and
- ◆ Pedestrians using a dog guide or carrying a white cane have an absolute right-of-way (even if not at an intersection).

WisDOT staff compared Wisconsin's *Motorist Handbook* with handbooks from fourteen other states to determine if Wisconsin provides a similar level of information as other states.⁹ All fifteen state handbooks addressed rights-of-way issues relating to

pedestrians and pedestrian use.

In addition to discussing motorist responsibilities to yield the right-of-way, eleven of the handbooks (excluding Arizona, California, Nebraska and Wisconsin) discussed actions pedestrians should take when walking. As the North Dakota handbook noted, "Traffic rules apply to pedestrians as well as motorists." And as Tennessee noted, "You [driver] too will be a pedestrian on occasion." Guidance provided by other states suggests specific actions pedestrians should take when walking, including:

- ◆ obeying traffic signals;
- ◆ using crosswalks;
- ◆ yielding the right-of-way to motor vehicles when crossing at places other than intersections;
- ◆ walking on sidewalks if available; if sidewalks are not available, walking on the left side of the road facing traffic; and
- ◆ wearing light-colored clothing at night.

A recent study reviewing the handbooks of thirty-two states (excluding Wisconsin) and the District of Columbia concluded that the level of information provided

⁹ Driver handbooks were obtained from Arizona, California, Colorado, Florida, Iowa, Nebraska, New Jersey, New York, North Carolina, North Dakota, Oregon, Tennessee, Utah, and Vermont.

Other States' Driver's Manuals and Pedestrians

“You [pedestrians] have the right-of-way at crosswalks and intersections whether the crosswalks are marked or not. However, you should always watch for vehicles. If there is an accident you are the one who will suffer.” Colorado Division of Motor Vehicles. *Colorado Driver Handbook*.

“Motorists should yield to you in marked crosswalks, but do not bet your life on it! Watch out for yourself.” Iowa Department of Transportation. *Iowa Driver's Manual*.

“Remember—just because you make eye contact with a pedestrian doesn't mean that the pedestrian will yield the right-of-way to you.” California Department of Motor Vehicles. *1998 California Driver Handbook*.

“Saving a pedestrian's life is always worth the driver's lost right-of-way. The safe driver yields right-of-way to a pedestrian whether the pedestrian is entitled to it or not.” North Carolina Division of Motor Vehicles. *Driver's Handbook*.

about potential pedestrian conflicts at intersections was insufficient and needed significant improvements¹⁰. The researchers suggested that to improve handbooks states should include data and pictures depicting pedestrian-vehicle conflicts at intersections. The researchers also suggested that the use of pictures showing points of conflict (e.g., a car turning into the path of a pedestrian) is more effective than a diagram of the same situation.

Action 4.3: WisDOT will review pedestrian related laws; addresses the preceding issue.

Please see Chapter VI for more details.

¹⁰ Sarkar, Sheila, Ron Van Houten and John Moffatt. “Using License Manuals to Increase Awareness About Pedestrian Hazards at Intersections: Missed Opportunities for Educating Drivers.” *Transportation Research Record*, no. 1674, 1999, pages 49-56.

V. Plans, Programs and Laws

This chapter provides an overview of previous planning efforts and current programs, plans, and laws. Included are key policies, programs and planning efforts at the federal, state and local levels of government

History of Federal, State & MPO Planning Efforts

Federal Planning Efforts

Pedestrian Planning and the Intermodal Surface Transportation Efficiency Act (ISTEA)

Increased federal attention to pedestrian transportation needs began with the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). ISTEA provided greater flexibility to state and local governments for funding plans and programs to meet all transportation needs. With respect to pedestrian issues, this flexibility resulted in pedestrian project eligibility for federal funding from numerous sources such as the National Highway System Program, Surface Transportation Program, Congestion Mitigation and Air Quality Improvement Program, Scenic Byways Program, and National Recreational Trails Fund. In addition to offering greater funding flexibility, ISTEA also required states and Metropolitan

Planning Organizations (MPOs) to address pedestrian transportation needs in their long-range planning efforts. Furthermore, ISTEA required establishment of the position of bicycle/ pedestrian coordinator in state departments of transportation to promote and facilitate the increased used of nonmotorized transportation. Wisconsin has had a bicycle/ pedestrian coordinator since 1992.

National Bicycling and Walking Study

Federal interest in pedestrian issues extends beyond passage of legislation. In 1991, Congress directed the U.S. Department of Transportation (U.S. DOT) to complete the *National Bicycling*



Figure V.1: Citizens need to let their local leaders know whether pedestrian issues are important to them

- ◆ determine current levels of bicycling and walking;
- ◆ identify reasons why bicycling and walking are not more frequently used as a means of transportation;
- ◆ to develop a plan for the increased use and enhanced safety of these transportation choices; and
- ◆ to identify the resources necessary to implement this plan.

The U.S. DOT completed the study and plan in 1994. The goals of the plan were to:

- ◆ double the percentage of total trips made by bicycling and walking in the U.S. from 7.9% to 15.8% of all travel trips by 2010; and
- ◆ simultaneously reduce the number of bicyclists and pedestrians killed or injured in traffic crashes by 10%.

The Federal Highway Administration (FHWA) has also partnered with the National Highway Traffic Safety Administration (NHTSA) to develop the *Pedestrian Safety Roadshow*. The *Roadshow* assists communities in identifying and solving problems related to pedestrian safety and walkability. The objectives of the program are to:

- ◆ increase the awareness of pedestrian safety and walkability issues;
- ◆ provide communities with information on what factors make a community safe and walkable; and
- ◆ turn the community's concern into a plan of action to address pedestrian issues.

In addition, the *Roadshow* developed materials to help communities identify and address pedestrian safety issues. In Wisconsin, *Roadshows* have been held in Cedarburg, Clintonville, Door County, Elk Mound, Green Bay, Hayward, Marshfield, Sauk City/Prairie du Sac, and Stoughton. Each of the communities has initiated activities to increase pedestrian safety and make their communities more walkable.

WisDOT Planning Efforts

In 1991, ISTEA required MPOs to complete pedestrian elements as part of their updated transportation plans. In September 1993, WisDOT published *Wisconsin Pedestrian Planning Guidance: Guidelines for Metropolitan Planning Organizations and Communities in Planning and Developing Pedestrian Facilities*. The purpose of the guidelines was to guide MPOs and larger communities as they developed pedestrian plans or the pedestrian element of their overall transportation plans. The guidelines, which provided recommendations

for processes and contents in pedestrian plans, were developed in consultation with other states that had recently endorsed pedestrian elements. The WisDOT guidelines for sidewalk placement included in this 1993 document, are reprinted in *Appendix N*. This was an important effort because very little had been written on planning processes for facilities to accommodate pedestrian travel. The Wisconsin document is included in the list of additional materials WisDOT will provide upon request (See *Appendix A*).

Action 3.1: WisDOT will provide broad-based professional training opportunities; addresses the preceding issue.

Please see Chapter VI for more details.

ISTEA also affected WisDOT policy regarding pedestrian facilities along State Trunk Highways (STH). Prior to 1992, WisDOT included sidewalks on STH projects only if the local municipality paid the complete cost of the pedestrian facility. Since 1992, WisDOT includes sidewalks under its “cost-share” policy. As a result, local municipalities pay only 25% of the cost for a basic level of service sidewalk. This policy will be changed in 2002 to reflect an 80/20 split between WisDOT and local cost. Since the advent of cost-share for sidewalks, WisDOT has constructed increasingly more

sidewalks and pedestrian crossings. WisDOT actually pays for more than 75% of the total cost to provide sidewalks. The cost-share policy only is applied to the cost of the poured concrete. WisDOT pays all other costs including any necessary real estate, berming, grading, and surveying. (See *Appendix G* outlining WisDOT’s current, cost-sharing arrangement.)

Local and MPO Planning Efforts

WisDOT relies on MPOs to develop transportation plans in urbanized areas. Under federal regulations, each MPO is required to develop a pedestrian planning element. Some MPOs in Wisconsin produced stand-alone pedestrian plans while others addressed pedestrian issues within their bicycle plans, in joint bike-pedestrian plans, or as an element of their long-range transportation plans. In addition to MPO plans, individual cities have also produced pedestrian plans. As an important part of meeting the goals of the *Wisconsin Pedestrian Policy Plan 2020*; the review and endorsement of the pedestrian plans by WisDOT occurred.

Although, WisDOT has endorsed these plans, the plans themselves vary among the MPOs in terms of thoroughness and extent. Through development of new pedestrian planning guidance in the forthcoming *BPRG*, MPOs and individual cities will be able to update and improve their current pedestrian planning elements.

All levels of government are involved in providing adequate pedestrian facilities. The federal and state governments can not do anything without the support of the local governments.

Table V.I: Comparison of Local Pedestrian Plan Components¹¹

	Plan objectives	Existing sidewalk inventories	Installation/retrofitting policies for new sidewalks		Financial policies for installing new sidewalks and/or repairing existing sidewalks
Beloit MPO	x		x		
Brown County MPO	x		x		x
Dane County	x		x		
Oshkosh & Fox Cities	x		x		
Eau Claire MPO			x		
Janesville MPO	x		x		
La Crosse MPO	x		x		
City of Madison	x	x	x		x
Sheboygan MPO			x		
SEWRPC	x	x	x		
City of Superior	x	x	x		x
Wausau MPO	x		x		
	% of population walking to work	Pedestrian crash data	Snow removal ordinances	Plan recommendations	
Beloit MPO	x	x			x
Brown County MPO					x
Dane County	x				x
Oshkosh and Fox Cities					x
Eau Claire MPO					x
Janesville MPO	x	x			x
La Crosse MPO	x		x		x
City of Madison			x		x
Sheboygan MPO			x		x
SEWRPC	x	x			x
City of Superior	x	x	x		x
Wausau MPO		x			x

¹¹ A column is not included for education and enforcement policies. Overall, the plans included only a minimal discussion of current education and enforcement policies. Instead, many of the plans included recommendations regarding education and enforcement which are captured under the plan recommendations section.

Wisconsin Pedestrian Planning Models

After examining all of the pedestrian plans, it was found that plans for the Madison Urbanized Area, the SEWRPC region,¹² and the Duluth-Superior Urbanized Area were the most comprehensive and complete in terms of identifying and addressing pedestrian issues and concerns in areas such as: plan objectives and recommendations focusing on pedestrian concerns; existing sidewalk inventories; installation/retrofitting policies for sidewalks; financing policies for installing new sidewalks and/or repairing existing sidewalks; percent of population walking to work; maintaining pedestrian crash data; and provision of local ordinances. The matrix on the previous page, identifies these MPO and other local pedestrian planning efforts.

Important Features of Local Pedestrian Plans

Specific plan objectives

Most plans included notable elements. For example, most plans identify two to four objectives to accomplish in terms of pedestrian travel. Objectives included:

- ◆ *Encouraging walking* through local adoption of sidewalk policies, local investment in pedestrian facilities to make walking viable, and adoption of local ordinances requiring sidewalks in new subdivisions. (Beloit, Green Bay, Oshkosh and Fox Cities, La Crosse, City of Madison, City of Superior and SEWRPC).
- ◆ *Improving pedestrian safety* by reducing crashes with cars and bicycles. (Beloit, Brown County, Dane County, Oshkosh and Fox Cities, City of Madison, City of Superior, Wausau and SEWRPC).
- ◆ *Improving planning and zoning* for pedestrian travel by gaining public input on pedestrian needs and promoting land use patterns that encourage walking. (Oshkosh and Fox Cities, Janesville, City of Madison, and City of Superior).
- ◆ *Increasing enforcement* of pedestrian laws including snow removal from sidewalks. (Oshkosh and Fox Cities, La Crosse, City of Madison, and City of Superior).

Sidewalk Inventories

Only three plans (City of Madison, SEWRPC and City of Superior) have compiled inventories of existing sidewalks. Such inventories identify areas without sidewalks, sidewalk systems lacking connection to desired pedestrian destinations, handicap accessibility, and barriers such as busy street crossings.



Figure V.2: A sidewalk “gap”. The development of a sidewalk inventory helps to identify problem areas and to set priorities

¹² The Southeastern Wisconsin Regional Planning Commission (SEWRPC) is the MPO for a seven-county region that includes the urbanized areas of Milwaukee, Racine, and Kenosha.

Wisconsin Sidewalk Facts

A Superior survey assessed the quality of the 156.8 miles of sidewalk in the city. Findings indicated that 65.6% were in satisfactory or average condition, and 34.4% were in unsatisfactory condition.

Madison has 1,275 miles of street frontage (both sides) with sidewalks along 942 miles (74%).

SEWRPC inventoried sidewalks along all arterials and non-freeway highways in the Milwaukee, Kenosha, and Racine Urbanized Areas. This inventory found 656 sidewalk miles along one or both sides of 1,409 miles of roadway.

First-rate pedestrian planning represents a continual process of addressing community needs and concerns rather than just developing a set of policies or rules to be followed. One example is the use of detailed sidewalk inventories that, if developed and kept up-to-date for investment decisions, represents an *ongoing* commitment to the process of identifying pedestrian needs and issues.

Local Ordinances

Some plans also reviewed existing ordinances regarding the installation and retrofitting of sidewalks:

- ◆ SEWRPC found that a high percentage of cities and villages require sidewalk installation in new subdivisions.
- ◆ The Brown County plan reviewed local municipal sidewalk requirements and found that sidewalks were required on arterials, collectors, and other streets with large traffic generators within Green Bay. Sidewalks are required on six specifically identified sites with costs shared equally between the property owner and the city of Allouez; and a complex consideration of topography, roadway classification, traffic generators, and safety issues in DePere.

Other Planning Elements

- ◆ *Cost Assessment practices.* Communities vary in the extent to which pedestrian projects are financed. For example, some cities fully assess property owners (City of Madison) while others divide the assessed cost between the property owner and the local government (Brown County and City of Superior).
- ◆ *Walking to work.* Six plans estimated the percent of population that walks to work. Estimates ranged from a low of 1.8% in Racine to a high of 9.1% in La Crosse.
- ◆ *Pedestrian crashes.* Seven plans include information on pedestrian crashes. Four plans identify specific intersections having the most pedestrian crashes. Crashes per 100,000 people range from a low of 15.3 in Janesville to a high of 69.4 in Superior. SEWRPC's analysis indicated that nearly half of all pedestrians in crashes were age 15 or younger.
- ◆ *Snow removal.* Four plans emphasize the importance of snow removal for pedestrian travel. The City of Superior's plan includes a summary of snow removal policies in nine northern cities including Green Bay, City of Madison, Milwaukee, and City of Superior.



Figure V.3: Local policies concerning snow removal are one important aspect of safe pedestrian facilities

- ◆ *Plan recommendations.* The numbers of plan recommendations regarding pedestrian travel ranged from no specific recommendations in Wausau to a high of ninety-seven in Madison. The most common recommendations included adherence to adopted sidewalk installation guidelines; improved crosswalks, lighting and traffic controls; consideration of pedestrian needs in future planning and roadway improvements; analyzing pedestrian crash data to identify improvement needs; designing bridges and underpasses to allow for pedestrian travel; and increasing education and enforcement efforts to promote and protect pedestrian travel.

The full report analyzing MPO pedestrian plans in Wisconsin can be requested from WisDOT and is listed in Appendix A. Sidewalk installation guidelines produced by WisDOT, SEWRPC and Bay-Lake Regional Planning Commission (for Sheboygan) are also included in this report.

Current Federal and State Programs, Laws and Rules

Current federal and state responsibility for pedestrian issues fall under two primary categories: (1) funding programs that provide local communities with financial assistance for proposed projects, and (2) rules and legislation that address such needs as access and pedestrian safety. The following identifies and describes each of these programs, laws and rules.

Transportation Equity Act for the 21st Century (TEA-21)

In 1998, Congress passed TEA-21, which continued and reaffirmed the principles first established in 1991 under ISTEA. The legislation continues to include provisions to ensure that states and MPOs consider the safe accommodation of nonmotorized travelers during the planning, development and construction of all federal-aid transportation projects and programs. Incorporating greater funding flexibility into all the major TEA-21 funding programs encourages consideration of pedestrian accommodations in transportation projects. For example, TEA-21 expanded the eligibility for National Highway System funding to include not only bicycle accommodation projects, but also enhancements to improve pedestrian safety as a part of highway reconstruction. TEA-21 also provided funding, through the enhancements component, for bicycle and pedestrian safety programs.

Funding

There are numerous TEA-21 funding programs for which pedestrian-related projects qualify. A brief summary of funding programs can be found starting on page 63. As guidance from the Federal Highway Administration (FHWA) notes, “eligibility does not ... guarantee that bicycle and pedestrian projects, plans, and

programs will be funded - States and MPOs retain broad control over project selection procedures and choices and can set their priorities for funding.”¹³

In 2000, the U.S. Department of Transportation adopted an official policy statement entitled, *Accommodating Bicycle and Pedestrian Travel: A Recommended Approach, A U.S. DOT Policy Statement on Integrating Bicycling and Walking into Transportation Infrastructure*. (See *Appendix L*). The policy statement was drafted in response to TEA-21 with the input and assistance of public agencies, professional associations and advocacy groups. The purpose of this policy statement was to encourage public agencies, professional associations, advocacy groups, and others to adopt this approach as a way of committing to bicycle integration and to pedestrian traffic as mainstream travel methods.

The policy statement incorporates three key principles:

1. A policy statement that **bicycling and walking facilities will be incorporated into all transportation projects** unless exceptional circumstances exist;
2. An approach to achieving this policy that has already worked in state and local agencies; and

¹³ U.S. Department of Transportation, Federal Highway Administration. *FHWA Guidance: Bicycle and Pedestrian Provisions of Federal Transportation Legislation*. www.fhwa.dot.gov/hep10/biped/bpguid.html. [Printed September 29, 1999]. Undated.

3. A series of action items that a public agency, professional association, or advocacy group can take to achieve the overriding goal of improving conditions for bicycling and walking.

failure to make the benefits of government programs, activities and services available to people who have disabilities because existing facilities are inaccessible is also discrimination.

