

Chapter 1

Introduction

Bicycling is an important mode of transportation and healthful recreational activity in the Madison area and countywide that is available to people of all ages and socioeconomic levels. For some people, the bicycle is their main or only mode of transportation. The City of Madison is recognized as one of the most “bicycle-friendly” communities in the U.S. due to its extensive network of bicycle facilities, relatively high levels of bicycling, and strong institutional and public support for bicycling.

Bicycling is a particularly efficient and convenient form of transportation in urban areas. Like the automobile, bicycling provides a high degree of independence, flexibility, and freedom of choice relative to schedule and destination. Unlike transit, “trip chains” or series of linked trips (e.g., running errands on the way to/from work) can be easily accomplished on bicycle. Door-to-door travel times for short trips of up to five miles are comparable to driving, particularly for downtown and university campus area destinations where automobile parking adjacent to buildings is limited. Bicycling levels are much higher during the warmer weather months. However, the development of hybrid and mountain bicycles and the availability of lightweight, waterproof clothing materials such as gortex have increased wet and cold weather bicycling.



Recreational bicycling continues to be very popular. Nationally, bicycling ranks as the second most popular recreational activity. The Madison area has 50 miles of shared-use paths, which are popular for recreational bicyclists as well as commuters. Rural farm-to-market roads and many county trunk highways with wide paved shoulders provide excellent routes for bicycling in the county. The Wisconsin Department of Natural Resources (WisDNR) has developed and operates two state bicycle trails: the Military Ridge Trail located on an abandoned railroad bed from Fitchburg west to Dodgeville; and the Glacial Drumlin Trail, which extends from Cottage Grove east all the way to Waukesha County. Construction was recently completed on the Nine Springs E-Way segment of the Capital City Trail, connecting the Military Ridge Trail to the John Nolen Drive and Isthmus Bike Paths. When the eastern portion is completed, the Capital City Trail will connect the Military Ridge and Glacial Drumlin State Trails.

A. Bicycle Plan Scope and Purposes

This Bicycle Transportation Plan serves to update and supersede the 1991 *Bicycle Transportation Plan for Madison and Dane County*. The 1991 plan was prepared by the staff of the Dane County Regional Planning Commission (Dane County RPC) and Madison Department of Transportation (Madison DOT) in cooperation with the former Pedestrian/Bicycle Sub-Committee of the Madison Transportation Commission (now divided into three separate commissions, including the Pedestrian/Bicycle/Motor Vehicle Commission). The 1991 plan was the first bicycle transportation plan for the county, but did not identify bicycle facility improvement needs nor recommended routes outside the Madison area. Bicycle planning efforts for the outer area of the county date back to the 1970s, however.

The 1991 plan updated the 1975 *Long-Range Bikeway Program*, the first comprehensive bicycle transportation plan for the Madison area. The City of Madison had adopted a *Long Range Master Plan-Bike Route System* in 1971, however it consisted only of a map of potential future bike routes. As part of development of the 1975 plan, an analysis was done and recommendations made regarding bicycle safety, registration, and enforcement issues. A Pedestrian/Bicycle Safety Plan was subsequently adopted by the Madison Common Council in 1982.

Plan Scope

The focus of this plan is on bicycling for transportation or “utilitarian” purposes as opposed to recreational bicycling. With utilitarian bicycle use, the trip origins and destinations and trip purpose (e.g., commuting to work or school, shopping, attending a social/recreational event, etc.) are of primary importance. The bicycle is simply the mode of transportation chosen for the trip. Recreational bicycle trips, on the other hand, are taken primarily for the enjoyment of the trip itself, often with no real destination. In reality, many trips and most facilities serve both purposes. For example, many off-street paths, which are popular for recreation, can be located in corridors that serve important community transportation needs.

In order to be eligible for funding under most Federal-aid programs, bicycle projects must be principally for transportation, rather than recreation, purposes. Federal guidelines consider any bicycle path or trail other than a closed loop trail as being principally for transportation and eligible for federal funding. To ensure coordination of all bicycle facilities, this plan incorporates major recreational trails included in local and county parks and open space plans.

The plan follows the recommended comprehensive approach to bicycle transportation planning, covering the “Four Es” of engineering (facility improvements), education, encouragement, and enforcement. Education and encouragement are important elements in increasing bicycling while also improving safety. Together, they can improve the skills and confidence of bicyclists to ride safely in traffic, which is critical for increasing their effective mobility. The impact of facility improvements on bicycling levels is increased when combined with training and promotion. In addition, studies have shown that the more bicycles in the traffic stream, the lower the accident rate for bicyclists. Education of motorists on safely sharing the road with bicyclists is also important. Education of public officials, planners, engineers and others involved in land use development will help ensure that bicyclists’ needs are considered when planning and designing new neighborhoods and the roadway system.

