

Chapter 6

Making the Region an Even Better Place to Bicycle: Goals and Objectives and Recommended Actions

Previous chapters of this plan presented information on current bicycle facilities, programs, and policies, and available information on existing levels of bicycling. This information demonstrated that residents of the Madison area and the rest of Dane County enjoy an excellent bicycling environment overall. The Madison area in particular has an extensive network of bicycle facilities for commuter bicycling. Numerous bicycle trails and paths in the county provide recreational bicycling opportunities. Reported bicycle crashes have dropped significantly since the 1980s at the same time that bicycling levels are increasing. All levels of government have policies that support bicycling, and public and private sector participation in bicycle advocacy, safety education, and club activities is high.

While the bicycling environment is good overall, there is plenty of room for improvement. Major gaps in the Madison area and Dane County bicycle facility networks exist. Many newer neighborhoods, schools, and employment/commercial centers have been located and/or designed without consideration of safe bicyclist access. Adult participation in bicycle education and training programs is low, and the attitude of the general public towards bicyclists and their understanding of bicyclists' rights needs to be improved.

Section A of this chapter presents the plan vision, goals, and objectives for continuing to improve the bicycling environment. The vision statement presents the “ideal” bicycling environment that the region is striving to achieve. The goal statements describe three broad elements needed to move the region closer to the vision—improving facilities, increasing bicycling levels, and improving safety. The objectives lay out in much more detail the goals or ends toward which the plan is directed.

Section B outlines specific actions that are recommended for achieving the goals and objectives. For each recommended action, the party or parties responsible for implementing the action are identified. Both the objectives and recommended actions are grouped according to the following categories: (1) bicycle facilities planning and

development; (2) bicycle facilities maintenance; (3) bicycle parking and other end-of-trip facilities; (4) education and encouragement; and (5) enforcement.

A. Vision, Goals, and Objectives

Bicycling Vision for the Region

An interconnected bicycle way network with supportive development patterns will provide people with safe, convenient, and enjoyable access and mobility throughout the county. Bicycling will be encouraged and will become a common and even safer mode of transportation for everyday trips, contributing to the quality of life in Dane County communities and the health, safety, and welfare of all residents.

Bicycle Plan Goals

1. Provide for the safe, convenient and enjoyable travel by bicyclists in the Madison area and throughout the county.
2. Increase levels of bicycling throughout Dane County, doubling the number of trips made by bicycles.
3. Reduce crashes involving bicyclists and motor vehicles by at least 10%.

Bicycle Plan Objectives

Bicycle Facilities Planning and Development

System Level:

1. Complete a continuous system of bicycle ways for the central urban area with connections to other communities throughout the county. The bicycle way network should minimize delay, maximize safety, and provide reasonably direct routes serving bicyclists' needs for travel within and between neighborhoods and to employment centers, commercial areas, schools, institutions, parks and open space areas, and other important destinations.

2. Develop a countywide bicycle way system, which provides reasonably direct connections on suitable roadways and off-street paths between cities and villages and to major employment and shopping centers, schools, parks and open space areas, and other important destinations.
3. Support the development of continuous bicycle way systems within cities and villages in the county, with connections to the countywide bicycle way system. The bicycle way networks should provide safe and direct access within and between neighborhoods and to schools, employment and shopping centers, parks and open space areas, and other important destinations.

Bicycle Transportation Planning – General:

4. Fully integrate the consideration of bicyclists’ needs into the community and neighborhood planning and design processes and local and state agencies’ planning design, operation and evaluation of transportation programs and projects.
5. Consider the needs of all bicyclists—experienced and novice, commuter and recreational—when planning and designing bicycle way systems and facilities.
6. Continue to improve the level of localized data available on existing and potential future bicycling levels, including establishment of accurate baseline data for the Madison area and Dane County, in order to assist in prioritizing facility improvements and assess progress towards bicycle transportation goals.

Design and Implementation of Specific Bicycle Facility Improvements:

7. Fully integrate the use of a consistent set of bicycle facility design standards throughout the county, based on the 1999 American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities and subsequent revisions and the bicycle facility design guidelines included in Appendix A of this plan.
8. Provide on-street bicycle facilities on arterial and collector roadways that are safe, functional, and

appropriate, given the street classification and cross-section, traffic volumes and speeds, cost, and other factors.

9. Seek to provide a higher level of service (LOS C or better where feasible) for bicyclists on roadways that are designated as bicycle routes.
10. Create and improve continuous bicycle through routes on local connector streets that provide mobility alternatives in addition to use of major arterial roadways.
11. Eliminate bicycling hazards and barriers.
12. Accommodate the needs of bicyclists in the design of bridges and under/overpasses, street intersections, railroad crossings, and traffic control devices.
13. Provide multi-use paths, where feasible and appropriate, when planning for and developing parks, other recreational and open space areas, shorelands, drainage ways, greenways, railroad rights-of-way, utility corridors (e.g., sewer and gas lines), and other linear corridors, especially those that serve both transportation and recreational uses.
14. Manage traffic on local streets through the use of “traffic calming” devices, where feasible and appropriate, without impeding bicyclists’ mobility and accessibility.
15. Provide for appropriate access control on arterial roadways in order to increase the function and safety of these roadways for both motorists and bicyclists, while at the same time ensuring adequate access and crossing opportunities for bicyclists and pedestrians.

Funding:

16. Make efficient use of all available funding sources, and seek additional funding sources for bicycle-related projects.
17. Fund bicycle facility improvements in conjunction with roadway projects as a routine part of the cost of the project.

