

# Goodlettsville Bicycle and Pedestrian Plan Executive Summary



July 2010

In Cooperation with the Nashville Area  
Metropolitan Planning Organization

## Introduction

Progressive and forward thinking communities across the country are creating environments that promote walking, biking, and transit use as alternatives to vehicular trips. The Bicycle and Pedestrian Plan for the City of Goodlettsville establishes the framework for Goodlettsville becoming a more bicycle and pedestrian friendly community. Development of the bicycle and pedestrian plan shows the commitment by the City of Goodlettsville to create a multi-modal transportation system.

Implementation of the plan will benefit the City of Goodlettsville and its citizens in many ways. Some of the potential benefits worth noting include greater mobility, lower personal transportation costs, safer streets, cleaner air, less traffic congestion, lower healthcare costs, and an improved quality of life.

The Goodlettsville Bicycle and Pedestrian Plan is comprehensive in that it identifies existing facilities, establishes locations for new facilities, recommends policy changes to encourage walking and biking, and recommends programs to promote safety and encourage more pedestrian and cycling trips.

In order to address these items the planning process included:

- A detailed inventory of existing bicycle and pedestrian facilities, including gaps in the existing facilities.
- An evaluation of land use and development patterns in the city to identify locations for bicycle and pedestrian connectivity.
- Recommendations of facilities to provide connectivity between existing bicycle and pedestrian infrastructure as well as to specific destinations.
- Policies that ensure new roadway projects will include bicycle and pedestrian facilities where appropriate.
- Encouragement programs that are intended to increase the number of walking and biking trips taken in the City of Goodlettsville.
- Education programs that teach proper sharing of the road for motorists, cyclists, and pedestrians.
- Cost estimates, implementation strategies, and potential funding sources.

As part of the inventory, roadway characteristics were collected and existing bicycle and pedestrian facilities were located. Along with the field work, the data collection included identifying programs and policies in the City of Goodlettsville that affect pedestrian and bicycle facilities. Using the information collected in the field during the inventory process, an evaluation of the existing conditions was conducted. From this information a pedestrian level of service (PLOS) and bicycle level of service (BLOS) were determined for each roadway that was inventoried. In order to determine the locations with the highest probability of producing walking and biking trips, a non-motorized trip model was created based on the land use patterns in the City of Goodlettsville. Throughout the process, public input was obtained through various avenues. The public input along with the results of the analysis were used to make recommendations for the location and type of bicycle and pedestrian facilities. The recommendations include specific facility locations which are identified on maps. Strategies on how to implement the plan are also recommended. Planning level cost estimates were prepared and funding strategies were identified.

## Plan Goals

As part of the development of the Goodlettsville Bicycle and Pedestrian Plan, goals were established to guide the recommendations and implementation of the plan.

- Goal 1: Promote alternatives to auto travel by providing realistic transportation options for pedestrians and cyclists.
- Goal 2: Provide safe and accessible facilities for all of Goodlettsville's pedestrians and cyclists.
- Goal 3: Encourage bicycle and pedestrian facility use for all types of users.
- Goal 4: Follow organized, rational, and systematic methods of project implementation.

## Inventory

A major part of the Bicycle and Pedestrian Plan for Goodlettsville was an inventory of the existing on and off road bicycle and pedestrian facilities. Approximately 55 miles of roadways were inventoried whereby roadway conditions (number of lanes, roadway speed, traffic volume, pavement width, and bicycle accommodations) as well as the presence of sidewalk facilities (along roadways classified as arterials or collectors) were identified.

