



# Durham*Walks!* Pedestrian Plan Digest

Prepared by the Pedestrian Plan Implementation Committee  
of the Durham Bicycle and Pedestrian Advisory Commission (BPAC)



## Table of Contents

- **Brief Summary of the Durham*Walks!* Pedestrian Plan**
  - ① Five Major Goals
  - ① Facility Improvement Benchmarks
  - ① Pedestrian Plan Implementation Committee
- **Durham's Context**
  - ① Durham's Residents
  - ① Durham's School System
  - ① Durham's Existing Pedestrian Facilities
- **Priority Programs and Policies**
  - ① School Strides
  - ① Durham Pedestrian Safety Brochure
  - ① Pedestrian Awareness Task Force
  - ① Pedestrians and Transit
  - ① Other Walking Policies
- **Goal #1: Facility Quantity**
  - ① Priority Sidewalk Construction Projects
  - ① Sidewalk Petition Process
- **Goal #2: Facility Quality**
  - ① Priority Intersection Improvement Projects
  - ① Priority Sidewalk Maintenance Projects
- **Goal #3: Improving Pedestrian Safety and Security**
  - ① Related Programs and Policies
  - ① Safety Survey
- **Goal #4: Enhancing Coordination**
  - ① Promoting Pedestrian-Friendly Policies and Practice
  - ① Networking with Special Mobility Groups
  - ① Formation of Task Forces
  - ① Holding an Annual Transportation Summit
- **Goal #5: Public Health Promotion**
  - ① Walking and Public Health
  - ① Americans with Disabilities Act (ADA) Compliance
  - ① School Strides: Health Benefits for Children
  - ① Other Public Health Promotion Actions and Recommendations
- **Appendix**
  - ① Pedestrian Plan Goals and Benchmarks
  - ① Funding Sources
  - ① Project Ranking Formula

# Brief Summary of the Durham Walks! Pedestrian Plan

**Passed:** By Durham City Council on 9/2006

**Purpose:** To assess existing pedestrian infrastructure, recommend safe and accessible pedestrian networks (sidewalks, trails, and intersections), and recommend new pedestrian-related programs and policies.

**Prepared:** By Durham City staff, Louis Berger Group consultants, and a Stakeholder Committee

**Plan Funding:** Provided by City of Durham and NC Department of Transportation

## Five Major Goals

1. **Facility Quantity:** Increase the number of pedestrian facilities, including sidewalks, trails, crosswalks, and pedestrian safety improvements at intersections.
2. **Facility Quality:** Upgrade facilities in poor condition.
3. **Improving Pedestrian Safety and Security:** Improve the safety and security of pedestrian facilities
4. **Enhancing Coordination:** Enhance and coordinate the efforts of people and agencies that make decisions concerning transportation and land use to prioritize pedestrian activity in their policies and practice.
5. **Public Health Promotion:** Promote public health by increasing pedestrian activity (this goal was added to original list of goals 1-4)

## Facility Improvement Benchmarks

A comprehensive list of benchmarks has been established to measure success in pedestrian facility improvement, with the full list available in the appendix and an abbreviated list of more tangible measures provided below:

1. Complete 6 of the 19 top priority projects listed in Table 1 by 2010, "A" Rank sidewalk construction projects in alphabetical order:

ROAD NAME	FROM	TO
Alston A6	Carpenter Fletcher	Sedwick
Avondale	Roxboro	Geer
Cameron	Erwin	Duke University
Campus Walk	Morreene	LaSalle
Cheek PW2	Geer	Hardee
Club1	Ruffin	Ambridge
Cornwallis A1	15-501	Roxboro
Dearborn A1	Old Oxford	Ruth

