



REGIONAL BICYCLE AND PEDESTRIAN STUDY

*A Strategic Vision for Walking and Bicycling in the
Greater Nashville Region*

Inventory

Technical Memorandum 1

November 2009



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1.0 INTRODUCTION

In 2008, the Nashville Area Metropolitan Planning Organization (MPO), the regional transportation planning organization in the Middle Tennessee area, initiated the development of the region's first comprehensive Bicycle and Pedestrian Study for the greater Nashville region. The Regional Bicycle and Pedestrian Study is intended to establish a strategic vision for walking and bicycling in the region. This strategic vision will feed into the MPO's overall Long Range Transportation Plan and provide the basis by which future funding priorities of the MPO are established for bicycle and pedestrian accommodations within Davidson, Rutherford, Sumner, Wilson and Williamson counties, plus the cities of Spring Hill and Springfield.

Working with local governments, businesses, non-profit organizations, and the general public the Nashville Area MPO developed the Regional Bicycle and Pedestrian Study as a mechanism to foster a better understanding of bicycle and pedestrian needs within the region. The Study is also intended to serve as a means of guiding policies, programs, and investments intended to maximize opportunities for greater walking and biking activity now and in the future within the greater Nashville region.

In general, the Regional Bicycle and Pedestrian Study:

- Provides a comprehensive inventory of existing and currently proposed on and off-road bicycle and pedestrian facilities in the greater Nashville region
- Increases the region's understanding of how non-motorized modes add to system-wide capacity by improving connectivity between residential areas, employment centers, schools, retail centers, recreational centers, and other attractions
- Serves as a framework for identifying and selecting bicycle/pedestrian projects for the region's Long Range Transportation Plan and Transportation Improvement Program; and
- Provides guidance for engineering, education, enforcement, encouragement, and evaluation activities to help improve the safety of non-motorized travel modes.

This Technical Memorandum provides an inventory of existing and currently proposed on and off-road bicycle and pedestrian facilities within the region; a listing of local and regional plans, policies, and programs which relate to the provision of walking and biking accommodations within the region; and the results and findings of a peer review which was undertaken to compare the Nashville region to other similar sized communities relative to walking and biking practices.

2.0 FACILITIES

A critical component of understanding walking and biking conditions in the region is to first understand the existing environment and provision of accommodations for non-motorized users. As part of this project, a comprehensive inventory of existing and currently proposed on and off-road bicycle and pedestrian facilities within the region was undertaken.

The following section describes the various types of bicycle and pedestrian facilities and the provision of on and off-road accommodations within the greater Nashville region.

2.1 TYPES OF FACILITIES

For purposes of this Technical Memorandum, facilities for bicyclists and pedestrians have been divided into two categories, on-road facilities and off-road facilities. Bicycle facilities are first described followed by pedestrian accommodations.

2.1.1 On-Road Bicycle Facilities and Pedestrian Accommodations

Roadway-based bicycle facilities include shared roadways, wide outside lanes, paved shoulders, signed bike routes, and bike lanes. Pedestrian facilities consist of sidewalks.

Shared Roadways

Shared roadways include wide outside lanes, paved shoulders, and signed shared roadways. All of these bicycle facilities are provided on the paved roadway. Wide outside lanes are provided in the travel lane closest to the curb and provide 14 to 15 feet of pavement. A paved shoulder refers to the part of the highway that is adjacent to the regularly traveled portion of the roadway and is on the same grade as the roadway. Signed shared roadways are a commonly used bike facility using signs to designate a travel lane as being shared by vehicles and bicycles.



Example of Bike Route Signing



Paved Shoulder

Bike Lanes

A bike lane is a portion of the roadway that has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists. In general, bike lanes are always located on both sides of the road (except one-way streets), and carry bicyclists in the same direction as adjacent motor vehicle traffic.



*Bike Lanes are Provided on the Pavement
Adjacent to Vehicular Traffic*

Pedestrian Facilities

Sidewalks and walkways are “pedestrian facilities” that provide people with space to travel within the public right-of-way that is separated from roadway vehicles. Pedestrian signals, ramps, and marked crosswalks are components of a pedestrian facility.



*Sidewalk Separated from Vehicular Traffic
by On-Street Parking*

2.1.2 Off-Road Bicycle and Pedestrian Accommodations

Shared-Use Paths (Greenways)

Shared-use paths or greenways are non-motorized facilities most often built on exclusive rights-of-way with limited motor vehicle crossings. A shared-use path is a facility that is physically separated from motor vehicle traffic by an open space or barrier, and may be within the roadway right-of-way or within an open space. Paths are normally two-way facilities and are used by a variety of users (cyclists, runners, walkers, skaters, etc.) and skill levels.



*Shared-Use Paths Provide Recreational Opportunities
as well as Transportation Opportunities*

In many cases, shared-use paths are used to serve corridors not served by streets and highways or where wide utility or former railroad right-of-way exists, permitting such facilities to be constructed away from parallel streets carrying vehicular traffic.

2.2 EXISTING & PLANNED ACCOMMODATIONS

The following section describes existing on and off-road accommodations within the MPO region for non-motorized users. Also included in this section is a summary of future planned bicycle and pedestrian accommodations based on existing, locally adopted bicycle and pedestrian plans, and greenway master plans.

