

# TOWN OF SPARTA PEDESTRIAN TRANSPORTATION PLAN

May 2, 2006



Funding for this project provided by NCDOT and Town of Sparta



Technical Assistance provided by High Country Council of Governments

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## Executive Summary

The Town of Sparta, with financial assistance from the North Carolina Department of Transportation (NCDOT), has developed a Pedestrian Plan to address deficiencies in the current pedestrian system, and to accommodate future population growth and demand for pedestrian facilities. The Town contracted with High Country Council of Governments to develop the Plan, and formed a Steering Committee to provide oversight of Plan development. The Steering Committee included representation from a broad range of stakeholder groups, including Town government, County government, NCDOT, Alleghany County Board of Education, and the business community. Public involvement strategies used in Plan development included surveys, a public meeting, posting of the draft Plan at various locations for public review and comment, and a public hearing.

The Plan was developed in four steps – analysis of the existing pedestrian facilities and programs in Sparta; determination of public opinion regarding pedestrian facilities; analysis of typical pedestrian facility specifications and pedestrian programs; and development of recommendations.

The analysis of current conditions identified deficiencies in the existing pedestrian system. These deficiencies included narrow sidewalks, lack of connectivity between common origins and destinations, and lack of formal pedestrian safety and sidewalk maintenance programs. The public survey, and input from the Steering Committee and other targeted stakeholders, also identified specific pedestrian system deficiencies. There are currently no pedestrian safety or encouragement programs, and no pedestrian facility funding program, in Sparta.

The analysis of typical facility standards and typical pedestrian safety programs was used to provide information and examples from other agencies and municipalities. The analysis included reference to facility standards from NCDOT, the Federal Highway Administration, the American Association of State Highway and Transportation Officials (AASHTO), and the Institute of Transportation Engineers (ITE). This section of the Plan also included cost estimates and description of available funding sources for pedestrian facilities.

Recommendations on facility improvements were made in four categories – new sidewalk construction, replacement of deficient sidewalks, new off-road trail construction, and ancillary facilities. These facility recommendations were prioritized based on demand and benefit. The recommendations include 25 new sidewalk segments, nine sidewalk replacement projects, two off-road trails, three crosswalks, and nine other ancillary facility projects. The new sidewalk recommendations total 19,815 feet (3.75 miles); the recommended sidewalk replacement projects total 2,977 feet (0.56 miles); and the off-road trail recommendations total 15,956 feet (3.02 miles).

Recommendations are also made for programs and policies intended to increase pedestrian safety, encourage pedestrian travel, and assist in implementing recommended facility improvements. These recommendations include development of pedestrian safety programs, development of pedestrian facility funding programs, amendment to the Town's Zoning Ordinance to promote pedestrian transportation, and development of pedestrian facility standards.

## **I. Introduction**

In 2003, the North Carolina Department of Transportation – Division of Bicycle and Pedestrian Transportation (NCDOT-DBPT) started the Bicycle and Pedestrian Planning Grant Initiative. The program provides matching grants to municipalities to develop comprehensive bicycle or pedestrian plans. The goal of the program is to develop plans that will guide local and state efforts to improve conditions for bicycling and walking.

The Town of Sparta received a Pedestrian Planning Grant in the 2004 cycle. The Pedestrian Plan will complement other current planning initiatives in the Town, including site planning for the future Sparta Teapot Museum, and a Master Plan focusing on the downtown area. The development of a Pedestrian Plan, and subsequent pedestrian facility improvements, will be valuable to the Town in its efforts to promote tourism.

The Town contracted with High Country Council of Governments (HCCOG) to assist in development of the Pedestrian Plan. A Steering Committee was formed to provide oversight of Plan development.

### **A. Steering Committee**

#### **Steering Committee Members:**

- John Brady, Town Council, Town of Sparta
- Lois Sheets, Town Council, Town of Sparta
- Bryan Edwards, Town Manager, Town of Sparta
- Melanie McFadyen, Community Development Coordinator, New River Community Partners
- Amy Pardue, County Planner, Alleghany County
- David Bender, Planning Program Manager, NCDOT Division of Bicycle and Pedestrian Transportation
- Roger Todd, NCDOT Alleghany Co.
- Jonathan Halsey, Project Manager, Sparta Teapot Museum
- Peggy Brady, Sparta Revitalization Committee
- April Choate, Transportation Director, Alleghany in Motion
- Tom Smith, Athletic Director, Alleghany County Schools
- George Stancil, County Extension Director, NC Cooperative Extension Service
- Joe Potts, Executive Director, Alleghany Wellness Center
- Karon Edwards, Activities Director, Alleghany County Council on Aging
- Bob Bamberg, Executive Director, Alleghany Chamber of Commerce
- Jeff Cox, Superintendent, Alleghany County Schools
- Don Adams, County Manager, Alleghany County

### **B. Goal**

The Steering Committee adopted the following goal for development of a Pedestrian Transportation Plan:

*Develop a town-wide plan that will guide Sparta in creating a safe and inviting environment for pedestrian travel*

**C. Need for Pedestrian Plan**

The need for a Pedestrian Transportation Plan for the Town of Sparta is broad-based. Current initiatives in Sparta, a transition in NCDOT to multi-modal long-range transportation planning, a renewed focus on tourism development, and future highway projects all support the need for planning for pedestrian traffic. The development of a Plan will provide a framework for gathering citizen input and guiding decision-makers. Below is a summary of some forces driving the need for pedestrian planning in the Town of Sparta.

NCDOT Long-Range Planning

NCDOT has recently incorporated all modes of transportation into its long-range transportation planning process. The previous Thoroughfare Plans (historically focused on highway construction/improvements) were replaced with Comprehensive Transportation Plans (CTP) in 2004. The new CTPs will include analysis of all transportation modes, including bicycle, pedestrian, rail, air, and transit. CTPs, as well as the former Thoroughfare Plans, serve as a basis for local governments in requesting projects from NCDOT.

The Town of Sparta has a Thoroughfare Plan that was mutually adopted by the Town and NCDOT in 1992. The Pedestrian Plan will serve as a component of Sparta's Comprehensive Transportation Plan when NCDOT schedules its development.

Alleghany County and Town of Sparta Land Development Plan

The Town of Sparta participated with Alleghany County and the North Carolina Division of Community Assistance in development of a Land Development Plan in 2000. The plan identified areas for urban development, and areas that should be considered for conservation. The Pedestrian Transportation Plan will take into account the growth patterns described in the Land Development Plan, and the proposed conservation areas will be considered in planning for off-road trail locations. Additionally, the Land Development Plan includes the following stated goals:

- Maintain downtown Sparta as a vital economic component of the Alleghany economy
- Maintain Sparta as Alleghany County's service center by maintaining a compact and unique community setting by limiting and discouraging urban sprawl
- Designate growth areas and corridors and direct water and sewer services and transportation improvements accordingly

The Pedestrian Transportation Plan will be a tool to help implement the Land Development Plan goals stated above by laying out an efficient pedestrian transportation network.

Sparta Teapot Museum

The Sparta Teapot Museum, scheduled to open in 2008, will house the Kamm Teapot Collection. The museum will also include gallery space, studio space, classrooms, and an auditorium. The \$10 million project will be located on a five-acre site one block south of Main Street (US

Highway 21) in Sparta. With anticipated visitation of 60,000 people annually, the museum is expected to enhance the downtown area, increase tourism in Sparta, and generate entrepreneurial opportunities. To fully benefit from the impact of the Sparta Teapot Museum, the Town needs to provide pedestrian connectivity from the museum site to Main Street, and within the downtown area.

### Alleghany County Wellness Center

The Alleghany Wellness Center opened in 2004 on a site approximately one-half mile from Main Street in Sparta. The Wellness Center provides recreational facilities, educational opportunities, and structured rehabilitation services. Facilities include an indoor pool, indoor walking track, aerobics area, and fitness area. Preliminary discussions have taken place regarding the development of a Greenway Trail connecting the Wellness Center to other areas in Sparta. The Pedestrian Transportation Plan will complement the Wellness Center by planning for pedestrian connectivity to the Wellness Center, and by planning for sidewalks and off-road trails that will promote walking for health benefits.

### Other Pedestrian Traffic Generators

Other significant pedestrian traffic generators within the Town of Sparta include the Sparta Elementary School, the Alleghany County High School, and the Blue Ridge Business Development Center (BDC). Both schools are accessed via Main Street, and have pedestrian traffic associated with regular school schedule and after-school activities. The BDC houses the Alleghany County JobLink Center and the Alleghany campus of Wilkes Community College, both of which generate pedestrian traffic (including nighttime pedestrians). None of these facilities currently have adequate pedestrian access.

### Downtown Master Plan

In 2005, the Town of Sparta began a planning process for the downtown area. Technical assistance is being provided by the NC Division of Community Assistance (DCA), since Sparta is a designated Main Street Community. A Visioning Forum was held on September 8, 2005, during which approximately 100 citizens worked to form a vision for downtown Sparta. The need for pedestrian connectivity, additional pedestrian facilities, and complementary improvements (landscaping, streetlights) was clearly expressed during the Forum. The Pedestrian Plan will be one component of the downtown master plan. Other associated projects will include a Parks and Recreation Master Plan, entrepreneurial promotion, review and update of the Town's development ordinance, and other infrastructure planning.

### Stormwater Plan

The Town is pursuing a NC Clean Water Management Trust Fund grant to develop a Stormwater Master Plan. The plan will assess the current stormwater collection and conveyance system in town, identify deficiencies, and recommend improvements. The use of curb and gutter to convey stormwater facilitates the construction of sidewalks by minimizing the amount of land needed for stormwater conveyance, and by creating a vertical separation between the road and adjacent land. Pedestrian facility improvements should include stormwater system improvements (curb and gutter, culverts, etc.) where applicable.

## Changing Economy

While Sparta and Alleghany County have promoted tourism for over 50 years, current economic conditions in western North Carolina have re-emphasized the importance of tourism in the regional economy. Adequate pedestrian facilities, downtown parking, and public transportation are essential to building a tourism economy. The Pedestrian Transportation Plan will help Sparta plan for this infrastructure.

## Sparta Western Loop

The completion of the Sparta Parkway is the Town's top transportation priority. The Parkway will create a bypass of downtown Sparta, removing through and truck traffic from Main Street. The project (identified as the Sparta Western Loop) is currently included in the State's Transportation Improvement Program (TIP), but does not have a scheduled construction date. Completion of the project is critical to the implementation of Sparta's downtown vision, and to creation of a safe and inviting pedestrian environment in the downtown area.

## Demographics

Compared to North Carolina and the United States, the Town of Sparta has a high proportion of persons over age 65, a high poverty rate, and a high instance of households with no vehicle. These conditions show a need for an efficient pedestrian transportation network in Sparta. More details on demographics are included in Section II.A.(page 10).