Appendix L contains a copy of the complete policy statement.

The Americans with Disabilities Act (ADA) & Wisconsin's Response for Pedestrians

As noted in Chapter III, the origin of universal design concepts grew out of the 1990 federal Americans with Disabilities Act (ADA). Considered to be the most sweeping piece of civil rights legislation since the Civil Rights Act of 1964, the ADA recognizes that persons with disabilities suffer discrimination from no fault of their own, but from an environment that does not meet their needs. In a recent design guide entitled “*Accessible Rights-of-Way* (written by the U.S. Architectural and Transportation Barriers Compliance Board),” the correlation between accessible facilities and discrimination was articulated:

Americans with Disabilities Act (ADA) is a civil rights statute that prohibits discrimination against persons who have disabilities. Under the ADA designing and constructing facilities that are not usable by people who have disabilities constitutes discrimination. In addition,

The ADA is a comprehensive federal law that bans discrimination on the basis of physical and mental handicap in the areas of employment, transportation, housing, education, health care, and communications. The ADA also calls for the removal of societal and physical barriers that limit access for persons with disabilities. A primary goal of the ADA is equal participation of individuals with disabilities in the mainstream of society.

Various federal agencies are responsible for carrying out the ADA. The U.S. DOT Federal Highway Administration (FHWA) is responsible for developing guidelines to carry out the legislation in the realm of surface transportation. ADA's status as a civil rights law requires the U.S. Department of Justice to oversee the overall implementation of the law. The U.S. Architectural and Transportation Barriers Compliance Board (The Access Board) is the independent federal agency responsible for developing accessibility standards that will determine what should be done to meet the pedestrian transportation needs of people with disabilities.

ADA requires standards be developed for all areas and issues of accessibility. Standards have been developed for building sites

The difference between a guide and standards is that a guide contains recommendations while standards carry the weight of law.

ADA requires standards be developed for all areas and issues of accessibility.

and facilities on those sites. Known as the Americans with Disabilities Act Accessibility Guidelines (ADAAG), these standards are enforceable by law. Until specific standards are developed for pedestrian facilities (ADAAG *Section 14*), the existing standards for buildings and facilities are the recommended basis for current design standards.

The Access Board recently released a design guide for sidewalks, street crossings, and other pedestrian facilities, but has not yet established rules for pedestrian facilities design standards. The difference between a guide and standards is that a guide contains recommendations while standards carry the weight of law.

Street, sidewalk, or shared-use path construction funded wholly or in part with federal funding is subject to federal disability laws. The only current pedestrian-related requirement is that curb ramps are generally required on newly constructed sidewalks. However, the Access Board's design guide advises officials on how they are to improve existing pedestrian systems so they are more usable by disabled pedestrians.

Design standards for Public Rights-of-Way

Unlike the ADAAG design standards for *private* facilities, design standards for accessible *public* rights-of-way have never been approved. In 1994, the

Access Board proposed specific design standards for the public right-of-way called *Section 14*. These proposed standards were later withdrawn for rewriting.

Meanwhile, some state and local government transportation agencies had already adopted pedestrian standards that included accessibility requirements based on guidelines found in *Section 14*. Perceived to be the highest accessibility design practices, these standards exist.

The Public Rights-of-Way Advisory Committee, established by the Access Board in October 1999, is currently developing federal design standards. The committee is exploring various access issues specific to public rights-of-way and will develop recommendations on newly constructed and altered sidewalks, street crossings, and other related pedestrian facilities. Members of the committee include representatives from disability organizations, public works departments, transportation and traffic engineering groups, design professionals and civil engineers, federal agencies, and standard setting bodies.

The committee's findings were presented to the Access Board in 2001. After a period for public comment, standards or guidance are likely to be considered. WisDOT will closely monitor the adoption of any standards or guidance to determine any potential impact on current WisDOT policies regarding provision of pedestrian facilities for people with disabilities.

Current WisDOT Funding Programs

The Wisconsin Department of Transportation currently funds sidewalks and other pedestrian facilities through many different state and federal programs. Since 1990, WisDOT has included sidewalks in construction projects along a STH if the local municipality agrees to pay 25% of the cost and agrees to accept responsibility for future sidewalk repair, maintenance and spot replacement. If a local municipality prefers a more substantial or ornate facility than ordinarily built, the municipality must pay for all costs exceeding 75% of standard sidewalk construction.

WisDOT will pay the full cost to replace existing sidewalk, however, when it must be replaced due to WisDOT action. For example, if a roadway-widening project requires the removal of existing sidewalk, that sidewalk will be replaced entirely at WisDOT expense.

WisDOT administers federal funds for local road projects that are eligible to include sidewalks and other pedestrian facilities. These projects generally require a 20% local match while federal funds cover the remaining 80% of expenses. Through General Transportation Aids (GTAs), WisDOT helps fund local sidewalk construction and replacement work, as well as all other pedestrian-related work such as crosswalk painting and crossing signal installation, on a partial reimbursement basis.

WisDOT State Highway Projects and Cost-Share Eligibility for Sidewalks

Bicycle and pedestrian projects are broadly eligible for funding under most federal-aid programs. One of the most cost-effective ways of providing bicycle and pedestrian accommodations is to incorporate them as part of larger reconstruction, new construction and some repaving projects. Generally, the same source of funding can be used for the bicycle and pedestrian accommodation as is used for the larger highway improvement if the accommodation is “incidental” in scope and cost to the overall project. Overall, most bicycle and pedestrian accommodations within the state are done as incidental improvements.

As of 1999, the State Trunk Highway System had 1,310.5 linear miles of sidewalk. One mile of highway can account for two linear miles of sidewalk if sidewalk exists along both sides of the highway. WisDOT constructed 12.6 linear miles of sidewalk along State Trunk Highways in 1999 at an estimated cost of \$754,000. The corresponding 1998 figures were 17.7 linear miles at an estimated cost of \$1,062,000.

WisDOT staff reviewed the 2000-2005 Highway Improvement Program for potential sidewalk needs. The most generous interpretation of the need for new sidewalk found a total need of 96.7 linear miles, or 16.1 miles annually along State Trunk Highways. Therefore, it appears WisDOT is presently building sidewalks close

TEA-21 expanded the definition of transportation enhancements eligibility to specifically include the provision of safety and educational activities for pedestrians and bicyclists

to the level of need. Spending estimates reflect sidewalk construction costs only and do not include other expenses such as WisDOT staff time, design costs, real estate acquisition or site preparation costs such as berming.

During the two-year 1998-1999 period, WisDOT constructed more than 2.3 miles of sidewalk on bridges and overpasses at an estimated cost of \$643,000. Not including costs associated with any additional structural width necessary to accommodate the bridge sidewalk, the thickness associated with steel reinforced bridge sidewalks make bridge sidewalks more expensive than regular sidewalks.

WisDOT constructed three pedestrian overpasses during the two-year period. Their costs cannot be determined because they were part of larger highway projects.

The Statewide Multi-Modal Improvement Program (SMIP)

Federal funding flexibility allows WisDOT to fund pedestrian-related projects in many different ways. Some programs are focused on local streets and roads, some on State Trunk Highways, some on projects to reduce single vehicle occupancy rates, and others targeted in “non-attainment” areas with air pollution problems (primarily southeast WI).

The Enhancements Programs — Local Enhancements and State Highway Enhancements

Transportation enhancements are improvements and activities designed to strengthen the multimodal, cultural, aesthetic, and environmental aspects of transportation systems. Transportation enhancement activities must relate to surface transportation. TEA-21 expanded the definition of transportation enhancements eligibility to specifically include the provision of safety and educational activities for pedestrians and bicyclists, neither of which was clearly eligible under ISTEA. The Enhancements Programs fund a variety of non-traditional projects such as:

- ◆ the restoration of historic transportation facilities;
- ◆ bicycle and pedestrian facilities;
- ◆ landscaping; and
- ◆ scenic beautification.

Examples of projects funded that benefit pedestrians include:

- ◆ multiuse trails in greenways and along former rail to trails sites;
- ◆ paved shoulders;

- ◆ bike lanes;
- ◆ overpasses, underpasses and bridges; and
- ◆ sidewalks.

WisDOT manages two separate Enhancements Programs, one for local roads, and the other for state highways.

The Local Transportation Enhancements Program (beginning in 1993) funds projects predominantly on local roads and streets. Initiated locally, the projects and compete on a statewide basis.

Through 1999-2003, WisDOT approved an annual average of \$533,763 under the Local Enhancements Program where the primary purpose of the project was “pedestrian.” WisDOT approved an additional \$4,712,363 annually, for projects under the same program in which at least a small portion of the total project costs included a pedestrian-related element.

The State Highway Enhancements Program project selection for the year 2000 projects provides Enhancements funding on State Trunk Highways only. Initiated by WisDOT, these projects compete for funding on a statewide basis.

So far, WisDOT has approved under this program an annual average of \$610,953 for projects in

which the primary purpose was “pedestrian.” WisDOT approved an additional \$4,085,376 annually, on average, toward projects where a small portion of the total project costs included a pedestrian-related element.

The Surface Transportation Program

The STP Programs provide grants primarily to local governments and to transit or transportation commissions in areas with a population of 5,000 occupants or more.

The Surface Transportation Program-Discretionary (STP-D)

The STP-D program funds projects promoting non-highway use or supplementing existing transportation activities. Priority is given to projects that promote alternatives to single-occupancy vehicle trips. In past years, funding has gone evenly to transit and bicycle/pedestrian projects. Nearly every bicycle and pedestrian project eligible under the Transportation Enhancement program is also eligible for the STP-D program, unless the project will clearly not reduce single-occupant vehicle trips. Unlike the Transportation Enhancement program, bicycle and pedestrian *planning* is eligible. The following are a few examples of eligible projects:

- ◆ adding paved shoulders or bike lanes to existing roadways;
- ◆ constructing bicycle and pedestrian facilities as part of a larger highway project, such as bike lanes or underpasses and overpasses;
- ◆ resurfacing or upgrading existing bicycle facilities; and
- ◆ developing countywide bicycle or pedestrian plans.

The federal government will provide 90% of funds for special projects addressing specific safety needs.

For the period 1999-2003, WisDOT has approved an annual average of \$188,558 on projects under the STP-D Program in which the primary purpose of the project was “pedestrian.” Also, an average of \$1,281,301 was approved annually between 1999-2003 for projects under STP-D in which at least a small portion of the total project costs included a pedestrian-related element.

Surface Transportation Program-Urban (STP-U)

Metropolitan areas receive an annual allocation that can be used on a variety of improvement projects including bicycle and pedestrian projects. Most of the MPOs that administer this program have been using these funds to integrate bicycle and pedestrian projects into larger street reconstruction projects.

Congestion Mitigation and Air Quality Program (CMAQ)

The primary purpose of the CMAQ program is to fund projects

and programs that reduce travel and/or emissions in areas that have failed to meet air quality standards for ozone, carbon monoxide (CO), and small particulate matter. Bicycle and pedestrian projects are eligible for CMAQ funding if they reduce the number of vehicle trips and vehicle miles traveled. Almost all bicycle and pedestrian projects eligible for the Transportation Enhancement and STP-D programs are usually eligible for CMAQ, but a higher burden of proof that the project will reduce air pollution is required. Non-construction activities such as maps and brochures are also eligible if a clear link to increased bicycle use can be made. CMAQ is NOT a statewide program. The program is limited to: Milwaukee, Kenosha, Racine, Ozaukee, Waukesha, Washington, Sheboygan, Kewaunee, Manitowoc, Walworth and Door Counties.

From 1999-2002, WisDOT approved an annual average of \$988,620 under CMAQ for projects where the primary purpose was pedestrian. Also, on average, an additional \$1,952,467 was approved for projects in which at least some small portion of the total project costs included a pedestrian-related element.

Hazard Elimination Program

This program focuses on projects intended for locations that have a documented history of crashes. Bicycle and pedestrian projects are eligible for this program. The federal government will provide 90% of funds for special projects addressing specific safety needs. Projects awarded under this pro-

gram are selected by a competitive process based on crash history at a specific location. Due to the unpredictable nature of pedestrian crash location, it is very uncommon for pedestrian-related projects to be funded under this program.

Interstate Maintenance

Funds may be used for resurfacing, restoration, rehabilitation, and reconstruction projects along the Interstate Highway System. Reconstruction projects include the construction of new features that may involve pedestrian safety such as sidewalks on bridges crossing over the highway or underpasses that cross underneath a local road.

National Highway System

Pedestrian facilities within National Highway System corridors are eligible activities for National Highway System funds, including projects within Interstate Highway rights-of-way.

Highway Bridge Replacement and Rehabilitation Program

Funds may be used to provide a range of on street, sidewalk, and trail facilities depending on the appropriate design for the bridge and its location, as long as the pedestrian projects are part of a highway bridge deck replacement or rehabilitation.

Transportation and Community and System Preservation Pilot Program (TSCP)

TSCP is a discretionary pilot program providing funding in three areas - implementation, planning

and research. All TSCP projects must meet the following five criteria:

- ◆ improve the efficiency of a transportation system;
- ◆ reduce the environmental impacts of transportation;
- ◆ reduce the need for future costly public infrastructure investments;
- ◆ ensure efficient access to jobs, services and centers of trade; and
- ◆ examine development patterns and identify strategies to encourage private sector development patterns that achieve these goals.

The scope covered by the TSCP pilot program tends to be very broad, i.e., it is not limited to pedestrian-oriented projects. However, pedestrian projects can qualify for funding. In recent years, funding under this program has been “earmarked” for specific projects by Congress. In FY 2000, the City of Green Bay received an award of \$653,250 for pedestrian improvements.

Other WisDOT Assistance

General Transportation Aids (GTA)

General Transportation Aids provided to town, village, city, and county governments defray a portion of the costs incurred when

constructing, maintaining, and operating local roads and streets. Local governments receive GTA either based on a share of eligible transportation-related expenditures or on a per mile payment, whichever is greater. The GTA Program is a reimbursement program based on each local government's spending patterns. It is established in Wis. Stats. 86.30. In addition to helping defray the cost of such road-related activities as road and bridge construction and/or maintenance; snowplowing; police traffic assistance including enforcement and control; culvert clearing and maintenance of traffic signals and pothole filling, GTA also helps defray costs associated with sidewalk construction, maintenance and replacement. A distribution of \$348.5 million to Wisconsin municipalities and counties under GTA occurred in the year 2000. The amount devoted to funding sidewalk projects alone cannot be determined because specific transportation costs, such as sidewalk construction, are not individually identified in municipal and county government expenditure reports.

Local Sidewalk Policy and Practices

State policy regarding sidewalks along State Trunk Highways must defer to local government policies for sidewalks along local roads and streets. Both local and State Trunk Highway sidewalks share use patterns, but local sidewalks become critical to establishing and meeting pedestrian need because local sidewalks accommodate more

destinations that are pedestrian. In order to assess the quality of pedestrian transportation in Wisconsin, understanding local government policies regarding sidewalks becomes necessary.

The sidewalk policies of Wisconsin's cities and villages vary greatly from one municipality to another. Local governments use a number of different approaches as they attempt to accommodate pedestrian traffic in their communities. Local officials must ask themselves:

- ◆ *Should sidewalks be required?*
- ◆ *What areas need sidewalks?*
- ◆ *Who is going to pay for them?*

The answers to these questions in each community create the framework for each municipality's sidewalk policy.

Each municipality has different goals and different challenges in creating sidewalk policy. Some communities provide as many sidewalks as possible because they have resources and public support.

Action 2.3: WisDOT will develop the *Pedestrian Best Practices Resource Guide (BPRG)* to help locals meet pedestrian needs; addresses the preceding issue.

Please see Chapter VI for more details.

A summary of many of these programs can be found in the WisDOT brochure, "Statewide Multi-Modal Improvement Program." Copies can be requested by calling (608) 264-8723 or by e-mailing your request to John Duffe: john.duffe@dot.state.wi.us

Other communities prefer sidewalks strictly within residential neighborhoods or only in downtown commercial areas. Decisions are made based on a number of factors, including pedestrian and automobile traffic, local land use policies, a municipality's ability to afford sidewalks, and the preferences of local residents.

In this regard, state statutes do not govern local sidewalk policy. Nor does state statute require municipalities to install or to rehabilitate sidewalks. These decisions, including who will pay for the sidewalks, are entirely at the discretion of the individual municipality.

Survey of Local Officials Concerning Sidewalk Policies

WisDOT staff contacted forty-nine Wisconsin municipalities of various sizes to learn about differences in local sidewalk policies. City Engineers, Public Works Directors, and Sidewalk Inspectors provided answers to a series of questions. WisDOT staff contacted all of Wisconsin's municipalities with a population greater than 25,000, as well as thirteen mid-sized municipalities (10,000 - 25,000) and twelve smaller communities (5,000-10,000). A listing of the municipalities contacted and the questions can be found in *Appendix H*.

Sidewalk Requirements. As municipalities have different goals in creating sidewalk policy, they also vary in their requirements for sidewalk construction. Commonly, municipalities require sidewalks in

certain types of development. For example, the city of Jefferson requires sidewalks on every new street built with curb and gutter, while Beloit requires sidewalks in its Central Business District (CBD) and on streets with a certain amount of automobile traffic. After specific occurrences, municipalities may require sidewalks when:

- ◆ a certain period of time has elapsed since an area has been developed;
- ◆ curb and gutter have been installed; or
- ◆ a certain percentage of a subdivision's lots have been developed.

Payment for New Sidewalks. Most municipalities contacted require developers or property owners to pay the full cost of new sidewalk construction. None of the municipalities pays the total cost of new sidewalk construction from their general fund, but some share sidewalk cost with the property owners. Further, zoning helps some municipalities further assess the cost. In Greenfield for example, multifamily developments are assessed 75% costs while commercial developments assessments equal 100%.

Payment for Sidewalk Rehabilitation. All municipalities deal with maintenance issues differently. In some large communities, annual inspection processes guarantee identification of a certain percentage of

Strong sidewalk installation and maintenance policies reflect a municipality's concern to address pedestrian travel needs.

