

## **IMPLEMENTATION**

Implementation of the Hendersonville bicycle and pedestrian network should be accomplished by the use of the following:

- **Sidewalks**
- **Bike Path (Class I - Shared-Use Path or Multi-Use Path)** – defined by AASHTO in the Guide for the Development of Bicycle Facilities as “a bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way.” Bike paths should be paved and 12’ in width, minimum, with 14’ preferred. Pedestrians, skaters, wheelchair users, joggers and other non-motorized users may benefit from them. Bike paths should not be incorporated into the roadway network but may travel parallel to roadway segments. Bike paths also may follow the course of natural physical boundaries such as rivers and streams, or man-made physical boundaries such as railroad lines and utility easements.
- **Bike Lane (Class II - Bicycles Only)** - defined by AASHTO in the Guide for the Development of Bicycle Facilities as “a portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.” Bike lanes should be 4’ to 5’ in width. Typically, these facilities require that additional pavement be provided on the roadway system in order to separate bicycle lanes from the vehicular travel lanes. Bike lanes may be provided for by use of paved shoulders or wide outside vehicular traffic lanes.
- **Bike Route (Class III - Shared Roadway)** - defined by AASHTO in the Guide for the Development of Bicycle Facilities as “a segment of a system of bikeways designated by the jurisdiction having authority with appropriate directional and informational markers, with or without a specific bicycle route number.” It is preferred that roadways designated as bike routes have wider than normal lanes and/or low traffic volumes, although this is not mandatory. Bike routes typically are designated by means of signage with little or no use of striping to indicate that the corridor is designated as a bicycle route. Also, unlike a bike lane, a bicycle route is not separated from the vehicular traffic by pavement markings.

## **GUIDELINES FOR RANKING PROJECTS**

Guidelines for prioritizing projects for future implementation within the network were developed and are given in Table III-1. The prioritization of projects in this manner is at best a guide for future implementation and will change with time. Some of the criteria appear to be contradictory, and may be. For example, if a network segment overcomes the crossing of a river, it should receive a high priority for overcoming a significant

obstacle. On the other hand, this type of segment will likely be expensive to implement and will receive a low priority with regard to ease of implementation. As a result, Table III-1 should be used as a guide, recognizing that planning judgment will always be required in deciding which project(s) to implement next. Other factors, such as available financial resources, may dictate the selection or timing of projects to be implemented.

**TABLE III-1  
GUIDELINES FOR RANKING PROJECTS  
IN THE BICYCLE AND PEDESTRIAN PLAN**

CRITERIA	HIGH PRIORITY (3)	MEDIUM PRIORITY (2)	LOW PRIORITY (1)
Uses Served	Generators	Dense Land Use	Sparse Land Use
Barriers Overcome	River, Freeway, RR	Arterial, Collector Roadway	Creek, Rural Roadway
Potential Cyclist Usage	High Potential	Medium Potential	Low Potential
Connectivity	To Exist. or Funded Facilities	To Future Facilities	No Connectivity
Lack of Parallel Facilities	No Parallel Facilities	Parallel Facilities 1/2 mi. or more	Parallel Facilities 1/2 mi. or less
Ease of Implementation (including Cost)	Easy to Implement	Moderately difficult to Implement	Difficult to Implement
Topographical Constraints	No Topo Constraints	Moderate Topo Constraints	Severe Topo Constraints

**RECOMMENDED BICYCLE & PEDESTRIAN PLAN**

Throughout the nation there is a growing interest in alternative modes of transportation such as bicycling and walking. As a result, it is expected that there will be an increasing demand for bicycle and walking facilities within the City of Hendersonville in the coming years.

The bicycle and pedestrian plan recommended herein has been developed to complement the City roadway network (both existing and proposed), and to provide for additional mobility. The facilities identified as part of the recommended bicycle and pedestrian plan are considered to be an essential component of Hendersonville's overall transportation network.

The resulting recommended bicycle and pedestrian network includes all of the existing and previously planned bicycle and pedestrian facilities within the City (Refer to Tables I-1 and I-2). Further, all of the projects currently included in the Major Thoroughfare Plan for the City that call for bicycle lanes are included in the proposed network (Refer to

Tables I-3 and I-4). The network also provides for links to existing and planned schools and parks, and areas of interest in the vicinity, all of which collectively are referred to as bicycle and pedestrian generators or attractors (Refer to Table I-6). The proposed network is made up of various types of facilities such as sidewalks, multi-use paths, bike lanes, and bike routes (shared roadways).

The plan calls for the development of three major bicycle and pedestrian paths that may also be referred to as "greenways." These are:

- CSX Railroad/Mansker Creek/Madison Creek at the western edge of the planning boundary from near Old Hickory Lake to north of Moss Wright Park
- Drakes Creek from Stop Thirty Road to the northern planning boundary
- Station Camp Creek from Gallatin Road to the northern planning boundary

Other paths which are much shorter in length, but provide much needed links within the bicycle and pedestrian network, include:

- CSX Railroad from Stop Thirty Road to the north end of Drakes Creek Park
- Indian Lake Elementary School
- Wal-Mart/Cemetery

The bicycle and pedestrian network is illustrated on Figure III-1 at the end of this section (a larger scale map showing more detail is included in Appendix A). Figure III-2 is a detailed plan of the proposed routes within the Environmental Study Area along the western shore of the Walton Ferry peninsula.