2.2.1 Inventory Process and General Findings

Inventory Process

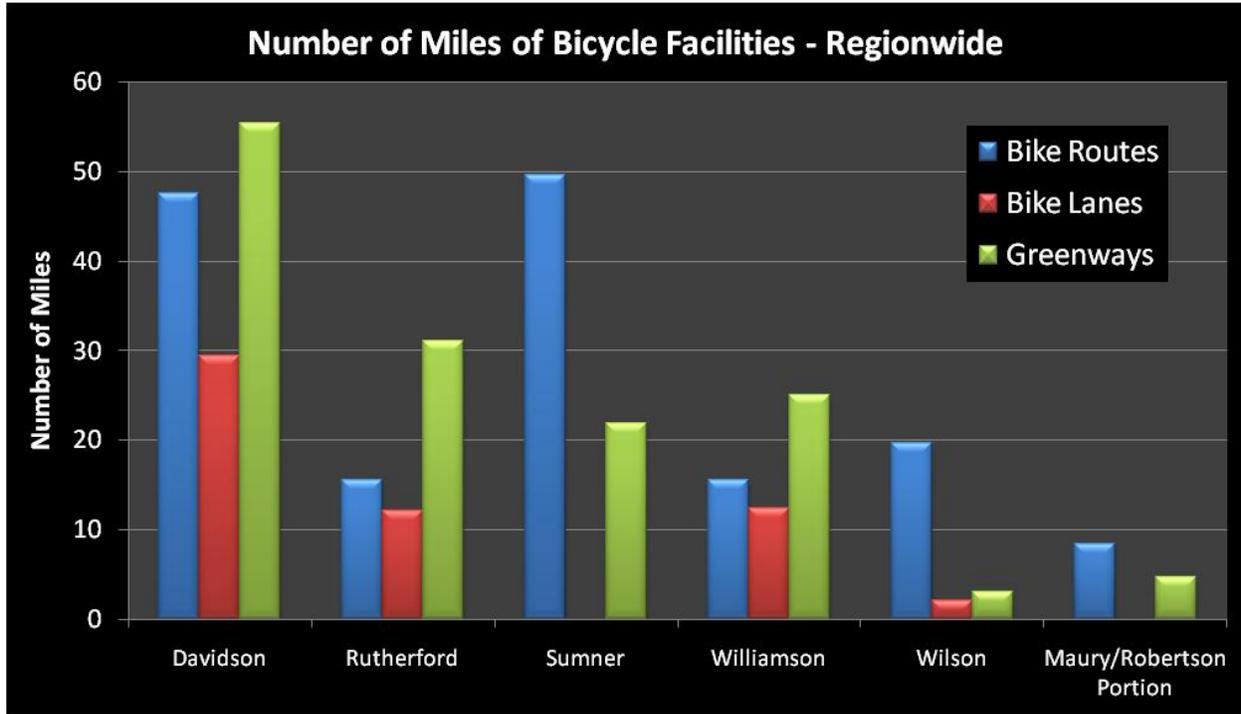
For on-road facilities, a comprehensive inventory of all major roadways, collector and above, in the MPO region was undertaken including a review of related plans and programs. The inventory process included fieldwork, the use of GIS, and data from the MPO and TDOT's Tennessee Roadway Information Management System (TRIMS). In total, over 3,300 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 collector and above roadways) were identified. Local streets and the presence of sidewalks on local roadways were not inventoried as part of this project with the exception of a few local roadways which were contained in the MPOs travel demand model roadway network.

For off-road facilities, a comprehensive inventory of all greenway facilities in the MPO region was undertaken including a review of related plans and programs. The inventory process included interviews with planning and parks departments in various communities, the use of GIS, and a review of greenway plans and programs.