Many municipalities allow retrofits if more than 50% of the abutting property owners request it.

sidewalks for replacement or improvement. For example, Madison inspects one-tenth of the city's sidewalk annually.

Approximately one-half of the municipalities contacted assess the sidewalk repair and replacement costs to property owners. In other cases, municipalities pay for the costs from their general fund.

Sidewalk Retrofit Policies. The frequency of retrofits often is proportional to density and size of ownership. Retrofits then, are common in larger municipalities over smaller municipalities because smaller communities do not have the resources or pedestrian traffic to accommodate the need for retrofit. Most municipalities contacted for this study, retrofit areas without sidewalks usually due to increases in pedestrian and automobile traffic. Increased pedestrian traffic encouraged the city of Eau Claire for example, to retrofit an area near a new school to provide safe walking routes for children. The city of La Crosse also experienced increased pedestrian traffic and installed new

sidewalks near a new apartment complex. Often, municipalities retrofit areas to connect newly developed sections with older areas.

Apart from municipal planning decisions, many municipalities allow retrofits if more than 50% of the abutting property owners request it. While this may be the case, many local officials noted difficulties approving sidewalks because, "Residents simply don't want them!" Reasons for lack of sidewalk interest, include:

- ◆ reluctance in property owners to pay for them;
- ◆ reduction in owner's size of usable property area by the inclusion of a sidewalk;
- ◆ rejection by property owners who do not want pedestrian traffic brought closer to their homes; and
- ◆ lack of enthusiasm by property owners who do not want to shovel the sidewalks in winter.



Figure V.4: In areas where pedestrians cross frequently, marked crosswalks are critical

Wisconsin State Statutes & Rules of the Road

Though there are no state requirements for how or when local governments must provide sidewalks, Wisconsin State Statutes do govern the behavior and treatment of pedestrians including pedestrian responsibilities. Pedestrian rights and duties are codified under Wisconsin Statute Chapter 346, *Rules of the Road*. At the time of this writing, no federal laws governing motorist behavior when pedestrians are present or regarding pedestrian rights and responsibilities exist, therefore reinforcing the governance by state statute.

Pedestrian Rights and Duties

Wisconsin statutes require motorists to yield the right-of-way to a pedestrian in three general situations:

1. *Sidewalks*. Pedestrians have the right-of-way on a sidewalk. This means motorists must yield the right-of-way to pedestrians such as when vehicles are pulling into or out of a driveway or crossing a sidewalk.
2. *“Uncontrolled” Intersections and Unmarked Crosswalks*. Pedestrians have the right-of-way when crossing at an uncontrolled intersection and/or an unmarked

crosswalk. These intersections and crosswalks are defined as those where there is no traffic signal, stop sign or traffic officer. If a pedestrian is crossing in an unmarked crosswalk,¹⁴ motorists must yield the right-of-way to the pedestrian. However, pedestrians are prohibited from suddenly leaving a curb or other place of safety and walking or running into the path of a vehicle that is so close that it will be difficult for the motorist to yield.

3. *“Controlled” Intersections and Marked Crosswalks*. Pedestrians have the right-of-way when crossing at a controlled intersection and/or in a marked crosswalk. These intersections and crosswalks are defined as those where a traffic signal, stop sign, or a traffic officer controls traffic. However, a pedestrian must obey the following rules:

- ◆ If pedestrian control signals (e.g., walk/don’t walk) are present, a pedestrian has the right-of-way *only* when facing a “Walk” signal. Pedestrians are prohibited from starting to cross the road on a “Don’t Walk” signal. However, if the pedestrian started to cross the road on a “Walk” signal and the signal switched to “Don’t Walk” before the pedestrian finishes crossing the road, the

¹⁴ A marked crosswalk is “any portion of a highway clearly indicated for pedestrian crossing by signs, lines or other markings on the surface” (s. 340.01 (10)(a)). An unmarked crosswalk is defined as “the absence of signs, lines or markings, that part of the roadway, at an intersection, which is included within the transverse lines which would be formed on such roadway by connecting the corresponding lateral lines of the sidewalks on opposite sides of such roadway or, in the absence of a corresponding sidewalk on one side of the roadway, that part of such roadway which is included within the extension of the lateral lines of the existing sidewalk across such roadway at right angles to the center line thereof, except in no case does an unmarked crosswalk include any part of the intersection and in no case is there an unmarked crosswalk across a street at an intersection of such street with an alley” (s. 340.01 (10)(b)).

pedestrian should continue crossing to a sidewalk or safety zone.¹⁵

- ◆ If pedestrian control signals are not present, a pedestrian may cross the roadway within any marked or unmarked crosswalk when:

1. Facing a green signal (in this instance, the pedestrian has the right-of-way), and
2. Facing a green arrow or red signal *only if* they can do so safely and without interference to traffic (in this instance, the pedestrian must yield the right-of-way to traffic).

Pedestrians must yield the right-of-way to motor vehicles when crossing a road at a place other than a crosswalk.

Additionally, pedestrians traveling along a highway with no sidewalks are to travel along the left side of the highway (so the pedestrian walks facing oncoming traffic). As noted earlier, when a motor vehicle approaches, the pedestrian is to move, if practicable, to the extreme outer limit of the traveled portion of the highway.

Motorist Special Responsibilities

Motorists have special responsibilities when encountering specific pedestrian situations. When motorists see a pedestrian who appears blind, with a “white cane” or a seeing-eye dog, they must stop their vehicles before approaching closer than ten feet to the pedestrian and take the necessary precautions to avoid the pedestrian. This law applies even if the blind pedestrian is in violation of pedestrian laws.

State statutes also impose other special responsibilities for motorists approaching school buses and in school zones. Motorists are required to stop for school buses displaying flashing red lights. An exception granted to motorists on divided highways that are driving in the opposite direction exists, allowing the continuance of motor vehicle traffic.

In school zones, motorists are required to follow the direction of crossing guards and to slow their speed if children are present. State law mandates a 15 mile-per-hour (m.p.h.) speed limit in school zones and school crossings when children are present. However, state law allows municipal adoption of a 20 m.p.h. speed limit in school zones but they must post this higher speed

¹⁵ The Wisconsin courts have clarified pedestrian and motorist rights-of-way at intersections where both traffic controls and pedestrian controls are present. In *City of Hartford v. Godfrey*, 92 Wis. 2d 815, the court ruled “pedestrians have the right-of-way on a green light only where there are no pedestrian control signals. Where pedestrian control signals are present, a pedestrian’s right to enter a highway ends when the ‘Don’t Walk’ signal comes on.”



Figure V.5: Officers try to educate pedestrians.

limit. It is the motorists' responsibility to reduce their speed to 15 m.p.h. if no speed limit is posted in a school zone. A 15 m.p.h. speed limit is also mandated when a motorist passes a safety zone occupied by pedestrians and at which a public passenger vehicle, such as a bus, has stopped for the purpose of receiving or discharging passengers.¹⁶

Surveys Concerning Pedestrian Education and Enforcement Needs

Survey of Residents Concerning Pedestrian Issues

In February and March 2000, WisDOT conducted a survey of Wisconsin residents at four Division of Motor Vehicles Service Centers and at public meetings held across

the state. The survey helped determine how well Wisconsin residents understand pedestrian-related laws.

Knowledge of Pedestrian Laws

Overall, the survey results indicate that respondents had a good understanding of many pedestrian-related issues such as understanding the meaning of walk and don't walk signals, knowing that drivers must yield to pedestrians in marked crosswalks, and that pedestrians must walk along the left side of a road if no sidewalks are present.

Action 3.3: WisDOT will review programs and manuals; addresses the preceding issue.

Please see Chapter VI for more details.

However, the results also show areas of need. For example, respondents appear to have some confusion regarding marked and unmarked crosswalks. Fewer than half of the respondents correctly stated that drivers must yield the right-of-way to pedestrians at unmarked crosswalks. Additionally, fewer than half of the respondents understood that laws governing pedestrians crossing at intersections with traffic lights and pedestrian signals differ from the laws regarding pedestrians crossing at intersections without signals.

¹⁶ "Safety zone" means the area or space set apart within a roadway for the exclusive use of pedestrians, including those about to board or alighting from public conveyances, and which is protected or is so marked or indicated by adequate signs as to be plainly visible at all times while set apart as a safety zone. Wis. Stat. 340.01(55).

Action 3.4: WisDOT will continue assistance for pedestrian safety education; addresses the preceding issue.

Please see Chapter VI for more details.

Compliance with Pedestrian Laws

Knowledge of laws may not result in compliance. For example, 81% of respondents correctly answered that pedestrians have the right-of-way in marked crosswalks. However, observation of marked crosswalks indicates fewer than 81% of all motorists yield to the pedestrian right-of-way when “seeing” a marked crosswalk. Additionally, more than 93% of respondents knew a driver should slow to the posted school zone speed limit if children are present. In practice however, a small percentage of drivers actually slow down.

Role of Wisconsin’s “Motorist Handbook”

Educational efforts may help close the gap between knowledge and compliance. Driver education begins with Wisconsin’s *Motorist Handbook*. The handbook currently addresses right-of-way issues, including motorist responsibilities for yielding to pedestrians. It also stresses that blind pedestrians have an absolute right-of-way, requiring motorists to stop at least 10 feet from a blind pedestrian in the road. Despite this information, the WisDOT survey

indicated a need for increased emphasis on pedestrian issues in driver education. Increased attention to pedestrian-related issues on the written driver-licensing exam may help increase legal compliance. Additionally, driver license on-road testing routes include intersections with high levels of pedestrian traffic underscoring the presence and attitude toward pedestrians.

Survey of Police Departments

Depending on the municipality, local police departments may provide pedestrian safety education. A WisDOT survey of Wisconsin police departments revealed several strategies used to educate both children and adults about pedestrian safety (See *Appendix J*).

Action 4.2: Locals should increase enforcement efforts; addresses the preceding issue.

Please see Chapter VI for more details.

Asked how well they believe pedestrians and motorists understand pedestrian laws, officers reported the right-of-way laws confused their communities. As a result, officers expressed a need for increased education and enforcement. They stressed improved pedestrian and motorist education about the rules of the road. One officer noted education must come first but that, “Enforcement is necessary to make people realize there are consequences if they do not follow

the law.” Another officer described education and enforcement in this manner:

Education will help solve enforcement. Eighty percent of the public will do what they are told. Of the remaining 20%, 80% will do it wrong the first time, catch themselves doing it wrong and never do it again. Enforcement is needed for that remaining 20%.

Still another officer noted that enforcement acts as an educational tool. People will tell others about a

citation they receive, particularly if it “hits them in the pocketbook.”

The officers interviewed for this study, strongly agreed that the media is the best means to educate the public. Suggestions included newspaper articles, radio spots, television news stories, and Public Service Announcements. Other common approaches suggested: including pedestrian education in drivers’ education classes, educating children through officer presentations at schools, and providing rewards, such as ice cream cone coupons to children for obeying traffic laws.



Figure V.6: Pedestrian overpasses can help ease the “barrier effect”

VI. Achieve the Vision!

Recommended Plan Goals, Objectives, and Actions

Introduction/Overview

The Wisconsin Pedestrian Policy Plan 2020: A 20 year Policy Framework.

This chapter of the plan summarizes key issues and establishes goals, objectives, and actions to accomplish the plan's vision.

Vision Statement

To establish pedestrian travel as a viable, convenient, and safe transportation choice throughout Wisconsin.

WisDOT in its leadership role recognizes that the success of any departmental effort depends on strong cooperative efforts with local governments, MPOs, RPCs, nonprofit organizations, and all citizens. Therefore, WisDOT's efforts can serve as a catalyst toward improving pedestrian transportation. Because most sidewalks are on local roads and streets, local government initiative is critically necessary. Without local efforts, the effectiveness of WisDOT's efforts will be limited.

The goals, objectives, and actions included in this plan are

based on input from the Citizens Advisory Committee, public meetings, focus groups of targeted members of the public, and discussion with many WisDOT staff. Other input included a review of best practices and pedestrian plans in other states, as well as public comment on the earlier draft plan (The summary of public involvement, Chapter IV, describes this process and what these discussions produced).

The Plan's Role in Establishing Pedestrian Policy

This plan serves three functions:

1. The plan provides the policy framework for statewide goals and objectives regarding pedestrian transportation;
2. The plan identifies that WisDOT will work in partnership with other interested stakeholders (including local, federal and other state agencies), to achieve the goals and objectives important to the State Trunk Highway system; and
3. The plan identifies potential strategies local officials can employ toward addressing pedestrian needs on local roads and streets.

Role of the Plan

1. *Provides statewide policy framework.*
2. *Identifies WisDOT as a partner.*
3. *Identifies local role.*

Relationship to Pedestrian Best Practices Resource Guide (BPRG)

Whereas this policy plan provides the broad policy framework for pedestrian planning efforts in Wisconsin, the *BPRG* will serve as a companion document to assist in the implementation of the goals, objectives, and actions. The *BPRG* will serve as a reference or guidebook for state and local officials to accomplish pedestrian-oriented projects in their communities. The guide will serve to address detailed design information and guidelines, planning concepts and guidance, funding options available, and education and enforcement. The *BPRG* will be released approximately eight months after release of this policy plan.

Statewide Goals to Achieve the Plan Vision

This section identifies the overall statewide goals for accomplishing the 2020 vision for the *Wisconsin Pedestrian Policy Plan 2020*. These goals are quantifiable and trackable. If these three goals are achieved, people who choose to walk or who have no other transportation alternative will be able to get to where they need to go and do what they need to do. The objectives identified for each goal are discussed in more detail following this section.

GOAL 1: Increase the number and improve the quality of walking trips in Wisconsin.

Increasingly recognized as an important method of travel, walking and pedestrian issues received increased attention in the 1990s. This increased attention is partially the result of various federal laws such as ISTEA, 1991; TEA-21, 1998; and the Americans with Disabilities Act, 1990. WisDOT has followed the federal lead and has increased its attention to pedestrian issues. This includes planning guidance developed in 1993 (entitled *Wisconsin Pedestrian Planning Guidance: Guidelines for Metropolitan Planning Organizations and Communities in Planning and Developing Pedestrian Facilities*), the subsequent Metropolitan Planning Organization or MPO planning efforts funded by WisDOT, and WisDOT policy changes that pay for a share of sidewalk costs along State Trunk Highways. The heightened awareness of pedestrian issues, places more emphasis on developing policies and guidelines that raise the importance of pedestrian facilities closer to that of other modes, such as highways and rail.

Because of the increased visibility of pedestrian issues at the national level, many states are now examining their own laws and

policies with respect to pedestrian issues and facilities. Wisconsin is helping to lead this change. State and local officials should take the lead in promoting pedestrian travel and developing and maintaining pedestrian-oriented facilities necessary for a well functioning and safe pedestrian transportation system. Officials planning pedestrian facilities should work toward complementing other transportation modes and facilities wherever possible. An integral part of the local transportation system infrastructure, pedestrian needs exist in the beginning of the planning process.

GOAL 2: Reduce the number of pedestrian crashes and fatalities.

As pedestrian travel grows, so must the commitment to reducing pedestrian crashes and fatalities. Government must address and meet the unique safety needs of all demographic groups including children, the elderly, and the disabled. The need for team efforts in roadway design, law enforcement, and public education exist. Protecting safety makes walking a more attractive and viable transportation option. Reducing pedestrian crashes cannot only provide an important measure of public health and safety, but can enhance the overall quality of life in local communities.

GOAL 3: Increase the availability of pedestrian planning and design guidance and other general information for state and local officials and citizens.

WisDOT has traditionally provided guidance to local communities on a variety of transportation-related topics. WisDOT's role should be expanded, to the extent practicable, to include the provision of information to both local communities and to WisDOT districts regarding pedestrian policy, local planning and design of pedestrian facilities, and project implementation. Information requests and public outreach efforts conducted by WisDOT indicate a strong demand for advice and information related to meeting local pedestrian needs.

Objectives and Actions to Accomplish the Three Goals

The plan's three goals will be achieved by means of numerous objectives and recommended implementation actions. The first objective is the State Trunk Highway Objective, which identifies WisDOT's direct responsibility in providing for pedestrian needs along State Trunk Highways. The State Trunk Highway Objective is followed by four additional objectives that have been

Goals of the Plan

- 1. Increase the number and improve the quality of walking trips in Wisconsin.*
- 2. Reduce the number of pedestrian crashes and fatalities.*
- 3. Increase the availability of pedestrian planning and design guidance and other general information for state, local officials and citizens.*

structured using the “4-E’s” of transportation safety- engineering, education, enforcement and encouragement.¹⁷

The *Wisconsin Pedestrian Policy Plan 2020* acknowledges that WisDOT must partner with local governments to provide for pedestrian needs along State Trunk Highways. The plan also identifies problems that accompany State Trunk Highways, including acknowledging highways as barriers to the movement of pedestrians along local road systems. The development of policy and/or criteria minimizing the “barrier effect” becomes one of many steps toward action on this issue.

The most significant pedestrian needs in Wisconsin, however, are not on State Trunk Highways, but are located on local roads and

streets. WisDOT’s policies and standards influence local government decisions because local governments often adopt them as their own. However, state government cannot act alone in addressing the entire spectrum of pedestrian concerns and issues. Even as WisDOT acts as an important conduit for technical and financial assistance, pedestrian transportation needs will continue to be a problem in Wisconsin without the commitment of local governments to address the needs in their communities.

WisDOT can help local governments both in the immediate and long-term futures. The *BPRG* will provide specific guidance on pedestrian project design at the local level and further assistance remains available from WisDOT on a continual basis.

¹⁷ This mirrors the approach used to organize the goals and objectives in the *Wisconsin Bicycle Transportation Plan 2020*. The 4-E’s approach has been widely accepted by government bodies, agencies and advocacy groups in addressing safety concerns and planning for transportation system needs.

Objective 1.0: State Trunk Highways

Working in partnership with local governments and other interested stakeholders, WisDOT will increase accommodations for pedestrian travel to the extent practicable along and across State Trunk Highways (STHs).