### **D. Scope and Purpose of Plan:**

Based on the goal and needs described above, the Steering Committee defined the following scope and purpose for the Pedestrian Transportation Plan:

- Assess current pedestrian system (existing facilities and current pedestrian travel patterns)
- Gather public input to identify needs
- Identify deficiencies in current system
- Identify future plans in Town that will affect demand for pedestrian facilities
- Examine current policies, plans, and development patterns that affect pedestrian transportation
- Identify needed safety improvements
- Evaluate options for improving pedestrian system
- Identify ways to encourage pedestrian travel
- Make recommendations for safety and educational programs concerning pedestrian transportation
- Make recommendations for facility improvements
- Prioritize improvements
- Identify funding sources

### **E. Definition of Project Area**

The Pedestrian Transportation plan covers an area encompassing the town limits and all area within one-half mile of town limits.

## **II. Current Conditions**

*This section is intended to provide information on the population, landscape, and existing pedestrian transportation system in Sparta. This information will be used to make specific recommendations for pedestrian facility improvements.*

The Town of Sparta is developed around the intersection of US Highway 21 and NC Highway 18. The Town covers 2.2 square miles. The majority of commercial development is located along US Highway 21 (Main Street), with residential and industrial development scattered within and adjacent to the town. There are 25 miles of State-maintained road within the project area boundary, and 18 miles of Town-maintained streets. Figure 1 shows the existing road network, Town limits, and project area boundary.

### **A. Demographics**

The Town of Sparta's population in July 2004 was 1,814 (NC State Data Center). Based on the 1990 and 2000 US Census figures, the Town's population has remained relatively constant (compared to a statewide growth rate of 29%). The ethnic mix in Sparta is typical of northwestern North Carolina, with ninety percent of the population being white. Sparta's population is older and less affluent than that of North Carolina and the United States. Sparta has a higher proportion of renter-occupied housing units than the state or nation, and a substantially higher proportion of households with no vehicle. Commuting characteristics in Sparta are similar to those of the state and nation, with a significantly higher carpooling rate and slightly lower percentages of workers walking to work or working from home. Table 1, below, provides various demographic data relevant to pedestrian transportation in Sparta.

**Table 1: Demographic Data**

<b>Population Characteristic</b>	<b>Town of Sparta</b>	<b>North Carolina</b>	<b>U.S.A.</b>
<b>General Population Characteristics</b>			
Total Population	1,817	8,049,313	
White	90%	72%	75%
Hispanic	8%	5%	13%
Black	2%	23%	12%
Median Age	44.4	35.3	35.3
% under 18 years	18.1%	24.4%	25.7%
% over 65 years	24.1%	12.0%	12.4%
<b>Housing Characteristics</b>			
Housing units	922		
Households (occupied housing units)	825		
% rental housing	44.5%	30.6%	33.8%
No Vehicle in Household	160 (19.3%)	7.5%	10.2%
<b>Income Characteristics</b>			
Median Household Income	\$22,474	\$39,184	\$41,994
% Persons below poverty level	18.3%	12.3%	12.4%
<b>Commuting Characteristics</b>			
Workers age 16 and over	849		
Commute alone	71%	79%	76%
Carpool	25%	14%	12%
Public Transportation	1%	1%	5%
Walk	1.5%	2%	3%
Work at Home	1.5%	3%	3%

**Source: 2000 US Census**

Figure 2 shows concentrations of children and older adults.

The relatively low income of residents in Sparta, the high instance of households with no vehicle available, and the compact development pattern in town suggests that pedestrian travel is a viable mode of transportation.

Due to the high median age and percentage of residents over age 65 in Sparta, pedestrian planning efforts should take into account the elderly population, specifically their needs regarding pedestrian facility access and safety.

## **B. Terrain**

The Town of Sparta is situated along the Little River and has moderate relief. Elevations in the project area range from 2,680 feet to 3,560 feet. Slopes range from 0% to 40%, with the majority of the project area having slopes less than 30%. Most development within the project area, including the existing road network, is located on flatter areas having slopes less than 10%. The steeper slopes remain either undeveloped, or contain low density residential development.

Two named tributaries of the Little River are located within the project area – Bledsoe Creek and Vile Creek. Several unnamed tributaries are also located in the project area. US Highway 21 (South Main Street) crosses the Little River via bridge; all other road crossings utilize culverts (either concrete box or round corrugated steel). Approximately one-half mile of an unnamed tributary of Bledsoe Creek is carried underground along South Main Street.

Based on FEMA Flood Insurance Rate Map panel #370005, areas along the Little River, Bledsoe Creek, Vile Creek, and unnamed tributaries lie within Special Flood Hazard Areas. These floodplain areas vary in width from approximately 75 feet to 400 feet. Within the project area, approximately 217 acres lie within Special Flood Hazard Areas. These areas are flat and not well-suited for development, and are therefore logical corridors for off-road trail development.

The following physical features present obstacles to current pedestrian travel and the construction of future pedestrian facilities:

#### River/Creek Crossings

Sixteen culverts and one bridge were measured to determine if they allowed for adjacent installation of pedestrian facilities. The bridge over the Little River on South Main Street is 27 feet wide, and doesn't allow for safe pedestrian travel.

For the culverted creek crossings, widths varied from 18 feet to 45 feet. NCDOT's Pedestrian Policy Guidelines suggest a 10-foot berm to accommodate a five-foot sidewalk. Based on common pavement widths in the project area and typical cross-sections for roads with sidewalks, 32 feet is required to accommodate a two-lane road with sidewalk on one side. The following roads/creek crossings have culverts less than 32 feet, and therefore provide obstacles to sidewalk installation on at least one side:

- Mitchell Mountain Road over Bledsoe Creek – 30 feet
- Grandview Drive over Bledsoe Creek – 28 feet
- Southside Drive over Bledsoe Creek – 18 feet
- Independence Drive over unnamed tributary (UT) to Bledsoe Creek – 28 feet
- Doctors Street over UT to Bledsoe Creek – 26 feet
- Cherry Street over UT to Bledsoe Creek – 20 feet
- Memorial Park Drive over UT to Bledsoe Creek – 30 feet

#### Steep Slopes

Existing road sections that have slopes steep enough to present a barrier to pedestrian travel is Ballpark Road, from the intersection with South Main Street to approximately one-tenth mile beyond the intersection with Southside Drive, and Sunset Drive.

Figure 3 displays the topography and hydrology in the project area. It also shows the obstacles to pedestrian travel described above.

### **C. Inventory of Existing Pedestrian Facilities**

There are 2.81 miles (14,837 feet) of existing sidewalk in Sparta. The existing sidewalk varies greatly in terms of age, width, and condition. The majority of sidewalk (1.73 miles) is located along Main Street. Sidewalks are also located along the following streets (with mileages):

- Whitehead Street (0.18 miles)
- Grayson Street (0.30 miles)
- Trojan Avenue (0.30 miles)
- East Cheek Street (0.10 miles)

- Blue Ridge Street (0.10 miles)
- Cherry Street (0.07 miles)
- Academy Street (0.02 miles)

Figure 4 displays the existing sidewalk network.

There are no existing off-road pedestrian facilities in Sparta.

Ancillary pedestrian facilities consist of striped crosswalks at the intersection of Main Street and Whitehead Street, and across Grayson Street in front of Post Office.

#### Condition of existing sidewalks

Existing sidewalks were evaluated for condition. Conditions evaluated include width, surface type, presence of buffers between sidewalk and road, presence of ramps at road crossings, obstructions on or over sidewalk, and surface condition.

Table 2, below, summarizes the conditions of existing sidewalks. The Steering Committee used this data in recommending sidewalk repair/replacement projects.

**Table 2: Existing Sidewalk Inventory**

STREET	Length (Feet)	Mileage	Surface	Surface Condition	Obstruction	Buffers	Ramps	Width (Feet)	Curb/gutter
Academy St	109	0.021	Concrete	Poor	No	No	Flush	5.000	Flush
Blue Ridge St	542	0.103	Concrete	Fair	No	No	N/A	4.000	C&G
Cherry St	686	0.130	Concrete	Good	No	No	Flush	4.000	Flush
E Cheek St	320	0.061	Concrete	Good	No	No	Flush	5.000	Flush
E Cheek St	178	0.034	Asphalt	Good	No	No	Flush	4.000	Flush
E Whitehead St	211	0.040	Concrete	Poor	No	No	N/A	5.000	No
E Whitehead St	199	0.038	Concrete	Good	Yes	Yes	Yes	3.500	Curb
E Whitehead St	51	0.010	Concrete	Fair				3.75	
Grayson St	559	0.106	Concrete	Excellent	No	No	Flush	4.000	Flush
Jones St	78	0.015	Concrete	Good	No	No	Not all	5.000	Flush
N Main St	1100	0.208	Concrete	Fair	Gravel	No	Yes	5.000	Yes
N Main St	1053	0.199	Concrete	Good	Poles, hydrants	No	Yes	4.750	Small curb
N Main St	451	0.085	Concrete	Good	Signs, benches	No	Yes	4.500	Flush
N Main St	309	0.059	Concrete	Good	Shrubs	No	Yes	4.000	Flush
N Main St	696	0.132	Concrete	Good	Poles, hydrant	No	Yes	4.500	Curb
N Main St	290	0.055	Concrete	Fair	Signs	No	Yes	4.500	Flush
S Grayson St	323	0.061	Concrete	Fair	Shrubs	No	Yes	5.00	C&G
S Grayson St	101	0.019	Concrete	Good	Trees	No	No	4.500	C&G
S Grayson St	116	0.022	Concrete	Good	No	No	Flush	5.00	Flush
S Grayson St	197	0.037	Asphalt	Good	No	No	Flush	3.000	Flush
S Main St	536	0.102	Concrete	Good	No	No	Yes	4.750	C&G
S Main St	195	0.037	Concrete	Excellent	No	No	Yes	5.000	C&G
S Main St	541	0.102	Concrete	Good	No	No	Flush	5.000	Flush
S Main St	99	0.019	Concrete	Poor	No	No	No	3.000	C&G
S Main St	864	0.164	Concrete	Excellent	Poles, signs	No	No	4.500	Flush
S Main St	1106	0.209	Concrete	Excellent	Pole	No	Yes	5.000	C&G
S Main St	139	0.026	Concrete	Excellent	No	No	Flush	4.750	Flush
S Main St	162	0.031	Concrete	Excellent	No	Small	Flush	4.250	Flush
S Main St	142	0.027	Concrete	Excellent	No	No	No	4.500	C&G
S Main St	240	0.045	Concrete	Excellent	Pole	No	Yes	5.000	C&G
S Main St	76	0.014	Concrete	Fair	No	No	No	5.000	Flush
S Main St	401	0.076	Concrete	Fair	Sign, shrub, bench	No	Yes	5.000	Flush
S Main St	340	0.064	Concrete	Poor	Poles	No	Not all	4.750	Gutter
S Main St	316	0.060	Concrete	Fair	Signs, trash can	No	Yes	5.500	Curb
Trojan Ave	800	0.152	Concrete	Poor	No	Small	Flush	4.250	Flush
Trojan Ave	830	0.157	Concrete	Good	No	No	Yes	5.000	Flush
W Whitehead St	140	0.027	Concrete	Fair	Poles, other	No	Steps	4.000	Flush

Figure 5 shows the condition of the existing sidewalk network.

