

IMPLEMENTATION

REALIZING THE VISION

Implementing the recommendations within this Plan will require leadership by the City and County of Durham and dedication to the development of a bicycle friendly community.

Durham has several opportunities that can help propel implementation. First is the grassroots interest among citizens and local groups that can provide a voice and support for the Plan. A second opportunity is building upon a system of existing bicycle and greenway facilities, by completing the elements outlined for the short-term network. A third opportunity is to take advantage of the region's growth by developing facilities as part of future roadway development and construction. These opportunities provide a base and starting point for development and implementation.

Future bicycle routes were prioritized by the segment's ability to provide connectivity, serve underserved areas, improve safety in areas of concern, and address public input. Higher priorities were also assigned where opportunity existed, such as striping bicycle lanes on roadways with wide outside lanes or through programmed improvement projects. It is recommended that these facilities be built first to have an immediate positive impact in Durham, dramatically expanding the area's bicycle network.

Implementing the recommendations of this plan will require a combination of funding sources that include local, state, federal, and private money. It will be necessary for Durham and the NCDOT to secure the funding necessary to undertake the short-term, top priority projects and develop a long-term funding strategy to allow continued development of the overall system. This Plan identifies 37 funding sources to be referenced for implementation.

PROGRAMS

It will be critical for Durham and the State to educate bicyclists and motorists about safe behaviors in a multi-modal roadway environment, to enforce laws that make bicycle travel safer, and to encourage people of all ages and abilities to use the bicycle and greenway routes. It will be equally important to promote and develop activities that encourage physical activity and healthy living. Programs can include Safe Routes to School, community-wide messages encouraging physical activity, bicycle rodeos and Bike to Work Days. These programs enhance the overall health and wellness of the community by promoting, teaching, and enforcing safety.



FACILITY DEVELOPMENT TOOLBOX

A variety of tools provide Durham with a quick reference for acquisition and/or facility development. Roadway and transit construction and re-construction projects offer excellent opportunities to incorporate facility improvements for non-motorized modes. Appendix E includes a listing of current CIP projects in Durham, NCDOT TIP projects, and NCDOT STIP projects. It is much more cost-effective to provide bicycle facilities along with these projects than to initiate the improvements later as "retrofit" projects.

ADDITIONAL RESOURCES

In addition to these tools, the Comprehensive Bicycle Transportation Plan includes a list of funding sources, provided to help Durham take advantage of all available options. The section on design guidelines for bicycle and greenway facilities provides guidance to meet facility development needs and introduce innovative ideas. Finally, Appendix D includes 20 phase-one project cut sheets that show examples of cost-effective projects that Durham can implement immediately to significantly enhance the roadway environment for cyclists.

Altogether, the resources within this plan will provide the City and County of Durham, North Carolina with the necessary means to set the standard for a safe, accessible, and efficient bicycle network.

For more information, please visit:

www.durhamnc.gov

or contact:

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DURHAM COMPREHENSIVE BICYCLE TRANSPORTATION PLAN



NOVEMBER 2006

GOOD THINGS [FOR BICYCLING] ARE HAPPENING IN DURHAM!

The City and County of Durham are part of one of the fastest growing regions in the State of North Carolina. Extensive redevelopment and reconstruction are reviving the once thriving epicenter of Durham, while suburban expansion is closing the gaps between neighboring municipalities. As Durham continues to evolve and expand, the 2006 Comprehensive Bicycle Transportation Plan will provide one of the building blocks for the future to aid in improving the quality of life and offer alternative transportation options for the area.

The goal of this plan is to increase mode share and safety for all levels of bicyclists, and provide a bicycle friendly environment, that all citizens of Durham can benefit from. This 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.



This Plan included significant levels of public input. The range of input included three public workshops and presentations, three plan review meetings with the project Steering Committee, 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.

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!

ASSESSING NEEDS AND OPPORTUNITIES:

BACKGROUND

The consultant team conducted an in-depth analysis and evaluation of current conditions for bicycling in the area. Both on-road and off-road bicycle facilities were evaluated. Existing greenway facilities were examined along with specific sites of opportunity and possible integration with the on-road network. An evaluation of the roadway network, including field measurements, was conducted to identify roadways that could accept the retrofit of bicycle facilities in their current state.

