



*Chapter Sections:*

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## **B.1 Methodology**

The prioritization factors used in this project were customized for the City and County of Durham by selecting and weighting the factors according to public input, the Bicycle Plan Steering Committee suggestions, and similar criteria used in alternative transportation planning in other communities.

If an opportunity arises (through programmed roadway projects, land development requirements, etc.) for the completion of a recommended facility improvement, that opportunity should be taken regardless of its rank in the priority index. See Appendix E for a list of NCDOT's 2006-2012 TIP projects and Durham's 2006-2011 CIP projects that contain bicycle improvement opportunities.

The prioritization criteria were grouped into four categories: Proximity to Schools; Parks, Recreation, and Points of Interest; Transportation System Integration; and, Residential/Commercial/Employment Destinations.

### ***Proximity to Schools***

*Direct Access to/from a School-* Since the beginning of the planning process, safe routes to school has been a major concern. This factor gives high priority to recommended routes that provide direct access to all types of school.

*Elementary and Middle School Proximity (1 mile radius)-* In addition to the 'direct access' factor above, recommended routes that are in the proximity of schools are also given priority. A one-mile radius was used to judge proximity to elementary and middle schools.

*High School, College & University Proximity (2 mile radius)-* For schools populated by older students, a two-mile radius was used to take into account the likelihood of them traveling longer distances. While many students commute distances greater than two miles, a larger proximity radius for each institution would cover nearly the entire recommended network, nullifying the utility of the factor as a priority. The

one- and two-mile proximity ensures that recommended routes near schools are factored into the network prioritization.

### ***Parks, Recreation, and Points of Interest***

*Direct Access to/from a Greenway*– Serving as an element of both transportation and recreation, connections to greenways are crucial to the prioritization of bicycle routes. This process factors only existing greenway facilities, and therefore should be updated as new facilities are completed.

*Direct Access to/from a Park/Recreation Center/Playground*- This factor includes over sixty City- and County-owned facilities, ranging anywhere from active recreation sites like ‘tot-lots’ and ball fields, to passive recreation areas, such as West Point on the Eno.

*Direct Access to/from a Point of Interest*- Points of interest include destinations such as cultural and historical sites, libraries, and museums.

### ***Transportation System Integration***

*Connectivity to Existing Bike Facilities*- Connecting new facilities to existing ones is perhaps the best way to strengthen the existing bicycle network. The existing network is currently fragmented into several bike lanes and greenways; filling the gaps, therefore takes a high priority.

*Direct Access to/from Rail Transit*- Currently this factor only includes the existing Amtrak Station in Downtown Durham. As the locations of future rail stations are confirmed, the process should be updated to reflect those changes by including ‘future transit stations’ as a high priority for connecting bicycle facilities.

*Integrates with DATA and TTA Bus Route Network* – Bike-Bus integration was a priority for the Bicycle Plan Steering Committee. The purpose of this factor is to give priority to those routes that intersect or parallel the DATA and TTA networks.

*Regional Connection and/or Interstate Highway Crossings*- This factor represents the recommended bicycle routes that provide links in and out of Durham County or across Interstate Highways. This factor was evident as a priority during public workshops in which participants consistently advocated for these types of connections. For more info on the public input process, see Appendix A.

*Route with a Reported Bicycle Accident*- This factor was included using information from the Durham Police GIS Crash Data. The Bicycle Plan Steering Committee questions the validity of such data since the crash-reporting methods are often inconsistent and incomplete. Therefore, this factor only received one point as weighted criteria. As reporting methods and the subsequent data improve, the weight of this factor should increase.

### ***Residential/Commercial/Employment Destinations***

*Direct Access to/from Commercial Areas-* Includes Commercial Neighborhoods (CN), as defined in the Unified Development Ordinance (UDO), and the Durham GIS Shopping Layer.

*Direct Access to/from Employment Centers-* Includes the Central Business District (CBD), as defined in the UDO, Duke University, and the RTP.