General Findings

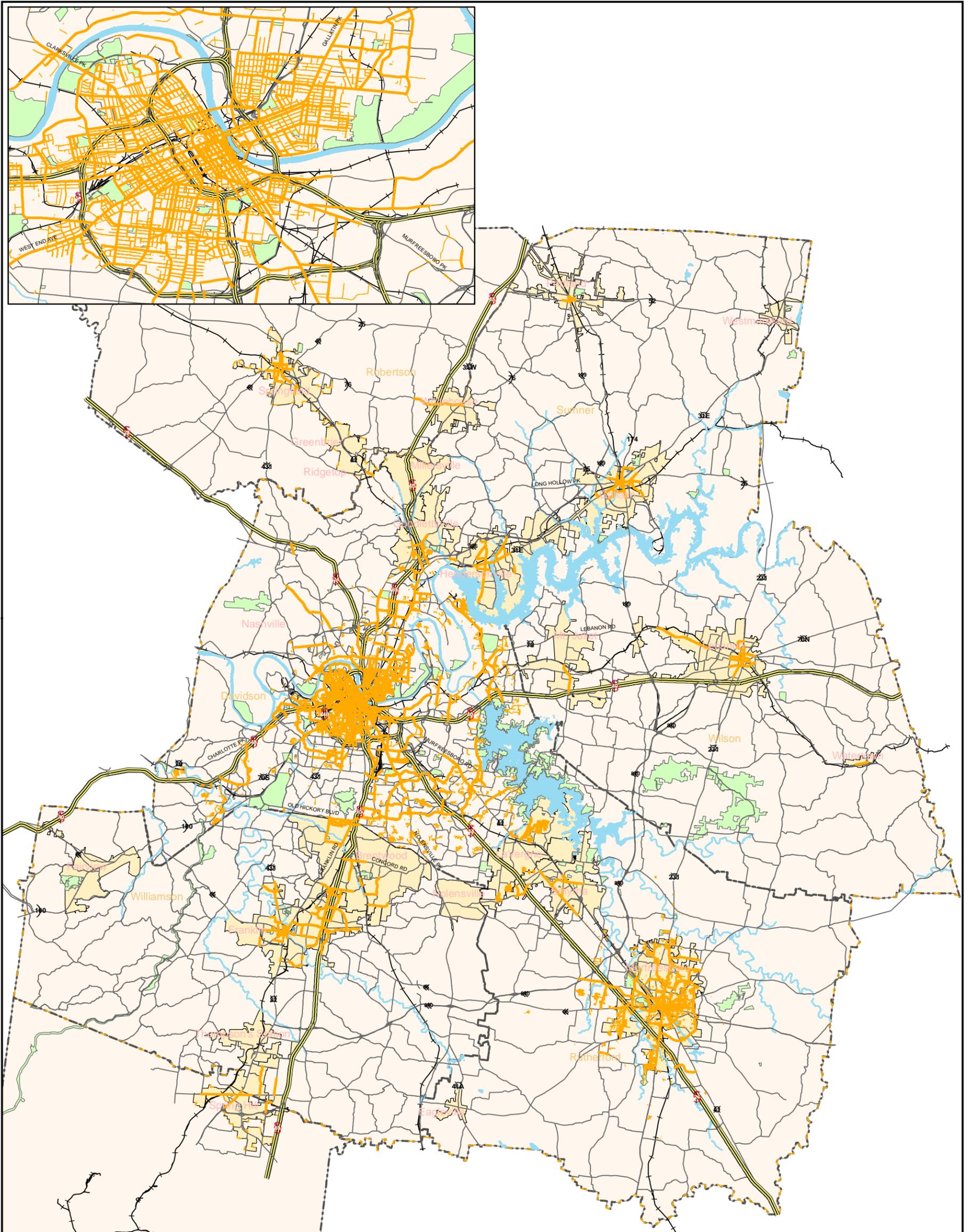
The inventory process, including the review of existing bicycle and pedestrian plans and programs, revealed the greater Nashville area has made sizable progress in the last ten years in terms of the number of existing bike lanes, bike routes, and greenway trails throughout the region as well as the presence of sidewalk accommodations. The inventory process revealed that there are currently over 354 miles of bike lanes, bike routes, and greenways in the greater

Nashville area and for arterial and collector roadways within the region, approximately 460 miles of sidewalk accommodations. Map 2.1 shows existing sidewalk accommodations in the Nashville MPO area along arterial and collector roadways as well as local sidewalk facilities for which GIS data existed. Maps 2.2 through 2.7 show existing bicycle and greenway (shared-use path) facilities in the Nashville MPO area per county along with planned facilities based on local plans.

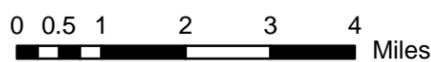


While on and off-road bicycle and pedestrian facilities exist in every MPO county, Davidson County has the highest concentration of bike lanes, bike routes, and greenway facilities. While the provision of bike lanes and bike routes throughout the region adhere to AASHTO standards the exact definition for a greenway has had many variations since the facilities were first introduced. While the typical definition for greenways across the region seems to follow the AASHTO standard for a 'shared use path', widths and materials vary greatly per each community. The designated greenways or multi-use paths in this region are typically paved and range from 12-foot wide asphalt or concrete paths to only 5-foot concrete paths in some communities. It should be noted that a 10-foot wide path is the minimum standard per AASHTO standards.

Sidewalks in the Nashville MPO Area



2



Legend

- Sidewalks
- Arterials & Collectors
- Interstate
- Parks
- Bodies of Water
- Railroad
- MPO Planning Boundary
- City Limits
- County Boundaries

This project is funded under an agreement with the Tennessee Department of Transportation.

The number of on and off-road facilities that have been put in place in the region in the last ten years is considerable given that many communities over that time period had no bicycle facilities at all. Since 2000 a number of municipalities in the MPO area have developed bicycle and pedestrian master plans and greenway master plans as well as enacted policies encouraging pedestrian and bicycle accommodations.

The following provides a county by county summary of existing on and off-road bicycle and pedestrian facilities in the greater Nashville region. These summaries also include information on future planned bicycle and pedestrian accommodations based on locally approved plans.

2.2.2 Davidson County

Existing Facilities

As part of the inventory process approximately 30 miles of bike lanes in Davidson County were identified, as shown on Map 2.2. The inventory also showed approximately 48 miles of signed bike routes where extra pavement like a paved shoulder or wide outside lane is sometimes provided. The bike lanes inventoried in the Nashville-Davidson County area provide at least four feet of pavement with pavement markings and signs.



Bike Route in Davidson County

Nashville-Davidson County has the most extensive existing greenway facilities in the region with approximately 55 miles on the ground which is shown on Map 2.3. The standard trail section for Davidson County is a 12-foot wide asphalt path, although many of the paths in the floodplain also utilize extensive boardwalk and sections of concrete trail which vary in width. A unique feature of Nashville's greenway system is the development of a number of significant bridges, which have provided important system-wide connections. The Cumberland River Bridge spanning the Cumberland River connects the Stones River greenway and Shelby Bottoms greenway. The rehabilitation of the Shelby Pedestrian Bridge across the Cumberland River and also the Old White Bridge Road Bridge across the railroad tracks provide unique and historic connections. Without these connections the river and railroad tracks can be obstacles for pedestrians and bicyclists.