Bicycle Facilities Maintenance

1. Maintain roadways, bikeways, and other bicycle-related facilities to a reasonable level of safety and rideability, giving consideration to pavement surface, clearance conditions in all seasons, traffic control devices, and parking facilities.
2. Address the needs of bicyclists during roadway construction or resurfacing projects.
3. Design and build new roadways and bikeways so as to reduce potential long-term maintenance problems.
4. Continue to search for new methods and procedures to more efficiently and effectively maintain bicycle facilities.

Support Facilities and Transit Connections

1. Provide an adequate number of safe, secure, appropriately designed, and conveniently located bicycle parking facilities in business districts and other public areas where needed (e.g., at public institutions, parks, park-and-ride lots, and bus transfer points).
2. Ensure the provision of adequate short-term and long-term bicycle parking (at least a portion of which should be covered) in employment centers, commercial areas and multi-family residential developments.
3. Support the provision of showers and changing facilities for commuting bicyclists by developers, building owners, and employers.
4. Improve bicycle connections and accessibility to the transit system.
5. Provide adequate rest stop facilities, information, signing, and lighting along shared-use paths and recreational bicycle trails.

Education, Encouragement, and Public Information

1. Promote bicycling for transportation as well as recreation, particularly for trips to school, work, shopping, and special events.



2. Increase public awareness of bicycling facilities, resources, and programs.
3. Provide and promote safety education and encouragement programs taught by qualified instructors and targeted to youth and adult bicyclists and motorists.
4. Coordinate the bicycle safety programs being conducted by various state and local agencies, public institutions, health care providers, and organizations.
5. Increase the participation of schools, college students, and adult bicyclists in safety education programs and training courses.
6. Increase public awareness of the benefits of bicycling, and improve public attitudes towards bicyclists as legitimate road users.
7. Improve the attitude and behavior of both motorists and bicyclists with respect to compliance with traffic laws, especially the responsibilities of each toward the other.
8. Educate law enforcement personnel on bicycle safety, including in particular information on those traffic law violations by bicyclists and motorists that are most likely to lead to crashes.
9. Support the provision of incentives for bicycling by public agencies, private employers, and other entities.
10. Expand education and training programs and opportunities on bicycle transportation for land use and transportation planning and design professionals, developers, public officials, and others.

11. Encourage and seriously consider the input of bicyclists, bicycle organizations, and the general public in bicycle facility and program planning and development.
12. Improve the level of information on bicycle crashes, including data on exposure, in order to address the most serious safety problems through education, enforcement, and facility improvements.

Traffic and Bicycle Law Enforcement and Registration

1. Consistently enforce traffic laws that enhance bicyclist safety by citing violations (particularly those most likely to lead to crashes) by both bicyclists and motor vehicle operators.
2. Increase participation in and compliance with community bicycle registration programs.
3. Support state legislation enhancing the safety of bicyclists, including uniformity of local bicycle ordinances.

B. Recommended Actions

Bicycle Facilities Planning and Development
Bicycle Transportation Planning - General

1. Assist cities, villages, and towns in the county in the development of bicycle transportation plans and projects as part of their community planning efforts. [Responsible parties: WisDOT, Dane County Dept. of Planning and Development, Madison Area MPO]
2. Adopt street design standards and bicycle/pedestrian facility requirements in municipal subdivision and planned development ordinances that ensure provision of a direct and continuous bicycle/pedestrian “grid” of streets and paved paths. [Responsible parties: local jurisdictions]

Examples of the types of provisions that should be considered include:

- Limiting the number of cul-de-sacs;
- Requiring paved paths connecting any cul-de-sacs to other streets, unless topography or other considerations make it infeasible;

- Requiring paved paths (not just pedestrian walkways) through long blocks;
 - Requiring that a certain percentage of street segments interconnect;
 - Requiring the dedication of an easement for or construction of bicycle/pedestrian paths to parks, schools, stores, etc. where necessary to provide convenient connections from planned residential areas; and
 - Encouraging shorter blocks and possibly reducing the maximum length of blocks (in most communities now 1,200 feet).
3. Include access management provisions in subdivision and zoning ordinances to reduce the number of driveways through consolidation and requiring access of businesses along arterial roads from intersecting local streets rather than directly from the arterial road, where possible. [Responsible party: local jurisdictions]
 4. Provide convenient bicycle/pedestrian access from residential neighborhoods to new commercial areas and employment centers, and convenient bicycle/pedestrian circulation within such centers. Identify opportunities to improve access and circulation within existing centers (e.g., Old Sauk Trails Office Park, UW Research Park) through construction of multi-use paths that provide short-cuts between origins and destinations. [Responsible parties: local jurisdictions]
 5. Adopt park/open space dedication requirements in subdivision and planned development ordinances that include specific reference(s) to bikeways, and allow fees to be used for construction of multi-use paths. Also, consider requiring construction of planned bikeways on the property to be subdivided. [Responsible parties: local jurisdictions]
 6. Consider the importance of the recommended bicycle routes into and out of the Madison Urban Area in land use and transportation planning and open space preservation efforts, and in implementation of the “Rural Scenic Byways” program recommended in the County Executive’s *Design Dane!* report. [Responsible parties: local jurisdictions, Dane County]

The identified bicycle routes into and out of the Madison urban area are, in most cases, the only roadways suitable for bicycling within the particular travel corridor. They are therefore very important for longer distance commuter and recreational bicycling. Efforts should be made to limit future increases in motor vehicle traffic volumes on these roadways, to the extent feasible. Where unavoidable, plans should be made to provide alternative suitable routes in these corridors.