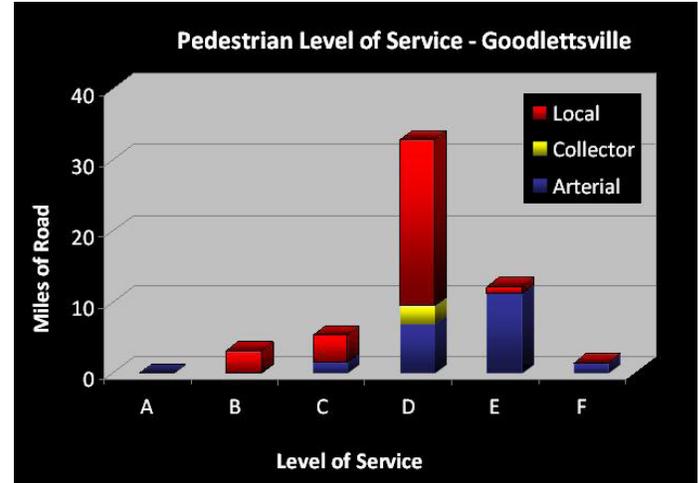
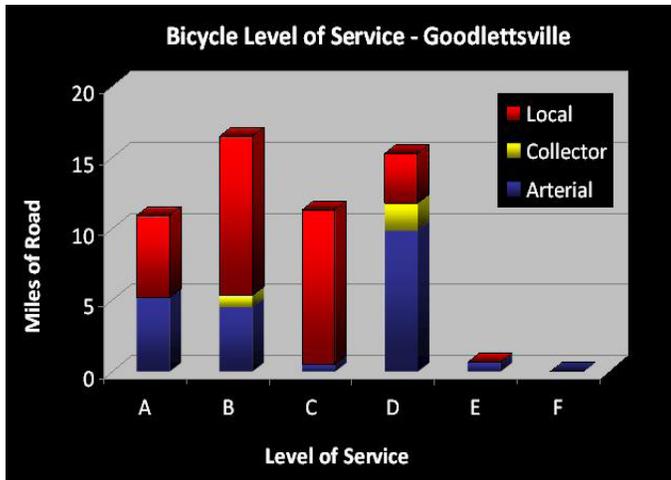
The inventory process revealed that a segment of Long Hollow Pike is signed as a bike route for 2.5 miles. In addition, there are currently 2.7 miles of greenways in Moss Wright Park. There are several locations with sidewalks in the City of Goodlettsville, such as segments of Long Hollow Pike, Conference Drive, the streets within subdivisions such as Windsor Green, and the north and south segments of Rivergate Drive. In total there are just under 14 miles of sidewalks in Goodlettsville.

## Analysis

Similar to the vehicular Level of Service, there are models that have been developed to evaluate the comfort level of pedestrians and bicyclists. Both the Bicycle Level of Service (BLOS) and the Pedestrian Level of Service (PLOS) models utilize various factors to evaluate the comfort level of users. The factors involve the roadway geometry, motor vehicles using the road, speeds, and the presence and condition of pedestrian and bicycle facilities.

The results of the BLOS and PLOS are shown in the following charts. As shown in the chart, approximately 38 miles of the roads analyzed operate at BLOS A, B, or C with about 15 miles operating at BLOS D, E, or F. Also, approximately 15% of the roadways analyzed, which is about 8 miles, operate at PLOS A, B, or C. The remaining 85% of the roadways analyzed (or 47 miles) currently operate at PLOS D, E, or F. Lack of sidewalks is the primary reason for these poor PLOS results.





As part of the Goodlettsville Bicycle and Pedestrian Plan, a Non-Motorized Demand Model (Trip Model) was used to give planners and engineers a tool to determine the real need for walking and biking facilities within the City. The Trip Model is a microscopic model, producing a fine-grained, parcel-level analysis for walking and biking trips. The model uses eight specific trip types for walking and five trip types for cycling. For trips to be attributed to the originating parcel, a suitable destination must be located within a specific proximity for the trip to occur. The number of walking and cycling trips is determined for each trip type. The potential for walking and biking trips for a quarter mile radius around each parcel for all eight of the trip types for Goodlettsville is shown on Map 1.