Handicapped Accessibility

ADA guidelines state that the slope of curb ramps on sidewalks cannot exceed 1:12 (8.3%), with a maximum rise of 30 inches. The existing sidewalk inventory summarized in the Table 2 identified whether ramps exist on existing sidewalks, or whether the sidewalk and street levels were flush. Any sidewalk repair or replacement should include the installation of curb ramps that meet the ADA guidelines, and detectable warnings for the blind.

## D. Common Origins and Destinations

Common pedestrian origins and destination (actual and potential) were identified to help identify deficiencies in the current pedestrian network, and for making recommendations for new facilities. Identified sites include:

### Civic

- Sparta Town Cemetery
- Alleghany Chamber of Commerce
- Alleghany County Courthouse
- Alleghany County Administration Building
- Alleghany in Motion
- Sparta Elementary School
- Alleghany High School
- Alleghany Senior Center
- Alleghany County Library
- Post Office
- Town of Sparta Offices
- Wilkes Community College/Blue Ridge Business Development Center
- Headstart (BROC)
- Alleghany County Family Resource Center
- Alleghany County Law Enforcement Center

### Recreational

- Crouse Park
- Alleghany County Fairgrounds
- Sam Brown Park
- Duncan Recreation Area
- Alleghany Wellness Center

### Large Employers

- Martin Marietta Composites, Inc.
- NAPCO, Inc.
- Parker Sales and Service

### Residential

- Ridgeview Apartments
- Sunbridge Care and Rehabilitation
- Maplewood Apartments

### Commercial

- Sparta Teapot Museum Site
- Alleghany Memorial Hospital
- Sparta Square Shopping Center
- Trojan Village Shopping Center
- Alleghany Cares
- Alleghany Inn
- Skyline Telephone Membership Corporation

The origins and destinations listed above are identified on Figure 4.

Aside from the major sites listed above, other origins and destinations identified include individual retail stores and laundromats.

## **E. Existing Rights-of-Way**

Existing rights-of-way (ROW) were examined in the project area to identify locations where pedestrian facilities could be constructed along roadways without the need for land acquisition. Alleghany County Tax Parcel data, dated May 2005, was used to determine existing ROW. Prior to conducting any sidewalk construction, the Town should verify existing ROW through either deed research or survey.

Minimum required ROW for sidewalk installation can vary based on existing pavement width, the presence of on-street parking, terrain, and other site-specific factors. Generally, at least 30 feet of ROW is required to accommodate sidewalk on one side of a two-lane roadway. For the purposes of evaluating existing ROW as a factor in making recommendations for sidewalk construction or replacement, the following minimum recommended ROWs were used:

- Two-lane street with no on-street parking – 32 feet for sidewalk on one side, 42 feet for sidewalk on two sides
- Two-lane street with on-street parking – 52 feet for sidewalk on one side, 62 feet for sidewalk on two sides
- Three-lane street with no on-street parking – 43 feet for sidewalk on one side, 53 feet for sidewalk on two sides
- Three-lane street with on-street parking – 63 feet for sidewalk on one side, 73 feet for sidewalk on two sides

Figure 6 displays existing rights-of-way in the project area.

## **F. Accident Data**

Pedestrian accident data was reviewed to identify number and types of accidents involving pedestrians and motor vehicles. NCDOT has data on pedestrian crashes reported to police for years 1997-2003. During that period, two pedestrian crashes were reported (one in 1997, one in 1998), both resulting in disabling injury. The pedestrians involved in the two crashes were 63 years old and 15 years old. One crash is classified as “non-intersection,” and one crash is classified as “non-roadway.”

Additionally, the Sparta Police Department was interviewed to identify any reported pedestrian-motor vehicle crashes, and to identify areas of potential pedestrian-motor vehicle conflict. During 2005, a pedestrian-motor vehicle crash occurred on Collins Road.

Potential areas of conflict mentioned were:

- Main Street/Grandview Drive intersection
- NC Highway 18/Grayson Street intersection
- Area surrounding Alleghany High School

Due to the low number of pedestrian-motor vehicle crashes, no patterns regarding crash type or location were evident.

## **G. Public Parking**

The availability of public parking facilitates pedestrian transportation by encouraging multiple trips from one parking spot. For public parking to be well-utilized, it should be connected to the pedestrian network, and be well lighted.

Public parking is available along Main Street (parallel parking) and at three public parking lots, with a total of 125 spaces. One lot is located on the north side of Main Street next to the ABC Store parking area (33 parking spaces, including one handicapped); one lot is located along Whitehead Street behind Gillespie Insurance Company (27 parking spaces); and parking for the public is available directly behind the Alleghany Chamber of Commerce (11 spaces). The public parking on Main Street is concentrated between Doughton Street and Cheek Street. There are 46 spaces total, including 2 handicapped spaces. All public parking on Main Street is limited to 3 hours. Public parking locations are shown on Figure 7.

## **H. Public Transportation**

The availability of public transportation is directly linked to increased pedestrian travel. Public transportation allows persons without access to a car to get to a centralized location, from which they can make multiple trips by foot.

Alleghany in Motion is the designated Public Transportation provider in Alleghany County and the Town of Sparta. Alleghany in Motion is a Department of Alleghany County Government. The system provides public transportation services to the general public, as well as contracting with various county and non-profit agencies for the provision of transportation service. The system operates five daily, fixed subscription routes, all of which originate and terminate in Sparta. Alleghany in Motion charges a fee for all trips provided. Demand-response service is also provided. Alleghany in Motion does not currently operate fixed routes, and has no bus shelters.

The Alleghany in Motion office is located at 53 Cherry Street in downtown Sparta.

NCDOT requires all Public Transportation providers to develop Community Transportation Services Plans (CTSP) every five years. The CTSP outlines the system's current fleet, operations, and financial management. The CTSP also can make recommendations and action plans for system operation. The most recent CTSP for Alleghany in Motion is dated March 2002.

## **I. Motor Vehicle Traffic**

The main arterials in the project area are NC Highway 18 (Whitehead Street) and US Highway 21 (Main Street). These two routes currently carry a mix of local and through traffic. As described in Section I. C., Need for Pedestrian Plan, NCDOT is currently planning to construct the Sparta Western Loop. The Sparta Western Loop will complete the Sparta Parkway, which will create a bypass of Main Street. This project will relieve through traffic, including tractor-

trailer traffic, on Main Street in downtown Sparta. This road improvement is expected to provide significant safety and comfort benefits to pedestrians along Main Street.

Main Street contains three lanes (one continuous center turn lane) from the intersection of the Sparta Parkway to Trojan Village Shopping Center (a distance of approximately 1.5 miles).

NCDOT maintains Average Daily Traffic (ADT) data for its highway/road network, measured in vehicles/day (vpd). ADT data was analyzed to identify areas within the project area where vehicular traffic is heavy, and where separation of vehicular and pedestrian traffic is most needed. The most recent ADT data available for Sparta is dated 2003. Current ADT figures in the project area include:

- 11,000 vpd on Main Street between Whitehead Street and Grandview Drive
- 9,300 vpd on Main Street between Whitehead Street and the Sparta Parkway
- 7,900 vpd on Main Street near the bridge over Little River
- 4,100 vpd on Whitehead Street north of Main Street
- 3,700 vpd on Whitehead Street south of Main Street
- 2,400 vpd on Grayson Street north of Whitehead Street

Posted speed limits in the project area vary from 20 mph to 55 mph. NC Highway 18 is posted at 20 mph for approximately 500 feet in both directions from Main Street, 35 mph on the remainder inside town limits, and 55 mph outside town limits. Main Street is posted at 20 mph from approximately Trojan Avenue to Memorial Park Drive, 35 mph inside town limits, 45 mph south of town limits, and 55 mph north of town limits. The Sparta Parkway is posted at 45 mph its entire length. Generally, other roads are posted 35 mph inside town limits, and 55 mph outside town limits.

## **J. Deficiencies in Current System**

Deficiencies in the current pedestrian system are described below (by category).

### Existing Sidewalks

Based on the Existing Sidewalk Inventory (summarized in Table 2 on page 13), 59% of existing sidewalks are less than the recommended width of 5 feet, and 33% of the existing sidewalks had Fair or Poor surface conditions.

Figure 5 shows conditions of sidewalks divided into three categories. The sidewalk segments were divided into the three categories to assist in prioritizing improvements. The three categories are:

- 1. less than 4 feet wide, or Poor surface condition** – these sidewalk segments are in most need of replacement. These segments are located along Main Street, Trojan Avenue, Whitehead Street, Blue Ridge Street, and South Grayson Street.

2. **between 4 and 5 feet wide, or have Poor surface condition** – these sidewalk segments should be second priority for repair/replacement. These segments are located along Main Street, Cheek Street, Cherry Street, and Grayson Street.
3. **at least five feet wide, and have Fair, Good or Excellent surface condition** – these segments are not in need of repair/replacement.

### Lack of connectivity

Lack of connectivity between sidewalk segments and between sidewalks and common destinations create hazards for pedestrians by forcing them to cross the street or walk in the street. As a minor arterial, Main street should have sidewalks on both sides within the downtown area (from the Sparta Parkway to Ballpark Road). There are multiple gaps in the sidewalk network along Main Street. Other connectivity deficiencies include:

- Lack of sidewalk on Trojan Avenue from Roe Street to Sam Brown Park
- Lack of pedestrian access to the Alleghany Wellness Center
- Lack of pedestrian access to the Sparta Teapot Museum site
- Not adequate room for pedestrians on bridge over Little River
- Lack of pedestrian connection between High School and Blue Ridge Business Development Center
- Lack of complete sidewalk on South Grayson Street
- Lack of sidewalk along West Whitehead Street
- Lack of sidewalk in areas attractive for future commercial development (Jones Street, Doughton Street, Cox Street)

Additionally, the lack of a safe way for pedestrians to cross the Little River prevents connectivity between the central downtown area and areas south of the bridge.

### Intersection deficiencies

Deficiencies at intersections include:

- Lack of pedestrian signals at the Main Street/Whitehead Street intersection
- Lack of crosswalks at the Main Street/Grandview Drive intersection
- Lack of crosswalks at the South Grayson Street/East Whitehead Street intersection
- Lack of crosswalks at the Trojan Avenue/Roe Street intersection
- Poor visibility/lack of crosswalks at the Doughton Street/Main Street intersection

### Maintenance deficiencies

Maintenance deficiencies include lack of snow removal, accumulation of gravel on sidewalks following rainstorms, and obstructions from trees and shrubbery. Specific areas with vegetation obstructions include in front of the Post Office on Grayson Street, and on the south side of Main Street between Doughton Street and Trojan Avenue.