7. Collect bicycle usage data through regional transportation surveys and bicycle user surveys to provide baseline information, measure progress in achieving plan goals, and help prioritize bicycle projects and programs.
[Responsible parties: WisDOT, Madison Area MPO, UW-Madison, City of Madison Traffic Engineering Division, local jurisdictions]

Bicycle trip information could be incorporated into planned future regional origin-destination surveys, “piggy-backed” onto the National Personal Transportation Survey (NPTS), or conducted as a separate survey. If an independent survey was done, information could be gathered on the attitudes and concerns of bicyclists as well as bicycling levels, trip purposes, and demographic information of bicyclists.

8. Continue to improve the City of Madison bicycle traffic count program to justify and evaluate bicycle facility projects and aid bicycle transportation planning in general. The UW and other jurisdictions should consider developing similar programs, as bicycle loop detectors with counters are installed.
[Responsible parties: City of Madison Traffic Engineering Division, UW-Madison, other local jurisdictions]

The Madison bicycle count program might be expanded to include more streets, specific corridors, and/or an isthmus screenline analysis, such as the one done for motor vehicle traffic. All of the bicycle count program data should be included in the division’s annual Traffic Volume Reports. The city has increased the number of bicycle paths with loop detectors that record bicycle volumes, but still needs to add this information to its reports.

9. Improve bicycle transportation forecasting techniques to aid in planning and prioritizing bicycle facility improvements.
[Responsible parties: Madison Area MPO and local jurisdictions]

New more sophisticated methods of forecasting future bicycle use are being developed. For example, a new procedure being developed, called the Bicycle Corridor Profile Method, attempts to predict the number of people that would shift from auto to bicycle travel in a corridor if a bicycle facility were built. The procedure uses a transportation “logit” mode-choice travel model format.

10. Officially map planned future multi-use paths and trails and sufficient road right-of-way for bike lanes, where necessary and feasible.
[Responsible parties: Dane County and local jurisdictions]

11. Incorporate recommended multi-use paths and trails in this plan into Wisconsin DNR, county, and local parks and open space plans, where appropriate.
[Responsible parties: Wisconsin DNR, Dane County Parks Department, local parks departments]

12. Continue to coordinate with other agencies to ensure appropriate bicycle connections are planned, constructed, and maintained.
[Responsible parties: WisDOT, WisDNR, Madison Area MPO, Dane County, UW-Madison, local jurisdictions]

13. Schools should work with local community planning and engineering staff to develop plans for safe bicycle access by students, and educate parents and students on such plans. Where there are barriers to safe access from some areas, schools should work with the school district and the local community to address the problem(s).
[Responsible parties: school districts, schools]

Some schools have discouraged students from bicycling to school, because of safety concerns due to traffic congestion in the vicinity of the school grounds. Schools should instead work with parents, students, and the local community to improve bicyclist safety through a “Four E” program of education/training, encouragement, enforcement, and engineering (i.e., facility improvements). This would be particularly helpful at schools that have limited parking and/or are trying to discourage students from driving to school or parents driving their kids to school.

Design and Implementation of Specific Bicycle Facility Improvements:

14. Include appropriate provisions for bicyclists and pedestrians in the design of transportation facility improvements in accordance with this plan's objectives and the FHWA's Joint Statement on Integrating Bicycling and Walking into Transportation Infrastructure.
[Responsible parties: WisDOT, Dane County, UW-Madison, local jurisdictions]

The only exceptions to provision of bicycle and pedestrian improvements should be projects on those roadways where bicycles are prohibited and those exceptional circumstances outlined in the FHWA Joint Statement (i.e., would be contrary to public safety, the cost is "excessively disproportionate" to probable use, lack of need).

15. Establish a policy to use AASHTO's Guide for Development of Bicycle Facilities (1999), and subsequent revisions, and the guidelines in Appendix A of this plan as a guide for the design of new or reconstructed bicycle facilities, while retaining the flexibility to use alternative approaches that have been successfully used by other agencies.
[Responsible parties: WisDOT, Dane County Highway and Transportation Dept., UW-Madison, local public works/engineering departments]
16. WisDOT and the Dane County Highway and Transportation Department should develop and adopt more detailed policies and/or design guidelines related to the provision of wide paved shoulders on rural roadways when they are reconstructed or resurfaced. The policy should address the circumstances under which a paved shoulder width greater than the AASTHO minimum recommended width of 4 feet should be provided, if feasible.
[Responsible parties: Dane County Highway and Transportation Department, WisDOT]

An extra wide paved shoulder should be considered where two or more of the following factors are present:

- Higher bicycle usage is expected;

- Motor vehicle speeds exceed 50 mph;
- Motor vehicle traffic is higher than a threshold ADT (e.g., 5,000);
- The percentage of trucks, buses, and recreational vehicles is high;
- The roadway section has a steep grade; and/or
- Obstructions exist at the right side of the roadway.

In addition to addressing the preferred paved shoulder width under different roadway conditions, the WisDOT design guidelines should address the possibility of reducing the travel lane width to 11 feet if needed to provide a minimum 4-foot shoulder. The WisDOT design guidelines should address the provision of wide paved shoulders on town and county as well as state roadways.

17. WisDOT should adopt more detailed policies and specific procedures (including a bicycle and pedestrian facility scoping sheet or checklist) related to the provision of bicycle accommodations on federally and state funded highway projects.
[Responsible party: WisDOT]

Examples of policies and procedures include:

- Requiring consideration of bicycle origins and destinations in the early planning stages of projects;
- Adding guidelines for determining bicycle travel demand;
- Identifying situations where bicycle accommodations should be incorporated into a project, such as the following:
 - the improvement is in a plan or the roadway is on a recommended bike route;
 - the route provides primary access to employment center, park, etc.;
 - the route provides unique access across barrier;
 - the roadway project negatively affects the transportation or recreational utility of a path/trail (i.e., severs path, will result in increase in ADT prohibiting safe crossings at-grade);

- Developing a scoping sheet or checklist for project reports to assist WisDOT and local engineers in determining the appropriate level and type of bicyclist accommodation, covering issues such as bicycle trip generators, consideration of bicycle travel, and public coordination.