The plan includes facility recommendations for the Madison Urban Area and for the county. The Madison Urban Area facility recommendations are those viewed as necessary to

improve bicyclist safety, mobility, and access to important destinations such as employment centers, schools, government and public institutional centers, commercial areas, and recreational areas. The improvements are primarily designed to fill in gaps and eliminate the remaining barriers in the area’s already well-developed bicycle transportation system. Recommended county-wide bicycle facility improvements are designed to facilitate trips between communities and to major employment and shopping centers, schools, state and county parks, and bicycle trails. Special emphasis has been placed on identification of commuter routes from outlying communities into the Madison area, where over 80% of the county’s jobs are located.

Plan Purposes

The Bicycle Transportation Plan is intended to serve the following purposes:

- Refine the Bicycle Plan Element of the adopted Vision 2020 *Dane County Land Use & Transportation Plan* (1997).

The Vision 2020 *Dane County Land Use & Transportation Plan* (1997) provides the overall policy framework for development and transportation decisions within the county. The Dane County Regional Planning Commission (DCRPC), Dane County Board of Supervisors, and Madison Area MPO have adopted the plan. The City of Madison has accepted the goals and objectives of the plan as a policy framework. The transportation component of the plan is an overall systems plan, which includes goals and objectives and makes recommendations for all modes of transportation.

The Bicycle Transportation Plan is intended to further refine the bicycle element of the *Dane County Land Use & Transportation Plan* through the development of goals, detailed objectives, bicycle facility planning and design guidelines, and the identification of specific facility improvements, programs and policies, and actions to increase bicycling and improve bicycle safety. Identification and prioritization of bicycle facility improvements and programs will facilitate inclusion of bicycle transportation projects into the area’s five-year Transportation Improvement Program (TIP), updated annually by the Metropolitan Planning Organization (MPO)(formally the Dane County RPC and now the Madison Area MPO).

Identification of planning and design guidelines, policies, and other actions to improve bicycling conditions will assist local community bicycle planning efforts throughout the county.

- Fulfill the requirements of the Transportation Equity Act for the 21st Century (TEA-21), requiring MPOs to undertake bicycle transportation planning.

The recently passed Transportation Equity Act for the 21st Century (TEA-21) retained the transportation planning and funding framework established by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). TEA-21 includes a specific requirement that bicyclists and pedestrians be given due consideration in the MPO transportation planning process and in designing and constructing transportation facilities. Preparation of this plan will help in continuing to improve the integration of bicycle planning into regional and local land use and transportation planning and budgeting processes. This linking of transportation planning and budgeting with local community planning is one of the primary objectives of TEA-21 and the earlier ISTEA legislation.

- Serve as a blueprint for continuing to improve bicycling conditions and safety and increase bicycling levels in the Madison area and countywide.

The plan identifies and prioritizes bicycle facility project needs, and recommends specific policies and educational, promotional, and enforcement activities. This information will further enhance the ability of state agencies, the county, and local communities to invest in projects and programs to improve the practicality and safety of bicycling for everyday travel.

- Identify desirable bicycle routes within Dane County, including linkages between communities.

An important purpose of this plan is to identify for the first time a list of countywide bicycle facility improvement needs and recommended bicycle routes, including linkages with the Madison area system.

- Serve as a framework for cooperation between state agencies, the county, and local governments in planning for and developing bicycle facilities.

Identification of both a detailed Madison area bicycle facilities plan and a countywide plan will help ensure that appropriate connections are made between local, county, and state facilities.

- Provide information to citizens interested in bicycle transportation.

In addition to providing a framework for bicycle planning and programming, the plan is also designed to serve as an educational tool on bicycle transportation and bicyclists' needs for policymakers and the general public.

- Provide guidelines for planning, designing, and maintaining bicycle facilities.

Inclusion of such guidelines will promote the use of safe, effective, and consistent bicycle facility designs throughout the county.



B. Legislative and Planning Context

In 1991, Congress passed the landmark transportation legislation, the Intermodal Surface Transportation Efficiency Act (ISTEA), which established a new overall transportation policy and planning framework and new funding programs. ISTEA placed greater emphasis on facilitating access for people, enhancing communities, and moving goods versus simply moving vehicles. Recognizing the important role that bicycling and walking can play in creating a balanced, intermodal transportation system, ISTEA required bicycle transportation planning at the state and regional or metropolitan planning organization (MPO)

levels. The law also created new funding opportunities for bicycle and pedestrian projects, a stronger local role in transportation project selection, and greater public involvement in the planning and programming process.

In 1998, Congress passed the Transportation Equity Act for the 21st Century (TEA-21), the ISTEA reauthorization bill, which continues and improves upon the policy and planning framework and funding programs established under ISTEA. TEA-21 reaffirmed the need to consider bicyclists in the planning and design of roadway projects, and further enhanced bicycle facility and program funding opportunities. For example, it provided increased funding for the Transportation Enhancements Program—the primary federal funding source of independent bicycle facility projects—and expanded the list of “transportation enhancement activities” eligible for funding to include safety and educational activities. Bicycle and pedestrian safety projects were also added as part of the Hazard Elimination Program, which requires states to identify and correct locations that pose a danger to motorists, bicyclists, or pedestrians.