Action 1.1

WisDOT recognizes its responsibilities for pedestrians on STHs

WisDOT reaffirms its shared responsibility with local governments for constructing pedestrian facilities along STHs, including funding for new facilities and retrofits.

WisDOT is responsible for construction, improvements and long-term maintenance of STH rights-of-way. WisDOT provides services and facilities accommodating appropriate and necessary modes within STH rights-of-way (for motor vehicles, trucks, bicycles, transit, and pedestrians). Municipalities have the option to pay for treatments beyond what WisDOT deems as appropriate and necessary facilities.

Action 1.2

WisDOT will evaluate pedestrian needs on STH Projects

As part of its standard project communications with municipal governments, WisDOT staff recommendations for sidewalks on STH projects will be provided in writing along with the reasons for the recommendation. WisDOT staff will evaluate STH projects for pedestrian needs, both along and across the State Trunk Highway. To facilitate this review, the Department will develop criteria for use in the project scoping process, based on the guidelines in Appendix M.

WisDOT will request a written response from the municipality if it rejects the recommendation. WisDOT will review current project planning and design procedures to ensure pedestrian consideration in every project. This review will consider pedestrian needs both along and across State Trunk Highways. When projects are first proposed, a set of criteria will be used to determine whether and what type of pedestrian facilities need to be

As part of the project scoping process, WisDOT staff will identify barriers to the flow of pedestrian traffic across a highway caused by an existing or planned State Trunk Highway design.

considered for the project. WisDOT will begin developing the scoping criteria in 2002. *Appendix M* includes proposed policy guidelines to assist WisDOT staff when assessing the need for pedestrian facilities on STH projects.

WisDOT will specifically work with the Ice Age Park and Trail Foundation (a state organization representing a thousand-mile national and state scenic hiking trail located entirely in Wisconsin) in identifying Ice Age Trail needs along and across state highways. Even though relatively few locations exist where the trail runs along state highways, WisDOT will strongly consider shoulder enhancements (additional shoulder width or pavement) to better accommodate hikers when state highways are reconstructed. In some exceptional situations, especially for short segments with extensive trail use and high motor vehicle traffic on the highway, a separate path exclusively for walking may be considered. Ice Age Trail crossings will be assessed using WisDOT's newly developed guidelines and cost share provisions for trail crossings.

Action 1.3

WisDOT will minimize the barrier effect in STH designs

To the extent practicable, WisDOT will promote highway designs for State Trunk Highways that do not adversely impact or disrupt local sidewalk continuity or create a “barrier” to the free-flow of pedestrian traffic. WisDOT will seek designs that join existing local sidewalk systems to sidewalks along the STH and provide increased attention to pedestrian travel needs near certain identified pedestrian generators (e.g., schools, retirement facilities, hospitals and shopping districts).

The forthcoming *BPRG* includes discussion and examples of how to develop pedestrian facilities to make connections with sidewalks and pedestrian generators. As part of the project scoping process, WisDOT staff will identify barriers to the cross-flow of pedestrian traffic caused by an existing or planned State Trunk Highway design. Alleviating the “barrier effect” can be achieved through multiple efforts, including constructing median refuges and extending pedestrian signal duration.

Action 1.4

WisDOT will promote state-of-the-art design practices

WisDOT will review and make changes to best design practices for pedestrian accommodations for use in staff training, highway project design work, other transportation projects, and for inclusion in the Department's Facilities Development Manual (FDM), which guides the design of transportation facilities.

Extensive discussion, drawings, and photographs related to project design and/or implementation will be included in the *BPRG*; topics will include:

- ◆ design details of pedestrian treatments within highway and street corridors;
- ◆ examples of standard and state-of-the-art pedestrian facilities;
- ◆ a discussion of pedestrian travel concepts and the benefits of livable communities;
- ◆ examples of traffic calming devices on the local system;

- ◆ a discussion of local policies and practices regarding sidewalks; and
- ◆ a *best practices* review of education and enforcement efforts.

WisDOT will also provide training to district staff to keep them informed of trends and best practices in pedestrian system design. (*Action 3.1: WisDOT will provide broad-based professional training opportunities*).

WisDOT Transportation Districts will be advised that stand-alone sidewalk retrofit projects may be funded under the regular 3R program.

Action 1.5

WisDOT will report on its level of effort of pedestrian investment

WisDOT will develop the necessary tools to report on the department's level of effort for addressing pedestrian needs, including the amount and cost of pedestrian facilities provided during any year.

This assessment will be dependent upon the scoping worksheet development outlined in *Action 1.2*. Once developed, the scoping worksheet criteria will include entries identifying the amount of constructed sidewalk including spot replacement,

replacement required by construction needs, and new sidewalk installation. This assessment will be done both retrospectively and prospectively (How much did we do during the last five years and how much are we planning to do during the next five years?). The *BPRG* will review general project progression and needs in relationship to assessment criteria.

Action 1.6

WisDOT will promote stand-alone sidewalk projects on STHs

WisDOT will promote stand-alone sidewalk retrofit projects. WisDOT Transportation Districts will be advised that stand-alone sidewalk retrofit projects may be funded under the regular 3R program. Additionally, the WisDOT committee that selects State Highway Enhancement projects should consider methods assigning some priority to critical sidewalk retrofit projects along State Trunk Highways to fill sidewalk system “gaps.”

Year to year changes in highway project types argue against a formal commitment to a specific funding amount. No one wants “money chasing projects.” Nevertheless, sidewalk retrofits on critical State Trunk Highway segments that did not include sidewalk installation as part of the original construction project remain. Because the next construction project (after initial construction) may not occur for 20 years, stand-alone retrofits can be used to install sidewalks without waiting for a highway construction project. In this way, districts will be able to build sidewalk retrofit projects viewed as critically necessary to pedestrian safety, even if they are rejected as a State Enhancement Project. Guided by the policies outlined in *Appendix G and M*, sidewalks built as stand-alone retrofits would insure necessary upgrades to existing infrastructure.

Objective 2.0: Engineering and Planning

Working in partnership with local governments and other interested stakeholders, WisDOT will plan, design and promote new transportation facilities, where appropriate, and retrofit existing facilities, where appropriate, to accommodate and encourage pedestrian use.

Action 2.1

Locals should consider pedestrian transportation in their land use plans

Local governments should address pedestrian needs in their comprehensive land use plans. Local land use decisions, such as subdivision approvals, should consider and provide for the needs of pedestrian transportation. WisDOT will provide advice and guidance to local governments, to the best of our capabilities, to help with these considerations.

Local community planning criteria include:

- ◆ encouraging compact and mixed use development that facilitates walking;
- ◆ promoting school and residential siting so as to accommodate walking as the primary mode; and
- ◆ providing for continuous sidewalk connectivity.

On a community-wide basis, local officials should strive to develop a pedestrian-friendly transportation system in their community. WisDOT will provide information and guidance to local officials for this purpose. WisDOT resources include:

- ◆ successful examples of pedestrian design efforts in Wisconsin and around the country;
- ◆ model practices from other communities (e.g., sidewalk inventories, model ordinances);
- ◆ techniques to identify pedestrian generators (i.e. schools, elderly housing, shopping areas); and
- ◆ strategies that seek to promote stronger ties between transit and pedestrians, pedestrian sidewalk financing techniques, the availability of financial assistance, and recent developments in pedestrian planning.

WisDOT, working in partnership with local communities and planning agencies, can identify deficiencies in

Public outreach conducted for the *Wisconsin Pedestrian Policy Plan 2020* highlighted a perceived lack of public knowledge and understanding related to pedestrian rights and responsibilities.

In addition to relying on the *FDM*, local officials regularly consult with WisDOT planners and engineers when addressing difficult design issues.

existing pedestrian facilities. These assessments can include the identification of financial resources, if available, which can be used by local communities to develop and maintain pedestrian facilities in these areas.

As outlined earlier, the primary method of providing this guidance will be the *BPRG*. Examples of communities that have completed creative and successful pedestrian plans will be included in the resource guide.

The recently released WisDOT *Transportation Planning Resource Guide*, (issued to help communities complete the transportation element of their state-required local comprehensive plans), will cite the resource guide to help local governments, RPCs, and MPOs.

Action 2.2

WisDOT will include local road pedestrian facility designs in the *FDM*

Recognizing that local officials rely on the *Facilities Development Manual* when designing local road projects, WisDOT will include design information for pedestrian facilities on local roads and streets.

The *BPRG* will outline and propose language for the *FDM* addressing such design measures as traffic calming, travel lane width, corner radii, pedestrian friendly intersection treatments and designs, median refuges to allow two-stage pedestrian crossings of busy streets, and sidewalk system design.

Action 2.3

WisDOT will develop the *Pedestrian Best Practices Resource Guide (BPRG)* to help locals meet pedestrian needs

Local governments should consider the needs of pedestrians when selecting and designing projects on their own streets and roads. WisDOT will encourage this consideration by providing information and guidance in the *BPRG*, providing ongoing and regular advice and guidance as requested by local officials, and by opening WisDOT staff training opportunities to local officials.

In addition to relying on the *FDM*, local officials regularly consult with WisDOT planners and engineers when addressing difficult design issues. In addition to the *BPRG*, WisDOT advice (within staff

time constraints in the various district offices) and training opportunities, will continue to help meet local officials' community pedestrian transportation needs.

Action 2.4

WisDOT will encourage MPO and RPCs to consider pedestrian needs in their planning processes

Metropolitan Planning Organizations (MPOs) and Regional Planning Commissions (RPCs) should include pedestrian transportation and other multimodal needs in their transportation studies, transportation project selections, and advice in plans and studies.

WisDOT relies on MPOs for transportation planning and project selection in urbanized areas with a population greater than 50,000. Therefore, MPOs have significant control and responsibility for meeting the needs of all transportation modes within their boundaries. WisDOT will encourage MPOs to address pedestrian needs in their area's Transportation Improvement Program (TIP). For example, an MPO could employ the use of a weighting factor in project prioritization that takes into account pedestrian concerns. MPOs and RPCs also assist local communities

with transportation planning needs including the transportation element of local comprehensive land use plans. WisDOT will contribute through the *BPRG* that will seek to provide guidance to assist MPOs and RPCs.

Action 2.5

Locals should utilize federal funding programs to meet local pedestrian needs

Local officials should identify and propose high priority pedestrian projects that qualify for grants under the Congestion Mitigation and Air Quality (CMAQ) program, the local Transportation Enhancement programs, and the Surface Transportation Project Discretionary (STP-D) programs.

Local communities select projects for funding under these programs. WisDOT will provide information on financial assistance, such as urban planning grants, and financing techniques for assessing sidewalk improvements. WisDOT will provide guidance to local communities about qualities of project proposals in "good" applications for Enhancement and CMAQ awards. Finally, WisDOT will work with local communities to determine how multimodalism can potentially be used as a weighting factor in project selections.

Objective 3.0: Education

Working in partnership with local governments and other interested stakeholders, WisDOT will expand the range of education activities, such as driver licensing and training, technical workshops on planning and design of facilities, pedestrian safety education, and provision of public service information to provide consistent safety measures and training to all roadway users.

Action 3.1

WisDOT will provide broad-based professional training opportunities

WisDOT will provide regular training on pedestrian needs to Department planning, design and construction staff as well as to staff of MPOs and RPCs, local municipalities, counties, and project consultants.

This training can include advice from local, regional and national, pedestrian experts and will be open to local, MPO and RPC officials whenever possible. In order for a training program to be effective, it must be continuously providing for both current and future training needs. Professional training relates to resource-based learning outlined under *Action 1.4: Promoting State-of-the-Art Pedestrian Treatments in WisDOT Projects*.

Action 3.2

Locals should provide training for planning and design staff

In conjunction with Action 3.1 and Action 3.5, local governments should commit to provide for the training needs of their project planning and design staff. In this way, recent developments in pedestrian transportation planning can remain effective.

Action 3.3

WisDOT will review programs and manuals

WisDOT will review its manuals and programs to ensure pedestrian rights and responsibilities are addressed.

Public outreach conducted for the *Wisconsin Pedestrian Policy Plan 2020*; highlighted a perceived lack of public knowledge and understanding related to pedestrian rights and responsibilities. WisDOT staff in the Bureau of Planning and the State Bicycle/Pedestrian Safety Program Manager will coordinate with Division of Motor Vehicles staff to identify initiatives toward improving driver awareness of their responsibilities when they come upon pedestrians. This effort will especially focus on the “white cane law” and the “pedestrian’s right-of-way.”

Action 3.4

WisDOT will continue assistance for pedestrian safety education

WisDOT will continue to build on its partnerships with local governments and law enforcement agencies in promotion of a comprehensive approach to pedestrian safety that includes education, enforcement, and design. WisDOT reaffirms present efforts by its Bureau of Transportation Safety to promote these efforts. WisDOT will continue to identify, assess, and fund new and innovative education and enforcement programs for both motorists and pedestrians to improve pedestrian safety in Wisconsin.

WisDOT will review state statute for opportunities to enhance the authority of and respect for crossing guards.

Action 3.5

Locals should continue to provide pedestrian education efforts

In conjunction with *Action 3.4*, local officials should commit to providing the necessary levels of effort by schools, public works departments, law enforcement agencies, and other local groups to increase pedestrian comfort and safety through improved public education efforts.

Promoting safe pedestrian travel through a variety of education and encouragement activities revitalize communities. Examples include: team walking, special needs pedestrian escort, the allowance of early arrival for school children, and the provision of areas within employment sites to allow workers who walk to clean up and change their clothes if necessary.

Action 3.6

WisDOT will conduct pedestrian related research

WisDOT will conduct long-term research, such as surveys to better understand pedestrian issues and problems.

Research should include:

- ◆ Analysis of why people *don't* walk more often, in order to better address the goal of encouraging walking;
- ◆ Determination of the number and causes of pedestrian crashes to address the unique safety needs of the elderly, disabled and children; and
- ◆ Data review by WisDOT's Bureau of Transportation Safety and conduct research to determine the number and causes of pedestrian crashes (see *Action 3.6: WisDOT will Conduct Pedestrian-Related Research*). Existing pedestrian safety approaches in the Bureau of Transportation Safety will be reviewed and new measures will be developed linking crash type and age data to pedestrian crash occurrences. The role of alcohol in pedestrian injuries and fatalities will also be assessed, as well as data involving crashes among "incidental pedestrians" such as stranded motorists walking along highways.

This relates to *Action 5.5(a)*.

Objective 4.0: Enforcement

Working in partnership with local governments and other interested stakeholders, WisDOT will work to improve the enforcement of laws to prevent dangerous and illegal behavior by motorists, pedestrians, and bicyclists.

Action 4.1

WisDOT will continue partnerships with local law enforcement

WisDOT will continue to build on its partnership with local law enforcement agencies to promote pedestrian and motorist law enforcement efforts in Wisconsin.

WisDOT reaffirms present efforts by the Bureau of Transportation Safety to provide staffing resource assistance and financial assistance for pedestrian and motorist law enforcement programs to law enforcement agencies. WisDOT will continue to identify, assess, and fund new and innovative enforcement programs to improve and promote pedestrian safety in Wisconsin. WisDOT will review current funding programs and assess enforcement and pedestrian safety measures with the objective of increasing their overall effectiveness.

Action 4.2

Locals should increase enforcement efforts

In conjunction with Action 4.1: *WisDOT will Continue Partnerships with Local Law Enforcement*; local governments and law enforcement agencies should commit to improve pedestrian safety and comfort through increased enforcement of pedestrian and motorist laws and consider innovative enforcement techniques.

The *BPRG* will include a review of innovative enforcement programs around the country that have improved walking as a transportation choice. WisDOT's Bureau of Transportation Safety will continue to seek out innovative techniques and programs to promote their use to local law enforcement agencies. WisDOT will provide information and examples in the *BPRG* to local governments on coordination of engineering, education, and safety awareness efforts with enforcement wherever possible.

Successful implementation of this plan will require a partnership between WisDOT, local governments, MPOs, RPCs, nonprofit organizations, and all citizens.

Action 4.3

WisDOT will review pedestrian related laws

WisDOT will form an ad hoc internal working group to review the National Uniform Vehicle Code and the state laws that have an impact on pedestrians in order to ensure that the laws are clear, current, and address pedestrian concerns and issues. Stakeholders and users of pedestrian facilities will be consulted as part of this review process. WisDOT will form this working group after the development of the *BPRG*

Action 4.4

WisDOT will look for opportunities to enhance crossing guard programs

WisDOT will review state statute for opportunities to enhance the authority of and respect for crossing guards. WisDOT will also encourage communities to improve their crossing guard programs by utilizing different, innovative approaches such as privatization efforts.

WisDOT will support changes to state statutes applying stricter penalties for failure to obey pedestrian crossing guards and nonobservance of pedestrian crossings. WisDOT will also promote innovative staffing, procedural, and funding techniques in the *BPRG* to help municipalities manage problems with crossing guard programs.

Action 4.5

WisDOT will promote education and enforcement of the 25 m.p.h. speed zones

WisDOT will focus state education efforts on local enforcement of the 25 m.p.h. speed limit in lower speed areas (e.g., residential and commercial areas). As indicated in Chapter IV, more than one half of Wisconsin's pedestrian crashes occur where the posted speed is 25 m.p.h. or less. Therefore, if education improves and driver awareness and law enforcement measures improve driver behavior, a decrease in fatalities and serious injuries could occur.

Objective 5.0: Encouragement

Working in partnership with local governments and other stakeholders, WisDOT will encourage more trips that are pedestrian by promoting the acceptance and usefulness of walking and through the promotion of pedestrian safety efforts.

Action 5.1

To the extent practical, WisDOT will share its expertise with the locals

To implement the recommendations of this plan, WisDOT will provide advice and guidance, to the extent practicable, both in its eight Transportation Districts as well as in its central office. Municipal and county officials will have many questions as a result of the challenges posed in this plan to address pedestrian needs on their local roads, streets and highways. WisDOT staff received many calls for advice and assistance from local officials after release of the *Wisconsin Bicycle Transportation Plan, 2020*. A similar response is expected after the release of this plan. It is hoped however that The *BPRG* will answer many municipal officials' pedestrian-related questions arising from the release of this plan. WisDOT will answer questions and concerns that remain. WisDOT will try to devote the necessary staff time to help local planning and design staff, as well as, education and enforcement staff, to meet pedestrian needs in their communities.

