

Chapter 2: Why Charlotte Needs a Bicycle Plan

This chapter describes the rationale for developing a bicycle master plan. It discusses the benefits of bicycling, as well as the community support for bicycle transportation.

Overview

Charlotte is growing in population. The City's population is projected to increase by more than 50% over the next 22 years from 664,000 to almost 1,115,000. This population growth cannot be accommodated by motor vehicles alone as there are already high motor vehicle traffic volumes. Recognizing this, the City is investing in a light rail transit system. Planning for the bicycle network represents another important opportunity to plan for Charlotte's expected growth in a sustainable manner.

A comprehensive approach to bicycle planning is important because it contributes to the quality of life in Charlotte. The City has a history of progressive planning efforts that emphasize quality of life and amenities. These efforts are supported by the City, as demonstrated by its history of strong planning and regulatory efforts such as the TAP and the recently adopted Urban Street Design Guidelines. They are also supported by Charlotte's citizens, as demonstrated by a recent tax measure to support public transit. A bike-friendly environment makes an important contribution to the quality of life in Charlotte.

Safety is also an important reason to plan for bicycling in Charlotte. Currently, many streets in the City are uncomfortable for bicyclists. From January 2000 to December 2005, there were 610 reported bicycle crashes and 11 fatal bicycle crashes reported. This Bicycle Master Plan identifies problematic roads and intersections and highlights design solutions to improve conditions for bicycling. It also identifies educational opportunities for bicyclists and drivers alike. A primary goal of these planning efforts is to reduce the number of bicycle crashes occurring in the City.

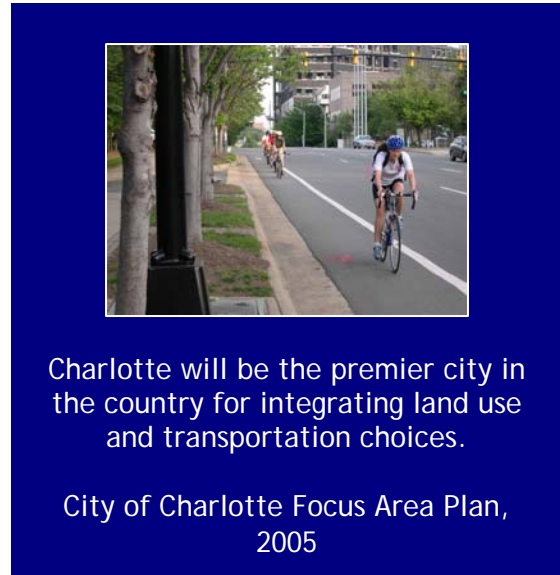
Benefits of Bicycling

Bicycling has positive transportation, environmental, economic and health benefits. These benefits are discussed below.

Transportation/Environmental Benefits

Nationally, approximately 40 percent of all trips are less than two miles in length, a distance covered by bicycle in around ten minutes (1995 National Household Transportation Survey).

Figure 1: Charlotte Focus Area Plan Mission Statement



Charlotte will be the premier city in the country for integrating land use and transportation choices.

City of Charlotte Focus Area Plan, 2005

Most of these trips are made by automobile, in part due to a lack of safe walking and bicycling facilities.

In Charlotte, improved bicycling conditions can play a role in mitigating automobile traffic congestion by providing residents with the option to travel by bicycle. There is little difference in the time it takes to make a short trip by bicycle or by car. Indeed, some short trips may even take less time by bicycle, when parking and traffic congestion are considered.

Aside from reducing and avoiding traffic congestion, every automobile trip replaced by bicycle reduces air pollution and petroleum use. Charlotte is a designated non-attainment area under the Federal Clean Air Act because it violates federal air quality standards for ozone levels. Each mile of automobile travel replaced by bicycle travel reduces the emission of nitrogen oxides, an important contributor to the formation of ozone and unhealthy air quality levels in the Charlotte region.