Improvements recommended for successful implementation of a bicycle and pedestrian network within the City follow in Table III-2. These recommendations indicate the appropriate types of facility, the approximate length, the general cost for implementation and the priority scoring for each corridor.

The recommended bicycle and pedestrian plan is a comprehensive network of facilities that combines bicycle lanes, bicycle routes, and paths. This combination of facilities is important because different types of cyclists prefer different types of routes. An experienced cyclist will usually prefer a shared roadway that is wide enough for bicycle travel over a bicycle path. Conversely, children and inexperienced cyclists will generally prefer a bicycle path over a bicycle route or bicycle lane. Also, it is important to note that bicycle paths are often enjoyed for their scenic and recreational characteristics, while cyclists who use bike lanes and routes often have more utilitarian trip purposes. For these reasons, the recommended plan provides facilities to accommodate a variety of cyclist experience levels, trip purposes, and preferences.

## **KEY RECOMMENDATIONS**

The City of Hendersonville should strive to be known as a “bike-friendly” place. This can happen if several institutional improvements and policy changes are made. Specifically, the following key recommendations are presented:

- Adopt the recommended bicycle and pedestrian plan.
- Adopt bicycle and pedestrian design standards so that future facilities are designed and constructed in a consistent and safe manner.
- Integrate bicycle and pedestrian planning into the overall planning process for the City.
- Educate key staff (planners, engineers and administrators) with regard to bicycle and pedestrian planning, design issues, and standards.
- Provide the plan to appropriate departments within the City, particularly parks, schools and utilities, so that they may be aware of opportunities made available by the plan.
- Develop a maintenance program for the ongoing operation of bicycle and pedestrian facilities and include funding in the City’s annual budget.
- Provide for bicycle parking at origin and destination points within the City. Desirable locations for bicycle parking include schools, recreational facilities, and city buildings. The City should include bicycle parking facilities at these type locations. Also, the City should encourage developers to provide bicycle parking facilities at appropriate locations.
- Review all plan submittals, both residential and commercial, for compliance with the adopted bicycle and pedestrian plan.
- Require that all sidewalk, multi-use path and bike lane routing be reviewed and approved as an integral part of the sketch plat submittal, review and approval process.
- Require developers to provide the segments or components of the plan that are contained within their development. At the very minimum, require the developers to provide the right-of-way that will be required for the construction of the recommended facilities within their project.
- Require developers, builders and/or contractors to prepare subgrade for sidewalks and multi-use paths simultaneously to the preparation of subgrades for roadways, and inspect subgrade for sidewalks and multi-use paths during the pavement base inspection.
- Encourage developers during the site planning process to look for opportunities to incorporate new bicycle and pedestrian facilities into development plans. Encourage connections to adjacent subdivisions and generators such as schools, recreational facilities, and commercial centers during the site planning process. For many developers, bicycle and pedestrian facilities are viewed as amenities, and often the additional costs are minimal.
- Review all roadway improvement plans that are developed by TDOT or others to ensure that bicycle and pedestrian usage is adequately accommodated.

- Include bicycle and pedestrian facilities in all new roadway projects that are developed by the City, County or State. In particular, bicycle lanes on new collector roadways should be provided.
- Aggressively seek opportunities for funding of the proposed facilities via TDOT/TEA 21.

## **OTHER RECOMMENDATIONS**

The City should emphasize bicycle and pedestrian education for adults and children throughout the city. Improved bicycle and pedestrian safety education is an excellent way to improve bicycle riding habits, reduce accidents, and increase the use of bike helmets. Including bicycle and pedestrian education in the public schools is probably the most effective way to teach children safe bicycle riding and walking skills. The Bicycle Federation of America has developed a bicycle education curriculum titled The Basics of Bicycling that can be taught as part of a physical education class. Also, bike rodeos are fun and effective events that can teach bicycle handling skills and the rules of the road.

If necessary, driver education programs should be modified so that drivers are familiarized with specific bicycle and pedestrian related issues. These modifications should reinforce to the driver that bicyclists have a legal right to use roadways, and should teach the driver about other important bicycle safety issues such as passing a bicycle, driving safely in the proximity of bicyclists, and how to anticipate a bicyclist's course of action. Modifying driver manuals and licensing exams can accomplish improved driver education. Also, the curricula of driver education courses, such as those offered in public schools and by private driving instructors, should be updated to include bicycle and pedestrian awareness.

The City should encourage employers to offer incentives to employees who commute by bicycle. Examples of incentives are shower facilities, bike racks, and lockers, or a guaranteed ride home service in the event of inclement weather. The City could set an excellent example for the corporate community by providing showers, bike racks, and lockers at City Hall and other City buildings.

The City should work with cycling organizations to sponsor an annual "Bike to Work Day." The purpose of this annual event should be to increase the public's awareness of the benefits of bicycle commuting and to increase the awareness of bicycling as an alternative mode of transportation. Also, this event can be used to highlight the future bicycle and pedestrian facilities that Hendersonville plans to implement. This event should be well publicized and should be coordinated with local bicycle clubs.

In conclusion, bicycle and pedestrian facilities need to be an integral part of the transportation system for the City of Hendersonville. The benefits of a comprehensive bicycle and pedestrian network include:

- reduced traffic volumes on the roadway system;

- increased mobility;
- reduced air pollution;
- increased recreational opportunities; and,
- an enhanced quality of life for Hendersonville residents.

The implementation of the recommended bicycle and pedestrian plan and the key recommendations listed above will be important components in the development of a comprehensive transportation network for the city of Hendersonville.