<b>Fayetteville A2</b>	<b>Woodcroft</b>	<b>MLK</b>
<b>Garrett A1</b>	<b>Hope Valley</b>	<b>Swarthmore</b>
<b>Hillandale A1</b>	<b>Peppertree</b>	<b>Carver</b>
<b>Hillandale A2</b>	<b>Carver</b>	<b>I-85</b>
<b>Hope Valley A1</b>	<b>HWY 54</b>	<b>Swarthmore</b>
<b>Hope Valley A4</b>	<b>Archdale</b>	<b>15-501</b>
<b>LaSalle A1</b>	<b>Kangaroo</b>	<b>Erwin</b>
<b>Markham 2</b>	<b>Washington</b>	<b>Avondale</b>
<b>Roxboro 2</b>	<b>Pacific</b>	<b>Murray</b>
<b>Roxboro 6</b>	<b>Enterprise</b>	<b>Cornwallis</b>
<b>University 3</b>	<b>Old Chapel Hill</b>	<b>Hope Valley</b>

2. Construct 156 miles of new sidewalk on existing roadways to add to the existing inventory of 409 miles by 2010 and reduce by 10 percent the existing gap of 1,558 miles of sidewalk needed to 1,402 miles of sidewalk needed.
3. Repair 4 miles of the existing inventory of deteriorated sidewalk (89 miles) and perform renovations to meet the design standard on 24 miles of deteriorated sidewalk by 2015.
4. Reduce pedestrian accidents (the total of all categories) to 73 per year or less by 2010.
5. Form a Pedestrian and Public Transit Task Force in conjunction with the Bicycle and Pedestrian Advisory Committee meeting four times per year to evaluate, update and otherwise oversee the plans goals by 2010, with a particular focus on safety.

### ***Pedestrian Plan Implementation Committee***

To achieve these goals and implement the plan, the Durham Bicycle and Pedestrian Advisory Commission (BPAC) created a Pedestrian Plan Implementation Committee. The goals of the committee include:

- Creation of the Durham *Walks!* Pedestrian Plan Digest to provide easily accessible information for the public
- Publication of an Annual Durham *Walks!* Progress Report to track the progress of the pedestrian plan

As a subcommittee of BPAC, the committee can include non-BPAC members. It currently includes citizens representing a variety of interests including, Durham Public Schools, downtown Durham, public health. To participate or provide input, please contact:

*Dale McKeel*

City of Durham/DCHC MPO Bicycle & Pedestrian Planner

919-560-4366

[dale "DOT "mckeel "AT" durhamnc "DOT" gov](mailto:dale DOT mckeel AT durhamnc DOT gov)

# Durham's Context

## *Durham's Residents*

Durham's population is full of pedestrians, from students without cars, to lower income populations that can't afford cars, to the elderly who no longer drive. Residents already have pedestrian-oriented tendencies, reflected in the percent of workers who commute to work via transit or walking. Specifics about Durham's population are as follows:

- **Race:** Durham, population 187,183 (2000 US Census), is a very diverse city, with 46% of the population Caucasian, 44% African American, and 8% Hispanic.
- **Age:** Durham's median age is 31.0 years old, while the median age for both the state and nation is 35.3 years old. This lower median age may be attributed to the large student population associated with the universities and colleges in the city.
- **Education and Income:** Educational attainment levels and median income in Durham are higher than both the state and national averages, as is Durham's poverty rate.
- **Vehicle Ownership:** In terms of vehicle ownership, the city has higher than state and national averages in percent of households with no vehicles available and percent of households with only one vehicle available, and lower than state and national averages in percent households with 2 or more vehicles available.
- **Work Commute:** Reflecting vehicle ownership, 6.6% of Durham's workers take public transit or walk to work – higher than the state-wide rate of 2.8%.

## *Durham's School System*

The City of Durham is part of the Durham County Public School system, which (in 2006) encompasses 48 schools total: 28 elementary schools, eight middle schools, and seven high schools plus three year-round schools, the Durham School of the Arts, Lakeview Secondary School and one hospital school. With about 4,600 employees (2,300 teachers), the system averages 32,000 students enrolled each year and offers a variety of after-school programs, including after-school day-care and athletic programs. Bus service through the public schools is provided to approximately 18,000 students, 180 days a year, on 300 buses. At this time, the Durham County Public School system does not maintain a count of the number of students that walk to school. A school system may establish a walk zone, which is a distance around a school within which the school will not provide bus service to students and instead students are expected to walk. As of the publication of this Plan, the Durham County Public School System does not have any walk zones established.

