

# 5 System Components



*Wakefield Street Photo Simulation showing Sharrows*

## Introduction

The Master Plan identifies various system components that, together, create a comprehensive greenway system. These components include and define variations in trail design, pedestrian and bicycle improvements, and facilities and amenities throughout the system. These components reflect existing conditions as well as context and ultimately influence potential use and the experience of the user.

## Trail Types

The master plan identifies four primary classifications of trails. These classifications reflect variations in purpose and design. These classifications are:

- Greenway Trails
- Spur Trails
- Urban Trails
- Blueways

## Greenway Trails

Greenway trails are typically 8'-12' wide asphalt-paved trails with a 2' wide compacted stone (compacted ABC) shoulder. These trail types are typically located through natural areas, within parks, and in conjunction with utility easements. Trails are to be built to withstand occasional vehicle traffic for maintenance and emergency access purposes. The stone subbase should be determined based on a geotechnical investigation of each specific corridor.

In some locations a greenway trail can be natural and unpaved, partially paved or have a gravel surface.



*Blue Loop - Raleigh Art Museum*

## Spur Trails

Spur trails are normally short distance trails that provide connections from neighborhoods, adjacent land uses, public facilities, retail, and civic uses to the larger greenway trail system. These trails can be narrower than the typical 8'-12' greenway trail but should not be narrower than 6'. These trails should also be built to greenway trail standards and be able to withstand an occasional vehicle for either maintenance or emergency access.

Spur trails typically occupy narrower corridors and can be close to established residences or other land uses and, therefore, may include additional amenities to screen or separate the trail from private property. These may include retaining walls to limit grading onto adjacent parcels, fencing to keep users off private property and limit access to facilities such as storm water ponds, and landscaping to minimize views and maintain privacy of adjacent land uses.



*Spur Trail - Cary, NC*

## Urban Trails

Urban trails refer to those accommodations for bicycles and pedestrians located along or within established streets and road rights of way. Components of these trails include those amenities and features associated with greenway trails as well as street improvements for bicycles and pedestrian crossings.

## Sidewalks

Sidewalks are pedestrian-centric and encourage safe walking conditions. The minimum sidewalk width should be 6' and located a minimum of 3' off the back of curb. Sidewalks typically are associated with roads and often are constructed of concrete.



*NC55 Streetside Trail - Cary, NC*

## Roadside Trails

A roadside trail is used along roads where higher pedestrian traffic volumes are expected and the potential for bicycle traffic is significant. Often, these trails are found in locations where there is a desire to keep bicycles off of the street. These trails are typically 8-10' wide and are ideally set at least 5' off the back of curb. In situations where there is limited room, these trails can be constructed closer to or along the back of curb. They can be constructed of asphalt or concrete.

## Street Crossings

In urban areas, designated street crossings will be necessary. The scale, size, speed limit, and amount of traffic on the street will determine the various approaches to street crossings and details which can be used.

Low traffic volume streets can have crossings that are as simple as a crosswalk and signage. These should be located at street intersections that have stop signs or signals.



*Batchelor Branch Creek Road Crossing - Cary, NC*



*Black Creek Greenway Road Crossing - Cary, NC*

Crossings of major roads with high traffic may require a pedestrian refuge island, pedestrian activated signals and flashing street signs in addition to signage. These can be located at intersections or in some cases mid-block.



*Sharrows on Lassiter Mill Road - Raleigh, NC*

Crossings at major highways will require either an underpass or bridge. These underpasses and bridges can be expensive and should be designed to be visually attractive, durable and safe. Bridges and underpasses also provide an opportunity for public art and can also be designed to be a gateway into town.



*American Tobacco Trail Bridge - Durham, NC*

## Bike Lanes

Bike lanes are dedicated travel lanes within an existing or new roadway. They are to be 4'-5' wide and identified with signage and pavement markings.

## Sharrows

Sharrows are lane markings on the road that indicate that cyclists are going to be in the same lane and have a right to ride. They are intended to make motorists aware of bicycles and that they need to share the road.



*Black Creek Greenway Underpass - Cary, NC*

## Street Classifications

The master plan identifies three levels of improvements for urban trails and other accommodations based on a tiered designation of the road and street network including classification of the road, destinations located along the road and the potential for future development.

### Tier 1 Streets

Tier 1 Streets are to include bike lanes, 8' sidewalks, and signage. Streets that are classified as Tier 1 Streets are as follows:

- Arendell Avenue
- Gannon Avenue
- Mack-Todd Road / Business 64



*Arendell Avenue - photo courtesy of Google Maps*

### Tier 2 Streets

Tier 2 Streets are to include sharrows, 5-8' sidewalks, and signage. Streets that are classified as Tier 2 Streets are as follows:

- Barbee Street
- Horton Street between Wakefield Street and greenway corridor #8
- Judd Street
- Shepard School Road / Poplar Street
- Stratford Drive
- Vance Street between Arendell Avenue and Poplar Street
- Wakefield Street



*Wakefield Street - photo courtesy of Google Maps*

### Tier 3 Streets

Tier 3 Streets are to include 5-6' sidewalks. Tier 3 Streets are as follows:

- Church Street
- Franklin Street
- Horton Street between Wakefield Street and greenway corridor #6
- Vance Street between Arendell Avenue and Wakefield Street



*S. Wakefield Street - photo courtesy of Google Maps*



*Little River Blueway Corridor - Zebulon, NC*



*Bolin Creek Trail Wayfinding Signage - Chapel Hill, NC*

## Blueways

A blueway is a river/stream that is navigable and can be used for recreational activity or movement from one destination to another. The river/stream itself may not require much improvement but will require access points for kayaks and canoes. These access points will require management. In addition to access points, some wayfinding signage may be required along the blueway. Along the western edge of the town's ETJ and connecting to Little River Park and eventually the future reservoir, the Little River offers potential for a designated blueway.



*Bolin Creek Trail Bicycle Stairway - Chapel Hill, NC*

## Facilities and Amenities

Facilities and amenities throughout the greenway system include trailheads, restrooms, directional signage, educational signage, bicycle stairways, exercise stations, benches, shelters and public art.



*Trailhead Speight Branch Greenway - Cary, NC*

Trailheads can be specific for greenway use or make use of an existing public facility like a park, library, stadium or shopping center. Bollards and / or gates at trailheads prevent vehicles from accessing the greenway trail

Trailheads can typically include parking, signage, trash receptacles and restrooms.

Along the trail, various amenities such as benches, dog waste stations, signage (both directional and educational), exercise stations, benches, shelters and public art can included. While many of these are functional, amenities can also provide educational opportunities and enhance the identity of a corridor or trail.



*Wayfinding signage - Chapel Hill, NC*