*Direct Access to/from Higher Density Residential Areas-* Includes the following Residential Zoning Districts, as defined in the UDO: RS-M, RU-5, RU-5(2), RU-M, and RC.

*Direct Access to/from Mixed-Use Areas-* Includes the Mixed Use (MU) District, as defined in the UDO.

## **B.2 Top Priority Bicycle Projects**

The prioritization process began by compiling a list of top priority road segments recommended by the DCHC-MPO 2030 Long Range Transportation Plan, the CORE Pedestrian, Bicycle and Greenspace Plan, and top requests from both the steering committee and public input that were not duplicated from the preceding sources. Prioritizing every road segment in the long range recommendations for the entire study area, was not feasible. By concentrating efforts on the most highly recommended routes, key routes were ranked against one another and a final list was developed. Figure B.1 contains the “Top 20” On-Street Bicycle Projects, while Figure B.2 contains the “Top 5” Greenway Projects. A complete version of the on-road prioritization matrix is included at the end of this appendix.

## **B.3 Phasing**

Projects were grouped into three phases. Phase One is comprised of restripe opportunities and highest scoring projects from the Prioritization Matrix. Detailed information and mapping of Phase One Projects is outlined in Appendix D. Cut sheet maps have been provided for each Phase One project. Phase Two is comprised of the remaining projects from the Prioritization Matrix. Phase Three consists of all remaining projects that were not included in the Prioritization Matrix. Phase Three consists of projects that were not top priority recommendations by either the 2030 DCHC MPO LRTP, CORE Plan, 2001 Durham Trails and Greenways Plan, or were not a “Top 10” public recommendation. Phase Three contains a large quantity of projects; if opportunity arises through a state or local improvement program or repaving, these projects should be constructed, despite its ranking in the Prioritization Matrix. Table B.2 at the end of this Appendix contains a detailed record of the phasing schedule for the recommendations of this plan.

### Top 20 On-Street Bicycle Projects

Segment	From	To
1) Broad St / Swift Ave	Duke University Rd	Guess Rd
2) Fayetteville St	Cornwallis/Riddle Rd	Lawson St
3) W. Chapel Hill St.	Duke University Rd	Downtown Loop
4) Fayetteville St	Lawson St	Holloway St
5) Erwin Rd	Cameron Blvd	Main St
6) Main St	Great Jones	Alston Ave
7) South Roxboro St	Lakewood Ave	Cornwallis Rd
8) US 15-501	Orange County line	University Dr.
9) Moreene Rd	Erwin Rd	American Dr.
10) Lakewood Ave	Fayetteville St	Chapel Hill Rd
11) Old Durham/ Chapel Hill Rd	University Dr./Garrett	Orange County line
12) Club Blvd	Acadia St	Geer St
13) Fulton St	Hillandale Rd	Erwin Rd
14) Main St	Hillsborough Rd	Great Jones
15) Mangum St	Markham Ave	Lakewood Dr
16) Buchanan Blvd	Club Blvd	W. Chapel Hill St
17) Club Blvd	Hillandale Rd	Washington St
18) Club Blvd	Acadia St	Washington St
19) Cornwallis Rd	Erwin Rd	University Dr
20) Martin Luther King Blvd	University Dr	Hope Valley Rd

Figure B.1 - "Top 20" On-Street Bicycle Roads

### Top 5 Off-Street Greenway Bicycle Facilities

Segment	From	To
1) Completion of American Tobacco Trail	Morehead Ave	Chatham County line
2) Third Fork Creek Greenway	Southern Boundaries Park	NC 751/Hope Vally Rd
3) Downtown Railroad Trail Loop West	Blackwell	Avondale Dr
4) Rocky Creek Greenway	NC 55	NC 147
5) Downtown Railroad Trail Loop East	Avondale Dr	Blackwell St

Figure B.2 - "Top 5" Greenway Projects

## B.4 Prioritization Matrix

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## B.5 Facility Phasing Chart

(Continues on following pages)