Bicycle facility improvements also have a positive effect for motorists in terms of safety and reduced congestion. For example, many motorists like bicycle lanes because they make dealing with bicyclists less confusing - they know where bicyclists are expected to be and it is easier to pass them. Bicycle lanes establish the correct riding location for bicyclists and tend to reduce sudden swerving by both motorists and bicyclists. Bike lanes also provide for better sight distance for motorists entering the street from side streets or driveways. Better local street connectivity allows bicyclists to travel on lower-volume streets while providing motorists with route options and reduced traveling distances.



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Quality of Life Benefits

Bicycling provides intangible benefits for the individual cyclist and the City as a whole. Some ride bicycles for simple enjoyment or recreation. It may be an activity enjoyed as a family on a summer afternoon or a way to relieve stress after work. Seventy-eight percent of bicyclists nationally ride for exercise or recreation (Bureau of Transportation Statistics, 2003). In Charlotte, the increasing popularity of recreational bicycling is unmistakable as more bicyclists are seen on the streets every year. According to data gathered in a survey by the

University of North Carolina-Charlotte Urban Institute in 1993 there were approximately 300,000 bicycles in Charlotte.

Economic Benefits

The bicycle is often an important transportation mode for those who cannot afford or do not wish to pay the costs of owning and operating an automobile. Households in the United States spent approximately 4 percent of total expenditures on gas, and 18 percent of total expenditures on transportation in 2005 (Bureau of Labor Statistics). The estimated cost of driving ranges between 47 and 62 cents per mile; the average annual cost of operating an automobile for a year is \$5,170 (AAA, 2007). Conversely, the cost of operating a bicycle for a year is estimated at only \$120 (League of American Bicyclists).

Figure 2: Positive health benefits of bicycling

Bicycling represents one opportunity to meet the recommended level of moderate physical activity, and can be obtained through recreational bicycling or a daily commute. Bicycling can produce a number of positive health benefits, including:

- Reduces the risk of dying prematurely
- Reduces the risk of dying from heart disease
- Reduces the risk of developing diabetes
- Reduces the risk of developing high blood pressure
- Helps reduce blood pressure in people who already have high blood pressure
- Helps control weight
- Helps build and maintain healthy bones, muscles, and joints
- Promotes psychological well-being

Health Benefits

The U.S Surgeon General recommends that adults should get at least 30 minutes of moderate physical activity every day of the week. Yet, more than 60 percent of American adults do not do this (Center for Disease Control). Furthermore, nearly half of adolescents are not vigorously active on a daily basis. Concurrently, national levels of obesity and the related problems of heart disease, diabetes, and other chronic conditions continue to rise, in part due to increasingly sedentary lifestyles and a reliance on automobiles for travel for even short distances. Figure 2 lists some of the ways bicycling can address these concerns. Having a viable and comfortable network of bicycle facilities can encourage individuals to take advantage of the health benefits provided through bicycling.

Community Support for Bicycle Transportation

Charlotte has an active and growing bicycling community that includes a diverse set of bicyclists and groups. Some people ride bicycles purely for recreation while others ride for transportation, to commute to work or run errands. Many people in Charlotte ride bicycles to access public transit. In 2001 there were approximately 19,000 bike on bus riders. As shown in Figure 7 in Chapter 4, this number grew to around 63,000 in 2007, highlighting the multi-modal bicycle/transit interface. Some choose to bicycle because they prefer it over other modes, while others bicycle because they have few other choices. Many bicyclists do not neatly fit into one niche; but use the bicycle for a number of purposes and reasons. Other people support bicycle transportation even though they don't bike themselves, recognizing the value of transportation choice in their community.

There are numerous bicycling organizations within Charlotte catering to the many different types of bicyclists in the community. A current list of Charlotte area bicycle advocacy groups, commuter support groups, and recreational clubs is available at the Bike Charlotte website (www.bikecharlotte.com). This website is also an excellent resource for recurring rides, special events and bicycle-related information for the Charlotte area.