As part of the Durham Pedestrian Plan, a school activity was conducted in which students from the elementary schools in the Durham Public Schools System were invited to perform pedestrian audits of the neighborhoods near their schools. Twenty schools participated in this program; these were:

Fayetteville Street  
Mangum  
Eastway  
George Watts  
Morehead Montessori  
Hillandale  
Lakewood  
R N Harris  
Barton  
Southwest  
C. C. Spaulding  
W. G. Pearson  
Club Blvd. Magnet  
Pearsontown  
Oak Grove  
Eno Valley  
Holt  
Eno Valley  
Holt  
Parkwood  
Creekside  
Forest View

Student's assessments found that many schools needed better pedestrian access, as well as more traffic calming near to the schools.

### ***Durham's Existing Pedestrian Facilities***

From August 2005 to January 2006 each and every hard-surface sidewalk and pedestrian trail (on-road and off-road) was inventoried using Global Positioning System technology.

- **Sidewalk mileage:** Durham has approximately 1,124 miles of road and 409 miles of sidewalks, which makes for a ratio of approximately one mile of sidewalk to 2.7 miles of road (.36:1 miles sidewalk to road). In an ideal situation, this ratio would likely be around 1.75 miles of sidewalk to 1 mile of road.
- **Sidewalk Condition:** Seventy-eight percent (78%) (320 miles) of Durham sidewalks are considered in good condition. However, over 274 roads show signs of deterioration as evidenced by cracking, faulting, or wearing of sidewalks. Refer to Figure 2-2 on page 2-10 of section 2 of the Durham *Walks!* plan ... [www.durhamnc.gov/durhamwalks](http://www.durhamnc.gov/durhamwalks) ... to view map display of sidewalk conditions in Durham. Appendix 3 of the full plan displays maps which identify pedestrian-related features as well as issues that currently inhibit pedestrian travel.
- **Current Pedestrian Activity Centers:** A pedestrian activity center is a location, at least a block long, where pedestrians use the street space to the same or greater degree than drivers. Currents centers include the Ninth Street Commercial Area, Brightleaf District, Downtown Durham, the North Carolina Central University Area, the Chapel Hill Street Area, Northeast Central Durham (see Fig. 7-1).

## Priority Programs and Policies

The following programs and policies have been identified as priorities under the Durham *Walks!* Pedestrian Plan:

### ***School Strides***

The *School Strides* program was developed under the plan and models the Safe Routes to School Program, with the purpose of educating and encouraging elementary, middle, and high school children to walk to school and do so safely. A number of recommendations were suggested to build the School Strides Program in Durham. The full list is available in the complete Pedestrian Plan, with a few listed below:

- Create a “Walk Across North Carolina” program throughout the school system, where children participate in a reward program based on physical activity, particularly walking to and from school or at school.
- Create individual school-based “Frequent Walker” programs where kids who walk to school can earn stamps that can be redeemed for prizes
- Establish a funding program to install trail connections, sidewalks, and bicycle parking racks at local schools. Emphasis is placed on pedestrian facility construction within ¼-mile radius of all elementary and middle schools.

The Pedestrian Plan suggests the formation of a School Strides Task Force, which would coordinate with the Durham Public School system and include members from the health community, to implement the School Strides program.

### ***Durham-Focused Pedestrian Safety Brochure***

A brochure focused on Durham’s pedestrian issues, including current pedestrian projects and programs, contacts, and links to the Durham *Walks!* Pedestrian Plan, should be distributed to schools, health care facilities, senior centers, colleges, and transit companies.

### ***Creation of a Pedestrian Awareness Task Force***

One of the plan’s recommendations is to increase coordination across sectors via a Pedestrian Awareness Task Force, led by the Public Works Department Transportation Division and the Bicycle and Pedestrian Advisory Commission and composed of individuals from the police, engineering, and transportation departments, as well as public schools. The task force would meet quarterly to discuss walking and bicycling safety issues in Durham.