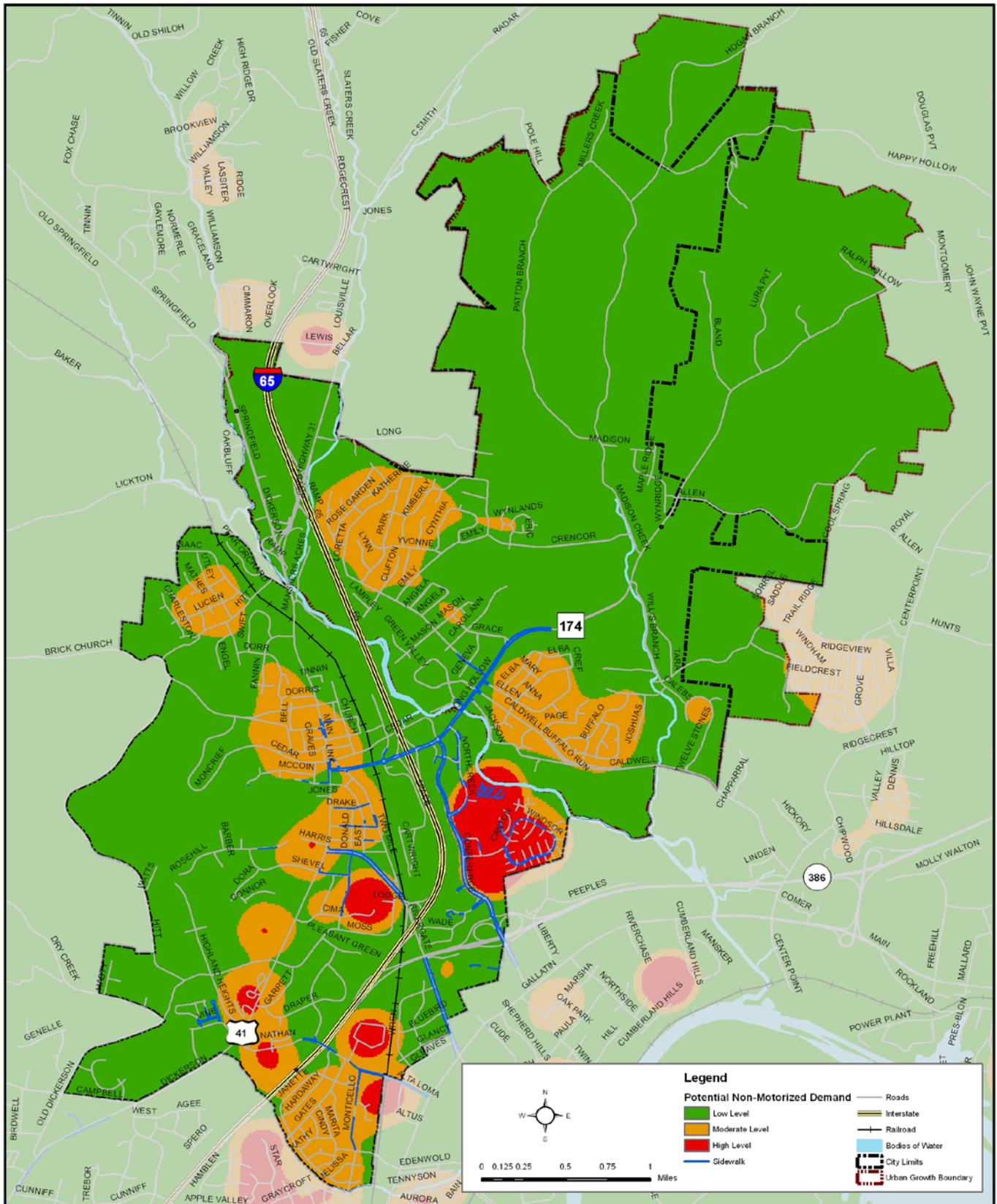
As shown on Map 1, the highest concentration of non-motorized trips is expected along Northcreek Road, Conference Drive, Dickerson Pike, and several neighborhoods in the City. These areas have residential developments close to commercial, office, retail, and school uses.