Cumberland River Bridge

The inventory found approximately 322 miles of collector and arterial roadways within Nashville-Davidson County that have a sidewalk on one or both sides of the road. The majority of the sidewalks did not have a buffer area between the curb and the sidewalk and therefore did not provide any appurtenances such as trees.

Existing Bicycle & Pedestrian and Greenway Master Plans

Since the adoption of the *Nashville-Davidson County Strategic Plan for Sidewalks & Bikeways* in 2003 (updated in 2008), the Metro Nashville area has consistently made bicycle and pedestrian facilities part of redevelopment and resurfacing projects as well as including the facilities in the construction of new developments. The adoption of the plan was the first step towards improving the bicycle and pedestrian accommodations in the Nashville-Davidson County area.

The vision for the Strategic Plan is to provide bike lanes and bike routes on most collector and arterial roadways. Phase One of the plan shows bike lanes and bike routes on the major downtown routes such as Charlotte Pike, Broadway, 8th Avenue/Franklin Pike, Lafayette Street/Murfreesboro Pike, and Gallatin Pike.

The *Nashville-Davidson County Strategic Plan* also includes policies to improve sidewalk accommodations. The plan targets pedestrian facility conditions and connections between land uses. It focuses on providing ADA compliant crossings, ramps, and sidewalk clearances.

Metro Nashville developed the *Metropolitan Parks & Greenways Master Plan* in November 2002. A major component of the vision and master plan for Metro Nashville is to locate greenways along waterways with the Cumberland River acting as the spine. It is envisioned that a multi-use path will eventually be located on both sides of the Cumberland River the entire way through the county. The system will eventually include several hundred miles of greenway throughout Nashville/Davidson County. A main priority is to acquire greenway easements for environmental, recreation, and transportation purposes.

Planned Improvements

There are a number of transportation improvement projects currently under development within Metro Nashville which will include bicycle and pedestrian accommodations. For example, Metro is receiving \$15 million in federal economic stimulus funds for sidewalk maintenance on state routes and major arterials in Nashville-Davidson County. Additionally a number of intersection improvement projects are to occur over the next two years such as those on the Jefferson Street corridor. These projects will include pedestrian facility improvements as part of this larger transportation project.

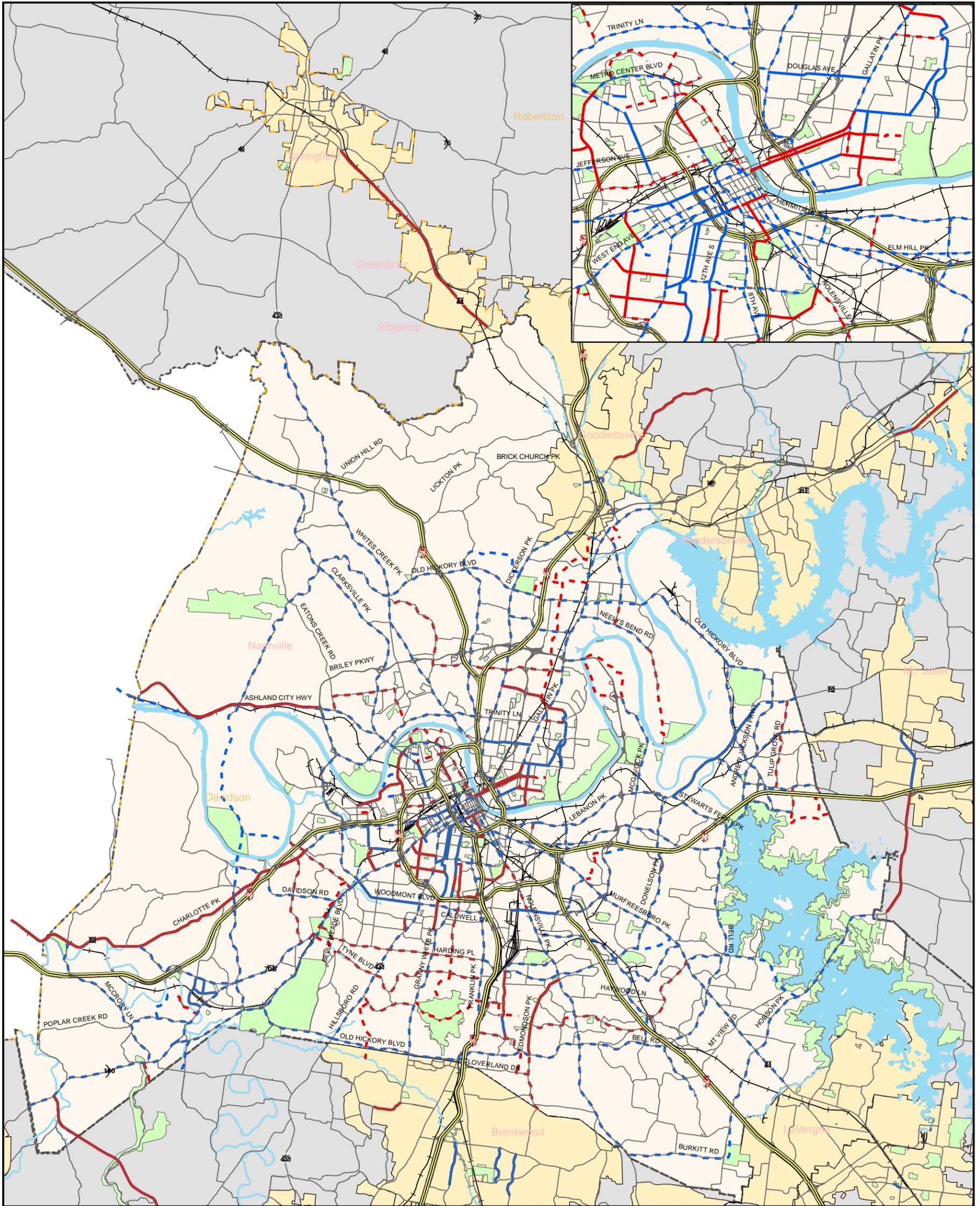
In addition to these on-street improvements, there are a number of off-street projects currently underway, including an expansion of the downtown greenway to connect to the Metro Center Levee, a section along the Harpeth River, and also an extension of the Richland Creek Greenway. A priority for future expansion includes a connection to the Hermitage (home of Andrew Jackson) to serve as a tourist destination. Other future projects include the expansion of Mill Creek Greenway, a connection to the Opry Mills Mall, and further expansion along the Harpeth River.