Developing a Viable Bicycle Transportation System

Bicyclists are a diverse group in terms of their comfort level on various bicycle facility types, the purpose they choose to bicycle, and their ultimate destinations. Unlike motorists, who generally feel comfortable on most roadways, bicyclists can vary widely in their perception of what is a safe and acceptable bike facility. For example, an experienced, recreational bicyclist may have a preference for on-street bike facilities that allow long-distance training with limited interruptions. These bicyclists are likely to be comfortable and even prefer to travel on higher-volume, higher-speed streets in mixed motor-vehicle traffic. At the other extreme, a couple with young children who want to bicycle may have a preference for a bicycle facility that is separated from motor-vehicle traffic such as a greenway.



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Bicycle commuters are interested in reaching specific destinations, and typically express the desire for bicycle facilities such as bike lanes that allow them to travel comfortably during times of heavy motor-vehicle traffic.

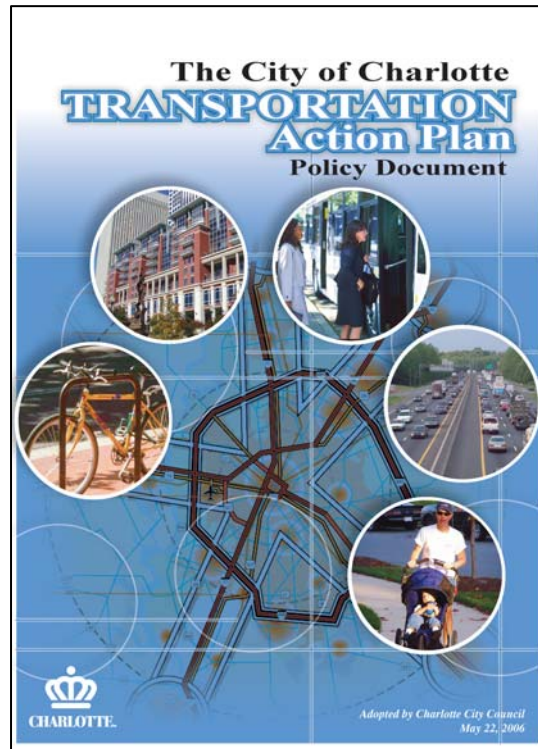
Currently, Charlotte has been implementing most bikeway projects where opportunities present themselves. Often, this is during street reconstruction, re-striping, or redevelopment, when bike lanes have been constructed from available right-of-way. This type of opportunistic bikeway construction, while cost-effective, has resulted in a “sparse and sporadic” bicycle network. Bike lanes may last only a few blocks or miles, and infrequently link with other bikeways. Greenways are intermittent and are not well-connected to on-street bicycle facilities. In significant portions of the City, bicycle-pedestrian connections between neighborhoods are limited, which makes it difficult to travel by bicycle to nearby destinations. A coordinated approach to bicycle planning is needed to develop a truly comprehensive bicycle network that allows travel throughout the city.

The following excerpt from the Transportation Action Plan explains why bicycle travel is important in Charlotte.

The City believes that Charlotte residents want travel options and to improve their quality of life. They want a less-stressful lifestyle, a cleaner environment, affordable transportation and better health for themselves and their children. Bicycling is part of the solution. Bicycle-friendly communities experience reduced traffic, better air, and improved public health. Bicycle-friendly communities, like those with good schools and vibrant downtowns, are communities that offer a good quality of life for families, which can lead to higher property values and business growth...

The City believes that by continuing to work towards an interconnected network of bicycle facilities, the City of Charlotte can increase the likelihood of a number of trips being accommodated by bicycle and by transit.

This chapter discusses the benefits of bicycling and the purpose and goals of bicycle planning. The following chapter highlights the goals, objective and policies that provide the foundation for bicycling planning efforts in Charlotte.



The TAP states that the City will require bicycle lanes designed consistent with the Urban Street Design Guidelines on all new or reconstructed roadways within the City, where feasible. (TAP Policy 2.6.1)