## Obstructions

Aside from the vegetation obstructions noted above, many utility obstructions exist. These consist of fire hydrants, utility poles, and signs located within the sidewalk. The obstructions are scattered, but exist along Main Street and West Whitehead Street.

### III. Existing Plans, Programs, and Policies

*This section is intended to provide information on current plans, programs, and regulations that impact pedestrian transportation in Sparta. This information is intended to:*

- *provide a justification for pedestrian improvements; and*
- *identify locations where pedestrian facilities are warranted (currently or in the future); and*
- *identify current plans for pedestrian improvements; and*
- *describe existing regulations relevant to pedestrian transportation.*

#### A. Plans

##### Town of Sparta Thoroughfare Plan

The Town of Sparta has a Thoroughfare Plan dated 1992. The Thoroughfare Plan is a document mutually adopted by both the North Carolina Board of Transportation and the Town Council of Sparta. Thoroughfare Plans are long-term plans that make recommendations for road and highway improvements. Sparta's Thoroughfare Plan covers a planning area that includes all of this Pedestrian Plan's project area. The Thoroughfare Plan makes the following recommendations:

- Widen to three lanes all of US Highway 21 in town limits, and remove on-street parking
- Upgrade NC Highway 18 to 12-foot lanes
- Upgrade Grandview Drive to 12-foot lanes
- Construction of US 21 Alternate – this recommendation includes the existing Sparta Parkway, and the proposed Sparta Western Loop described in Section II.I., Motor Vehicle Traffic (above)
- Blue Ridge Street Extension (a connector road between Main Street and NC Highway 18 to the north)
- Extension of South Grayson Street to Memorial Park Drive
- Upgrades to Duncan Street and Memorial Park Drive

The Sparta Thoroughfare Plan does not include any recommendations for pedestrian facilities. However, the Thoroughfare Plan does recommend that local development ordinances contain requirements that any curb construction or replacement include wheelchair ramps.

NCDOT has replaced the Thoroughfare Planning process with the development of Comprehensive Transportation Plans. The most significant change is that the Comprehensive Transportation Plans will include recommendations for all modes of transportation. This Pedestrian Transportation Plan can provide the pedestrian component of a future Comprehensive Transportation Plan for the Town of Sparta.

Excerpts from the Thoroughfare Plan are included in Appendix 1.

NCDOT Transportation Improvement Program (TIP)

Every two years, NCDOT develops a seven-year transportation project budget/schedule. The Transportation Improvement Program (TIP) lists road improvement, bridge replacement, public transportation assistance, and enhancement projects by County. The current TIP covers years 2006-2012.

Projects listed in the 2006-2012 TIP that are located within the project area are summarized in the Table below.

<b>Location</b>	<b>ID Number</b>	<b>Description</b>	<b>Schedule</b>
US Hwy 21	R-3101	Upgrade roadway from Roaring Gap to Sparta	ROW – 2007; Construction – 2009
Sparta Western Loop	R-4060	Construct two lanes on new location, from US Hwy 21 to Grandview Drive	ROW – 2011; Construction – Post Years (unscheduled)
NC Hwy 18	R-2516	Upgrade roadway from Blue Ridge Parkway to Sparta	ROW – Post Years; Construction – Post Years
Feasibility Study	FS-0211A	Upgrade intersections along NC Hwy 18 at S. Grayson St., Osborne Rd., Napco Rd., and Moxley Hollow Rd.	Feasibility Study in progress
Sparta	E-4799	Construct Welcome Center at 58 S. Main Street	Under construction
Various	E-4975	Construct markers at Blue Ridge National Heritage sites	2007
Countywide	TR-, TL-, TJ-4902	Provide Rural Operating Assistance to Alleghany in Motion	2006, 2007

No bridge replacement projects listed in the 2006-2012 TIP are located in the project area.

When a project is scheduled in the TIP, NCDOT’s Project Development and Environmental Analysis Branch (PDEA) begins planning and designing the project. During this process, local governments have the opportunity to provide input on the project, including request for inclusion of pedestrian facilities.

Portions of the 2006-12 TIP are included in Appendix 3.

Alleghany County and Town of Sparta Land Development Plan

A Land Development Plan for the Town of Sparta and Alleghany County (dated August 2000) was developed by the NC Division of Community Assistance. The purpose of the Land Development Plan was to provide a mechanism for coordinating land-use planning, infrastructure planning, and environmental protection. While specific pedestrian improvements were beyond the scope of the Land Development Plan, the plan contains goals, objectives, and policies that will support and be complemented by pedestrian facility construction. These include:

- Encouragement of cluster development to promote efficient use of infrastructure
- Encouragement of urban and dense development in the Town of Sparta

- Construction of infrastructure improvements to designated growth areas
- Completion of the Sparta Western Loop
- Provision of quality recreation opportunities
- Conservation of floodplains along Bledsoe Creek, Vile Creek, and Little River

### Sparta Visioning Plan

In Summer 2005, the Town of Sparta initiated a downtown visioning plan. The purpose of the plan will be to provide a foundation for tourism promotion, infrastructure improvements, and development regulation amendments aimed at improving the quality of life for Sparta residents and visitors. A group of local officials formed to guide the effort, with technical assistance provided by the North Carolina Division of Community Assistance. A Vision was formed following a September 8, 2005 community meeting attended by approximately 100 people where ideas concerning community appearance and development were solicited. The Vision includes specific recommendations that support pedestrian facility improvements, including:

- Completion of the Sparta Bypass
- Convenient downtown parking
- Pedestrian-friendly walkways
- Mixed-use development
- Strong tourism economy
- Nighttime entertainment

### Alleghany County School System Plans

The Alleghany County School system has renovation plans for the Sparta Elementary School. The plans involve addition of classrooms on the east side of the existing building. The plans also include an area designed for student drop-offs that will alleviate some of the vehicle traffic congestion along Trojan Avenue.

Long-term plans for the School System property include development along Charles Street, possibly including parking/stacking area and construction of a Middle School.

### Alleghany County Park and Recreation Plan

Alleghany County has recently drafted a Parks and Recreation Master Plan. The plan analyzes existing recreation facilities and makes recommendations for new facilities and improvements countywide. Many existing recreation facilities are located within the Pedestrian Plan project area, including Crouse Park, Alleghany County Fairgrounds, Alleghany Wellness Center, ballfield at Martin Marietta Composites, Inc., Sam Brown Park, and facilities at Alleghany High School. Specific recommendations of the Parks and Recreation Plan that support or will be complemented by the construction of pedestrian facilities include:

- Connection of the Alleghany Fairgrounds, Sam Brown Park, and Alleghany Wellness Center with sidewalk network
- Construction of off-road trails within Alleghany Fairgrounds and Sam Brown Park

### Sparta Teapot Museum

As stated in Section I. C., Need for Pedestrian Plan (above), the Sparta Teapot Museum is anticipated to become a major destination in downtown Sparta when it opens in 2008. The Museum site will cover approximately 4.5 acres, bordered by Womble Street to the south, West Doughton Street to the west, Evergreen Street to the north, and Whitehead Street (NC Highway 18) to the east. The site is situated approximately 200 feet south of Main Street. The current site plan for the development shows a driveway crossing the site providing access from both West Doughton Street and Whitehead Street. The museum buildings will be located on the northern portion of the site, and parking areas will be located in the southern portion. The parking lot has the potential to serve the general public during non-peak use of the museum.

The Teapot Museum Site Plan is included in Appendix 2.

### Farmers Market/Crouse Park Expansion

In November 2004, the Town of Sparta acquired a 0.8-acre parcel adjacent to the existing Crouse Park. The parcel is located on the northeast corner of Grayson Street and Whitehead Street. Possible plans for the site include development of a Farmer's Market, new park facilities, and construction of additional parking for Crouse Park. New parking at the site could potentially serve visitors to Main Street as well.

## **B. Programs**

*Pedestrian transportation can be encouraged through programs. Below is an analysis of existing programs related to pedestrian transportation.*

### Safety Programs

There are currently no Pedestrian Safety programs operated by the Town of Sparta or the Alleghany County School system.

### Main Street Program

The Town of Sparta was designated a Main Street Community by the North Carolina Division of Community Assistance (DCA) in 1998. Following a Main Street Community designation, DCA provides technical assistance to the town for three years aimed at revitalizing downtown economies. In Sparta, the Sparta Revitalization Committee was formed following the designation, and is still active. The Sparta Revitalization Committee has worked on a variety of projects, including streetscape improvements, events promotion, and building façade improvements.

### Silver Striders

Silver Striders is a statewide program organized through the North Carolina Senior Games. The goal of the program is health promotion for persons age 50 and over. Participants walk

regularly, set walking goals, and track progress in log books. In Sparta, there are approximately 80 members. Some members walk individually, and others participate in organized group walks. There are no set routes; however, existing sidewalks, Crouse Park, and the track at Alleghany High School are commonly used.

### Local Funding Programs for Pedestrian Facilities

The Town of Sparta does not have a Capital Improvements Program or Capital Reserve Fund for pedestrian facilities. The Town currently receives approximately \$68,000 annually in Powell Bill funds for street and sidewalk maintenance.

## **C. Policies**

*Local policies can directly and indirectly impact pedestrian transportation. Municipal policies such as land use regulation, provision of public parking, pedestrian facility maintenance, and private parking and appearance requirements help create the pedestrian network. Below is a description of current policies in Sparta as they relate to pedestrian transportation.*

### Zoning Ordinance

Land use, parking requirements, landscaping, and signage in Sparta regulated by the Town of Sparta Zoning Ordinance. The Zoning Ordinance has been in effect since the 1960s, with the most recent update dated 1984. The ordinance does not contain requirements for pedestrian facilities as part of developments. Provisions of the ordinance that have the potential to affect pedestrian travel include:

- Requirements for off-street parking in all development – effects building density and need for public parking
- Restrictions on visible obstructions at street intersections – enhances pedestrian safety
- Allowance for mixed-use (residential and commercial) developments within the Central Business District – promotes an environment in which pedestrian travel is feasible for errands

### Pedestrian Facility Policies

The Town does not currently have a policy regarding construction of new sidewalks or maintenance of existing sidewalks. Facilities have traditionally been built based on demand and available local resources.

### School Crossing Guard

Due to available staff resources, the Town of Sparta does not post a crossing guard at the Elementary/High School area.

## Public Transportation

Alleghany in Motion (AIM), the local transit provider, is described in Section II.H, (page 16). AIM is a function of Alleghany County government, and is not funded by the Town of Sparta.