Action 5.2

WisDOT will promote walking as part of a multimodal transportation system

WisDOT will promote connections between pedestrian travel and other transportation modes through planning and design efforts. The State Trunk Highway Objective (Objective 1.0) commits WisDOT to providing intermodal connections for pedestrians along its STH system. These connections will also be important on local road systems. The *BPRG* will discuss and provide examples of how to develop pedestrian facilities in an intermodal context. WisDOT training opportunities and consultation will also be available to local officials to help develop their understanding of these critical connections and safety considerations.

Action 5.3

WisDOT reaffirms efforts to address pedestrians with special needs

WisDOT reaffirms its commitment to accommodate and support all pedestrians including those with special needs such as the elderly, children and people with disabilities.

Specific activities include:

- ◆ WisDOT will also continue research into how to better accommodate and increase pedestrian travel for the elderly, children and people with disabilities.
- ◆ In conjunction with (a) and (b), WisDOT will conduct regular pedestrian workshops. The workshops will be open to a broad audience including educators, law enforcement personnel, local staff including engineers and planners, local officials, WisDOT staff, and special group representatives. The workshops will invite national, state and local experts and will seek to concentrate on education, enforcement and design strategies with special emphasis placed on how these strategies work together in addressing pedestrian needs. The goal of these workshops will be twofold: (1) to encourage and promote pedestrian safety and enforcement; and (2) to facilitate mobility among all pedestrians and provide access among people who are disabled, the elderly and children.
- ◆ WisDOT will encourage local planning departments to identify areas where elderly and those who have special needs for pedestrian facilities are known to reside and walk. For example, residences of those age 65 and older can be tracked using U.S. Census data with Geographic Information Systems. Locations frequented by seniors, such as grocery stores or senior centers, could also be plotted with the corresponding sidewalk needs identified. Information can be added to the analysis on an ad hoc basis.
- ◆ WisDOT will encourage local school districts to include pedestrian concerns in school siting decisions and in existing neighborhoods as demographic conditions change. A broad comprehensive approach can include: long-term solutions i.e., incorporating pedestrian needs into the platting process and developing attendance projection maps; and short-term solutions i.e., providing crossing guards, engineering solutions, and identifying unusual hazards.

Estimated Fiscal Costs to Implement this Plan

In general, the impacts of the recommendations in this plan are directly related to work that continues in the area of pedestrian planning, design, enforcement and education efforts. However, the Department anticipates an increased focus on the needs of pedestrians as a result of this plan that will increase the funding and efforts devoted to meeting pedestrian needs along State Trunk Highways and on local roads. Increased local government attention to pedestrian needs is expected to have a significant impact on additional staff time demands, both in the Districts and in the Central Office, and as local officials request advice or assistance.

As noted earlier, WisDOT is presently meeting current sidewalk needs along State Trunk Highways. Therefore, any significant impact on WisDOT's construction budget is not expected. Due to increased awareness and demand for sidewalks and other pedestrian facilities on the local road system however, significant impacts on local municipal budgets are possible. For example, sidewalk construction currently costs approximately \$12.50 per running foot of five-foot width (2001). Therefore, constructing sidewalk on a residential block of 15 houses per side and 75 feet of street frontage per house would cost approximately \$35,000. Initial developer costs can be passed on

to the homebuyer or to the municipality. The municipality may fund the project through special assessment or through regular municipal operations.

During the period of public comment on the draft plan, some citizens urged WisDOT to establish a program to fund critically necessary pedestrian facilities along local roads and streets. These citizens advised WisDOT that the Hazard Elimination Safety (HES) Program would be the best vehicle through which to fund such projects. WisDOT staff and management reviewed this proposal and eventually decided that it was not necessary. Staff identified three reasons for rejecting the proposal:

1. There is no need for special set-aside funding because of the many programs already in place that can assist local governments in meeting local pedestrian needs, such as the Enhancements Program, the many Surface Transportation Programs (STP), the Congestion Mitigation and Air Quality Program (CMAQ), and reimbursement under the General Transportation Assistance Program (GTA).
2. Local officials and WisDOT district staff expressed concern that such a program could actually cause municipalities to delay needed pedestrian facility projects as they wait for funding to become available. These officials felt the program could be used to pay for projects that a municipality would be doing anyway.

3. The *Wisconsin Pedestrian Policy Plan 2020* is not the appropriate venue to consider potential additional WisDOT programs to help local governments pay for necessary pedestrian transportation facilities. The purpose of this plan is to identify what WisDOT will do along its own State Trunk Highways and how WisDOT can help local governments meet their own pedestrian needs. The Department will address local sidewalk needs and funding options as part of its multimodal plan update, scheduled to begin in 2002.

WisDOT Initial Tasks for 2002-2003

Successful implementation of this plan will require a partnership between WisDOT, local governments, MPOs, nonprofit organizations, and all citizens. WisDOT will act as the catalyst to begin the process of developing this partnership. The initial and critical steps over the next two years include:

WisDOT will develop a *Pedestrian Best Practices Resource Guide (BPRG)*.

Detailed design, planning, and program information and guidelines will be provided in the forthcoming *BPRG* that serves as a companion document to assist in implementation of its goals,

objectives, and actions. The resource guide is scheduled for completion by summer, 2002.

WisDOT will review current project planning and design procedures to ensure pedestrians are appropriately considered in every project. This review will consider pedestrian needs both along and across the State Trunk Highways. When projects are first proposed, a set of criteria will be used to determine whether and what type of pedestrian facilities need to be considered for the project. WisDOT will begin developing the scoping criteria in 2002.

WisDOT will establish a working group to review laws potentially affecting pedestrians. In 2002, WisDOT will form an ad hoc, internal working group to perform a comprehensive review of the National Uniform Vehicle Code and the state laws that have had an impact on pedestrians to ensure that the laws are clear, current and address pedestrian issues. Other stakeholders and users of pedestrian facilities will be consulted as part of this review process. The review is expected for completion within one year.

WisDOT will pursue research on pedestrian safety. WisDOT will conduct further research to determine the number and causes of pedestrian crashes to address safety needs of all pedestrians. A review of the MV 4000 crash data will

take place in 2002 and will focus on motorists and pedestrians impaired by alcohol, the role of speed in pedestrian crashes and on the elderly and children. The WisDOT Bureau of Transportation Safety will review its existing pedestrian safety approaches and identify any new measures that can be developed linking crash type and age data to pedestrian crash occurrences.

WisDOT will further survey pedestrian use. Survey research, currently underway, will provide an analysis of walkers and non-walkers and the purpose and frequency of their walks. The research will also focus on how to better accommodate and increase pedestrian travel for the elderly, children, and people with disabilities. WisDOT is spending \$2.5 million to increase the size of the Wisconsin sample of the National Household Transportation Survey from approximately 500 individuals to approximately 16,500 individuals. This survey is expected to be completed in 2002.

WisDOT will sponsor a pedestrian workshop. WisDOT will sponsor a pedestrian conference that will focus on three areas: (1) planning and design of pedestrian facilities; (2) safety and enforcement; and (3) pedestrian mobility and access. The workshop, in conjunction with research by WisDOT on pedestrian safety, will review pedestrian laws and measure pedestrian use. This workshop is scheduled for 2003.

VII. Appendices

Appendix A: Resources Available Upon Request of WisDOT

1. *Wisconsin Pedestrian Planning Guidance: Guidelines for Metropolitan Planning Organizations and Communities in Planning and Developing Pedestrian Facilities.* Wisconsin Department of Transportation (September, 1993).
2. *MPO Pedestrian Planning: A Background Paper Prepared for the WisDOT Statewide Pedestrian Plan Effort.* Wisconsin Department of Transportation (June 29, 2000).
3. *Bicycle and Pedestrian Travel Survey Results: A Background Paper Prepared for the Statewide Pedestrian Plan Effort* Wisconsin Department of Transportation (April 20, 2000).
4. *Local Government Sidewalk Policies in Wisconsin: A Background Paper Prepared for the WisDOT Statewide Pedestrian Plan Effort.* Wisconsin Department of Transportation (June 29, 2000).
5. *Pedestrian Education & Enforcement Efforts: A Background Paper Prepared for the WisDOT Statewide Pedestrian Plan Effort.* Wisconsin Department of Transportation (July 27, 2000).
6. *“Universal Accessibility: Providing Pedestrian Facilities for Everyone”:* A Background Paper Prepared for the WisDOT Statewide Pedestrian Plan Effort. Wisconsin Department of Transportation (June 1, 2000).
7. *Pedestrian-related Laws: Federal, State and Local: A Background Paper Prepared for the Statewide Pedestrian Plan Effort.* Wisconsin Department of Transportation (April 27, 2000).
8. *Creating Walkable Communities: Ten Steps for Turning Your Town Into a Walkable Place.* Dan Burden. Walkable Communities, Inc. (Date Unknown).

Please call Tom Huber of WisDOT at (608) 267-7757 or by e-mail: tom.huber@dot.state.wi.us to receive copies of these reports.

Appendix B: Types of Pedestrian Crashes

Table A.1: Types of Pedestrian Crashes

Driver Action during Pedestrian Crash	
Action	Percentage
Driving Straight Ahead	64.2%
Left Turn	9.1%
Right Turn	8.6%
Backing	3.4%
Slowing/Stopping	2.7%

Pedestrian Location during Pedestrian Crash	
Location	Percentage
In Roadway	56.7%
In Crosswalk	25.3%
On Sidewalk	3.5%
Other than Roadway, Crosswalk, Sidewalk	3.5%
Unknown	11.0%

Pedestrian crashes occur for a number of different reasons. Determining the factors that result in crashes may lead to taking further actions that could help prevent the same scenarios from occurring in the future.

A sample of MV4000 reports were analyzed to determine the pedestrian crash types that occur the most often. Crash reports from 1996 to 1999 were also reviewed to determine the different crash types. These crash types do not assign the blame to either the driver or the pedestrian, but simply attempt to explain what happened. A description of each crash type can be found in Appendix C. The analysis indicates that the pedestrian crashes can be divided into the following categories:

Table A.2: Pedestrian Types, Breakdown

Intersection Crashes	37 %	Midblock Crashes	30 %	All Other Locations	22 %
Vehicle Turn/Merge	13 %	Midblock Dash	12 %	Enter/Exit Parked Vehicle	5 %
Driver Violation at Intersection	6 %	Midblock Dart Out	9 %	Walking along Road	4 %
Intersection Dash	5 %	Walked into Vehicle at Midblock	4 %	Backing Vehicle	3 %
Multiple Threat at Intersection	3 %	Midblock – Other	5 %	In Driveway/Sidewalk	3 %
Walked into Vehicle at Intersection	3 %			Vehicle Object Crash	3 %
Intersection Other	7 %	Unknown Location	11 %	Disabled Vehicle Related	2 %
				Play Vehicle Related	2 %

Appendix C: Description of Pedestrian Crash Types

Excerpts from *Pedestrian Crash Data: A Background Paper* prepared for the Statewide Ped. Plan Effort (WisDOT, April 27, 2000)

Dart Out – The motorist’s view of the pedestrian was blocked an instant before impact.

Dash – The pedestrian was struck running and the motorist’s view of the pedestrian was not obstructed.

Multiple Threat – The pedestrian entered the traffic lane in front of standing or stopped traffic and was struck by another vehicle moving in the same direction as the stopped traffic.

Walked into Vehicle – The pedestrian stepped into the travel lane and instantaneously collided with the vehicle, or had been walking in the lane prior to colliding with the vehicle. This is common when vehicles stop at a red light before making a right turn. The pedestrian enters the crosswalk as the car begins the turn. (The name of this crash type is misleading, as the impact may be simultaneous or the vehicle may initiate the crash).

Vehicle Turn/Merge – The pedestrian and vehicle collided while the vehicle was preparing to turn, in the process of turning, or had just completed a turn/merge.

Driver Violation – The driver committed a violation such as careless driving, failed to yield,

signal/sign violation, DWI (“driving while intoxicated”), etc.

Trapped – The pedestrian was struck while crossing at a signalized intersection when the light changed and traffic started moving.

Disabled Vehicle Related – The pedestrian was struck while walking to or from or while near or next to a disabled vehicle.

Bus Related – The pedestrian was struck by a bus before or after entering or exiting the bus, or was struck by another vehicle while crossing in front of a bus.

Lying in Road – The pedestrian was lying in the road and was struck by a moving vehicle.

Play Vehicle Related – The pedestrian was struck while riding a play vehicle (wagon, sled, skateboard, roller blades, tricycle).

Working on Roadway – The pedestrian was struck while working on, in, over, or under the roadway.

Expressway Crossing – The pedestrian was struck while attempting to cross an expressway.

Unusual – The pedestrian was struck by a vehicle, but the circumstances were unusual and did not conform to a specified crash type.

Vehicle Object Crash – The pedestrian was struck as a result of a prior vehicle-object (building, pole, or sign) collision.

Appendix D: Pedestrian Fatalities

Table A.3: Injury Severity of Pedestrians in Crashes, 1994-1998

Posted Speed (m.p.h.)	Fatality	Serious Injury	All Others
25	1.5 %	20.4 %	78.1 %
30	2.0 %	20.9 %	77.1 %
35	4.5 %	30.3 %	65.2 %
40	7.8 %	23.4 %	68.8 %
45	10.1 %	38.0 %	51.9 %
55	16.2 %	35.1 %	48.7 %
65	15.7 %	27.0 %	73.3 %
All Crashes	3.0 %	22.3 %	74.7 %

NOTE: Does not include cases where the posted speed was unknown

In Wisconsin, pedestrian fatalities occur in 3.1% of pedestrian crashes. Nationally, over 6 % of crashes lead to fatalities. The first table shows that the higher the posted speed in a pedestrian crash, the more likely the pedestrian will be killed. In areas where the speed limit is 25 miles per hour, less than 2% of crashes result in a pedestrian fatality. On the other hand, once the posted speed is 55 miles per hour or greater, over 14 % of state pedestrian crashes result in a fatality. Also, as can be seen in Table A.4, a higher probability of a crash being fatal occurs in rural areas at night with no lighting. Nearly 15 % of all crashes at night with no lighting are fatal.

Table A.4: Comparing the Light Condition of Fatal Crashes with all Pedestrian Crashes in Wisconsin, 1994-1998

Light Condition	Fatal Crashes	All Pedestrian Crashes	% of Crashes that are Fatal
Daylight	41.3%	65.9%	1.9%
Dawn	1.7%	1.0%	5.2%
Dusk	3.1%	3.5%	3.0%
Dark/Unlit	29.2%	6.1%	14.7%
Dark/Lighted	24.3%	22.9%	3.2%

Alcohol has a large impact on fatal crashes. Over the last 5 years, in nearly a third (30%) of fatal pedestrian crashes, the pedestrian had been drinking. Also, 14% of drivers in the fatal crashes had consumed alcohol. Both of these rates are higher than the 11.5% alcohol involvement rate for all state pedestrian crashes.

When state pedestrian crashes are broken down by season, there are no major differences in when pedestrian crashes occur. It does appear that slightly more crashes do occur in summer and fall. This trend is more obvious in determining when fatal pedestrian crashes occur, as 58% of fatal crashes are in summer and fall.

Table A.5: Pedestrian Crashes by Season, 1994-1998				
	Dec. - Feb.	March - May	June - Aug.	Sept. - Nov.
Number of Crashes	2,121	2,315	2,537	2,452
Percent of Total Crashes	22.5 %	24.6 %	26.9 %	26.0 %
Number of Fatal Crashes	62	59	77	90
Percent of Total Fatal Crashes	21.5 %	20.5 %	26.7 %	31.3 %

Fatal Crash Types

All MV4000 reports involving pedestrian fatalities from 1996 to September of 1999 were analyzed to determine the type of crash that

caused the death. Here are the most common pedestrian crash types that cause fatalities in Wisconsin:

Table A.6: Fatal Crash Types

Midblock Crashes	34.8 %
Midblock Dart Out	4.8 %
Midblock Dash	11.4 %
Multiple Threat at Midblock	1.0 %
Walked into Vehicle at Midblock	2.4 %
Midblock – Other	15.2 %
Walking along Road	12.9 %
Intersection Crashes	11.9 %
Vehicle Turn/Merge	3.8 %
Intersection Dash	1.4 %
Driver Violation at Intersection	1.4 %
Multiple Threat at Intersection	1.0 %
Trapped	0.5 %
Intersection Other	3.8 %
Disabled Vehicle	5.7 %
Mailbox Related	3.8 %
Bus Related	2.8 %
Commercial Bus	1.4 %
School Bus	1.4 %
Lying in Road	2.8 %
Play Vehicle Related	2.4 %
Working on Roadway	1.9 %
Expressway Crossing	1.4 %
Unusual	8.6 %
Inadequate Information	8.1 %

Fatal WI Pedestrian Crashes vs. All WI Pedestrian Crashes

The next table compares these fatal crash types with the frequencies of general pedestrian crash types in Wisconsin. Although

intersection crashes occur the most often (37%), only 11.9% of fatal pedestrian crashes occur at intersections.