### ***Pedestrians and Transit***

- Expand the marketing budget of DATA (Durham Area Transit Authority)
- Provide cursory review opportunities for any new/proposed development located adjacent to existing/new transit service
- Modify “checklist” of items reviewed for each new/proposed development or expansion of 50% of value of property that has pedestrian, cycling, and transit provisions (see pedestrian-transit checklist, table 7-1)
- Promote pedestrian-oriented transit development
- Create a “Universal Access Award” for developers that exceed minimum standards for pedestrians, cyclists, and transit design.

### ***Other Walking Policies***

- Update ordinances to improve consideration of pedestrian, cycling, and transit facilities
- Establish areas that already have a high concentration of pedestrians as Pedestrian Activity Centers

# Goal #1: Facility Quantity

## *Priority Sidewalk Construction Projects*

One of the primary goals set forth by the Pedestrian Plan is to construct new sidewalks and trails, as well as related facilities such as signage, signals, and lighting. A prioritization scheme was developed to determine the highest priority (“A” rank) locations for new sidewalks. Differential weights were given according to the following criteria:

**Top tier (weight: 3):** Gap construction > new construction > one side only

**Second tier (weight: 2):** Equal weight for safety (higher priority if more crashes), proximity to school (higher priority when closer to a school), and road type (higher priority when on a higher traffic road)

**Third tier (weight: 1):** Equal weight for compatible land uses (higher priority if compatible land use leading to higher demand surrounding new sidewalk), proximity to park (higher priority when close to park), and proximity to greenways (higher priority when close to greenway).

An example calculation can be seen in the Appendix. The resulting priority new construction projects are listed below:  
**“A” Rank sidewalk construction projects in alphabetical order:**

<b>ROAD NAME</b>	<b>FROM</b>	<b>TO</b>
Alston A6	Carpenter Fletcher	Sedwick
Avondale	Roxboro	Geer
Cameron	Erwin	Duke University
Campus Walk	Morreene	LaSalle
Cheek PW2	Geer	Hardee
Club1	Ruffin	Ambridge
Cornwallis A1	15-501	Roxboro
Dearborn A1	Old Oxford	Ruth
Fayetteville A2	Woodcroft	MLK
Garrett A1	Hope Valley	Swarthmore
Hillandale A1	Peppertree	Carver
Hillandale A2	Carver	I-85
Hope Valley A1	HWY 54	Swarthmore
Hope Valley A4	Archdale	15-501
LaSalle A1	Kangaroo	Erwin
Markham 2	Washington	Avondale
Roxboro 2	Pacific	Murray
Roxboro 6	Enterprise	Cornwallis
University 3	Old Chapel Hill	Hope Valley

## ***Sidewalk Petition Process***

Citizens have the opportunity to request a sidewalk at any given location. The petition process is administered through the Engineering Division of the Public Works Department.

- **Petition sponsor responsibilities:** An individual serving as the “petition sponsor” [petitions for a sidewalk](#) from the City. As a part of the request the sponsor outlines the limits of the area to be served. They indicate the starting point and ending point of the sidewalk and on which side of the street. Typically the sidewalk should begin and end at street intersections and includes complete blocks. Once the limits have been determined, the City prepares a petition for the sponsor to circulate. The petition sponsor is responsible for securing signatures for the petition.
- **Requirements:** The petition must be signed by a majority (50%+) of the property owners adjacent to the proposed improvement. and the signers’ properties must represent the majority (50%+) of the road frontage involved in the requested project. Once completed, the petition is returned to the City’s Engineering Division and researched to determine if it is sufficient.
- **City Council decision:** If the petition is sufficient, it is taken to City Council for action. A public hearing is held to consider the issue. Assuming Council approves the project, it is returned to Engineering for design and placement into a contract once it has been funded.
- **Fees:** When the project is complete, the adjacent property owners are assessed a portion of the project costs. The current assessment rate for sidewalks is \$5.00 per linear foot. There may also be an additional \$20 per linear foot assessment for curb and gutter in situations if curb and gutter installation is necessary. This assessment can be paid at the time it is levied or it can be paid out in annual installments over 5 years at 9% interest.
- **Petition Form:** Citizens may request a sidewalk petition and learn more about the petition process by calling the City's Engineering Services Division at 560-4326.