## Recommendations

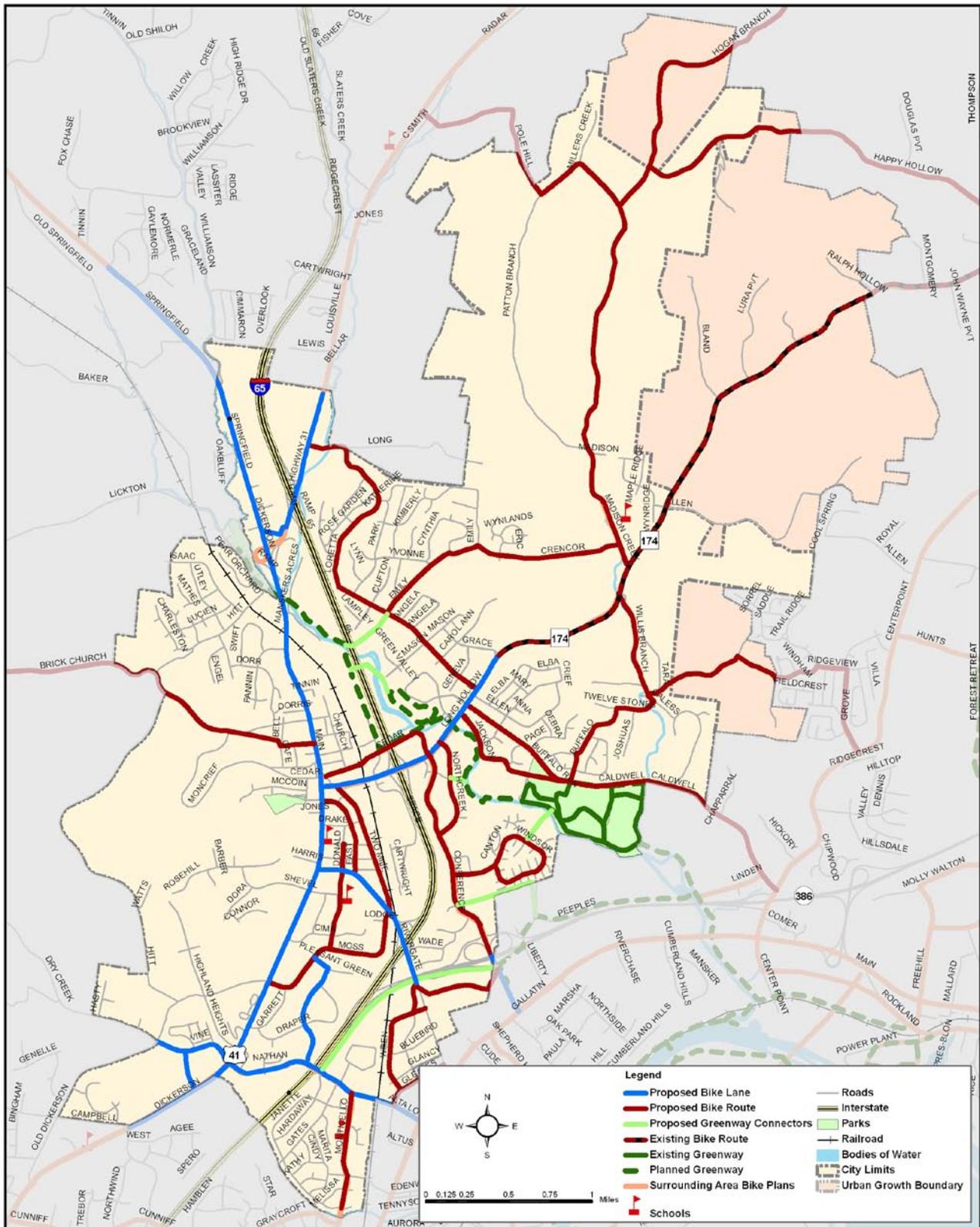
The recommendations for the Goodlettsville Bicycle Network were developed to complement the Regional Bicycle Network developed as part of the Nashville MPO Regional Bicycle and Pedestrian Study. Map 2 shows the City of Goodlettsville Recommended Bicycle Network. The Recommended Bicycle Network is intended to ensure that bicycle facilities are incorporated into the design of future roadway projects. The projects are intended to be constructed as part of new construction projects, redevelopment projects, or resurfacing projects. There are approximately 11 miles of bike lanes, 35 miles of bike routes, and 3 miles of greenway connectors to be constructed as part of the plan. In addition to the greenway connections shown as part of the Goodlettsville Bicycle Network, the greenways included in the 2009 Greenway and Open Space Plan should be constructed which will provide approximately 14 miles of greenways.