Boardwalk at Richland Creek Greenway

As shown on Maps 2.2 and 2.3, Metro Nashville has a considerable number of planned on-street bicycle facilities as well as greenways. The planned improvements illustrate the overall vision Metro Nashville has established for non-motorized accommodations in Nashville-Davidson County. The maps illustrate the desire to connect all the major corridors to the downtown area with bicycle facilities.

Existing and Planned On-Road Bicycle Facilities in Davidson County



2

Legend

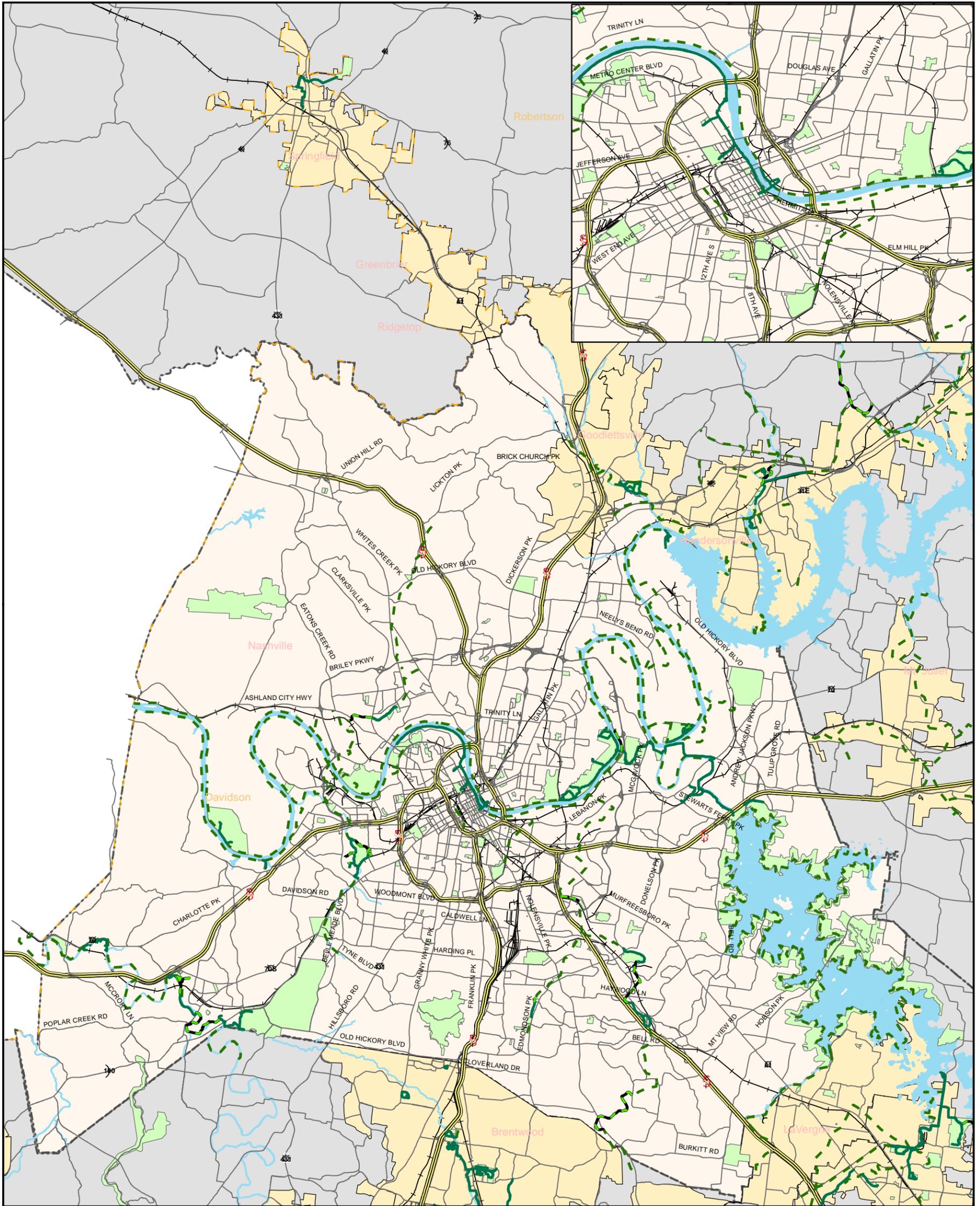
- Existing Bike Lane
- Existing Bike Route
- - - Planned Bike Lane
- - - Planned Bike Route
- Arterials & Collectors
- Interstate
- Parks
- Bodies of Water
- Railroad
- - - MPO Planning Boundary
- City Limits
- - - County Boundaries