## Goal #2: Facility Quality

### *Priority Intersection Improvement Projects*

One of the five main goals of the Durham *Walks!* Pedestrian Plan is to improve the quality of both future and existing sidewalks, multi-purpose trails, and other pedestrian amenities in Durham, especially in those areas that are suffering the most from poor conditions.

A prioritization scheme was developed to rank priority intersections to be improved, according to the following criteria:

**First Tier (weight: 3):** Equal weight for ADA Compliance (higher priority for no/less compliance) and safety (higher priority if more crashes)

**Second Tier (weight: 2):** Equal weight for schools (higher priority if closer to a school), parks (higher priority if closer to a park), greenways (higher priority if closer to a greenway), and public comments (higher priority if more public comments about it)

**Third Tier (weight: 1):** Equal weight for compatible land uses (higher priority if compatible land use leading to higher demand surrounding new sidewalk), presence of a sidewalk (higher priority if no/few sidewalks), sidewalk condition (higher priority for poor condition), and road type (higher priority when on a higher traffic road)

An example calculation can be seen in the appendix. The resulting priority intersection improvement projects are listed below:

#### **Priority (“A” ranked) intersection improvement projects**

**15-501 and Garrett**

**Academy and Cranford**

**Broad and Main**

**Club and Guess**

**Duke and I-85**

**Duke and Main**

**Duke University and Chapel**

**E. Forest Hills and University**

**Fayetteville and Barbee**

**Fayetteville Crossing for SW Elementary**

**Garrett and Trotter Ridge**

**Glendale and Acadia**

**Glendale and Club**

**Hillandale and I-85**

**Hillsborough and LaSalle**

**HWY 54 and Fayetteville**

**HWY 55 and HWY 54**

**LaSalle and Erwin**

**Mt. Sinai and Erwin**

**Roxboro and Club**

**Roxboro and I-85**

## ***Priority Sidewalk Maintenance Projects***

The priority sidewalk maintenance projects are listed below and were determined as such if there was severe cracking, faulting, surface wearing, *and* obstructions that served as a safety hazard.

<b>Street Name</b>	<b>From</b>	<b>To</b>	<b>Length (miles)</b>
<b>Angier</b>	<b>Alston</b>	<b>Holman</b>	<b>0.06</b>
<b>Concord</b>	<b>Lawson</b>	<b>Otis</b>	<b>0.09</b>
<b>Conyers</b>	<b>Wilkerson</b>	<b>end</b>	<b>0.02</b>
<b>Duke</b>	<b>Morehead</b>	<b>Proctor</b>	<b>0.07</b>
<b>Ellerbe Creek Trail</b>			<b>0.74</b>
<b>Ellis</b>	<b>New Haven</b>	<b>Taylor Ridge</b>	<b>0.07</b>
<b>Farthing</b>	<b>Ellerbe</b>	<b>Club</b>	<b>0.01</b>
<b>Formosa</b>	<b>Otis</b>	<b>Concord</b>	<b>0.03</b>
<b>Garrett</b>	<b>15-501</b>	<b>University</b>	<b>0.05</b>
<b>Geer</b>	<b>Foster</b>	<b>Morth</b>	<b>0.19</b>
<b>Gregson</b>	<b>Minerva</b>	<b>Morgan</b>	<b>0.25</b>
<b>Gurley</b>	<b>Mallard</b>	<b>Primitive</b>	<b>0.02</b>
<b>Hillsborough</b>	<b>Hale</b>	<b>Carolina</b>	<b>0.05</b>
<b>Knox</b>	<b>Hale</b>	<b>Carolina</b>	<b>0.06</b>
<b>Lakewood</b>	<b>Fayetteville</b>	<b>Old Fayetteville</b>	<b>0.02</b>
<b>Lyon Park Trail</b>			<b>0.18</b>
<b>MLK Jr.</b>	<b>Dixon</b>	<b>Hope Valley</b>	<b>0.01</b>
<b>Morehead</b>	<b>Vickers</b>	<b>Duke</b>	<b>0.12</b>
<b>Roxboro</b>	<b>Corporation</b>	<b>Dowd</b>	<b>0.06</b>
<b>Sherwood Park Trail</b>			<b>0.24</b>
<b>Southern Boundary Park Trail</b>			<b>0.61</b>
<b>Taylor</b>	<b>Hyde Park</b>	<b>Maple</b>	<b>0.06</b>
<b>Trinity</b>	<b>Shawnee</b>	<b>Rosetta</b>	<b>0.14</b>
<b>University</b>	<b>Cornwallis</b>	<b>Woodridge</b>	<b>0.04</b>