18. Carefully consider the need for free flow right-turn lanes in urban areas, particularly at intersections with significant pedestrian and bicyclist activity. Where found to be unnecessary for traffic flow purposes, use a standard intersection design. Eliminate existing unnecessary free flow right-turn lanes as part of street reconstruction.

[Responsible parties: local jurisdictions, Dane County, WisDOT]

Free flow right-turn lanes are most problematic for pedestrians and bicyclists when turning motor vehicles have a dedicated lane to move into and do not have to yield to cross traffic and the street the vehicle is turning onto has a higher speed limit. The *Pedestrian Transportation Plan for Madison, Wisconsin* also generally recommends against free flow turn lanes in areas of high pedestrian activity.

19. Identify exiting street intersections that are difficult for bicyclists and pedestrians to cross, and prioritize improvements (e.g., markings, traffic signal adjustments, addition of bike lanes, etc.) to those intersections where bicycle routes or paths cross and others with a high level of current or anticipated bicyclist and pedestrian activity.

[Responsible parties: local jurisdictions, Dane County, WisDOT]

Identification of all of the specific problem intersections for bicyclists in the Madison Urban Area was beyond the scope of this plan. However, making improvements to intersections to improve bicyclists' ability to safely move through them is very important. Difficult intersections create barriers to bicyclist mobility. In addition, the majority of bicycle-motor vehicle crashes in urban areas occur at intersections.

20. Consider the use of innovative design treatments (e.g., different textured or colored bike lanes, advance bicycle stop lines at intersections, bike path crossing markings) for bicyclists, where appropriate.

[Responsible parties: Dane County Highway and Transportation Dept., UW-Madison, local public works/engineering departments]

There are a number of available resources for ideas and specific designs for roadways and intersections that better accommodate bicyclists and pedestrians. One of them is the Federal Highway Administration's *Flexibility in Highway Design* Report.

21. Consider assigning an individual within an agency or department the responsibility for coordinating the planning and design of bicycle and pedestrian facility projects and bicycle/pedestrian facilities to be included as part of larger roadway projects.

[Responsible parties: Dane County Highway and Transportation Department, UW-Madison, local jurisdictions]

22. The Dane County Highway and Transportation Department should review project design plans for consistency with the guidelines outlined in this plan and AASHTO's guidelines when funding projects through the "Bicycle Paths" program.

[Responsible party: Dane County Highway and Transportation Department]

23. Local jurisdictions should consider developing and using bicycle project selection criteria to prioritize proposed projects.

[Responsible parties: local jurisdictions]

24. Local governments should consider developing signed bicycle route systems with appropriate connections to route systems of neighboring jurisdictions and the county. Consideration should be given to providing destination information along the route system, where helpful, and/or adopting a number system to improve the system's utility for bicyclists.

[Responsible parties: Local public works/engineering departments]

The primary value of developing a signed bicycle route system is to provide directional assistance. Because of this, the Manual on Uniform Traffic Control Devices (MUTCD) recommends use of destination plaques as well as arrows. Bicycle routes should be designed to indicate routes through a

community to major destinations on streets and paved paths that most bicyclists will feel comfortable using. A route system is particularly useful for pointing out short-cut paths and routes on local streets that may not be immediately obvious to a bicyclist not familiar with a particular area. For liability reasons, care should be taken to remove all hazards to bicycle travel (e.g., unsafe drainage grates and railroad crossings, pot holes, etc.) prior to signing a route.

25. Develop a signed county bicycle route system that is integrated with the Madison area route system and other planned local community route systems.
[Responsible parties: Madison Area MPO, Dane County Highway & Transportation and Planning Departments]

The signed route system should be based on the recommended routes identified in this plan. However, not all of the routes identified in the plan would necessarily be signed. Development of the signed bicycle route system should be coordinated with development of the “Rural Scenic Byways” program proposed in the County Executives *Design Dane!* Report if/when that program is implemented.

In developing the signed route system, careful consideration needs to be given to the issue of the appropriate type of signage. Use of the standard “Bike Route” sign on rural roadways may not be appropriate due to the higher traffic speeds on these roads. Use of these signs raises liability concerns, because they may be seen to encourage youth and less experienced bicyclists to ride under conditions that are unsafe for their skill level. Alternatives to use of the “Bike Route” sign include standard destination signing, directional bicycle signing using a bicycle logo, or “scenic or back roads route” signing. An advantage of the directional signing with a bicycle logo is that such signing could be combined with the standard “Bike Route” sign when the county routes enter urban areas to show the two route systems are connected.

26. Ensure that existing signals with detector loops are tuned to detect bicyclists, and implement a program to install pavement markings at signals with detector loops to instruct bicyclists where to ride to activate detection.
[Responsible parties: Local public works/engineering departments]

The City of Madison Traffic Engineering Division is implementing a pilot program to install pavement markings on streets with demand-actuated traffic signals. Bicycle markings have been placed at four intersection locations.

27. Install and maintain traffic signal detector loops in multi-use paths at signalized street crossings, where needed, and in bicycle lanes on streets with signal detection.

[Responsible parties: Local public works/engineering departments]

28. Reconstruct railroad crossings to bicycle safe standards, working with railroad companies to retrofit those railroad crossings needing improvements. Also, consider posting signs or using pavement markings at angled crossings warning bicyclists of the need to cross the railway at the proper angle.