0 1 2 4 6 8 Miles

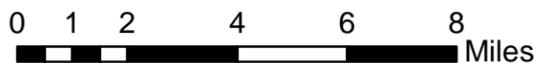


This project is funded under an agreement with the Tennessee Department of Transportation.

Existing and Planned Off-Road Bicycle Facilities in Davidson County



2



Legend

- Existing Greenway
- - - Planned Greenway
- · - · - Greenway Under Construction
- Arterials & Collectors
- Interstate
- Parks
- Bodies of Water
- Railroad
- MPO Planning Boundary
- City Limits
- County Boundaries

This project is funded under an agreement with the Tennessee Department of Transportation.

2.2.3 Rutherford County

Existing Facilities

According to the inventory conducted, Rutherford County has approximately 16 miles of signed bike routes and 12 miles of bike lanes which are shown on Map 2.4. Of the 12 miles of bike lanes within Rutherford County, all of them are located within the City of Murfreesboro and are four feet wide with pavement markings and signs. In addition, the City of Murfreesboro provides bike lanes on some local roads that were not included as part of this inventory. Bike routes are signed on John Bragg Highway located in the eastern portion of the county and along Northfield Boulevard in the City of Murfreesboro.

Also shown on Map 2.4 there are approximately 30 miles of existing trails on the ground in Rutherford County. The vast majority of these facilities are located in the cities of Murfreesboro and Smyrna. Murfreesboro is the largest city in Rutherford County and has 12.5 miles of existing greenway facilities including the Stones River and Lytle Creek Greenways. Smyrna has an extensive network of greenway trails, second only to Nashville in the region. They have just over 17 miles of existing facilities. These facilities include eight-foot to twelve-foot asphalt trails and eight-foot concrete sidewalks. Many of the projects have been able to utilize Corps of Engineers land adjacent to Percy Priest Lake.



Wide Shoulder in Rutherford County

The sidewalks inventoried were all located within the Smyrna, LaVergne, and Murfreesboro city limits. Sidewalks were found on approximately 29 miles of collector and arterial roadways, on one or both sides of the road.

Existing Bicycle & Pedestrian and Greenway Master Plans

Within Rutherford County, the cities of LaVergne, Smyrna, and Murfreesboro have prepared bicycle and greenway plans. Also, the Town of Smyrna has prepared a comprehensive plan that sets a goal to provide bicycle and pedestrian travel between destinations and activity centers. Rutherford is one of the counties in the region that does not have a completed master plan for greenways; however the cities of Smyrna, LaVergne and Murfreesboro do have completed master plans.



Concrete Section of Stone River Greenway in Murfreesboro

LaVergne's master plan for their greenway network was completed in conjunction with Smyrna. The plans provide a good connection between cities so that multi-modal travel will be possible between the two cities. While the desire for greenways is high, LaVergne has not been able to implement any trails to date.