## State Law

North Carolina General Statutes address pedestrian travel, and motorist responsibility regarding pedestrians. The statutes dictate that motorist must yield to pedestrians at any marked crosswalk, or at an intersection. The statutes also dictate that pedestrians yield to motorists anywhere other than within a marked crosswalk or at intersections. Also, pedestrians are prohibited from walking in the roadway if a sidewalk is provided, and must walk facing traffic in areas where no sidewalks are provided. "Jaywalking" (crossing between intersections) is only prohibited between adjacent intersections with traffic signals.

## **IV. Public Involvement**

*The following methods of public involvement were used to gather citizen comments on the current pedestrian system, and recommendations included in the Plan.*

### **A. Citizen Survey**

To gather information on current pedestrian behavior and desired pedestrian improvements, the Town of Sparta developed a Citizen Survey. The Citizen Survey Form is included in Appendix 4. The survey was mailed to 1,311 households and businesses (every water customer). The surveys were translated into Spanish and distributed to Spanish-speaking residents through the Farm Worker Health Program. 303 responses were received.

Survey results are summarized below.

- Average age of respondents - 55.8 years.
- 65% of respondents were female; 35% male
- Average household size of respondents – 2.24 persons
- Average number of children in household – 1.82
- 88% of respondents have a car
- 13% of respondents use Allegheny in Motion; generally, use is weekly or less
- 18% of respondents have children that walk to school; 75% of those walk either daily or at least twice/week
- 78% of respondents walk for exercise/recreation; 27% walk daily, 53% walk between 2-6 times/week
- 47% of respondents run errands by walking
- 44% of business owners answered that their businesses benefit from foot traffic
- The most common identified barrier to pedestrian travel is lack of downtown parking, followed by lack of sidewalks, and lack of crosswalks
- The most common identified priority for pedestrian facilities is new sidewalks along roads, followed by repair of damaged sidewalks, and new off-road trails or greenways
- Areas in town where people walk that do not have sidewalks – Collins Road, Grayson Street, Doughton Street, and Memorial Park Drive

The results of the citizen survey provide information on current alternative transportation use, noted deficiencies in the current pedestrian system, and desired improvements to the pedestrian system. This information was used to help develop recommendations for improvements.

The Citizen Survey form is included in Appendix 4.

### **B. Public Meeting**

On June 30, 2005, a public meeting was held to gather citizen input on development of the Pedestrian Plan. The meeting was announced in the Allegheny Times newspaper. At the meeting, information on the Pedestrian Plan process was presented, and additional Citizen

Surveys were distributed. Additionally, individual comments were noted for consideration in development of the Plan.

### **C. Stakeholders**

In formation of the Steering Committee, individuals were selected in an attempt to get representation from as many stakeholder groups as possible. A list of the Steering Committee membership is included in Section I.A. (page 4). The Steering Committee met periodically to provide input on the format of the Plan, discuss results of the citizen survey, analyze the information base, and develop recommendations.

Additionally, interviews were conducted with the following individuals to gather input for the Pedestrian Plan:

- Jeff Cox, Superintendent, Alleghany County Schools
- Detective Wayne Crouse, Town of Sparta Police Department
- Bonnie Vaughn, member, Silver Striders walking club
- Debby Trulock, Director, Alleghany/Ashe Farm Worker Health Program

A presentation on the Pedestrian Plan was given to the Alleghany Chamber of Commerce/Sparta Revitalization Committee Merchants to provide information to, and solicit comment from, the local business community.

### **D. Comments on Draft Plan**

Following development of a draft plan, a map displaying proposed recommendations was posted in the following locations for public review and comment:

- Sparta Town Hall
- Alleghany Chamber of Commerce
- Alleghany Wellness Center
- Alleghany in Motion
- Alleghany High School
- Blue Ridge Business Development Center
- Alleghany Council on Aging
- Sparta Elementary School
- Alleghany County Administration Building
- Alleghany County Library

Copies of the complete draft (map and text) were made available at Sparta Town Hall for review.

To gather additional comment from the business community, the draft plan was presented to the Alleghany Chamber of Commerce/Sparta Revitalization Committee Merchants.

Prior to consideration by the Sparta Town Council, a public hearing was held on the draft plan.

## V. Typical Facility Standards

*Information on typical facility standards is provided as guidance for development of recommendations. Minimum standards should be developed to ensure consistency in pedestrian system improvements, ensure compliance with applicable laws, and provide for adequate capacity and safety of pedestrian facilities.*

The following resources were used in evaluating pedestrian facility standards:

- NCDOT's Roadway Design Manual (2002)
- Federal Highway Administration (FHWA) "Recommended Guidelines/Priorities for Sidewalks and Walkways"
- American Association of State Highway and Transportation Officials (AASHTO) "Policy on Geometric Design of Highways and Streets" (2001)
- Institute of Transportation Engineers (ITE) "Transportation Planning Handbook (1999)
- FHWA "Manual on Uniform Traffic Control Devices" (2003)
- Various municipal pedestrian design guidelines

The following specifications are intended as guidance. Available rights-of-way, existing development, steep site conditions, and available resources should be considered in the design of any pedestrian facility.

### A. Design Guidelines

#### Sidewalks

Minimum width – 5 feet

Recommended widths (will vary significantly based on existing conditions, and pertain primarily to new development):

Local or collector streets - 5 feet

Arterials or major streets – 6 feet

Central Business Districts – 6 feet

At designated bus stop – 8 feet

Buffer width between street and sidewalk \* – 2 feet

Recommended maximum grade – 5%

Maximum cross slope – 2%

Maximum grade for curb ramp – 8.3%

Construction specifications:

Thickness – 4 inches concrete (3,000 psi)

Base - 4 inches washed stone

- \* Buffers between street and sidewalk provide safety and comfort to pedestrians, and provide suitable area for snow storage and location of signs and utility poles.

## Off-road trails

Minimum width – 10 feet

Maximum cross slope 2%

Minimum cleared shoulder – 2 feet (each side)

Construction specifications:

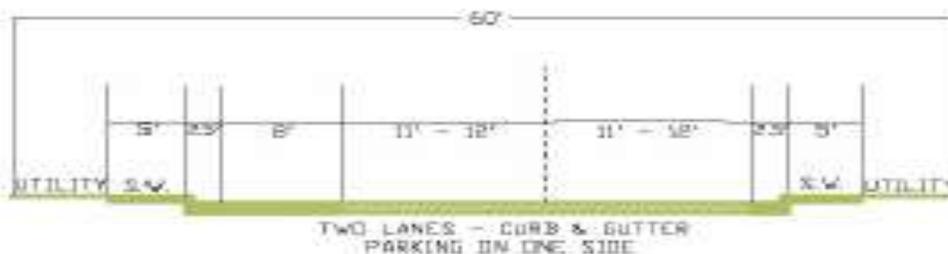
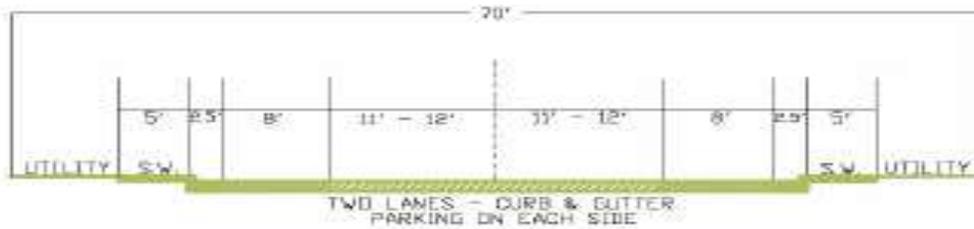
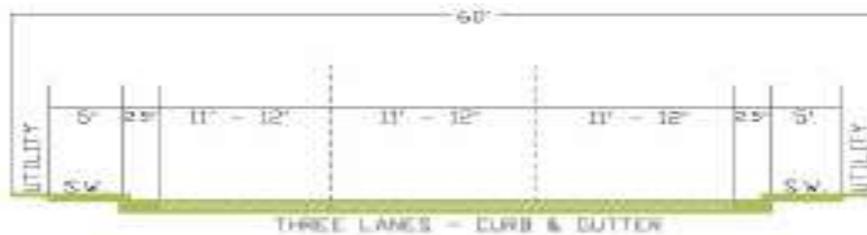
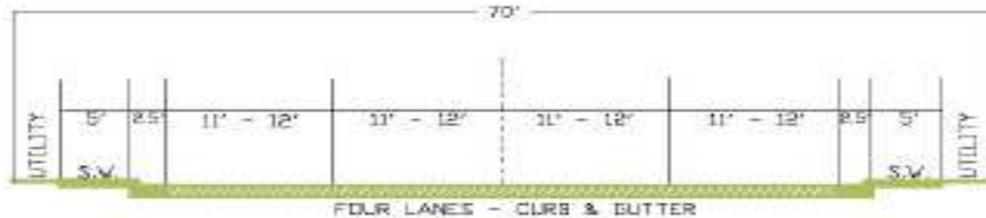
Thickness – 2 inches asphalt

Base – 6 inches compacted aggregate

Minimum recommended right-of-way – 30 feet

### B. Typical Cross-Sections

The following diagrams are typical road cross-sections that include sidewalks. They are used to provide guidance in determining required right-of-way and development of local design standards.



## C. Ancillary Facilities

Ancillary facilities are amenities that encourage or enhance pedestrian transportation. Typical ancillary facilities are described below.

### Crosswalks

Marked crosswalks serve to channel pedestrian traffic and to warn motorists of pedestrian crossing movements. Generally, crosswalks with wider stripes or high-visibility design are recommended on higher speed roads (over 35 mph). Crosswalks should be a minimum of 6 feet wide and the striping should be a minimum of 1 foot wide.

Crosswalks between intersections (mid-block) should be avoided, especially on streets where on-street parking is allowed. Mid-block crosswalks are acceptable where significant pedestrian traffic generators exist mid-block, where intersections are greater than 600 feet apart, or where previous efforts to discourage pedestrian crossings have been unsuccessful.

Crosswalks should be accompanied by “Pedestrian Crossing” warning signs, and stop bars (painted stripe in roadway) for vehicles. Stop bars should be located at least 10 feet from crosswalk.

### Signals

Pedestrian signals at intersections are coordinated with motor vehicle traffic signals to alert pedestrians when to cross. They can be timed in a variety of phases depending on the nature of the intersection and traffic. Typical styles include “WALK” and “DON’T WALK” signals; and signals with a white pedestrian symbol for the walk phase and a red hand for the don’t walk phase. Pedestrian signals must be warranted based on factors such as vehicular traffic volume, pedestrian traffic volume, crash rates, and school crossings.

Installation of pedestrian signals should be coordinated with NCDOT Division 11 Traffic Engineer to establish need and ensure coordination with motor vehicle traffic signals.

Pedestrian signals should be accompanied by “No Turn on Red” signs at the intersection to prohibit vehicular turning movements during “walk” phase of pedestrian signal.