Relationship to Other Bicycle and Local Plans

The facilities component of this plan includes recommended on-street and off-street bicycle facilities for the Madison Urban Area and countywide. Recommended Madison area facility improvements are designed to serve intraregional trips to major employment centers and commercial areas, government and institutional centers, and other destinations. Where facilities providing neighborhood connections have already been identified in prior planning efforts, they are shown. However, identification of neighborhood connections within each community is generally beyond the scope of the plan. Local communities within the urban area are encouraged to address neighborhood-level facilities and other local issues as part of their community and neighborhood planning efforts.

The countywide bicycle transportation plan is intended to address trips between outer area communities and the Madison area, trips between outer area communities, and other longer distance trips. The comprehensive land use plans and/or park and open space plans of a number of outer area communities include recommended bicycle-ways. These plans have been considered in development of the countywide plan. Communities that have not identified local

bicycle-way systems should do so as part of local planning efforts.

The recommended goals, objectives, policies, and actions in the plan are intended to serve as a guide for the county and all local communities within the county. They are designed to identify strategies for improving local bicycling conditions and to guide local planning efforts.

In September 1998, the Wisconsin Department of Transportation (WisDOT) completed the *Wisconsin Bicycle Transportation Plan*, which establishes goals, objectives, and policies regarding the provision of bicycle accommodations, and identifies strategies for effective bicycle safety education and enforcement. The plan recommends intercity bicycle facility improvements for priority routes and key linkages between communities and other bicyclist destinations. It also recommends goals, policies, and actions to improve both intercity and intracity bicycling conditions. Specific local bicycle facility improvements are addressed through the incorporation of more detailed county and MPO plans, such as this one.

County and local community land use, transportation, and parks and open space plans have been integrated into this plan. Similarly, it is important for local communities to coordinate and ensure consistency of future plans they develop with this plan and the state bicycle transportation plan. Existing bicycle-related plans, policies, and programs are discussed in more detail in Chapter 4.



C. Public Participation

This plan was prepared under the guidance of a Technical Advisory Committee. The committee included staff from all of the Madison urban area communities, Dane County Transportation and Parks Departments, the Wisconsin Department of Transportation, and the University of Wisconsin, a representative from the City of Madison's Pedestrian-Bicycle-Motor Vehicle Commission (PBMVC), and representatives from area bicycling organizations. A list of the committee members is provided at the beginning of this report.

In addition to this advisory committee, additional input was solicited through presentations to the City of Madison's PBMVC, Long-Range Transportation Planning, and Plan Commissions, the Madison Area MPO Technical Coordinating Committee, Madison Area MPO, Dane County Transportation Committee, Dane County Parks Commission, DCRPC, and area bicycle clubs and organizations. A public meeting was held on July 19, 2000 and a public hearing before the Madison Area MPO was held on July 24. Public hearings were also held before the City of Madison Plan Commission on August 14, 2000 and the DCRPC on August 24, 2000. The meeting and public hearings provided an opportunity for citizens to provide input on the goals and objectives, address bicycle facility and program needs, and comment on the draft recommendations and recommended bicycle facility plans. The draft plan was also posted on the City of Madison's Web page, with links from the Dane County and bicycling community Web pages, to further facilitate public comments via e-mail.

D. Plan Organization

Part I of the plan provides background information. Following this introductory chapter, Chapter 2 outlines and illustrates the facility needs of bicyclists, addressing the various conditions and factors that impact bicycle use. The chapter also discusses land use and street designs that facilitate bicycle use. Chapter 3 presents information on current bicycling levels and existing bicycling conditions and facilities in the Madison urban area and Dane County. The bicycle compatibility of the major roadways is analyzed to identify current deficiencies in the level of service for bicycling. Chapter 4 summarizes current plans, policies,

programs, and ordinances related to bicycling, which have been adopted by the Wisconsin Department of Transportation, Dane County, Madison area communities, and the University of Wisconsin. Chapter 5 covers bicycle operation and safety considerations and education, encouragement, and enforcement activities and programs. Bicycle laws and bicycle crash data are reviewed, and the common factors related to crashes are discussed. Existing bicycle safety programs and encouragement policies and activities are covered. Enforcement of bicycle laws is also discussed.

Part II presents the bicycle transportation plan. Chapter 6 presents the vision, goals, and objectives, and identifies proposed actions and strategies to achieve them. Chapter 7 outlines and illustrates the recommended Madison area and countywide bicycle transportation plans, and provides information on costs, revenues, and the transportation budgeting process. Design and engineering guidelines for bicycle facilities are included in Appendix A.