USE OF GIS

Geographic Information Systems (GIS) data was collected by the consultant from the City and County of Durham. The consultant team inventoried both the existing on-road bicycle and greenway facilities, creating new GIS databases for each. This information was supplemented with aerial photography, transportation data, trip attractors, schools, parcels, hydrology, etc., to provide a comprehensive map and tool for developing the recommended bicycle and greenway network.

EXISTING PLANS

Numerous plans, guidelines, and strategies have addressed issues relating to bicycle and greenway facilities in Durham. They have addressed land use, alternative transportation, open space, conservation, parks and recreation, and other initiatives. Special consideration was given to current community plans, policies, and documents to better integrate the Comprehensive Bicycle Transportation Plan into the fabric of area planning efforts, and to incorporate the insights, visions, and findings of other plans as appropriate.

PUBLIC INPUT

Public input was gathered through three public workshops meetings, community outreach sessions and a public opinion form. Input at the public meetings was gathered in the form of map markups, comment collection and through discussion between the citizens, consultant team, and City/County staff. In addition to the online public opinion form, a significant number of paper copies were solicited at workshops

and outreach sessions. Participants expressed that they would like more bicycle and greenway facilities, especially in underserved areas, that would provide connectivity to major destinations such as Downtown, RTP, local colleges and universities. A combined total of over 600 people completed the public opinion form during the planning process.

NEEDS ANALYSIS

The need and demand for a more accessible, safe and functional bicycle network is paramount throughout Durham. This was clearly articulated by the residents through the public input process and is strongly evident in the results of the GIS and field analysis. Health and wellness issues, bicycle crash data, levels of service, and community input all point towards the need for safe, functional accessibility for bicyclists. These needs can be met with a comprehensive system of on-road and greenway bike routes along with the programs, policies, and funding to support this endeavor.



CONNECTING PEOPLE & PLACES

ALTERNATIVE TRANSPORTATION + HEALTH AND WELLNESS

It is well documented that an active community is a healthy community. The declining health of America's population is alarming. Study after study affirms that sedentary lives and prolonged periods of inactivity are major deterrents to health, leading to a rise in the occurrence of cardiovascular disease, hypertension, diabetes, osteoporosis and some cancers.

Land use and transportation are quickly becoming areas of focus as communities

strive to become more bikeable and accessible. Transportation safety and enhanced mobility along with the pattern and density of development are proven corollaries to community health and wellness.

Safer roadways, additional greenways, and improved facilities for bicyclists, aid in safety, improve the environment, and encourage more people to enter the outdoors for transportation, recreational, and day-to-day activities.

DURHAM'S BICYCLE NETWORK

This plan recommends an integrated bicycle network of on-street and greenway routes to provide a bicycle friendly environment for all of Durham.

DEVELOPING THE RECOMMENDED NETWORK

The recommended bicycle networks from existing local and regional plans were overlapped with current recommendations from the public input process. The combined results were then analyzed to see where the networks overlapped and what gaps were left to be filled. Finally, a field analysis was used to evaluate the recommended network and verify that recommended facility types were reasonable for each route segment.

The result was a total recommended network that represents an ideal bicycle transportation system in Durham, and serves as a long-range, visionary element of this plan. The total network is unattainable in the near future, therefore the recommendations were broken down into groups and prioritized to promote the most efficient use of resources possible, with the greatest positive results for bicycling in Durham.

First, the most feasible opportunities for facility improvements were separated for short-term recommendations. Second, most of the paved shoulder recommendations, were separated as opportunity-based improvements. This leaves approximately 515 miles:

Total Recommended Network	= 852 miles
Re-stripes/Signed Routes (Short term)	= (30) miles
Shared Roads (Short term)	= (30) miles
Paved Shoulders (Opportunity-based)	= (277) miles
Remaining Network (Med/Long Term)	= 515 miles

IDENTIFYING PROJECTS PRIORITIES

Out of the remaining 515 miles of medium- and long-term recommendations, the most significant were selected for prioritization. Significance was determined by appearance in existing local and regional plans, public input, and field analysis. The selected routes were prioritized by weighted criteria, such as proximity to schools and employment centers, parks and greenways, commercial destinations and points of interest.

Please note: the 852 miles of recommended routes is in no way expected to be completed in the short-, or even medium-term. This Plan carefully prioritizes recommendations for a rational and achievable implementation process. For comparison's sake, the total recommended bicycle network is 34% of the present day existing roadway mileage in Durham City/County, whereas the *existing* on-street bicycle network is only 0.75%. Durham clearly has room to improve its bicycle network; this Plan shows how to make it happen through its implementation strategy.