## **Goal #3: Improving Pedestrian Safety and Security**

The City of Durham is committed to creating and maintaining a safe, accessible network of pedestrian facilities for all residents. In addition to the call for a Pedestrian Awareness Task Force and the Pedestrian Safety Brochure, the Pedestrian Plan also suggests the following as safety and security benchmarks of success:

- Creation of a fourth and fifth-grade class-based education module focused on pedestrian and bicycle safety
- Improve school crossing treatments to reduce crashes near schools
- Assess resident satisfaction with safety/security while walking in survey conducted every 2 years
- Create traffic calming and speed reduction programs to reduce dangerous driving behavior
- Encourage safer travel by implementing pedestrian and driver safety awareness and enforcement programs

## **Goal #4: Enhancing Coordination**

### ***Promoting Pedestrian-Friendly Policies and Practice***

To successfully implement the DurhamWalks! Pedestrian Plan, coordination will be required across a broad range of individuals, agencies, and organizations, including:

- The City and County of Durham (including City Council, planning, transportation, engineering departments)
- Citizen Advisory Commissions: The Durham Bicycle and Pedestrian Advisory Commission; the Durham Open Space and Trails Commission; and the Planning Commission
- Transportation planning agencies: NC Department of Transportation, STAC, MPO, others?
- Departments of Public Health
- Public Transit Operators
- Police Departments
- Education: Universities, schools, teachers, and education organizations
- Private sector: Businesses and property developers
- Special mobility groups: Elementary and middle school students, senior citizens, and low income individuals
- Citizens and public interest groups

### ***Networking with Special Mobility Groups***

The Plan recommends Transportation and BPAC members should regularly network with special mobility groups, such as students, senior citizens, and low income workers, who are more dependent and affected by pedestrian facility access and quality.

### ***Formation of Task Forces***

- Pedestrian Awareness Task Force (see page 6)
- School Strides Task Force (see page 5)

### ***Holding an Annual Transportation Summit***

The City should consider hosting an annual transportation summit to review progress made in implementing this Plan. The summit should include breakout sessions on walking, cycling, auto travel, and public transportation/rail. Participants should include change agents from all levels of government and in various functional roles, and each should come away with a clear, preferably one-page summary of what each agency needs to do to reach the goals of the *DurhamWalks!* Pedestrian Plan.

## **Goal #5: Public Health Promotion**

### ***Walking and Public Health***

Walkable cities promote healthy citizens. Health professionals recommend walking as a form of physical activity to help prevent a host of diseases including obesity, heart disease, and some forms of cancer. While many issues provided impetus for the DurhamWalks! Pedestrian plan, public health was an important concern. The Plan identified several potential programs and policies that are relevant to public health, including compliance with the Americans with Disabilities Act and implementation of the School Strides program.