The recommendations for the sidewalk improvements build upon the MPO and Nashville-Davidson County's plans calling for sidewalk facilities along major commuting corridors, commercial corridors, corridors of commerce, and connections to activity centers and major destinations. This will complement the City's Subdivision Regulations requiring sidewalks in residential developments as well as commercial. The recommended sidewalk locations are shown on Map 3. The major roadways in Goodlettsville where sidewalks are recommended include Dickerson Pike/Main Street, Rivergate Parkway, Alta Loma Road, Dry Creek Road, Northcreek Boulevard, Loretta Drive, Caldwell Drive, and Windsor Green Boulevard. Roadways, such as Rivergate Parkway and Northcreek Boulevard, which have existing segmented sidewalks need to have sidewalk gaps filled in to provide a continuous pedestrian network. There are approximately 9 miles of sidewalk shown on Map 3.

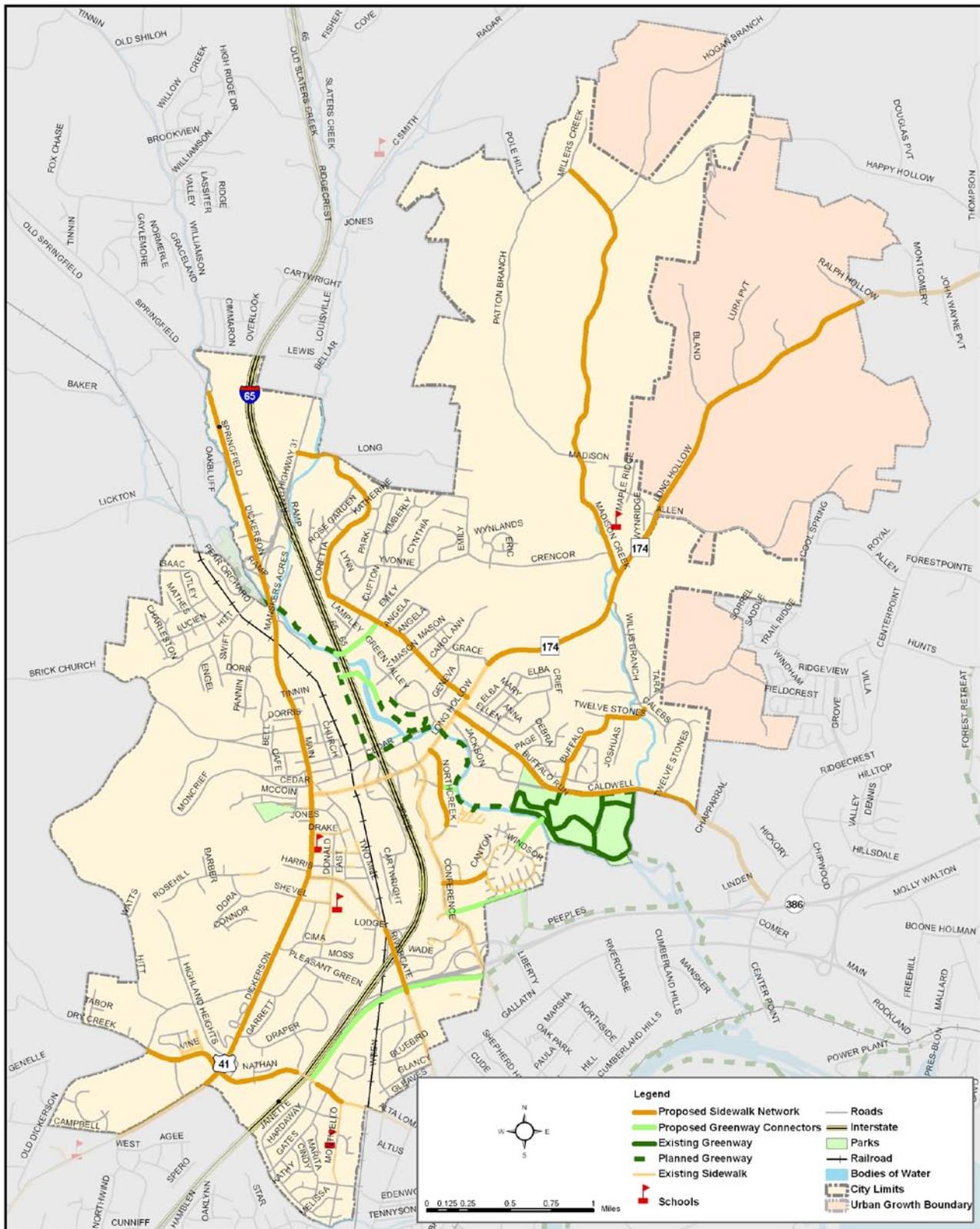
## Map 1. Non-Motorized Demand



## Map 2. Recommended Bicycle Network



## Map 3. Recommended Pedestrian Network



## Cost Estimate and Funding

Planning level cost estimates were prepared for both the bicycle and pedestrian networks. The cost estimates are calculated in 2010 dollars and it is assumed these are all stand-alone projects (i.e. nor part of a road construction, repaving, widening, or other project). Table 1 shows the cost for the recommended sidewalks on the City of Goodlettsville Pedestrian Network and the recommended bicycle facilities included on the Goodlettsville Bicycle Facilities Network.

**Table 1. Planning Cost for Recommended Bicycle and Pedestrian Facilities**

| Facility  | Pedestrian Mileage | Bicycle Mileage | Total Cost  |