Table A.7: Fatal WI Crashes vs. All WI Crashes

Crash Type	Fatal	All
Midblock	34.8 %	30.0 %
Intersection	11.9 %	37.0 %
Walking along Road	12.9 %	4.0 %
Disabled Vehicle	5.7 %	2.0 %
Mailbox Related	3.8 %	1.0 %
Play Vehicle Related	2.4 %	2.0 %
Working on Roadway	1.9 %	1.0 %
Other	8.6 %	2.0 %

Appendix E: Pedestrian Fatalities and Percentage of Workers Walking to Work

Table A.8: Pedestrian Fatalities and Percentage of Workers Walking to Work					
State	Pedestrian fatalities	Rate of pedestrian 100,000 persons	% of traffic-related fatalities that are pedestrians	Pedestrian fatalities 1 billion VMT	% of workers walking to work
<small>(number in parentheses represents the state's rank¹; 1=best, 51=worst)</small>					
Alabama	79 (32)	1.8 (27)	7.4 (15)	1.4 (17)	1.9 (51)
Alaska	8 (5)	1.3 (13)	11.3 (28)	1.8 (30)	10.2 (2)
Arizona	155 (42)	3.3 (49)	15.8 (43)	3.4 (49)	3.4 (32)
Arkansas	47 (22)	1.9 (29)	7.5 (16)	1.7 (25)	2.7 (45)
California	697 (51)	2.1 (40)	19.9 (47)	2.4 (41)	3.4 (32)
Colorado	73 (30)	1.8 (27)	11.6 (30)	1.9 (34)	4.2 (20)
Connecticut	45 (19)	1.4 (17)	13.7 (40)	1.5 (22)	3.7 (29)
Delaware	15 (11)	2.0 (35)	13.0 (38)	1.8 (30)	3.9 (27)
District of Columbia	15 (11)	2.9 (47)	27.8 (51)	4.5 (51)	11.8 (1)
Florida	531 (50)	3.6 (51)	18.8 (45)	3.9 (50)	2.5 (48)
Georgia	167 (44)	2.2 (42)	10.6 (23)	1.7 (25)	2.3 (49)
Hawaii	23 (14)	1.9 (29)	19.2 (46)	2.9 (47)	5.6 (10)
Idaho	7 (3)	0.6 (1)	2.6 (1)	0.5 (1)	4.6 (17)
Illinois	187 (46)	1.6 (25)	13.4 (39)	1.8 (30)	4.2 (20)
Indiana	71 (29)	1.2 (9)	7.3 (14)	1.0 (6)	3.3 (36)
Iowa	25 (15)	0.9 (4)	5.6 (6)	0.9 (4)	5.8 (8)
Kansas	35 (16)	1.3 (13)	7.1 (12)	1.3 (13)	3.9 (27)
Kentucky	61 (26)	1.5 (21)	7.1 (12)	1.3 (13)	3.5 (30)
Louisiana	112 (39)	2.6 (44)	12.1 (31)	2.8 (46)	2.9 (41)
Maine	13 (9)	1.0 (7)	6.8 (11)	1.0 (6)	5.4 (12)
Maryland	105 (37)	2.0 (35)	17.3 (44)	2.2 (38)	3.4 (32)
Massachusetts	84 (34)	1.4 (17)	20.7 (48)	1.6 (23)	5.4 (12)
Michigan	171 (45)	1.7 (26)	12.5 (35)	1.8 (30)	3.1 (38)
Mississippi	59 (25)	2.1 (40)	6.2 (8)	1.7 (25)	2.6 (47)
Minnesota	55 (23)	1.2 (9)	8.5 (17)	1.1 (9)	4.9 (15)
Missouri	102 (35)	1.9 (29)	8.7 (19)	1.6 (23)	2.8 (44)

State	Pedestrian fatalities	Rate of pedestrian 100,000 persons	% of traffic-related fatalities that are pedestrians	Pedestrian fatalities 1 billion VMT	% of workers walking to work
(number in parentheses represents the state's rank ¹ ; 1=best, 51=worst)					
Montana	13 (9)	1.5 (21)	5.5 (5)	1.4 (17)	7.7 (4)
Nebraska	21 (13)	1.3 (13)	6.7 (9)	1.2 (12)	4.8 (16)
Nevada	46 (20)	2.6 (44)	12.7 (36)	2.7 (45)	4.1 (23)
New Hampshire	11 (6)	0.9 (4)	8.6 (18)	1.0 (6)	4.1 (23)
New Jersey	154 (41)	1.9 (29)	20.7 (48)	2.4 (41)	4.1 (23)
New Mexico	58 (24)	3.3 (49)	13.7 (40)	2.6 (43)	3.5 (30)
New York	357 (48)	2.0 (35)	23.8 (50)	2.9 (47)	7.0 (5)
North Carolina	197 (47)	2.6 (44)	12.3 (32)	2.3 (40)	2.9 (41)
North Dakota	4 (1)	0.6 (1)	4.3 (4)	0.5 (1)	8.2 (3)
Ohio	134 (40)	1.2 (9)	9.4 (21)	1.3 (13)	3.2 (37)
Oklahoma	46 (20)	1.4 (17)	6.1 (7)	1.1 (9)	2.9 (41)
Oregon	66 (28)	2.0 (35)	12.3 (32)	2.0 (36)	4.2 (20)
Pennsylvania	166 (43)	1.4 (17)	11.2 (27)	1.7 (25)	5.7 (9)
Rhode Island	11 (6)	1.1 (8)	14.9 (42)	1.4 (17)	4.3 (19)
South Carolina	111 (38)	2.9 (47)	11.1 (26)	2.6 (43)	3.1 (38)
South Dakota	7 (3)	0.9 (4)	4.2 (3)	0.9 (4)	7.0 (5)
Tennessee	82 (33)	1.5 (21)	6.7 (9)	1.3 (13)	2.3 (49)
Texas	461 (49)	2.3 (43)	12.9 (37)	2.2 (38)	2.7 (45)
Utah	43 (18)	2.0 (35)	12.3 (32)	2.0 (36)	3.4 (32)
Vermont	11 (6)	1.9 (29)	10.6 (23)	1.7 (25)	6.9 (7)
Virginia	102 (36)	1.5 (21)	10.9 (25)	1.4 (17)	3.1 (38)
Washington	75 (31)	1.3 (13)	11.4 (29)	1.4 (17)	4.0 (26)
West Virginia	35 (16)	1.9 (29)	9.9 (22)	1.9 (34)	4.5 (18)
Wisconsin	63 (27)	1.2 (9)	8.8 (20)	1.1 (9)	5.5 (11)
Wyoming	4 (1)	0.8 (3)	2.6 (1)	0.5 (1)	5.3 (14)
U. S.	5,220	1.9	12.6	2.0	3.9

Sources: U.S. Census. Means of Transportation to Work. 1990; U.S. Department of Transportation. Traffic Safety Facts 1998. *DOT HS 808 958*; U.S. Department of Transportation. Highway Statistics 1998.

¹ Some states have identical rates on certain categories. For example, North Dakota and Wyoming each had four pedestrian fatalities in 1998. As a result, both states tied in the (#1) ranking for lowest number of pedestrian fatalities.

Appendix F: Pedestrian Crash Rates for Individual Counties in Wisconsin, 1994-1998

County	1998 population estimate	Total crashes involving pedestrians	Total pedestrians hit by vehicle	Total pedestrians seriously injured	Total pedestrians killed	Total pedestrian crashes involving alcohol
Adams	17,826	20	10	4	0	2
Ashland	16,785	36	18	5	2	2
Barron	42,695	94	45	21	2	4
Bayfield	14,603	23	13	7	2	2
Brown	218,149	579	285	68	10	55
Buffalo	13,818	21	10	6	0	7
Burnett	13,999	14	6	2	2	5
Calumet	38,760	64	33	9	3	4
Chippewa	54,761	87	42	11	3	9
Clark	32,625	73	28	2	3	6
Columbia	49,266	168	91	30	3	9
Crawford	16,656	23	12	3	2	4
Dane	407,584	1,526	755	196	24	115
Dodge	83,348	151	71	23	1	4
Door	36,537	71	34	14	4	2
Douglas	42,291	167	85	28	2	26
Dunn	38,309	93	45	15	1	11
Eau Claire	90,691	257	127	25	3	32
Florence	5,057	5	2	0	0	0
Fond du Lac	96,151	316	152	46	3	25
Forest	9,302	23	13	5	1	4
Grant	49,796	68	33	8	2	6
Green	31,983	77	37	7	1	4
Green Lake	19,576	40	21	7	1	4
Iowa	21,913	24	13	3	2	3
Iron	6,329	12	6	1	0	2
Jackson	18,304	36	18	3	2	5
Jefferson	73,340	186	94	29	4	9
Juneau	23,425	41	20	4	2	0
Kenosha	141,474	659	321	58	18	50
Kewaunee	19,904	10	5	0	0	0
La Crosse	105,299	364	184	42	4	34
Lafayette	16,252	33	16	6	1	0
Langlade	20,593	46	23	5	0	4

County	1998 population estimate	Total crashes involving pedestrians	Total pedestrians hit by vehicle	Total pedestrians seriously injured	Total pedestrians killed	Total pedestrian crashes involving alcohol
Lincoln	28,865	67	33	10	2	2
Manitowoc	84,434	223	111	25	5	10
Marathon	125,491	282	140	20	8	22
Marinette	42,523	85	42	15	1	13
Marquette	13,734	26	13	7	1	3
Menominee	4,293	22	11	4	3	5
Milwaukee	957,058	9,093	4,481	858	77	416
Monroe	38,758	88	42	10	1	5
Oconto	33,089	69	34	12	7	4
Oneida	34,439	54	27	9	0	3
Outagamie	155,953	342	171	45	7	25
Ozaukee	80,098	96	47	13	2	6
Pepin	7,213	8	4	1	0	1
Pierce	34,547	55	27	7	1	5
Polk	37,046	60	28	9	2	7
Portage	66,913	103	49	13	2	4
Price	16,269	27	14	5	0	2
Racine	187,330	1,053	517	83	13	48
Richland	17,794	30	15	5	1	0
Rock	149,784	577	284	64	5	31
Rusk	15,322	16	8	3	3	2
Sauk	52,334	160	80	27	3	15
Sawyer	15,517	42	21	11	2	4
Shawano	38,730	75	38	16	2	14
Sheboygan	111,427	319	153	30	3	22
St. Croix	57,113	106	51	11	2	10
Taylor	19,481	32	17	6	1	2
Trempealeau	26,314	40	20	9	1	5
Vernon	26,492	35	17	1	2	4
Vilas	19,435	34	17	4	1	3
Walworth	84,414	198	96	22	4	16
Washburn	14,819	18	10	4	0	1
Washington	112,326	199	100	22	2	14
Waukesha	345,440	538	257	76	10	38
Waupaca	49,751	96	48	10	1	6
Waushara	20,928	20	10	6	0	2
Winnebago	153,937	387	189	44	5	27
Wood	77,538	140	73	16	6	2
Statewide total	5,244,350	20,222	9,963	2,226	294	1,248

Appendix G: WisDOT's Facility Investment and Cost Sharing Policy

Note: the following are excerpts from WisDOT's facility investment and cost sharing policy which are pedestrian-related. For the full policy, please consult the WisDOT Program Management Manual.

6.3.0 Project Costs Eligible for State Funding

Some project costs are eligible for state or federal funding on urban non-freeway projects for a State Trunk Highway. Eligible for funding means that only certain costs qualify for state or federal monies. Urban means the project has an urban cross section where urban type development exists or a section where urban type development is planned, or may reasonably be expected. Local agreements are required for all projects that involve participation.

6.3.1 Street Construction

All usual items of street construction (grading, paving, etc.) which are an integral part of a construction project are eligible.

6.3.2 Preconstruction Engineering

All preconstruction engineering costs which are necessary for the construction project are eligible, (with some exceptions).

6.3.3 Right-of-Way

The acquisition of the necessary right-of-way in order for the construction of the project to be eligible.

6.3.4 Sidewalks

Replacement sidewalks necessitated by street/road construction are eligible if the local jurisdiction agrees to accept responsibility for sidewalk repair, maintenance, and replacement (other than that caused by future highway projects).

Where sidewalks do not already exist, provision will be made for sidewalks as part of the project design for all reconstruction and recondition type projects at state expense. Provision for new sidewalk consists of purchasing the right-of-way and grading a berm so that a sidewalk may be installed.

Provisions for future or present sidewalks will be made during project planning and construction. These costs are eligible. Exceptions to provisions for sidewalk are allowed in cases when real estate costs are prohibitive and the local jurisdiction does not anticipate a need or a desire for sidewalks.

WisDOT will participate in costs of new sidewalks only if they are installed at the time of project construction. Costs of continuous sidewalk constructed to WisDOT's standards and installed at the time of project construction are 75 percent eligible. Where an alternate design acceptable to the Department is installed, 75 percent of the cost equivalent to a sidewalk meeting WisDOT standards is eligible, not to exceed 75 percent of actual costs. Any additional costs of installing the alternative design are not eligible.

WisDOT will provide reasonable sidewalk access over bridges (one side or two) when sidewalks exist on either end of the bridge.

6.3.5 Driveways

When replacement driveways are necessitated by street or road construction and there is a sidewalk, concrete from curb to sidewalk and replacement in kind beyond the sidewalk is eligible. When there is no sidewalk, replacement in kind beyond the curb is eligible. New driveways are not eligible.

Appendix H: Interview with Municipalities: Sidewalk Practices and Policies

Population - 25,000 +

Cities	Population
Appleton	69,103
Beloit	36,087
Brookfield	36,691
Eau Claire	56,856
Fond du Lac	40,389
Franklin	25,726
Green Bay	101,596
Greenfield	35,449
Janesville	57,928
Kenosha	85,685
LaCrosse	51,942
Madison	200,814
Manitowoc	33,910
Milwaukee	620,609
New Berlin	35,739
Oshkosh	60,240
Racine	85,433
Sheboygan	50,763
Waukesha	59,949
Wausau	38,700
Wauwatosa	49,299
West Allis	63,576
West Bend	27,796
Villages	Population
Menomonee Falls	28,620

10,000 - 25,000

Cities	Population
Baraboo	10,059
Cedarburg	10,513
Chippewa Falls	13,006
DePere	18,885
Marshfield	19,942
Menomonie	14,152
Merrill	10,322
Whitewater	13,264
WI Rapids	18,798
Villages	Population
Brown Deer	12,471
Pleasant Prairie	13,360
Shorewood	14,083

5,000 - 10,000

Cities	Population
Altoona	6,491
Ashland	8,784
Berlin	5,395
Jefferson	6,541
New London	6,968
Prairie du Chien	5,699
Rhineland	7,758
Rice Lake	8,167
Waupaca	5,288
Villages	Population
Fox Point	7,189
Hales Corners	7,818
Oregon	5,943
Waunakee	7,449

Questions asked of Municipalities

1. Are sidewalks required for either new residential construction or for new commercial developments?
2. Does the city have a program to retrofit areas without sidewalks? If so, who makes these decisions?
3. Could you estimate how much the city spends on sidewalks construction and reconstruction annually? Is this separated by new construction, replacement?
4. How does the city finance new sidewalk construction?
5. How does the city finance the replacement or improvement of existing sidewalks?
6. Do you have any comments for your city's sidewalks?

Appendix I: Safe Community Coalitions in Wisconsin

Over 1.1 million Wisconsin residents reside in an area with a safe community coalition. The population served by each coalition listed below is provided in parentheses.

Cities/Villages

- ◆ Beloit Safe Community Coalition (36,204)
- ◆ City of LaCrosse & UW-LaCrosse Safe Community Coalition (51,942)
- ◆ City of Madison Safe Community Coalition (200,814)
- ◆ River Falls Safe Community Coalition (11,564)
- ◆ Sauk Prairie Safe Community Coalition (6,056)

Counties

- ◆ Brown County Safe Community Coalition (212,448)
- ◆ Door County Safe Community Coalition (26,171)
- ◆ Eau Claire County Safe Communities Coalition (88,668)
- ◆ Green County Safe Community Coalition (31,349)

- ◆ Jefferson County Safe Community Coalition (71,788)
- ◆ LaCrosse County Safe Community Coalition (except City of LaCrosse; 51,207)
- ◆ Marathon County Safe Communities Coalition (123,258)
- ◆ Pepin County Safe Communities Coalition (7,179)
- ◆ Rusk County Safe Community Coalition (15,235)
- ◆ Shawano Safe Community Coalition (38,226)
- ◆ Winnebago County Safe Community Coalition (149,894)

School District

- ◆ Elcho School District Safe Community Coalition (1,119)

Tribes

- ◆ Bad River Safe Home Coalition (1,070)
- ◆ Red Cliff Safe Community Coalition (857)

Appendix J: Interviews with Wisconsin Police Departments

Twenty Wisconsin police departments were randomly chosen to represent counties, villages and each class of cities.* In total, 18 departments participated in the telephone interviews. Officers were asked a series of questions regarding pedestrian education and enforcement efforts in their respective districts. Below is a listing of the participating police departments. In addition to the police departments listed, information regarding various enforcement and education activities of police departments was obtained from the final reports of police departments receiving grants from the Pedestrian and Bicycle Law Enforcement Projects.

Officers were asked how well they believe pedestrians and motorists understand pedestrian laws. Whether it is due to a lack of understanding or a willful disobedience of pedestrian laws, officers agreed that both pedestrians and motorists are consistently breaking the law. Examples of these violations include:

- ◆ pedestrians crossing a street on a Don't Walk signal;
 - ◆ motorists failing to yield the right-of-way to pedestrians in a crosswalk; and
 - ◆ motorists passing a car that has slowed down/stopped to yield for a pedestrian in a crosswalk.
- One officer noted that some pedestrians are too courteous. If a motorist is slowing to allow the pedestrian to cross the street, the pedestrian will wave the car to continue. Other officers noted that motorists are not courteous enough. In sum, the officers' responses point toward a general confusion regarding the right-of-way laws and the need for increased levels of education and enforcement.
- The following provides a few examples of the various efforts used by police departments to educate the public on pedestrian safety:
- ◆ *Officer Friendly program for grades K-4 City of Glendale.* An officer gives a presentation at schools four times a year. Pedestrian safety, as well as safety around strangers, is always covered. In addition, children receive handouts such as coloring books.

** Wisconsin statutes 62.05 define 4 classes of cities:*

*·First Class—
population 150,000
and over;*

*·Second Class—
population of at least
39,000 but less
than 150,000;*

*·Third Class—
population of at least
10,000 but less
than 39,000;*

*·Fourth Class—
population of less
than 10,000.*

*Reclassification only occurs when a city 1) meets the minimum population requirement; 2) makes any necessary changes in government; and 3) when the mayor makes a proclamation, declaring the fact, and it is published according to law.