### ***American with Disabilities Act (ADA) Compliance***

One emphasis of the plan guidelines was to strongly urge that all new or reconstructed sidewalks should adhere to ADA standards. These standards include sidewalk grade, cross-slope at driveways, and design specifications for curb ramps. Specific recommendations were as follows:

- Cross-slope on sidewalks should allow safe wheelchair travel along the sidewalk without directing the user into traffic through angled (cross) slope designs.
- Cross-slope on sidewalks should not exceed 2%, preferably not 1.5% where possible (see figure below).
- Curb ramps should not have a slope greater than 1:12, meaning that for every foot of travel, the slope should not rise more than one inch.
- To provide a tactile warning to the visually impaired, raised truncated domes with a color contrast to the background material (typically concrete) should be used.

Additionally recommendations for features to make recreation trails ADA compliant were also issued. Recreation trails by their nature may have limited accessibility to mobility impaired users; other trail types should provide surfaces, grades, and dimensions to make them fully accessible to a wide range of user groups. Cross-slopes should nevertheless not exceed 2% (preferred maximum: 1.5%) to avoid problems with drainage and undercutting of the pavement through erosion. Grade in the direction of travel should not exceed 8.3% according to ADA guidelines (preferred maximum: 5%).

### ***School Strides: Health Benefits of Walking for Children***

Given the recent epidemic in childhood obesity, it is critical that children develop an active lifestyle at an early age. This can be encouraged by creating opportunities for utilitarian exercise through activities such as walking to school. While many issues provided impetus for the DurhamWalks! Pedestrian plan, promoting walking in children, especially to school, was an important concern. To address this concern, the *School Strides* program was developed, with the purpose of educating and encouraging elementary, middle, and high school children to walk to school and do so safely.

### ***Other Public Health Actions and Recommendations***

The following agencies should receive summaries of the DurhamWalks! Pedestrian Plan and/or brochures on the benefits of walking:

- Student Health Centers at college and university campuses;
- Public Hospitals, one copy for each waiting area;
- Public School nursing stations; and
- General medical practitioners and other medical facilities for placement in waiting rooms.

# APPENDIX

## *Pedestrian Plan Goals and Benchmarks*

**Goal 1:** Increase the total amount of pedestrian facilities in Durham: sidewalks; trails; crosswalks; pedestrian safety improvements at intersections such as electronic signals and signage; and other related amenities in the [County or City] of Durham. To meet the recommended ratio of 1.75 mile of sidewalks to 1 mile of roads, Durham needs 1,967 miles of sidewalk for its 1,124 miles of roads.

### **Benchmarks**

1. Complete 6 of the 19 top priority projects listed in Table 1 by 2010 (see the Table in Appendix page 4-2).
2. Construct 156 miles of new sidewalk on existing roadways to add to the existing inventory of 409 miles by 2010 and reduce by 10 percent the existing gap of 1,558 miles of sidewalk needed to 1,402 miles of sidewalk needed.
3. Establish an online citizen petition for new sidewalks and maintain database of requested sidewalks on City of Durham website by 2010.
4. Establish a street project prioritization system that includes among other factors a focus on public transit and proximity to schools by 2006.
5. Construct electronic pedestrian signals and crosswalks at all intersections within areas of the city zoned for retail commercial use and all public transit routes by 2012.
6. Reduce residential streets without sidewalks by 25% by 2015.
7. Create an updated citizen survey every two years to determine satisfaction with quantity of existing pedestrian facilities by 2010.
8. Update the existing pedestrian facility inventory to include mileage count of all sidewalks in Durham including those constructed by developers by 2015.

**Goal 2:** Continually maintain all existing pedestrian facilities in Durham to an accepted design standard.

### **Benchmarks**

1. Adopt a universal pedestrian design standard for all Durham planning documents by 2010.
2. Repair 4 miles of the existing inventory of deteriorated sidewalk (89 miles) and perform renovations to meet the design standard on 24 miles of deteriorated sidewalk by 2015.
3. Create an updated citizen survey every two years (same survey as goal 1.8) to determine satisfaction with quality of existing pedestrian facilities by 2010.
4. Update the existing pedestrian facility inventory to include all sidewalks in Durham including those constructed by developers by 2015, with focus on higher maintenance standards.