|---|--------------------|-----------------|-------------|
| Sidewalks   | 13                 | -               | \$ 2.83 Mil |
| Bike Lanes  | -                  | 11              | \$10.30 Mil |
| Bike Routes   | -                  | 35              | \$ 0.09 Mil |
| Greenway Connectors   | -                  | 3               | \$ 3.00 Mil |
| Pedestrian Signal and Crosswalk Improvements (21 Intersections) | -                  | -               | \$ 0.33 Mil |
| Total   | 13                 | 49              | \$16.55 Mil |
| Greenways*  | -                  | 14              | \$14.91 Mil |
| Total   | 13                 | 63              | \$31.46 Mil |

\* From 2009 Greenway and Open Space Master Plan

There are a variety of funding sources including local, state, federal, and private that can be used to fund bicycle and pedestrian projects and programs. Most are competitive and involve the completion of extensive application with clear documentation of the project need, costs, and benefits.

A complete copy of the Goodlettsville Bicycle and Pedestrian Plan can be obtained from the City of Goodlettsville Planning Department or at [www.cityofgoodlettsville.org](http://www.cityofgoodlettsville.org).

**City of Goodlettsville**

Planning Department  
 105 South Main Street  
 Goodlettsville, TN 37072  
 Phone: 615.851.2234  
 Fax: 615.851.2212  
[www.cityofgoodlettsville.org](http://www.cityofgoodlettsville.org)

Prepared By:



Funding for this document was provided in part by the U.S. Department of Transportation Federal Highway Administration and the Tennessee Department of Transportation.