- ◆ *Pedestrian safety program for grades K-3*—City of La Crosse. Officers make presentations at schools on a request basis. The presentations consist of three components:

A chart describing what to look for and do in traffic.

Presentation of the video “See and Be Seen,” produced by the American Automobile Association (AAA).

Hands-on experience where the kids practice the stop-look-listen techniques.

- ◆ *30-minute cable access television show*—City of Eau Claire. The police department tapes a new episode every month and the episode is aired approximately ten times a month. Pedestrian safety is included among the various topics. While the officer admitted the audience of the show is limited to those who have access to cable television, the department is assured the show is being watched because people can call and ask officers questions. In addition, the show features a “most wanted” segment that has resulted in a 75 percent capture rate.
- ◆ *Free ice cream coupons*—Villages of Sauk City and Prairie du Sac. Officers distribute free ice cream

coupons to kids who are obeying the traffic laws. A local restaurant donated \$500 worth of free coupons.

Cities

Counties

- ◆ Appleton

- ◆ Crawford

- ◆ Eau Claire

- ◆ Vilas

- ◆ Fitchburg

- ◆ Waushara

- ◆ Glendale

- ◆ Kenosha

- ◆ La Crosse

- ◆ Ladysmith

- ◆ Milwaukee

- ◆ Superior

- ◆ Tomah

- ◆ Watertown

- ◆ Wausau

Villages

- ◆ Fall Creek

- ◆ Kimberly (dept. responsible for Village of Little Chute)

- ◆ Sauk City (dept. responsible for Village of Prairie du Sac)

Appendix K: Summary of Safe Routes to School: WI Department of Public Instruction (DPI)

The Wisconsin Department of Public Instruction (DPI) coordinates determinations of safe routes to school. In addition to partially funding the cost of transporting students who live further than two miles from their school, as required under Wisconsin Statute (s. 12154), DPI also provides partial funding for students who live closer than two miles but whose walking route includes an “unusual hazard.”¹⁸

When an unusual hazard is present, school boards are required to prepare a plan to safeguard pupil transportation, have the plan reviewed by the county Sheriff who, in turn, must submit a report to the State Superintendent. If the State Superintendent agrees that an unusual hazard exists, the school district is provided \$12 per student for transport per school year (Wis. Stat. [s. 121.58]).

During the 2000-2001 school year, 128,122 pupils were transported in Wisconsin school districts due to unusual hazards at a total cost of \$1,492,500. This funding does not fully cover a school district’s costs of transporting these students. Therefore, a community may wish to look into how providing adequate pedestrian facilities can reduce a school district’s costs. For example, a Surface Transportation-Discretionary (STP-D) project in McFarland, awarded in 1993, allowed the village to construct a side path from a residential development to a school, thereby eliminating a hazardous situation for pupils. District-provided busing was eliminated after construction of this side path because pupils had an easy walk to school.

¹⁸ An unusual hazard is defined as “an existing condition which constitutes more than ordinary hazard and which seriously jeopardizes the safety of pupils in their travel to and from school. It is recognized that all traffic situations through which pupils must travel present some degree of hazard. That degree of hazard often depends on the age of the pupils concerned. When such hazards reach a degree of danger which is unacceptable to the community in which they exist, the school board, with its combined judgment reflecting the safety interests of the community, may identify such hazards as unusual for the purpose of proposing a plan to remove or diminish them” (PI 7, 1996).

Appendix L: US DOT Policy Statement: *Integrating Bicycle and Pedestrian Travel*

Purpose

Accommodating Bicycle and Pedestrian Travel: A Recommended Approach is a policy statement adopted by the United States Department of Transportation. U.S. DOT hopes that public agencies, professional associations, advocacy groups, and others adopt this approach as a way of committing themselves to integrating bicycling and walking into the transportation mainstream.

The Design Guidance incorporates three key principles:

- a) policy statement that bicycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist;
- b) an approach to achieving this policy that has already worked in State and local agencies; and
- c) a series of action items that a public agency, professional association, or advocacy group can take to achieve the overriding goal of improving conditions for bicycling and walking.

The Policy Statement was drafted by the U.S. Department of Transportation in response to Section 1202 (b) of the *Transportation Equity Act for the*

21st Century (TEA-21) with the input and assistance of public agencies, professional associations and advocacy groups.

Introduction

Bicycling and walking issues have grown in significance throughout the 1990s. As the new millennium dawns public agencies and public interest groups alike are striving to define the most appropriate way in which to accommodate the two modes within the overall transportation system so that those who walk or ride bicycles can safely, conveniently, and comfortably access every destination within a community.

Public support and advocacy for improved conditions for bicycling and walking has created a widespread acceptance that more should be done to enhance the safety, comfort, and convenience of the nonmotorized traveler. Public opinion surveys throughout the 1990s have demonstrated strong support for increased planning, funding and implementation of shared use paths, sidewalks and on-street facilities.

At the same time, public agencies have become considerably better equipped to respond to this demand. Research and practical experience in designing facilities for bicyclists and pedestrians has

generated numerous national, State and local design manuals and resources. An increasing number of professional planners and engineers are familiar with this material and are applying this knowledge in towns and cities across the country.

The 1990 Americans with Disabilities Act, building on an earlier law requiring curb ramps in new, altered, and existing sidewalks, added impetus to improving conditions for sidewalk users. People with disabilities rely on the pedestrian and transit infrastructure, and the links between them, for access and mobility.

Congress and many state legislatures have made it considerably easier in recent years to fund nonmotorized projects and programs (for example, the Intermodal Surface Transportation Efficiency Act and the Transportation Equity Act for the 21st Century), and a number of laws and regulations now mandate certain planning activities and design standards to guarantee the inclusion of bicyclists and pedestrians.

Despite these many advances, injury and fatality numbers for bicyclists and pedestrians remain stubbornly high, levels of bicycling and walking remain frustratingly low, and most communities continue to grow in ways that make travel by means other than the private automobile quite challenging. Failure to provide an accessible pedestrian network for people with disabilities often requires the provision of costly paratransit service. Ongoing investment in the nation's transportation infrastructure is still more likely to overlook rather

than integrate bicyclists and pedestrians.

In response to demands from user groups that every transportation project include a bicycle and pedestrian element, Congress asked the Federal Highway Administration (FHWA) to study various approaches to accommodating the two modes. The Transportation Equity Act for the 21st Century (TEA-21) instructs the Secretary to work with professional groups such as AASHTO (American Association of State Highway and Transportation Officials), ITE (Institute of Transportation Engineers), and other interested parties to recommend policies and standards that might achieve the overall goal of fully integrating bicyclists and pedestrians into the transportation system.

TEA-21 also says that,

Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation projects, except where bicycle and pedestrian use are not permitted (Section 1202).

In August 1998, FHWA convened a Task Force comprising representatives from FHWA, AASHTO, ITE, bicycle and pedestrian user groups, state and local agencies, the U.S. Access Board and representatives of disability organizations to seek

advice on how to proceed with developing this guidance. The Task Force reviewed existing and proposed information on the planning and technical design of facilities for bicyclists and pedestrians and concluded that these made creation of another design manual unnecessary. For example, AASHTO published a bicycle design manual in 1999 and is working on a pedestrian facility manual.

The area where information and guidance was most lacking was in determining when to include designated or special facilities for bicyclists and pedestrians in transportation projects. There can also be uncertainty about the type of facility to provide, and the design elements that are required to ensure accessibility.

For example, when a new suburban arterial road is planned and designed, what facilities for design standards to accommodate bicyclists and pedestrians should be provided? The Task Force felt that once the decision to provide a particular facility was made, the specific information on designing that facility is generally available. However, the decision on whether to provide sidewalks on neither, one or both sides of the road, or a shoulder, striped bike lane, wide outside lane or separate trail for bicyclists is usually made with little guidance or help.

After a second meeting with the Task Force in January 1999, FHWA agreed to develop a *Policy Statement on Accommodating*

Bicyclists and Pedestrians in Transportation Projects to guide state and local agencies in answering these questions. Task Force members recommended against trying to create specific warrants for different facilities (warrants leave little room for engineering judgment and have often been used to avoid providing facilities for bicycling and walking). Instead, the purpose of the Policy Statement is to provide a recommended approach to the accommodation of bicyclists and pedestrians that can be adopted by state and local agencies (as well as professional societies and associations, advocacy groups, and federal agencies) as a commitment to developing a transportation infrastructure that is safe, convenient, accessible, and attractive to motorized and non-motorized users alike.

The Policy Statement has four elements:

- a) an acknowledgment of the issues associated with balancing the competing interests of motorized and nonmotorized users;
- b) a recommended policy approach to accommodating bicyclists and pedestrians (including people with disabilities) that can be adopted by an agency or organizations as a statement of policy to be implemented or a target to be reached in the future;
- c) a list of recommended actions that can be taken to implement the solutions and approaches described above; and

- d) further information and resources on the planning, design, operation, and maintenance of facilities for bicyclists and pedestrians.

The Challenge: Balancing Competing Interests

For most of the second half of the 20th Century, the transportation, traffic engineering and highway professions in the United States were synonymous. They shared a singular purpose: building a transportation system that promoted the safety, convenience and comfort of motor vehicles. The postwar boom in car and home ownership, the growth of suburban America, the challenge of completing the Interstate System, and the continued availability of cheap gasoline all fueled the development of a transportation infrastructure focused almost exclusively on the private motor car and commercial truck.

Initially, there were few constraints on the traffic engineer and highway designer. Starting at the centerline, highways were developed according to the number of motor vehicle travel lanes that were needed well into the future, as well as providing space for breakdowns. Beyond that, facilities for bicyclists and pedestrians, environmental mitigation, accessibility, community preservation, and aesthetics were at best an afterthought, often simply overlooked, and, at worst, rejected as unnecessary, costly, and regressive. Many states passed laws preventing the use of state gas tax funds on anything other than motor vehicle lanes and facilities.

The resulting highway environment discourages bicycling and walking and has made the two modes more dangerous. Further, the ability of pedestrians with disabilities to travel independently and safely has been compromised, especially for those with vision impairments.

Over time, the task of designing and building highways has become more complex and challenging. Traffic engineers now have to integrate accessibility, utilities, landscaping, community preservation, wetland mitigation, historic preservation, and a host of other concerns into their plans and designs - and yet they often have less space and resources within which to operate and traffic volumes continue to grow.

The additional “burden” of having to find space for pedestrians and bicyclists was rejected as impossible in many communities because of space and funding constraints and a perceived lack of demand. There was also anxiety about encouraging an activity that many felt to be dangerous and fraught with liability issues. Designers continued to design from the centerline out and often ran out of space before bike lanes, paved shoulders, sidewalks and other “amenities” could be included.

By contrast, bicycle and pedestrian user groups argue the roadway designer should design highways from the right-of-way limits in, rather than the centerline out. They advocate beginning the design of a highway with the sidewalk and/or trail, including a buffer before the paved shoulder or bike lane, and then allocating the

Sec. 1202 Bicycle Transportation and Pedestrian Walkways

(b) Design Guidance

(1) In general - In implementing section 217(g) of Title 23, United States Code, the Secretary, in cooperation with the American Association of State Highway and Transportation Officials, the Institute of Transportation Engineers and other interested organizations, shall develop guidance on the various approaches to accommodating bicycles and pedestrian travel.

(2) Issues to be addressed- The guidance shall address issues such as the level and nature of the demand, volume, and speed of motor vehicle traffic, safety, terrain, cost, and sight distance.

(3) Recommendations- The guidance shall include recommendations on amending and updating the policies of the American Association of State Highway and Transportation Officials relating to highway and street design standards to accommodate bicyclists and pedestrians.

(4) Time period for development - The guidance shall be developed within 18 months after the date of enactment of this Act.

remaining space for motor vehicles. Through this approach, walking and bicycling are positively encouraged, made safer, and included as a critical element in every transportation project rather than as an afterthought in a handful of unconnected and arbitrary locations within a community.

Retrofitting the built environment often provides even more challenges than building new roads and communities: space is at a premium and there is a perception that providing better conditions for bicyclists and pedestrians will necessarily take away space or convenience from motor vehicles.

During the 1990s, Congress spearheaded a movement towards a transportation system that favors people and goods over motor vehicles with passage of the Intermodal Surface Transportation Efficiency Act (1991) and the Transportation Equity Act for the 21st Century (1998). The call for more walkable, liveable, and accessible communities, has seen bicycling and walking emerge as an “indicator species” for the health and well-being of a community. People want to live and work in places where they can safely and conveniently walk and/or bicycle and not always have to deal with worsening traffic congestion, road rage and the fight for a parking space. Vice President Al Gore launched a Livability Initiative in 1999 with the ironic statement that “a gallon of gas can be used up just driving to get a gallon of milk.”

Balancing competing interests is made more challenging by the widely divergent character of our nation’s highways and byways. Traffic speeds and volumes, topography, land use, the mix of road users, and many other factors mean that a four-lane highway in rural North Carolina cannot be designed in the same way as a four-lane highway in New York City, a dirt road in Utah or an Interstate highway in Southern California. In addition, many different agencies are responsible for the development, management, and operation of the transportation system.

In a recent memorandum transmitting Program Guidance on bicycle and pedestrian issues to FHWA Division Offices, the Federal Highway Administrator wrote that,

We expect every transportation agency to make accommodation for bicycling and walking a routine part of their planning, design, construction, operations and maintenance activities.

The Program Guidance outlines these clear statements of intent:

- ◆ Congress clearly intends for bicyclists and pedestrians to have safe, convenient access to the transportation system and sees every transportation improvement as an opportunity to enhance the safety and convenience of the two modes.

- ◆ “Due consideration” of bicycle and pedestrian needs should include, at a minimum, a resumption that bicyclists and pedestrians will be accommodated in the design of new and improved transportation facilities.
- ◆ To varying extents, bicyclists and pedestrians will be present on all highways and transportation facilities where they are permitted and it is clearly the intent of TEA-21 that all new and improved transportation facilities be planned, designed and constructed with this fact in mind.
- ◆ The decision not to accommodate [bicyclists and pedestrians] should be the exception rather than the rule. There must be exceptional circumstances for denying bicycle and pedestrian access either by prohibition or by designing highways that are incompatible with safe, convenient walking and bicycling.

The Program Guidance defers a suggested definition of what constitutes “exceptional circumstances” until this Policy Statement is completed. However, it does offer interim guidance that includes controlled access highways and projects where the cost of accommodating bicyclists and pedestrians is high in relation to the overall

project costs and likely level of use by nonmotorized travelers.

Providing access for people with disabilities is a civil rights mandate that is not subject to limitation by project costs, levels of use, or “exceptional circumstances”. While the Americans with Disabilities Act doesn’t require pedestrian facilities in the absence of a pedestrian route, it does require that pedestrian facilities, when newly constructed or altered, be accessible.

Policy Statement

1. Bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas unless one or more of three conditions are met:
 - ◆ bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.
 - ◆ the cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent of the cost of the larger transportation project.

The challenge for transportation planners, highway engineers and bicycle and pedestrian user groups, therefore, is to balance their competing interest in a limited amount of right-of-way, and to develop transportation infrastructure that provides access for all, a real choice of modes, and safety in equal measure for each mode of travel.

- ◆ where sparsity of population or other factors indicate an absence of need. For example, the Portland Pedestrian Guide requires “all construction of new public streets,” to include sidewalk improvements on both sides, unless the street is a cul-de-sac with four or fewer dwellings or the street has severe topographic or natural resource constraints.
2. In rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day, as in states such as Wisconsin. Paved shoulders have safety and operational advantages for all road users in addition to providing a place for bicyclists and pedestrians to operate.

Rumble strips are not recommended where shoulders are used by bicyclists unless there is a minimum clear path of four feet in which a bicycle may safely operate.
 3. Sidewalks, shared use paths, street crossings (including over and under crossings), pedestrian signals, signs, street furniture, transit stops and facilities, and all connecting pathways shall be designed, constructed, operated and maintained so that all pedestrians, including people with disabilities, can travel safely and independently.
 4. The design and development of the transportation infrastructure shall improve conditions for bicycling and walking through the following additional steps:
 - ◆ Planning projects for the long-term. Transportation facilities are long-term investments that remain in place for many years. The design and construction of new facilities that meet the criteria in item (1.) above should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements. For example, a bridge that is likely to remain in place for 50 years, might be built with sufficient width for safe bicycle and pedestrian use in anticipation that facilities will be available at either end of the bridge even if that is not currently the case.
 - ◆ Addressing the need for bicyclists and pedestrians to cross corridors as well as travel along them. Even where bicyclists and pedestrians may not commonly use a particular travel corridor that is being improved or constructed, they will likely need to be able to cross that corridor safely and conveniently. Therefore, the design of intersections and interchanges shall accommodate bicyclists and pedestrians in a manner that is safe, accessible and convenient.
 - ◆ Getting exceptions approved at a senior level. Exceptions for the non-inclusion of bikeways and walkways shall be approved by

a senior manager and be documented with supporting data that indicates the basis for the decision.

- ◆ Designing facilities to the best currently available standards and guidelines. The design of facilities for bicyclists and pedestrians should follow design guidelines and standards that are commonly used, such as the *AASHTO Guide for the Development of Bicycle Facilities*, AASHTO's *A Policy on Geometric Design of Highways and Streets*, and the ITE Recommended Practice "Design and Safety of Pedestrian Facilities".

Policy Approach

Rewrite the Manuals Approach

Manuals that are commonly used by highway designers covering roadway geometries, roadside safety, and bridges should incorporate design information that integrates safe and convenient facilities for bicyclists and pedestrians - including people with disabilities - into all new highway construction and reconstruction projects.