[Responsible parties: WisDOT, Dane County, and local jurisdictions]

The Manual on Uniform Traffic Control Devices (MUTCD) does not currently include a standard sign to warn bicyclists on how to approach angled railroad crossings. The Wisconsin Department of Transportation (WisDOT) should consider adopting a standard sign for this purpose in its supplement to the MUTCD.

29. Investigate the possible creation of “bicycle boulevards” in some key corridors in the central Madison area with a high level of bicycle demand (e.g., E. Mifflin St. and Kendall Ave.).

[Responsible party: City of Madison Traffic Engineering Division]

Bicycle boulevards are created through modification of a local street to function as a through street (with few or no stop signs) while maintaining local access for motor vehicles. Traffic calming devices (e.g., traffic circles, diverters) are used to control traffic speeds and discourage through trips by motor vehicles. Traffic controls limit conflicts between motor vehicles and bicycles and give priority to through bicycle movement. Bicycle boulevards are often located on roads parallel to a major arterial roadway. Development of a pilot program to test

such a facility would be advisable, given the lack of experience in the city and elsewhere with bicycle boulevards.

30. Consider lowering posted speed limits on some roadways, particularly at the developing fringes of urban areas and on roadways identified as important bicycle routes. In urban areas, the timing of traffic signals should be set to encourage motorists to obey the speed limit.

[Responsible parties: WisDOT, Dane County, local public works/engineering departments]

The Manual on Uniform Traffic Control Devices (MUTCD) identifies the factors that should be used to determine posted speed limits on roadways. These include: road geometry (grade, alignment, sight distance, curves) and surface characteristics; 85th percentile speed (speed at which 85% of the traffic is traveling regardless of the posted speed limit) and the pace speed; and reported accident experience. The need to accommodate bicycle and pedestrian travel and the safety of residents along the roadway should be balanced with an assessment of the 85th percentile speed and other engineering factors. Any change in posted speed limit should be accompanied by law enforcement efforts. WisDOT and the Dane County Highway and Transportation Department should work cooperatively with local communities in setting and re-evaluating posted speed limits on state and county roadways.

31. Madison should consider budgeting additional funds for its Neighborhood Traffic Management Program (NTMP), and other jurisdictions should consider adopting similar programs, which include both traffic enforcement and use of traffic management or “traffic calming” devices on local streets to improve bicyclist and pedestrian safety. [Responsible parties: City of Madison Traffic Engineering Division and other local public works/engineering departments]

The City of Madison Traffic Engineering Division recently implemented a Neighborhood Traffic Management Program as part of an overall strategy to improve neighborhood livability and improve conditions on local streets for all users. The city

currently budgets \$50,000 per year for traffic management projects. Along with education and traffic enforcement efforts, use of traffic management devices can improve bicyclist and pedestrian safety. However, care must be taken to ensure such devices do not impede bicyclists’ accessibility and mobility.

Consideration should be given to assigning the right-of-way to bicyclists on heavily used bicycle paths where they cross low-volume streets. Speed humps can be used where bicycle paths cross streets to slow traffic and provide a visual cue to motorists that bicyclists have the right-of-way.

Funding:

32. Continue to fund and implement bicycle projects and programs in accordance with the objectives and facility recommendations in this plan through incorporation of such projects into state, county, and local capital improvement programs and the Transportation Improvement Program (TIP) for the Dane County Area.

[Responsible parties: WisDOT, Dane County, Madison Area MPO, local jurisdictions]

Facilities Maintenance

1. Budget for and provide regular maintenance on an established schedule of both off-street and on-street bikeway facilities, particularly sweeping and snow plowing in the winter.

[Responsible parties: WisDOT, Dane County Highway and Transportation Dept., local public works/engineering departments]

The regular maintenance schedule should include early spring sweeping and repairing of roadway surface defects in bike lanes and the outside lane of heavily traveled roadways. New bicycle facilities should be incorporated into the regular maintenance budget of the appropriate agency. Extra attention should be given to maintaining a smooth, clean surface on streets designated as bicycle routes.

2. Encourage bicyclists to report maintenance problems and other bicycling hazards to the agency responsible for maintaining the roadway and/or bicycle facility, and respond to such reports in a timely manner.

[Responsible parties: Dane County Highway and Transportation Dept., local public works/engineering departments, bicycle organizations and clubs]

Local public works departments should consider budgeting for and implementing a formal Bicycle Spot Improvement Program to fix small-scale problems (e.g., fixing cracks or potholes, sweeping, signing/stripping, signal modifications) identified by bicyclists, street maintenance crews, and others on notification forms. The City of Madison Traffic Engineering Division does have a Bicycling Improvement Request Form, available primarily on the division's Web site. However, the City of Madison does not set aside funds for small bicycle maintenance projects, and major construction projects have used up all available bicycle facility funding in recent years.

WisDOT, Dane County Highway & Transportation Department, and local public works departments that have Web sites should provide information and a form on the site for reporting bicycle facility maintenance and other improvement needs. A link could also be created from the Dane County Bicycle Community Web site to the Web pages of these departments to report problems. For those local public works departments without e-mail, a phone number could be provided.

3. Maintain the full width of bicycle paths to prevent deterioration of pavement edges.
[Responsible parties: Dane County, local jurisdictions]
4. Train and encourage street maintenance crews, traffic officers, and utility employees to report hazardous roadway conditions for bicyclists.
[Responsible parties: Dane County Highway and Transportation Dept., local public works/engineering departments]
5. Implement "Adopt-a-Bikeway" programs on selected multi-use paths and recreational trails to assist with maintenance efforts.
[Responsible parties: WisDNR, Dane County, and local jurisdictions]

WisDNR has such a program, which has been implemented on some of its trails.