### Traffic Calming

Traffic calming is the use of design features and physical features to reduce vehicular speed and cut-through traffic. Traffic calming concepts include roadway narrowing, horizontal roadway shifts, raised structures in roadway, visual features. Traffic calming features need to be carefully designed to ensure effectiveness, avoid delays in emergency vehicle response times, to avoid merely transferring traffic from one location to another. Prior to implementing any traffic calming measures, substantial public input from the affected neighborhood should be gathered.

Additionally, plans should be discussed with legal counsel and NCDOT Division 11 staff prior to

implementation. If practical, testing of proposed design or feature is recommended prior to construction.

Common traffic calming measures include:

- Traffic circles – Traffic circles are used at intersections to slow traffic as it is forced to move out of the straight line of travel. Traffic circles also reduce intersection vehicle collisions (Institute of Transportation Engineers). Traffic circles require careful design to avoid vehicle/pedestrian conflict since right-turning vehicles are not controlled. Flush or low curbs are often used to accommodate large vehicles (fire trucks, moving vans).
- Curb extensions – Curb extensions (also called “bulb-outs”) are extensions of the sidewalk and curb into the street at crosswalk locations. The purpose of curb extensions is to reduce the crossing distance for pedestrians, provide better visibility to pedestrians, and reduce the speed of turning vehicles. Curb extensions are well-suited for streets with on-street parking; however, a small amount of on-street parking is sacrificed for the construction of curb extensions.
- Chokers – Chokers are curb extensions most commonly used away from intersections. They promote slower speeds by reducing street width to either one lane or two narrow lanes.
- Chicanes – Chicanes are curb extensions that alternate from one side of the roadway to the other, forming s-shaped curves.
- Crossing islands – Crossing islands (also called pedestrian refuges) are raised islands placed in the center of a four-lane divided roadway. They allow pedestrians to focus on one direction of traffic at a time. They should be used in conjunction with striped crosswalks and signage.
- Speed humps – Speed humps are raised portions of pavement installed across the entire street to reduce vehicular speed. They are typically designed for speeds of 15-25 mph. They are typically 12 feet wide and 3-4 inches high, and are generally installed on straight and flat sections of streets. Speed humps may be used individually or in groups, with tighter spacing resulting in slower speeds.
- Speed tables – Speed tables are similar to speed humps, but are typically 22 feet wide (10-foot table with 6-foot ramps on either side).
- Diverters – Diverters are physical barriers that force vehicles to turn. Diverters block full lanes of traffic. Median islands along street centerlines prevent left-turn movements. Pork Chops are small islands that force traffic to turn only one way (usually to the right).

### Streetscape Improvements

Streetscape improvements can enhance the pedestrian environment and provide a buffer between pedestrian and motor vehicle traffic. Streetscape improvements must be planned to ensure that they do not interfere with pedestrian travel. Ideally, all streetscape improvements, as well as utilities, will be located within a buffer strip. Typical streetscape improvements include:

- Brick sidewalks
- Removal of above-ground utilities
- Flower boxes

- Benches
- Façade improvements to buildings abutting sidewalks
- Landscaping

Landscaping requires maintenance to prevent obstruction on sidewalk. Trees should be trimmed to maintain a minimum vertical clearance of seven feet.

### Directional Signage

Directional signage is used in some municipalities to direct residents and visitors to common destinations. The signage can be located at intersections, or at public parking areas. Signage should be a minimum of seven feet high (measured from bottom of sign).

## **VI. Typical Pedestrian Programs/Policies**

*Information on typical programs and policies relating to pedestrian transportation is provided as guidance for development of recommendations.*

### **A. Health Promotion Programs**

#### Active Living by Design

Active Living by Design is a national program that focuses on community design changes as a way to increase physical activity. The goal of the program is to establish innovative approaches to increase physical activity through community design, public policies, and communications. To achieve this goal, the program advocates for mixed-use development, a variety of transportation choices, and construction of parks and greenways. The program has a website that offers resources (including publications), a Community Action Model, and links to other health-promotion websites.

#### Eat Smart, Move More

Eat Smart, Move More is a statewide initiative operated by the NC Division of Public Health. The initiative promotes increased opportunities for physical activity and healthy eating through policy and environmental change. The initiative sets goals and objectives regarding improved opportunities for physical activity, including development of walking trails and sidewalks, and creation of municipal policies dedicating funds for pedestrian and/or bicycle facilities. The program makes grants available for health promotion.

### **B. Education/Safety Programs**

#### Walk a Child to School Programs

The Walk a Child to School Program is an initiative of the US Department of Transportation and other pedestrian advocacy groups. The program has the following three objectives:

- Encourage adults to teach children safe pedestrian behaviors
- Have adults help children identify and practice safe routes to school
- Remind everyone of the tremendous health benefits of regular, daily walking

In North Carolina, the program is implemented at the local level with no prescribed activities. Typical activities include organized walks to school in the morning, walking on school property during lunch breaks, and having local police officers discuss pedestrian safety issues with students.

#### Safe Routes to School

The Safe Routes to School Program is a national program with the following purposes:

- To enable and encourage children to walk and bicycle to school
- To make walking and bicycling to school safe and more appealing
- To facilitate the planning, development, and implementation of projects that will improve safety, reduce traffic, reduce fuel consumption, and reduce air pollution in the vicinity of schools

The program was funded for \$612 million over five years in the most recent Federal transportation bill (SAFETEA-LU). Funds will be distributed to State Departments of Transportation for eligible uses. Each state will receive at least \$1 million per year through 2009, and each state is required to create a full-time position to implement the program. Eligible uses of funds include sidewalk improvements, road crossing improvements, traffic calming initiatives, public awareness campaigns, and education campaigns. NCDOT is planning to have a full-time Safe Routes to School Coordinator by January 1, 2006.

### Pedestrian Safety Campaign

The Pedestrian Safety Campaign is an initiative of the Federal Highway Administration. The purpose of the campaign is to educate both drivers and pedestrians. A Pedestrian Safety Campaign Planner has been developed that is a free collection of outreach materials, including television and radio public service announcements, posters, brochures, and newspaper articles.

### Local Education Programs

Pedestrian education can be incorporated into existing school curriculums, or provided to schools by local law enforcement agencies. These programs focus on laws relative to pedestrians, and pedestrian safety. The Alleghany County School System and Sparta Police Department are willing to work on incorporating a pedestrian safety program for school-aged children.

## **C. Land-Use Policies**

Towns can regulate land development through powers specified in NC General Statute 160A. These regulations can include the provision of sidewalks and recreation space in new developments. Typical municipal land-use regulations also include provisions for off-street parking.

Provisions for sidewalks or other pedestrian facilities in land-use regulations can address location, dedication, maintenance, and construction specifications. Examples of sidewalk requirements contained in municipal zoning ordinances include:

- Require sidewalk construction in all new developments
- Require sidewalk construction for all multi-family developments
- Require sidewalk construction for any development in certain zoning districts
- Require sidewalk construction for any non-residential development
- Require sidewalk construction in major subdivisions or in planned-unit developments

- Require sidewalk construction in developments where density meets or exceeds four dwelling units per acre
- Require sidewalk construction along new roads based on type of road (i.e., collector, rural, local, etc.)
- Require sidewalk construction only where existing sidewalk ends at subject property
- Require sidewalk construction when sidewalk exists within a certain distance of subject property, or when subject property is within a specified distance of certain land uses (i.e., school, park, library, etc.)
- Exceptions approved by Planning Board, Zoning Enforcement Officer, or Town Manager for areas where sidewalk construction is unfeasible due to topography
- Exceptions allowed when sidewalk exists on opposite side of street from subject property
- Allowance for payment of cost of sidewalk construction into a dedicated sidewalk fund in instances where sidewalk construction is required but is not feasible

Specifications for sidewalk construction may include differing width requirements based on location (i.e., residential street versus central business district); requirements for either curb and gutter or drainage swales; and requirements for buffer strip between sidewalk and street. Buffer requirements vary based on presence of curb and gutter, and may be waived if there is on-street parking.

Local governments can also require provision of open space in subdivisions. Such open space can be used for off-road pedestrian walkways.

#### **D. Ancillary Programs**

##### Maintenance

Since sidewalks are predominantly located within public right-of-way, maintenance is a responsibility of the municipality. Typical maintenance activities include snow removal, trimming of trees/shrubs along sidewalks, litter removal, and resurfacing or replacement.

##### School Crossing Guards

School Crossing Guards are typically employees of local law enforcement agencies. The guards are used to control vehicle traffic during hours when school beginning or letting out.

## VII. Sample Cost Estimates

*Cost estimates are included as guidance for making recommendations. Prices can change over time, and will vary significantly based on terrain, necessary utility relocation, soil conditions, etc. The facility prices below do not include any right-of-way acquisition or engineering services.*

### Sidewalks

- 5 feet wide concrete sidewalk - \$35/linear foot (includes site preparation and stone base)
- 8 feet wide concrete sidewalk - \$56/linear foot (includes site preparation and stone base)
- 30 inch curb and gutter - \$20/linear foot
- Curb ramps - \$1,150/each

### Off-Road Trails

- 10 feet wide asphalt trail - \$25/linear foot (includes site preparation and stone base)

### Ancillary Facilities

- Crosswalk - \$250/each (parallel stripes, 22 foot wide road)
- Speed Hump - \$1,500/each
- Traffic Circle (small) - \$7,500/each
- Traffic Circle (large) - \$50,000/each
- Relocation of utility poles - \$3,000/each
- Pedestrian Crossing signals - \$7,000/intersection
- Sign - \$500/each
- Parking Space (exclusive of land cost) - \$2,000 each
- Parking Bumpers - \$100/each

### Right-of-way

Estimated right-of-way cost is based on land values in current Alleghany County tax records. To accurately assess right-of-way cost, private appraisal is necessary. The following estimates are based on 10 feet wide right-of-way.

- along Main Street - \$35.00/linear foot
- along residential roads - \$3.50/linear foot

## **VIII. Funding Sources**

*Available funding sources are described below to provide guidance on how best to finance desired pedestrian improvements.*

### **A. Federal**

Several categories of federal aid construction funds — National Highway System (NHS) and Surface Transportation Program (STP) — or Congestion Mitigation and Air Quality (CMAQ) funds provide for the construction of pedestrian and bicycle transportation facilities. The primary source of funding for bicycle and pedestrian projects is STP Enhancement Funding.

#### Transportation Enhancement Program (TE)

Federal Highway Administration funding includes the Transportation Enhancement (TE) Program. State DOTs allocate the TE funds. NCDOT has typically offered TE grants on a biennial basis in the Winter of even-numbered years, with \$10 million available statewide. TE funds can be used for construction of pedestrian facilities, and preservation of abandoned railway corridors (for use as pedestrian trails).

#### US Department of Housing and Urban Development (HUD)

HUD's Community Development Block Grant (CDBG) Program provides funding for housing, infrastructure, and economic development activities that benefit low and moderate income persons. The CDBG Program is administered in North Carolina by the Division of Community Assistance and the Commerce Finance Center. The CDBG Concentrated Needs and Community Revitalization Programs can include construction of pedestrian facilities as part of the overall project.