In addition to incorporating detailed design information - such as the installation of safe and accessible crossing facilities for pedestrians, or intersections that are safe and convenient for bicyclists - these manuals should also be amended to provide flexibility to the highway designer to develop facilities that are in keeping with

transportation needs, accessibility, community values, and aesthetics. For example, the *Portland Pedestrian Design Guide* (June 1998) applies to every project that is designed and built in the city, but the Guide notes that:

Site conditions and circumstances often make applying a specific solution difficult. *The Pedestrian Design Guide* should reduce the need for ad hoc decision by providing a published set of guidelines that are applicable to most situations. Throughout the guidelines, however, care has been taken to provide flexibility to the designer so she or he can tailor the standards to unique circumstances. Even when the specific guideline cannot be met, the designer should attempt to find the solution that best meets the pedestrian design principles described [on the previous page].

In the interim, these manuals may be supplemented by stand-alone bicycle and pedestrian facility manuals that provide detailed design information addressing on-street bicycle facilities, fully accessible sidewalks, crosswalks, and shared use paths, and other improvements.

Examples: Florida DOT has integrated bicycle and pedestrian facility design information into its standard highway design manuals and New Jersey DOT is in the process of doing so. Many States and localities have developed their

own bicycle and pedestrian facility design manuals, some of which are listed in the final section of this document.

Applying Engineering Judgement to Roadway Design

In rewriting manuals and developing standards for the accommodation of bicyclists and pedestrians, there is a temptation to adopt “typical sections” that are applied to roadways without regard to travel speeds, lane widths, vehicle mix, adjacent land uses, traffic volumes and other critical factors. This approach can lead to inadequate provision on major roads (e.g. a four foot bike lane or four foot sidewalk on a six lane high-speed urban arterial) and the over-design of local and neighborhood streets (e.g. striping bike lanes on low volume residential roads), and leaves little room for engineering judgment.

After adopting the policy that bicyclists and pedestrians (including people with disabilities) will be fully integrated into the transportation system, state and local governments should encourage engineering judgment in the application of the range of available treatments.

For example:

- ◆ Collector and arterial streets shall typically have a minimum of a four foot wide striped bicycle lane, however wider lanes are often necessary in locations with parking, curb and gutter, heavier and/or faster traffic.

- ◆ Collector and arterial streets shall typically have a minimum of a five foot sidewalk on both sides of the street. However wider sidewalks and landscaped buffers are necessary in locations with higher pedestrian or traffic volumes, and/or higher vehicle speeds. At intersections, sidewalks may need to be wider to accommodate accessible curb ramps.
- ◆ Rural arterials shall typically have a minimum of a four foot paved shoulder. However wider shoulders (or marked bike lanes) and accessible sidewalks and crosswalks are necessary within rural communities and where traffic volumes and speeds increase.

This approach also allows the highway engineer to achieve the performance goal of providing safe, convenient, and comfortable travel for bicyclists and pedestrians by other means. For example, if it would be inappropriate to add width to an existing roadway to stripe a bike lane or widen a sidewalk, traffic calming measures can be employed to reduce motor vehicle speeds to levels more compatible with bicycling and walking.

Actions

The United States Department of Transportation encourages states, local governments, professional associations, other government agencies and community organizations to adopt this *policy statement*

as an indication of their commitment to accommodating bicyclists and pedestrians as an integral element of the transportation system. By so doing, the organization or agency should explicitly adopt one, all, or a combination of the various approaches described above AND should be committed to taking some or all of the actions listed below as appropriate for their situation.

- a) Define the exceptional circumstances in which facilities for bicyclists and pedestrians will NOT be required in all transportation projects.
- b) Adopt new manuals, or amend existing manuals, covering the geometric design of streets, the development of roadside safety facilities, and design of bridges and their approaches so that they comprehensively address the development of bicycle and pedestrian facilities as an integral element of the design of all new and reconstructed roadways.
- c) Adopt stand-alone bicycle and pedestrian facility design manuals as an interim step towards the adoption of manuals covering the design of streets and highways.

- d) Initiate an intensive retooling and reeducation of transportation planners and engineers to make them conversant with the new information required to accommodate bicyclists and pedestrians. Training should be made available for, if not required of, agency traffic engineers and consultants who perform work in this field.

Conclusion

There is no question that conditions for bicycling and walking need to be improved in every community in the United States; it is no longer acceptable that 6,000 bicyclists and pedestrians are killed in traffic every year, that people with disabilities cannot travel without encountering barriers, and that two desirable and efficient modes of travel have been made difficult and uncomfortable.

Every transportation agency has the responsibility and the opportunity to make a difference to the bicycle-friendliness and walkability of our communities. The design information to accommodate bicyclists and pedestrians is available, as is the funding. The US DOT is committed to doing all it can to improve conditions for bicycling and walking and to make them safer ways to travel.

Further Information and Resources

General Design Resources

A Policy on Geometric Design of Highways and Streets, 1994 (The Green Book). American Association of State Highway and Transportation Officials (AASHTO), P.O. Box 96716, Washington, DC, 20090-6716, Phone: (888) 227-4860.

Highway Capacity Manual, Special Report 209, 1994. Transportation Research Board, Box 289, Washington, DC 20055, Phone: (202) 334-3214. Next Edition: FHWA Research Program project has identified changes to HCM related to bicycle and pedestrian design.

Manual on Uniform Traffic Control Devices, 1988. Federal Highway Administration (FHWA), Superintendent of Documents. P.O. Box 371954, Pittsburgh, PA 15250-7954. Next Edition: 2000, will incorporate changes to Part IX that will soon be subject of Notice of Proposed Rulemaking.

Flexibility in Highway Design, 1997. FHWA. HEP 30, 400-7th St. SW, Washington, DC 20590.

Pedestrian Facility Design Resources

Design and Safety of Pedestrian Facilities, A Recommended Practice, 1998. Institute of Transportation Engineers, 525 School Street, S.W., Suite 410, Washington, DC 20024-2729, Phone: (202) 554-8050.

Pedestrian Compatible Roadways-Planning and Design Guidelines, 1995. Bicycle and Pedestrian Transportation Master Plan, Bicycle and Pedestrian Advocate, New Jersey Department of Transportation, 1035 Parkway Avenue, Trenton, NJ 08625, Phone: (609) 530-4578.

Improving Pedestrian Access to Transit - An Advocacy Handbook, 1998. Federal Transit Administration WalkBoston. NTIS, 5285 Port Royal Road, Springfield, VA 22161.

Planning and Implementing Pedestrian Facilities in Suburban and Developing Rural Areas, Report No. 294A., Transportation Research Board, Box 289, Washington, DC 20055, Phone: (202) 334-3214.

Pedestrian Facilities Guidebook, 1997. Washington State Department of Transportation, Bicycle and Pedestrian Program, P.O. Box 47393, Olympia, WA 98504.

Portland Pedestrian Design Guide, 1998. Portland Pedestrian Program, 1120 SW Fifth Ave., Room 802; Portland, OR 97210. (503) 823-7004.

Implementing Pedestrian Improvements at the Local Level, 1999. FHWA, HSR 20, 6300 Georgetown Pike, McLean, VA.

AASHTO Guide to the Development of Pedestrian Facilities, 2000. AASHTO. (Currently under discussion) Bicycle Facility Design Resources.

Guide for the Development of Bicycle Facilities, 1999., American Association of State Highway and Transportation Officials (AASHTO), P.O. Box 96716, Washington, DC, 20090-6716, Phone: (888) 227-4860.

Implementing Bicycle Improvements at the Local Level, (I 998), FHWA, HSR 20, 6300 Georgetown Pike, McLean, VA.

Bicycle Facility Design Standards, 1998. City of Philadelphia Streets Department, 1401 JFK Boulevard, Philadelphia, PA 19103.

Selecting Roadway Design Treatments to Accommodate Bicyclists, 1993. FHWA, R&T Report Center, 9701 Philadelphia Ct., Unit Q; Lanham, MD 20706. (301) 577-1421 (fax only).

North Carolina Bicycle Facilities Planning and Design Guidelines, 1994. North Carolina DOT, P.O. Box 25201, Raleigh, NC 27611. (919) 733-2804.

Bicycle Facility Planning, 1995. Pinosof & Musser. American Planning Association, Planning Advisory Service Report # 459. American Planning Association, 122 S. Michigan Ave., Suite 1600; Chicago, IL 60603.

Florida Bicycle Facilities Planning and Design Manual, 1994. Florida DOT, Pedestrian and Bicycle Safety Office, 605 Suwannee Street, Tallahassee, FL 32399.

Evaluation of Shared-use Facilities for Bicycles and Motor Vehicles, 1996. Florida DOT, Pedestrian and Bicycle Safety Office, 605 Suwannee Street, Tallahassee, FL 32399.

Bicycle and Pedestrian Design Resources

Oregon Bicycle and Pedestrian Plan, 1995. Oregon Department of Transportation, Bicycle and Pedestrian Program, Room 210, Transportation Building, Salem, OR 97310, Phone: (503) 986-3555.

Improving Conditions for Bicyclists and Pedestrians, A Best Practices Report, 1998. FHWA, HEP 10, 400 Seventh Street SW, Washington, DC 20590.

Traffic Calming Design Resources

Traffic Calming: State of the Practice, 1999. Institute of Transportation Engineers, 525 School Street, SW, Suite 410; Washington, DC 20024.

Florida Department of Transportation's Roundabout Guide. Florida Department of Transportation, 605 Suwannee St., MS-82, Tallahassee, FL 32399-0450.

National Bicycling and Walking Study. Case Study # 19, Traffic Calming and Auto-Restricted Zones and other Traffic Management Techniques-Their Effects on Bicycling and Pedestrians, Federal Highway Administration (FHWA).

Traffic Calming (1995), American Planning Association, 122 South Michigan Avenue, Chicago, IL 60603.

Traditional Neighborhood Development Street Design Guidelines, 1997. Proposed Recommended Practice, Institute of Transportation Engineers, 525 School Street, SW, Suite 410; Washington, DC 20024.

Making Streets that Work, City of Seattle, 600 Fourth Ave., 12th Floor, Seattle, WA 98104-1873, Phone: (206) 684-4000, Fax: (206) 684-5360.

Traffic Control Manual for In-Street Work, 1994. Seattle Engineering Department, City of Seattle, 600 4th Avenue, Seattle, WA 98104-6967, Phone: (206) 684-5108.

ADA-related Design Resources

Accessible Pedestrian Signals, 1998. U.S. Access Board 1331 F Street NW, Suite 1000; Washington, DC 20004. (800) 872-2253.

Accessible Rights of Way. A Design Manual, 1999. U.S. Access Board, 1331 F Street NW, Suite 1000; Washington, DC 20004. (800) 872-2253.

Designing Sidewalks and Trails for Access, Part One, 1999. FHWA, H EPH-30, 400-7th St. SW, Washington, DC 20590.

ADA Accessibility Guidelines for Buildings and Facilities, 1998 (ADAAG). U.S. Access Board,

1331 F Street NW, Suite 1000; Washington, DC 20004. (800) 872-2253.

Uniform Federal Accessibility Standards, 1984 (UFAS), available from the U.S. Access Board, 1331 F Street NW, Suite 1000; Washington, DC 20004. (800) 872-2253.

Universal Access to Outdoor Recreation: A Design Guide, 1993. PLAE, Inc., MIG Communications, 1802 Fifth Street, Berkeley, CA 94710. (510) 845-0953.

Recommended Street Design Guidelines for People Who Are Blind or Visually Impaired. American Council of the Blind, 1155 15th Street NW, Suite 720; Washington, DC 20005. (202) 467-5081.

Trail Design Resources

Trails for the 21st Century, 1993. Rails to Trails Conservancy, 1100 17th Street NW, 1st Floor, Washington DC 20036. (202) 331-9696.

Greenways: A Guide to Planning, Design, and Development, 1993. The Conservation Fund. Island Press, 1718 Connecticut Ave. NW, Suite 300; Washington, DC 20009.

Trail Intersection Design Guidelines, 1996. Florida Department of Transportation, 605 Suwannee St., MS-82, Tallahassee, FL 32399-0450.

Appendix M: Proposed Guidelines, WisDOT Sidewalk Construction Along State Trunk Highways

The following are factors that should be considered in the determination of the need for pedestrian facilities along State Trunk Highways (STH):

- ◆ development density (present and expected in the near future) of the area surrounding the STH segment;
- ◆ the type (residential, commercial, industrial, mixed use) and pattern of land use or development adjacent to the STH segment;
- ◆ opportunities to connect pedestrian systems on local streets to those along STHs;
- ◆ the presence of pedestrian traffic generators, abutting schools, retirement housing facilities, parks, recreational areas and areas of commercial development;
- ◆ connecting transit stops and facilities along STHs to local pedestrian systems;
- ◆ sidewalks may be built along some rural cross-sections (no curb and gutter) where a strong need to facilitate pedestrian traffic can be demonstrated such as a worn path in the grass leading to a school; and
- ◆ providing for the pedestrian-related needs of specific pedestrian groups such as pedestrian commuters, people who are disabled, children, and the elderly.

In all cases, the exercise of good planning and engineering judgment, as well as input from the local community, is necessary to ensure that roadway plans and designs consider the need for pedestrian facilities and how best to provide for them.

Local Maintenance Required

In all cases, signed agreements with local officials will be required so that sidewalk maintenance needs (including snow removal and repair of damaged and deteriorated sidewalk panels) will remain the responsibility of the local municipality.

Appendix N: WisDOT Guidelines for Sidewalk Placement

Table A.10: WisDOT Guidelines for Sidewalk Placement		
Land-Use/Dwelling Unit/ Functional Classification	New Urban and Suburban Streets	Existing Urban and Suburban Streets
Commercial & Industrial (All Streets)	Both Sides.	Both sides. Every effort should be made to add sidewalks where they do not exist and complete missing links.
Residential (Arterials)	Both Sides.	Both Sides.
Residential (Collectors)	Both Sides.	Multifamily - both sides. Single family dwellings - prefer both sides; require at least one side.
Residential (Local Road) More than 4 units/acre	Both Sides.	Prefer both sides; require at least one side
Residential (Local Road), 1 to 4 units/acre	Prefer both sides; at least one side required.	One side preferred, at least 4 feet.
Residential (Local Road), Fewer than 1 units/acre	One side preferred, shoulder on both sides.	At least 4 feet shoulder on both sides required.

Notes for additional consideration:

- 1) Any local street within two blocks of a school site that would be on a walking route to school - sidewalk required on at least one side.
- 2) Sidewalks may be omitted on one side of new streets where that side clearly cannot be developed and where there are not existing or anticipated uses that would generate pedestrian trips on that side.
- 3) Where there are service roads, the sidewalk adjacent to the main road may be eliminated and replaced by a sidewalk adjacent to the service road on the side away from the main road.
- 4) For rural roads not likely to serve development, a shoulder at least 4 feet in width, preferably 8 feet on primary highways should be provided. Surface material should provide a stable, mud-free walking surface.

Appendix O: Links to On-line Pedestrian Resources

Federal Websites

Bureau of Transportation Statistics (BTS) - <http://www.bts.gov> is an operating administration of the U.S. Department of Transportation (DOT). BTS compiles, analyzes, and makes accessible information on the nation's transportation systems; collects information on intermodal transportation and other areas as needed; and works to enhance the quality and effectiveness of government statistics.

Federal Highway Administration- <http://www.fhwa.dot.gov/tea21> provides comprehensive information relating to the most current federal legislation regarding all transportation in the nation, as well as guidelines for promotion of pedestrian friendly accommodations.

The Federal Highway Administration (FHWA) joined forces with the National Highway Traffic Safety Administration (NHTSA) and developed the "Pedestrian Safety Roadshow (PSRS)" which can be found at <http://www.fhwa.dot.gov/safety/roadshow/walk/tools.html>. The purpose of the Roadshow is to assist communities in developing their own approach to identifying and solving the problems that affect pedestrian safety and walkability.

The Federal Highway Administration's Bicycle and Pedestrian Program Office at <http://www.fhwa.dot.gov/environment/bikeped> is responsible for promoting bicycle and pedestrian transportation accessibility, use, and safety. This site provides links to many pedestrian related sites on the web.

U.S. Access Board - <http://www.access-board.gov> is an independent Federal agency devoted to accessibility for people with disabilities. It operates with about 30 staff and a governing board of representatives from federal departments and public members appointed by the President. Key responsibilities of the Board include:

- ◆ developing and maintaining accessibility requirements for the built environment, transit vehicles, telecommunications equipment, and for electronic and information technology
- ◆ providing technical assistance and training on these guidelines and standards
- ◆ enforcing accessibility standards for federally funded facilities

Disclaimer: All external hyperlinks are provided for your information and for the benefit of the general public. WisDOT does not testify, sponsor or endorse the accuracy of the information provided on externally linked pages.

Pedestrian Interest Groups

Dairyland Walkers - <http://www.execpc.com/~rjspark/ava/madison.html> is a nonprofit organization that promotes walking and other volkssports of biking, swimming, and cross-country skiing. Volkssport is a German word that literally means “sport of the people.” As an affiliate of the American Volkssport Association, the Dairyland Walkers sponsors year-round and special event walks.

America Walks - <http://americawalks.org> is a national coalition of walking advocacy groups dedicated to promoting livable communities where people walk.

Links to Other State DOTs

The Oregon Dept. of Trans. - <http://www.odot.state.or.us/index.htm> is one of only a few DOTs nationwide that has developed a separate Pedestrian Plan. The Department’s website includes useful and interesting links relevant to pedestrian issues and information.

The Washington Dept. of Trans. - <http://www.wsdot.wa.gov> offers a resource of information pertaining to a variety of issues including a comprehensive base of pedestrian related information and web-links.

General Interest

Perils for Pedestrians - <http://www.pedestrians.org> is a monthly cable TV series promoting safety. The program interviews advocates and government planners about problems such as missing sidewalks and crosswalks, dangerous intersections, speeding traffic, and obstacles to wheelchair users and people with disabilities.

Partnership for a Walkable America - <http://www.nsc.org/walkable.htm> is a new alliance of public and private organizations, and individuals who are committed to promoting the changes needed to make America more walkable.

The Pedestrian and Bicycle Info. Center <http://www.walkinginfo.org> provides information and resources to create safe places for bicycling and walking and to promote healthy life-styles and neighborhoods through increased bicycling and walking.

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