6. Consider developing construction site policies or standards to ensure that bikeways are not rendered useless by ongoing construction work.

[Responsible parties: local public works/engineering departments]

Examples of topics to be covered by the policies or standards include:

- Ensuring bikeways are not used for storage of equipment, vehicles or access;
- Addressing use of cones and other construction zone signing and placement;
- Ensuring any roadway or trail surface affected be returned to its pre-construction condition or better; and
- Identification and signing of on-street detour routes, where necessary.

Parking and Other End-of-Trip Facilities

1. Incorporate bicycle-parking requirements into local zoning ordinances, and ensure enforcement of the requirements by zoning inspectors.

[Responsible parties: local jurisdictions]

The City of Madison is the only urban area community with bicycle parking requirements in its zoning ordinance. Bicycle parking ordinances should address the number and size of bicycle parking spaces and facility design (including definitions for acceptable types of racks), and should require bicycle parking to be located in a safe and convenient location.

Bicycle parking requirements should be tailored to the type of area (e.g., campus area, neighborhood vs. highway commercial district). Specifically, consideration should be given to increasing the required amount of bicycle parking in areas where the demand is anticipated to be high. In those cases where the demand for bicycle parking is anticipated to be low, flexibility should be provided to reduce the required number of bicycle racks, but still reserve space for additional bicycle parking in the future.

The following additional provisions should be considered for inclusion into a bicycle-parking ordinance:

- Requiring a certain percentage of spaces to be covered;
 - Requiring distribution of spaces at various public entrances;
 - Requiring a certain percentage of spaces to be able to accommodate bicycle trailers (e.g., at shopping centers);
 - Requiring sign(s) indicating the location of bicycle parking if it is not visible from street;
 - Allowing conversion of some auto spaces to bicycle spaces;
 - Requiring full compliance with bicycle parking requirements in non-complying, older buildings when they are rehabilitated or undergo a change in use; and
 - Allowing a reduction (e.g., up to 10%) of auto parking spaces for providing a combination of short- and long-term bicycle parking.
2. Budget for and install parking in the public right-of-way, with priority to downtown and neighborhood business districts and other areas with demonstrated need.
[Responsible parties: local jurisdictions]
 3. Ensure all public buildings have good bicycle parking facilities, and include showers and locker room facilities in new public building projects to set a good example for the private sector.
[Responsible parties: State agencies, Dane County, colleges/universities, local jurisdictions]
 4. Budget for and install a sufficient number of bicycle racks with approved designs at schools and colleges/universities.
[Responsible parties: school districts, colleges/universities, local jurisdictions]
 5. The City of Madison should review its existing ordinance requirements concerning placement of structures in the street terrace, and make changes as necessary to reduce the barriers to installing bicycle racks in the terrace as long as public safety, aesthetic, and other concerns are addressed. Other local communities should review their ordinances to determine whether the same problem exists, and make ordinance changes if necessary.
[Responsible parties: City of Madison and other local jurisdictions]
 6. Provide and promote secure, long-term bicycle parking at appropriate park-and-ride lots and bus transfer points.
[Responsible parties: WisDOT District 1, Madison Metro, local jurisdictions]
 7. Promote the program being implemented by Madison Metro to provide bicycle racks on buses.
[Responsible parties: Madison Metro, MPO Rideshare Etc. Program, bicycle shops, bicycle organizations, local jurisdictions]
 8. Encourage and provide incentives for developers, building owners, and employers to provide showers and locker room facilities for employees.
[Responsible parties: local jurisdictions]
 9. Establish a program to assist owners of existing multi-family dwelling complexes in purchasing and siting long-term bicycle parking.
[Responsible parties: local jurisdictions]
 10. Support and work with local bicycle organizations to establish permanent relationships for the provision of temporary, long-term bicycle parking at special events.
[Responsible parties: Madison Bicycle Program, local jurisdictions, business associations]
 11. Work with health and fitness clubs in or near employment centers, particularly those located downtown, to create arrangements whereby, for a small fee, bicyclists could use their shower facilities.
[Responsible parties: Madison Bicycle Program, local jurisdictions]
 12. Identify the need for and possible location of drinking fountains, restroom facilities, maps, etc. at parks located along popular bicycle routes and trails.
[Responsible parties: WisDNR, Dane County, local jurisdictions, business associations]

Consideration should be given to the provision of bike route maps and/or other destination information where multi-use paths end or other locations where way-finding information would be particularly helpful.

Education and Encouragement Programs

1. Continue to cooperatively develop, distribute, and update bicycle maps and other informational materials regarding bicycle safety/training programs and contacts.

[Responsible parties: WisDOT, Madison Area MPO, Dane County Highway and Transportation Dept., Madison Bicycle Program, local jurisdictions, employers, bicycle organizations and clubs]

Updates to the Madison Bicycling Resource Guide and Map, published in 1997, should include bicycle facility and roadway compatibility information for the surrounding communities in the Madison urban area. An updated, color version of the Dane County Bicycle Map was published in May 2000. The new map includes bicycle facility and suitability information and identifies recommended bicycle routes into and out of the Madison area. Efforts should continue to be made to make the Madison area and Dane County maps and other materials more widely available at employment sites, public buildings, bicycle shops, and other locations.

Local communities should consider developing neighborhood-scaled maps targeted for children and inexperienced bicyclists showing recommended bicycle routes to schools, parks, and other destinations, as well as other information such as the degree of difficulty of routes (beginner, intermediate, advanced) considering traffic volumes, street crossings, steep hills, and other factors.

2. Adopt governmental practices and policies that encourage employees to commute by bicycle and other alternative transportation modes.