#### The National Recreational Trails Fund Program

The National Recreational Trails Fund Program is funded in the federal transportation bill (SAFETEA-LU), and is administered in North Carolina by the Division of Parks and Recreation. The funds can be used for off-road trail construction. Grants range from \$10,000 to \$50,000, and must be matched at 20%.

#### Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) Program provides funds to local governments for conservation and recreation purposes. Off-road trail construction is an eligible use of funds. The grants require a 50% match, with a maximum grant amount of \$250,000.

## **B. State**

### **1. NCDOT Funding**

#### Independent Projects

NCDOT's Division of Bicycle and Pedestrian Transportation (DBPT) programs funding through the TIP process for bicycle and pedestrian projects. 80% of the funding is from the federal TE program (described above), and the remaining 20% comes from State transportation funds. Projects must be requested and evaluated for feasibility. Projects may include off-road pedestrian facilities, pedestrian bridges or underpasses, and intersection treatments. Projects may be funded up to \$1 million. \$6 million is typically available per year.

#### Incidental Projects

NCDOT's Pedestrian Policy Guidelines establish the process for inclusion of pedestrian improvements in programmed highway projects.

Pedestrian projects incidental to scheduled highway improvements are included in the highway project cost, programmed in the TIP. Local governments can request inclusion of pedestrian improvements when the highway project enters the Program Development process. Requests should be made to DBPT and NCDOT's Project Development and Environmental Analysis (PDEA) Branch. Local governments must commit to 20% local match, maintenance, and liability for the project.

NCDOT pays the entire cost of replacing sidewalk that is removed for a road-widening project.

#### Spot Improvements

NCDOT's Division Offices receive discretionary funds for small projects and spot improvements, which can include pedestrian facilities. Local governments can make requests through the Division Engineer and Division Traffic Engineer.

#### Governor's Highway Safety Program

The Governor's Highway Safety Program (GHSP) provides funding for specific pedestrian and bicycle safety initiatives. The program is administered by NCDOT.

#### Powell Bill

Powell Bill funds are taxes on fuel that is distributed to municipalities annually for street and sidewalk maintenance, repair, and construction. Amount of funds are based on population and mileage of town-maintained streets. Sparta currently receives approximately \$68,000 per year from the fund.

## **2. Other State Funding**

### Adopt-A-Trail Program

North Carolina's Adopt-A-Trail (AAT) program provides grants annually for trail construction, renovation, and repair. Maximum grants are \$5,000, with no match required. Grants are administered by the NC Division of Parks and Recreation.

### Parks and Recreation Trust Fund (PARTF)

PARTF funds are made available to local governments for recreation facilities. Greenway trails are eligible projects. PARTF grants require a 50% cash match, with maximum grants of \$500,000. The PARTF program is administered by the NC Division of Parks and Recreation.

### Clean Water Management Trust Fund

North Carolina's Clean Water Management Trust Fund (CWMTF) provides grants for the protection and restoration of surface waters in the state, including land acquisition. Land acquired must be put in public ownership or put under long-term easement, providing opportunity for trail development. CWMTF grants cannot be used for trail construction.

### NC Health and Wellness Trust Fund

The NC Health and Wellness Trust Fund was created by the General Assembly to use revenue from the Tobacco Master Settlement to improve the health of NC citizens. The Fund currently offers grants through the Fit Together program for health promotion, which may include promotion, education, and policy measures to encourage walking.

## **C. Local**

Municipalities often plan for the funding of pedestrian facilities/improvements through development of Capital Improvement Programs (CIP). CIPs should include all types of capital improvements (water, sewer, buildings, streets, etc.) versus programs for single purposes. This allows municipal decision-makers to balance all capital needs. Typical capital funding mechanisms include the following.

### Capital Reserve Fund

Municipalities have statutory authority to create capital reserve funds for any capital purpose, including pedestrian facilities. The reserve fund must be created through ordinance or resolution that states purpose of the fund, duration of the fund, approximate amount of fund, and the source of revenue for the fund. Sources of revenue can include general fund allocations, fund balance allocations, grants, and donations for the specified use.

### Capital Project Ordinances

Municipalities can pass Capital Project Ordinances that are project specific. The Ordinance identifies and makes appropriations for the project.

### Occupancy Tax

The NC General Assembly may grant towns the authority to levy occupancy tax on hotel and motel rooms. The act granting the taxing authority limits the use of the proceeds, usually for tourism-promotion purposes.

### Bonds

Municipalities can borrow money for pedestrian projects through the use of bonds. A bond referendum must be approved by the voters. Bond orders, adopted by the Town Council, state the purpose and maximum amount of bond funds.

### Municipal Service District

Municipalities have statutory authority to establish municipal service districts, to levy a property tax in the district additional to the citywide property tax, and to use the proceeds to provide services in the district. Downtown revitalization projects are one of the eligible uses of service districts.

### Tax Increment Financing

Tax increment financing, also called project development financing, is an economic development tool whereby capital projects (including sidewalks) are funded through the issuance of bonds that do not require a referendum. The bonds are paid from the increased tax revenue generated by specific economic development projects.

## **D. Private**

### Blue Cross Blue Shield of NC Foundation

The Blue Cross Blue Shield of NC Foundation offers grants to local communities for health promotion. Grant funds may be used for pedestrian facilities, or pedestrian education and encouragement programs.

### Private Donations

Private donations can be used for specific municipal purposes, including construction of pedestrian facilities. Fundraising through a non-profit organization is common.

## **IX. Recommendations**

*Recommendations were developed analyzing public input, deficiencies in current pedestrian system, growth patterns, and input from the Steering Committee. Recommendations were divided into the following three categories – facilities, program, and policy measures.*

### **A. Facilities**

Recommendations on facility improvements were made in four categories – new sidewalk construction, replacement of deficient sidewalks, new off-road trail construction, and ancillary facilities.

#### **1. New Sidewalks**

The following recommendations for new sidewalks include 25 sections, totaling 19,815 feet (3.75 miles)

- Main Street
  1. Grandview Dr. to Sparta Town Hall (south side)
  2. ABC Store to Library (north side)
  3. Missing segment west of Trojan Ave. (north side)
  4. Charles St. to Brady’s Dry Cleaners (beyond Trojan Ave., south side)
  5. From end of existing to Doughton St. (south side)
- Grayson Street
  1. Whitehead St. to Grayson National Bank (south side)
  2. Whitehead St. to Crouse Park trail (north side)
  3. From end of existing to Atwood St.
  4. Whitehead to existing section towards Cheek St. (north side)
- Whitehead Street
  1. Womble St. to Evergreen Dr. (west side)
  2. Jones St. to Main St. (east side)
  3. Main St. to Grayson St. (east side)
  4. Grayson St. to Ridgeview Apts. (east side)
  5. Ridgeview Apartments to Halsey Street (south side)
- West Doughton Street – Womble St. to Main St. (east side) \*
- East Doughton Street – Main St. to Grayson St. \*
- Trojan Avenue – Roe St. to Sam Brown Park \*
- Halsey Street – Memorial Park Dr. to Whitehead Street
- Memorial Park Drive – Halsey St. to Main St.
- Jones Street – Grandview Dr. to Whitehead St. (north side)
- Atwood Street – Grayson St. to Blue Ridge Business Development Center \*
- West Cheek Street – Jones St. to Main St. \*
- East Cheek Street – in front of apartments \*
- Womble Street – Combs St. to Whitehead St. (north side) \*
- Independence Road – Cherry St. to Maplewood Apartments (west side)

\* Projects where existing right-of-way is 30 feet or less. Implementation of these projects may require acquisition of additional right-of-way, depending on existing site conditions.

## **2. Replacement of Deficient Sidewalks**

The following recommendations for sidewalk replacement include nine sections, totaling 2,977 (0.56 miles).

- Main Street (south side) – short section in front of County Administration Building
- Main Street (north side)
  1. ABC Store to Whitehead St.
  2. Halsey Drug to Cheek St.
- Whitehead Street–
  1. Main St. to Grayson St. (west side)
  2. Main St. to Alleghany St. (east side)
  3. Evergreen Dr. to Main St. (west side)
  4. short section south of Main St. (east side)
- Blue Ridge Street (existing section) \*
- Trojan Avenue – Main St. to NAPCO

\* Projects where existing right-of-way is 30 feet or less. Implementation of these projects may require acquisition of additional right-of-way, depending on existing site conditions.

## **3. Off-Road Trails**

The following two off-road trails are recommended. Exact locations have not been determined; rather, 300 foot wide corridors were identified for further study. The corridors were selected based on existence of floodplain, pedestrian network linkage, and available public property. Decisions on trail location should be based in part on the Town’s ability to secure property easements.

- Bledsoe Creek Greenway – an off-road trail along the main stem of Bledsoe Creek would provide linkages to various origins/destinations. The project should be broken into the following four sections (from north to south) to be prioritized:
  1. Alleghany Fairgrounds to Alleghany Wellness Center - 5,305 feet (1.0 mile)
  2. Alleghany Wellness Center to Whitehead Street – 2,517 feet (0.48 mile)
  3. Whitehead Street to Grandview Drive – 3,413 feet (0.66 mile)
  4. Grandview Drive to Little River – 4,421 feet (0.84 mile)

Because exact location of the Bledsoe Creek Greenway is not determined, no recommendation is made for linkage of the Greenway to the existing sidewalk network. As Greenway section locations are determined, the feasibility of connections to the existing sidewalk network should be examined.

- Alleghany High School/Blue Ridge Business Development Center Connector – an off-road trail between the Alleghany High School and the Blue Ridge Business Development Center is recommended. Development of the trail would benefit from publicly-owned property, but will require engineering due to the topography of the area.