**Goal 3:** Enhance pedestrian safety and user friendliness to increase pedestrian activity.

### **Benchmarks**

1. Reduce pedestrian accidents (the total of all categories) to 73 per year or less by 2010.
2. Improve crossings at schools and thereby reduce pedestrian crashes around schools by 50% by 2010.
3. Pedestrian activity as measured by direct observation viewing major pedestrian corridors is to increase by 25 percent by 2010 over a baseline measurement taken by the same method in 2008.
4. Create an updated citizen survey every two years (same survey as goals 1.8 and 2.3) to determine satisfaction with personal safety and security while using existing pedestrian facilities by 2010.

**Goal 4:** Guarantee that all public agencies operating in Durham and issuing construction permits or themselves constructing civic works give **equal** design and regulatory consideration to all pedestrian, public transit, and private means of transportation including bicycles and automobiles.

**Benchmarks**

1. Update and distribute the Uniform Development Ordinance to this end by 2010.
2. Annually convene “best practices” workshop to educate city regulatory and design staff employees about the UDO by 2010.
3. Form a Pedestrian and Public Transit Task Force in conjunction with the Bicycle and Pedestrian Advisory Committee meeting four times per year to evaluate, update and otherwise oversee the plans goals by 2010, with a particular focus on safety.

***Funding Sources***

**Sidewalk Repair and Maintenance**

The City has very limited funding each year for sidewalk projects outside of a bond package. Once a project is ordered by Council it may still take several years before it is actually constructed. Funding for sidewalk repair is requested annually as a part of the budget process. The City has very limited funding each year for sidewalk projects outside of a bond package. Once a project is ordered by Council it may still take several years before it is actually constructed. Historic funding levels have been approximately \$100,000 per year. In addition, the 2005 bond package includes \$2.4 million intended for sidewalk repair and replacement. Potential sources of funding for maintenance (refer to Section 8 of the Pedestrian Plan for details):

- Transportation Enhancement Program
- Powell Funds – NCDOT
- Spot Improvement Program – NCDOT
- Statewide Discretionary Funding – NCDOT

**School Strides**

Funding for this effort should come in part from the City, perhaps from the DPS, and in part from anticipated grant opportunities from the federal/state Safe Routes to School program.

## ***Project Ranking Formula***

### **Calculating “A” Rank New Sidewalk Projects**

Final Score = 3\*(Project Type) + 2\*(Safety Need + Schools + Transit + Road Type) + 1\*(Compatible Land Use + Comments + Parks + Greenways)

Final Score = 3\*(Project Type = one side only = 0) + 2\*(Safety Need = No Crashes = 0 + Schools = Yes = 1 + Transit Route = Yes = 1 + Road Type = Collector = 1/2) + (Compatible Land Use = very = 1 + Comments = 3 comments = 1/2 + Parks = No = 0 + Greenways = No = 0)

Final Score = 3\*0 + 2\*(0 + 1 + 1 + 1/2) + (1 + 1/2 + 0 + 0) = 6 1/2

### **Calculating “A” Rank Intersection Improvement Projects**

Final Score = 3\*(ADA Compliance + Safety Need) + 2\*(Schools + Parks + Greenways + Comments) + 1\*(Transit + Sidewalk + Sidewalk Condition + Road Type)

Final Score = 3\*(ADA Compliance = No = 1 + Safety Need = 1 Crash = 1/2) + 2\*(Schools = Yes = 1 + Parks = No = 0 + Greenways = No = 0 + Comments = 4 Comments = 1) + 1\*(Transit = No = 0 + Sidewalk = Yes = 0 + Sidewalk Condition = 1/2 + Road Type = Collector = 1/2)

Final Score = 3\*(1 + 1 + 1/2) + 2\*(1 + 0 + 0 + 1) + 1\*(0 + 0 + 1/2 + 1/2) = 12.5