[Responsible parties: State agencies, colleges/universities, Dane County, local jurisdictions]

Public agencies and institutions should adopt employee transportation, parking, and other policies (e.g., offering mileage allowance for business travel by bicycle, “flex time” provisions) and programs

(e.g., making bicycles available for staff use) that encourage bicycling and other alternatives to single-occupant vehicle driving. By doing so, public agencies serve as “model employers” for the private sector.

3. Continue to work with private employers to promote bicycle commuting.

[Responsible parties: Madison Area MPO Rideshare Etc. Program, Madison Bicycle Program, bicycle organizations]

Private employers have an important role to play in promoting bicycle commuting. In addition to providing good parking and support facilities, employers can make sure bicyclists feel welcome at work by instilling a corporate culture that makes bicycle commuting professionally and socially acceptable. Employers should be encouraged to provide financial and other incentives to employees, such as offering payroll subsidies, obtaining group discounts on bicycles and accessories, and offering a guaranteed ride home program.

Ideas for possible initiatives with employers include:

- Developing a speakers bureau to provide workshops on bicycle commuting to interested companies, covering topics such as bicycle maintenance, ideas for employer assistance, etc.;
- Developing a “Bicycle Friendly Businesses Program,” recognizing businesses that have supportive policies and programs through certificates and advertising media;
- Creating an annual commuter challenge for area businesses;
- Establishing a “Bike Buddies” or “Bike Coaches” program in cooperation with bicycle organizations that matches area residents interested in bicycling to work with experienced bicycle commuters; and
- Working with employers to distribute informational materials, provide assistance to employees in route planning, and develop incentives for bicycle commuting.

Some of these employer assistance activities could be conducted through the Madison Area MPO’s

Rideshare, Etc. program, which promotes alternative transportation through employer-sponsored programs and other information and publicity activities. The Rideshare Coordinator should continue to work with the Madison Pedestrian/Bicycle Coordinator and others to distribute bicycle commuting resources, contacts, etc. Efforts should also be made to advertise the fact that bicyclists are eligible for the existing regional Guaranteed Ride Home Program if they are registered with the Rideshare, Etc. Program.

4. Identify Dane County Planning and/or Highway & Transportation Department staff to work with the Madison Pedestrian/Bicycle Coordinator to provide assistance to communities with bicycle planning and education and encouragement activities. Madison Area MPO staff should continue to assist in coordinating community assistance efforts.

[Responsible parties: Dane County, Madison Area MPO, Madison Bicycle Program]

5. Continue cooperative efforts between government agencies and bicycling clubs/organizations and their activities.

[Responsible parties: WisDOT, Dane County, Madison Area MPO, Madison Bicycle Program, local jurisdictions, Dane County Bicycling Association, bicycle clubs/organizations]

6. Continue to support bicycle-training programs, such as the Effective Cycling™ course, and promote such programs to public schools, law enforcement agencies, community and neighborhood organizations, employers, planning agencies, and others.

[Responsible parties: WisDOT, Madison Bicycle Program, local jurisdictions, bicycle clubs/organizations]

By targeting the courses to agencies and organizations, group discounts could be offered. Grants might also be provided to subsidize the cost of the courses, and thereby encourage greater participation.

7. Develop a public information and education campaign to encourage bicycling and improve the

attitude and behavior of both bicyclists and motorists.

[Responsible parties: WisDOT, Madison Bicycle Program, local jurisdictions, bicycle organizations]

The campaign should make use of multiple print and electronic media, including television and radio PSAs, advertising signs (e.g., posters on buses, seasonal banners), newspaper ads, etc. Private sponsors could be sought for the campaign. Information could also be inserted into utility company mailings. The campaign's message should emphasize bicyclists' rights to use the roadway and associated responsibilities to obey the "rules of the road." Key safety messages could also be developed. Health care organizations and insurance companies could market the benefits of bicycling and walking on personal health.

8. Establish an information clearinghouse on programs aimed at bicycle safety and promotion.

[Responsible parties: WisDOT and Madison Bicycle Programs, Madison Area MPO, bicycle organizations]

In addition to providing information to the public on resources available, establishment of such a clearinghouse will help in coordinating the various programs and activities and ensuring that safety education programs emphasize the right messages and utilize qualified instructors. The Bicycle Federation of Wisconsin currently provides this type of service to some extent, however development of a more coordinated and comprehensive clearinghouse is needed. Clearinghouse information should be available through government agency and bicycle organization Web pages.

9. Continue to provide and promote bicycle safety education and training courses and activities in the regular curricula of the school systems and colleges/universities.

[Responsible parties: WisDOT, Madison Bicycle Program, colleges/universities, school districts]

Education for elementary school students is generally best aimed at basic bicycle safety, while courses, activities, and information for middle and

high school and college students should address bicycle handling and the “rules of the road.” Parents should be encouraged to reinforce bicycle education. The Madison Bicycle Program safety education activities should be expanded to include programs at the middle schools, such as offering a modified Effective Cycling™ course as an after-school club activity. Schools should also consider incorporating bicycling into physical education classes. Schools could seek donations and/or discounts from bicycle manufacturers.

10. Continue and expand on the number of special events to encourage bicycling.

[Responsible parties: Madison Bicycle Program, Dane County, UW-Madison, bicycle organizations]

Ideas for events besides Bike to Work Week include “Bicycle to Shop” or “Go by Bike” days where bicyclists receive discounts and annual family bicycling rides.

11. Continue to implement programs to provide free or discounted helmets and head/taillights. [Responsible parties: WisDOT, bicycle organizations, and health care agencies]

A survey conducted for the Jefferson County Bicycle Plan found almost half of all respondents never use a headlight when traveling at night, and around 30% do not use a helmet. These numbers would probably be similar in Dane County.