#### **4. Ancillary Facilities**

The following ancillary facilities are recommended to add safety and comfort benefits to the pedestrian transportation network:

- Relocation of stop sign at East Doughton St./Main St. intersection
- “Watch for Pedestrians” signs at South Main St. (near Sunset Dr.), North Main St. (near Charles St.), West Whitehead St. (near Womble St.), and East Whitehead St. (near Grayson St.)
- Relocation of utility poles in sidewalks
- Crosswalks at the following intersections
  1. Main St./Grandview Dr.
  2. Whitehead St./Grayson St.
  3. Main St./Trojan Ave.
- Public restrooms
- Additional public parking spaces
- Signage for public parking at the three public parking lots
- Pedestrian signals at Whitehead St./Main St. intersection
- Installation of curbing around Alleghany High School parking lot
- Traffic circle at Whitehead St./Sparta Parkway intersection

#### **B. Programs**

Recommendations are made for programs intended to increase pedestrian safety and encourage pedestrian travel. These include:

- Keep apprised of available grant opportunities for pedestrian facilities (refer to Section VII)
- Pursue Fit Community designation through the NC Health and Wellness Trust Fund (HWTF) and Blue Cross and Blue Shield of North Carolina (BCBSNC)
- Organize an annual Walk to School Day (through Alleghany County School System and PTA)
- Establish fixed transit route (Alleghany in Motion) within Town of Sparta
- Develop Stormwater Master Plan for Town of Sparta that includes standards for culverts that allow for sidewalk installation, and that defines areas that require curb and gutter installation
- Establish pedestrian safety program in schools (periodic presentations by Town of Sparta Police Officer)

- Develop a Safe Routes to School Program with NCDOT, which may include posting of a crossing guard at the Main St./Trojan Ave. intersection during school start/end hours
- Work with NCDOT and High Country RPO to develop an Access Management Plan
- Obtain Pedestrian Safety Campaign Planner from FHWA, and distribute materials
- Establish sidewalk inspection and maintenance program to address obstruction from trees/shrubs, and removal of sand/gravel
- Develop a Capital Improvement Program that includes pedestrian facilities
- Establish Capital Reserve Fund for pedestrian facility construction
- Work with Sparta Revitalization Committee to establish a Municipal Service District for downtown revitalization purposes, to include sidewalk construction/replacement

### **C. Policies**

Recommendations are made for policies intended to increase pedestrian safety, encourage pedestrian travel, and assist in implementing recommended facility improvements. These include:

- Request completion of the Sparta Western Loop (NCDOT TIP Project R-4060)
- Close Charles St. to vehicular traffic (except school buses)
- Present plan to NCDOT Project Development Engineers as applicable to request inclusion of pedestrian facilities in TIP projects
- Establish minimum specifications for new sidewalk construction (including curb and gutter requirements)
- Amend Zoning Ordinance to allow cluster subdivisions
- Amend Zoning Ordinance to require sidewalk construction for new developments and redevelopment in the following zoning districts: Multiple Family (RMF), Central Business (CB), and Neighborhood Business (NB)
- Present Pedestrian Plan to NCDOT Division 11 Division Engineer (Mike Pettyjohn) and Division 11 Traffic Engineer (Dean Ledbetter)
- Present Pedestrian Plan to NC's Mountain Region Trails Specialist (Dwayne Stutzman)
- Communicate annually with NCDOT's Safe Routes to School Coordinator (Terry Canales) about available resources
- Communicate annually with NCDOT's Division of Bicycle and Pedestrian Transportation about available resources
- Request Comprehensive Transportation Plan from NCDOT Transportation Planning Branch
- Require maintenance of sidewalks (limited to snow removal, trash removal, and landscape trimming) by property owners in the following zoning districts: Multiple Family (RMF), Central Business (CB), and Neighborhood Business (NB)

## X. Prioritization and Implementation

The facility recommendations listed in Section X.A., above, were divided into high priority, medium priority, and low priority (1, 2, and 3, respectively) to guide project implementation. The prioritized projects are listed in the table below. Estimated project costs are included for comparative purposes. A unit cost of \$55 for new/replacement sidewalk includes curb and gutter. Figure 8 displays the recommended projects.

ID	Improvement	Description	Priority	Length (feet)	Unit Cost	Total Cost
1-A	New Sidewalk	Main St - Charles to Brady's Dry Cleaners (beyond Trojan, south side)	1	1,445	\$55.00	\$79,475
1-B	New Sidewalk	Main St - from end of existing to Doughton (south side)	1	312	\$55.00	\$17,160
1-C	New Sidewalk	Main St - Missing segment west of Trojan Ave (north side)	1	154	\$55.00	\$8,470
1-D	New Sidewalk	Main St - ABC Store to Library	1	292	\$55.00	\$16,060
1-E	New Sidewalk	Main St - Grandview Drive to Sparta Town Hall	1	165	\$55.00	\$9,075
1-F	New Sidewalk	Whitehead Street - from Womble to Evergreen (west side)	1	695	\$55.00	\$38,225
1-G	New Sidewalk	Whitehead Street - from Jones to Main (east side)	1	252	\$55.00	\$13,860
1-H	New Sidewalk	East Doughton - from Main to Grayson	1	614	\$55.00	\$33,770
1-I	New Sidewalk	Grayson - south side, from Whitehead to Grayson National Bank	1	617	\$55.00	\$33,935
1-J	New Sidewalk	Grayson - from Whitehead to Crouse Park trail (north side)	1	341	\$55.00	\$18,755
1-K	Replace Sidewalk	Whitehead - Evergreen to Main (west)	1	191	\$55.00	\$10,505
1-L	Replace Sidewalk	Whitehead - from Main to Grayson (west side)	1	494	\$55.00	\$27,170
1-M	Replace Sidewalk	Main Street - in front of County Administration Building	1	72	\$55.00	\$3,960
1-N	Replace Sidewalk	Whitehead Street – short section south of Main St. (east side)	1	60	\$55.00	\$3,300
1-O	Off-Road Trail	Bledsoe Creek Greenway - Section 2 (Wellness Center to Whitehead St.)	1	2,517	\$25.00	\$62,925
1-P	Off-Road Trail	Bledsoe Creek Greenway - Section 3 (Whitehead St. to Grandview Dr.)	1	3,413	\$25.00	\$85,325
1-Q	Off-Road Trail	Alleghany High School/Blue Ridge BDC Connector	1	300	No estimate	
1-R	Crosswalk	Main St./Grandview Dr. intersection	1	220	\$5.68	\$1,250
1-S	Crosswalk	Whitehead St./Grayson St. intersection	1	176	\$5.68	\$1,000
1-T	Crosswalk	Main St./Trojan Ave. intersection	1	220	\$5.68	\$1,250
1-U	Stop Sign	Relocation at East Doughton/Main st. intersection	1		\$500.00	\$500
1-V	Parking Signage	at three public parking lots	1		\$500.00	\$1,500
<b>Subtotal-</b>						<b>\$467,470</b>
2-A	New Sidewalk	West Doughton - from Womble to Main Street (east side)	2	884	\$55.00	\$48,620
2-B	New Sidewalk	Womble Street - entire length (north side)	2	745	\$55.00	\$40,975
2-C	New Sidewalk	Jones Street - from Grandview to Whitehead (north side priority)	2	1,909	\$55.00	\$104,995
2-D	New Sidewalk	Memorial Park Drive - from Halsey to Main St.	2	1,423	\$55.00	\$78,265
2-E	New Sidewalk	Whitehead Street - from Alleghany Street to Grayson St. (east)	2	288	\$55.00	\$15,840
2-F	New Sidewalk	Whitehead Street - from Grayson Street to Ridgeview Apts. (east)	2	492	\$55.00	\$27,060

2-G	New Sidewalk	Independence Road - from Maplewood Apts to Cherry Street	2	1,650	\$55.00	\$90,750
2-H	New Sidewalk	Grayson - from end of existing to Atwood Street	2	1,515	\$55.00	\$83,325
2-I	New Sidewalk	Atwood Street - from Grayson to BDC	2	534	\$55.00	\$29,370
2-J	New Sidewalk	West Cheek Street - from Jones to Main St. (west side)	2	288	\$55.00	\$15,840
2-K	New Sidewalk	East Cheek Street - in front of Apartments	2	218	\$55.00	\$11,990
2-L	New Sidewalk	Grayson - from Whitehead to existing section (north side)	2	123	\$55.00	\$6,765
2-M	Replace Sidewalk	Whitehead - from Main to Alleghany (east side)	2	211	\$55.00	\$11,605
2-N	Replace Sidewalk	Trojan Avenue - from Main St. to NAPCO	2	796	\$55.00	\$43,780
2-O	Replace Sidewalk	Main Street - Halsey Drug to Cheek (north side)	2	314	\$55.00	\$17,270
2-P	Replace Sidewalk	Main Street North Side - from ABC Store to Whitehead	3	287	\$55.00	\$15,785
2-Q	Pedestrian Sign	Total of four - Main St. and Whitehead St.	2		\$500.00	\$2,000
2-R	Pedestrian Signal	Main St./Whitehead St. intersection	2		\$7,000.00	\$7,000
2-S	Bumpers	to channel traffic at Alleghany High School parking lot, 30 total	2		\$100.00	\$3,000
<b>Subtotal</b>						<b>\$654,235</b>
3-A	New Sidewalk	Trojan Avenue - from Roe St to Sam Brown Park	3	1,495	\$55.00	\$82,225
3-B	New Sidewalk	Whitehead Street – from Ridgeview Apartments to Halsey St. (south side)	3	2,245	\$55.00	\$123,475
3-C	New Sidewalk	Halsey Street – from Whitehead St. to Memorial Park Dr. (west side)	3	1,169	\$55.00	\$64,295
3-D	Replace Sidewalk	Blue Ridge Street (existing section)	3	552	\$55.00	\$30,360
3-E	Off-Road Trail	Bledsoe Creek Greenway - Section 1 (Fairgrounds to Wellness Center)	3	5,305	\$25.00	\$132,625
3-F	Off-Road Trail	Bledsoe Creek Greenway - Section 4 (Grandview Dr. to Little River)	3	4,421	\$25.00	\$110,525
3-G	Utility Pole Removal	various locations (26 total)	3		\$3,000.00	\$78,000
3-H	Public Restrooms	free-standing building, separate men's & women's, unspecified location	3		\$40,000.00	\$40,000
3-I	Parking Lot	30 spaces, includes 0.25-acre of land	3		\$100,000	\$100,000
3-J	Traffic Circle	Whitehead St./Sparta Parkway intersection	3		\$50,000.00	\$50,000
<b>Subtotal</b>						<b>\$811,505</b>
<b>Total</b>						<b>\$1,933,210</b>

The recommendations include 25 new sidewalk segments, nine sidewalk replacement projects, two off-road trails, three crosswalks, and nine other ancillary facility projects. The new sidewalk recommendations total 19,815 feet (3.75 miles); the recommended sidewalk replacement projects total 2,977 feet (0.56 miles); and the off-road trail recommendations total 15,956 feet (3.02 miles).

Project implementation will depend to a large degree on available funding. Generally, Priority 1 projects will be addressed in years 1-10, Priority 2 projects will be addressed in years 11-20, and Priority 3 projects will be addressed after year 20.

The Pedestrian Plan should be reviewed at five-year intervals to determine if population growth, major development, accomplished pedestrian projects, or other factors affect the recommendations or priorities.

Many of the program and policy recommendations listed in Sections X.B. and X.C. can be implemented at little or no cost within one year, and all could be completed within five years.

The Town of Sparta will utilize available staff resources from NCDOT – Division of Bicycle and Pedestrian Transportation, NCDOT Division 11, High Country RPO, High Country Council of Governments, and NC Division of Community Assistance in implementing the Pedestrian Plan. These agencies can provide technical assistance, and direct the town to applicable funding sources for individual projects. Where appropriate, the Town will work cooperatively with Alleghany County and Alleghany County Board of Education on project implementation.