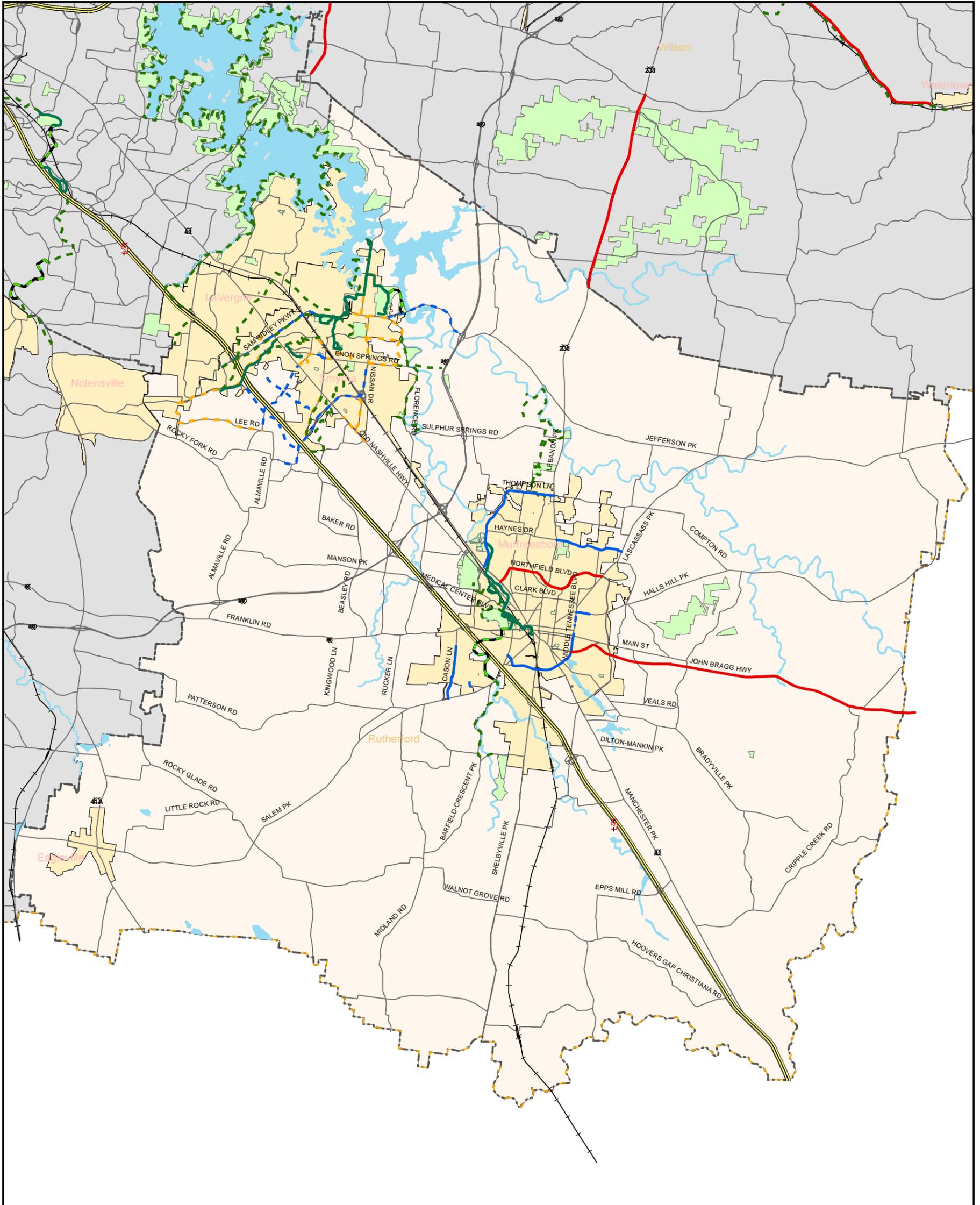
Planned Improvements

There are a number of transportation improvement projects currently under development within Rutherford County which will include bicycle and pedestrian accommodations. For example, the widening of Waldron Road and Parthenon Pkwy in the City of LaVergne will include paved shoulder facilities for use by bicyclists and the City of Murfreesboro Transit System, Rover, will be funding approximately \$350,000 in the coming year for passenger amenities, which will include bus stop shelters and bike racks.

Map 2.4 shows the planned facilities in Rutherford County. The majority of the planned facilities are within the three major city limits in the county. In Rutherford County, the highest priority for new projects based on discussions with local officials includes a connection to Barfield Crescent Park; the park includes primitive backcountry camping, which provides a destination for greenway users that is unique. The goal is to eventually provide an additional camping area on the opposite end of the greenway. Some of the future projects include a high desire to extend the Stones River Greenway to Smyrna and eventually to Davidson County along Percy Priest Lake. The greenway along the Stones River has significant regional importance, as there is both the potential and high desire to provide the connection to Davidson County's greenway network.

Currently underway off-road projects include an eight-foot wide path along Cherry Boulevard. The highest priority for future off-road projects is to complete a section of trail along Sam Ridley Parkway; this is considered a parallel facility.

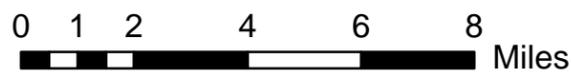
Existing and Planned Bicycle Facilities in Rutherford County



Legend

- Existing Bike Lane
- Existing Bike Route
- - - Planned Bike Lanes
- - - Planned Sidewalk/Bikeway
- Existing Greenway
- - - Planned Greenway
- Greenway Under Construction
- Arterials & Collectors
- Interstate
- Parks
- Bodies of Water
- Railroad
- MPO Planning Boundary
- City Limits
- County Boundaries

2



This project is funded under an agreement with the Tennessee Department of Transportation.

2.2.4 Sumner and Robertson Counties (Springfield, Greenbrier, Ridgetop)

Existing Facilities

According to the inventory conducted, there are approximately 50 miles of bike routes and no bike lanes in Sumner County and the MPO area of Robertson County. Map 2.5 shows the bike routes that are currently signed in Sumner and part of Robertson County. The facilities that were found to be signed during the inventory are on Highway 52, Highway 31E, and Long Hollow Pike and Highway 41 in Robertson County.

As shown on Map 2.5, within Sumner County and its municipalities, there are approximately 23 miles of trails on the ground. Many of the existing facilities parallel existing roadways. Hendersonville has approximately five miles of trail facilities, which vary from asphalt paths to five-foot concrete sidewalks. Many of the existing five-foot wide facilities are undersized per AASHTO design standards. Many of the trails are provided in relationship to Drakes Creek Park and to nearby schools.

Other areas in Sumner County with significant trail systems either in place or under design include the City of Gallatin, the City of Goodlettsville, White House, and Portland. White House's greenway system includes a loop around the city, which provides connections to Robertson County. Springfield also has a greenway system that links to the City's downtown district.



Cyclist Riding on Shoulder in Sumner County

Additionally, there are approximately 84 miles of sidewalks along arterial and collector roadways in Sumner County and the MPO area of Robertson County. The majority of these sidewalks are provided in the cities of Gallatin, Hendersonville, and Goodlettsville.