12. Continue to monitor and improve the data available on bicycle crashes.

A simple-to-use, well-publicized reporting system should be developed to report all bicycle crashes resulting in injury or any property damage. Currently, only those crashes that involve a moving motor vehicle and result in serious injury or property damage in excess of \$1,000 (more than the value of most bicycles) are reported.

[Responsible parties: WisDOT, local police departments, Madison Bicycle Program]

13. Provide regular workshops and make available other training opportunities for local planners, engineers, and parks and recreation professionals on bicycle transportation and facility design issues.

[Responsible parties: WisDOT, Madison Area MPO, local jurisdictions, bicycle organizations]

The Bicycle Federation of Wisconsin received a TDM grant from WisDOT to conduct Effective Cycling™ courses for planners and engineers in 2000. Local communities should encourage their staff to attend this course and take advantage of similar opportunities. Participants should educate other local staff, elected officials, and citizens.

Enforcement

1. Educate and train law enforcement personnel in the enforcement of laws concerning bicyclists’ rights and responsibilities through recruit training and in-service refresher courses.

[Responsible parties: WisDOT, Dane County, local police departments, UW Police]

Information provided should include the proper way for bicycles to operate in traffic and common motorists violations that endanger bicyclists. WisDOT Bureau of Transportation Safety’s “Enforcement for Bicycle Safety” and other courses have been developed to assist local communities in these efforts.

2. Involve local law enforcement personnel in safety education programs, and encourage alternative enforcement programs such as police bicycle patrols, permitting training in lieu of fines, and positive reinforcement.

[Responsible parties: Madison Bicycle Program, local police departments, UW Bicycle Program and Police]

Enforcement and education can be combined by offering training program attendance in lieu of paying a fine and/or using fines to pay for training programs. The City of La Crosse has such a program. “Tickets” are issued to bicyclists under age 18. One-hour classes are held once a week for bicyclists cited for committing certain offenses (e.g., no headlight, riding on the wrong side of the street, etc.). Some communities have programs whereby police officers give coupons to bicyclists, usually children, for obeying traffic laws. The coupons are designed to look like traffic tickets and entitle the bicyclist to a discounted bicycle accessory purchase,

free food item, etc. These types of programs reinforce safe riding habits. Police officers should be given appropriate training in enforcement for bicycle safety.

3. Increase traffic law enforcement efforts by properly trained local/UW-Madison police department officers, focusing selectively on those violations most likely to lead to bicycle-motor vehicle crashes. [Responsible parties: local police departments, UW Campus Police]

There is currently little traffic law enforcement activity aimed at bicyclists. Efforts have been made in recent years to re-institute the Madison bicycle/pedestrian safety monitor program, which used citizens to enforce traffic laws against bicyclists and pedestrians. One of the major drawbacks to such a program, however, is that it focuses solely on bicyclists even though studies have shown that motorists are responsible for more than half of all bicycle-motor vehicle crashes. A comprehensive approach is needed that combines improved enforcement directed towards both motorists and bicyclists along with education.

Prior to increasing enforcement efforts against bicyclists and motorists, it is advisable for the responsible agencies to undertake community relations activities, such as soliciting support from parents, schools, civic groups, etc. and publicizing the effort through the local media with an explanation of its purpose. Written policies and procedures should be considered to ensure fair and consistent enforcement.

The goal of enforcement programs should be to increase real and perceived bicycle safety by:

- Correcting illegal behavior by both bicyclists and motorists most likely to lead to crashes;
- Encouraging bicyclists to behave in a predictable manner and be visible to motorists;
- Ensure adult bicyclists set a proper example for younger riders;
- Require motorists to respect the rights of bicyclists as users of the road; and

- Encouraging new and timid bicyclists to observe safe riding practices so they don't unwittingly put themselves in more danger than they are trying to avoid.

4. Implement and improve compliance with bicycle registration programs. [Responsible parties: local jurisdictions]

The purposes of bicycle registration programs are to: (1) deter theft; (2) identify bicycles in case of theft; (3) identify a bicyclist without other identification in the event of an accident; (4) provide independent proof of ownership for insurance claims; and (5) assist in bicycle planning efforts.

Plan Implementation

1. Encourage local communities to incorporate the bicycle plan into their master plans, and ensure all newly elected or hired officials are aware of the plan and its goals, objectives, and recommendations. [Responsible parties: Madison Area MPO, Dane County Highway and Transportation Dept., Madison Bicycle Program]
2. Ensure the bicycle plan is incorporated into and referenced in other related state, county, and local plans. [Responsible parties: state, county/regional, and local government agencies]
3. Provide information regularly on the progress of plan implementation. [Responsible parties: Madison Area MPO, Dane County Highway and Transportation Dept., Madison Bicycle Program]
4. Utilize opportunities to generate media publicity about the bicycle plan. [Responsible parties: Madison Area MPO, Dane County, Madison Bicycle Program, bicycle organizations]
5. Prepare an update of the bicycle transportation plan within five years of its adoption. [Responsible party: Madison Area MPO]

6. Make state and local road and accident data more easily accessible to the Madison Area MPO and local governments for bicycle planning purposes through implementation of the new Wisconsin Information System for Local Roads and other similar initiatives.
[Responsible party: WisDOT]

The Wisconsin Information System for Local Roads (WISLR) should incorporate as much of the data as possible that is needed for conducting a bicycle compatibility evaluation of roadways. This information includes bike lane/paved shoulder width, outside travel lane width, speed limit, traffic volumes, truck volumes, and parking availability and occupancy.