



Chapter Sections:

1.1 Project History and Overview

1.2 Project Purpose and Scope

1.3 Benefits of Bicycling

1.4 Elements of the Plan

1.1 Project History and Overview

In November of 2005, the City and County of Durham, North Carolina, contracted with a team of consultants, including Greenways Incorporated, Alta Planning, CLH Design, and Parsons Brinckerhoff (the Greenways Team) to create a Comprehensive Bicycle Transportation Plan for the area bound by City and County of Durham. After months of fieldwork, research and public input, a preliminary draft network was completed and presented to the public for review in March of 2006. The Greenways Team then produced a new Bicycle Route Network and finalized the elements of the Plan, as outlined below.

The City of Durham Department of Public Works' Transportation Division and the project Steering Committee worked closely with the Greenways Team to ensure significant levels of public input. The range of public input included three public workshops and presentations, focused appeals for input from low-income and minority communities, a survey of bicycle interests and needs with more than 600 participants, and a thorough review of existing plans, each of which included previous public input.

1.2 Project Purpose and Scope

This plan serves as an update to the 1993 Regional Bicycle Plan. Its goal is to increase mode share and safety for all kinds of cyclists, improving the overall quality of life in Durham. The plan provides a comprehensive approach toward identifying existing bicycle needs and deficiencies, presents a new route network to address those deficiencies, examines optimal design and policy improvements, and identifies implementation strategies for the development of quality bicycle facilities and programs. See page 1-5 for a diagram of the planning process.

1.3 Benefits of Bicycling

For many years, small and large communities across the United States and throughout the world have been implementing strategies for serving the bicycle needs of their residents. They do this because of their obligations to promote health, safety and welfare, and also because of the growing awareness of the many benefits of bicycling. These benefits can include increased health and physical activity, reduced traffic congestion, affordable mobility, improved quality of life, reduced auto dependency, conservation of fossil fuels, increased economic vitality, increased community connections, and last, but not least: bikes are fun!

1.3.1 Increased Health and Physical Activity

A growing number of studies show that the design of our communities—including neighborhoods, cities, transportation systems, parks, trails and other public recreational facilities—affects people’s ability to reach the recommended daily 30 minutes of moderately intense physical activity (60 minutes for youth)¹. The Centers for Disease Control and Prevention (CDC) determined that creating and improving places to be active could result in a 25 percent increase in the percentage of people who exercise at least three times a week². According to the CDC, “physical inactivity causes numerous physical and mental health problems, is responsible for an estimated 200,000 deaths per year, and contributes to the obesity epidemic”³. The increased rate of disease associated with inactivity reduces overall quality of life for individuals and leads to increased medical costs for families, companies, and local governments.

The establishment of a safe and reliable bicycle network in Durham will help Durham retain its label as a ‘Fit Community’, a designation honored to Durham by a partnership between the N.C. Health and Wellness Trust Fund and Blue Cross and Blue Shield of North Carolina.

1.3.2 Economic Benefits

Bicycling is an affordable form of transportation. According to the Pedestrian and Bicycle Information Center (PBIC), of Chapel Hill, NC, the cost of operating a bicycle for a year is approximately \$120, compared to \$5,170 for operating a car over the same time period. The PBIC explains, “When safe facilities are provided for pedestrians and bicyclists, more people are able to be productive, active members of society. Car ownership is expensive, and consumes a major portion of many Americans’ income.” Bicycling becomes even more attractive from an economic standpoint when the increasing cost of fuel is also factored into the equation.

In exploring the economic benefits of bicycling for Durham, Chapter 2’s Benefits Analysis provides estimates for the financial impacts of an enhanced bikeway network. Specifically, recreational, mobility, and health-related benefits are summarized.



Figure 1.1 - A safe and reliable bicycle network in Durham will contribute to the overall health of the community.

1.3.3 Environmental Improvements

When people choose to get out of their cars and onto their bicycles, they make a positive environmental impact. They reduce their use of gasoline, which then reduces the volume of pollutants in the air (see Air Quality Benefits for Durham in Chapter 2). Other environmental impacts can be a reduction in overall neighborhood noise levels and improvements in local water quality as fewer automobile-related discharges wind up in the local rivers, streams, and lakes. Furthermore, every car trip replaced with a bicycle trip reduces U.S. dependency on fossil fuels, which is a national goal set by the current Administration.

1.3.4 Transportation Benefits

In 2001, The National Household Travel Survey found that roughly 40% of all trips taken by car are less than 2 miles. By taking these short trips on a bicycle, rather than in a car, citizens can have a substantial impact on local traffic and congestion. Additionally, many people do not have access to a vehicle or are not able to drive. An improved bicycle network provides greater and safer mobility for these residents.



Figure 1.2 - Bicycling also offers quality of life benefits, such as increased social connections. Above, Durham cyclists meet before commuting to work.

1.3.5 Quality of Life

Many factors go into determining the quality of life for the citizens of a community: the local education system, prevalence of quality employment opportunities, and affordability of housing are all items that are commonly cited. Increasingly though, citizens claim that access to alternative means of transportation and access to quality recreational opportunities such as parks, trails, greenways, and bicycle routes, are important factors for them in determining their overall pleasure within their community. Communities with such amenities can attract new businesses, industries, and in turn, new residents. Furthermore, quality of life is impacted by bicycling through the increased social connections that take place by residents being active and spending time outdoors in their communities.

1.3.6 Summary and Additional Resources

Many private and public organizations have completed studies and surveys that show the many benefits of bicycling. The ideas presented above are only a small sample of the information that is available. If you would like to learn more about the benefits of bicycling, the Internet can be a great source of information. Two good starting points are:

www.hhh.umn.edu/centers/slp/bike_bib.htm

This site is maintained by the State and Local Policy Program of the Hubert Humphrey Institute of Public Affairs at the University of Minnesota. Their website lists dozens of studies related to economic, social, and natural resource impacts associated with cycling.

www.bicyclinginfo.org/pp/benefits/

This website is provided by the Pedestrian and Bicycling Information Center based in Chapel Hill, NC.

1.4 Elements of the Plan

The main elements of this plan describe the *status quo* (chapters two and three), *the solution* (chapters four and five) and *how to make it happen* (chapters six and seven). They specifically include the following chapters:

1. Introduction and Overview
2. Existing Conditions
3. Existing Planning Efforts
4. The Bicycle Network Plan
5. Bicycle Facility Design Guidelines
6. Program and Policy Recommendations
7. Implementation Strategy

A series of appendices supplements these chapters, offering detailed information on the results of the public input process, recommended phasing and prioritization, funding sources, maps, and related improvement programs. Figure 1.4 on the following page outlines the planning process used to develop this plan and its recommended network of bicycle facilities.



Figure 1.3 - Together, the individual elements of this plan aim to provide a safe and reliable bicycle network that will accommodate a variety of skill levels.