Existing Bicycle & Pedestrian and Greenway Master Plans

In 2000, Sumner County and the Cities of Gallatin and Hendersonville jointly developed individual bicycle and pedestrian master plans for their respective communities. Development of the three plans concurrently resulted in a high level of coordination and understanding of connectivity of facilities between each of these communities. The plans have been utilized by Sumner County and the Cities to determine the feasibility and location of bicycle and pedestrian facilities. Also included in the plans are recommended cross-sections and design standards.



Sidewalk Connection to School

Sumner has a countywide master plan for their greenway system. Gallatin has recently completed a 2020 master plan that includes over 25 miles of potential greenway corridors. The City of Goodlettsville just this year adopted a

greenway and open space master plan and they are in the process of developing a bicycle and pedestrian plan for the City as well.

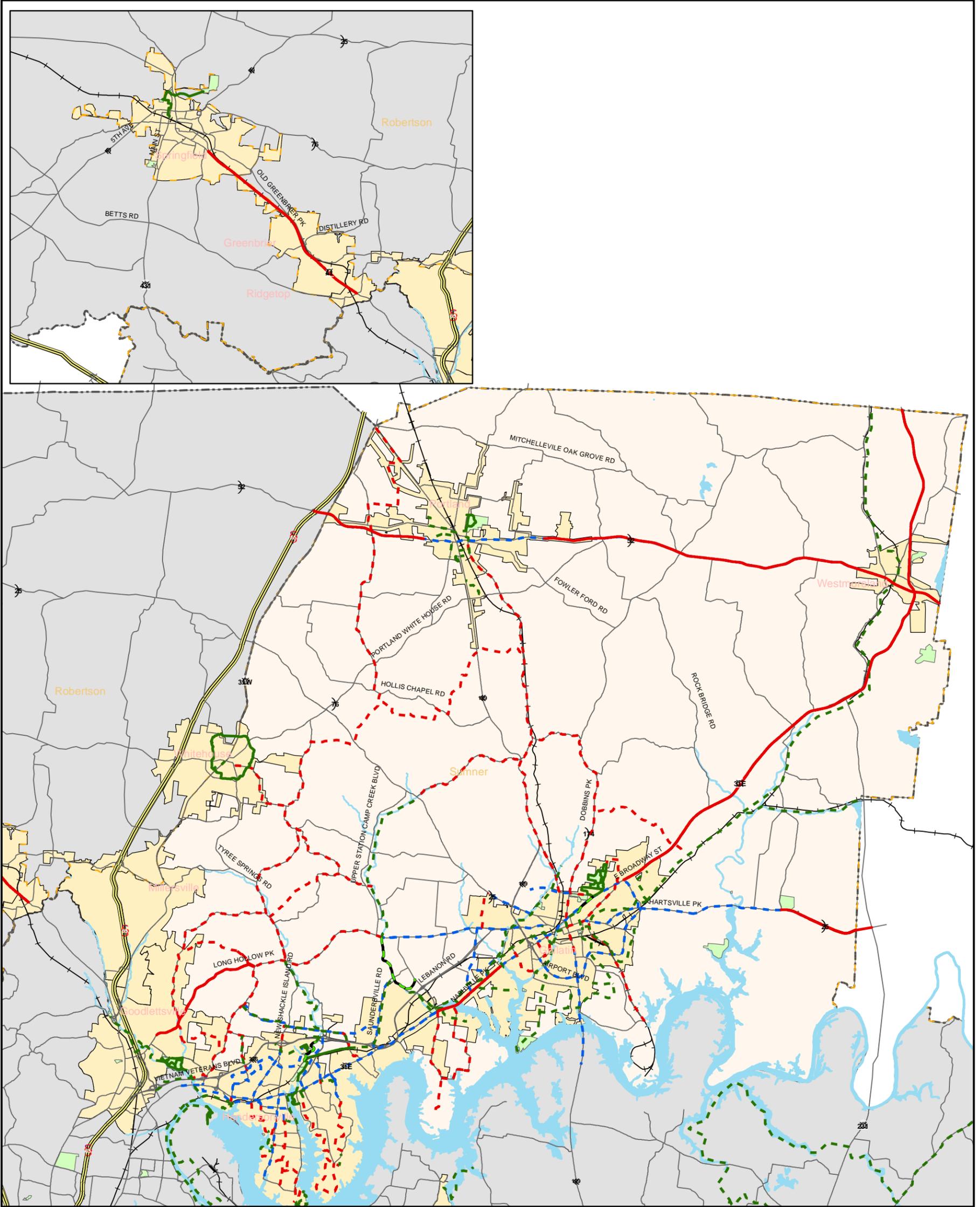
Planned Improvements

There are a number of transportation improvement projects currently under development within Sumner County which will include bicycle and pedestrian accommodations. For example, the widening of Indian Lake Boulevard in the City of Hendersonville which is to include sidewalks and bike lanes, the Main Street project in Portland which is to include sidewalk improvements, and the SR 76 pedestrian improvement project in White House.

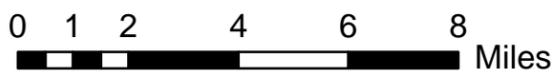
Map 2.5 shows the locations for future bike lanes, bike routes, and greenway facilities based on the existing local plans. Once the planned bicycle facilities are constructed there will be good connectivity between Gallatin and Hendersonville and other parts of the County. Also, there will be bike routes, which will provide travel through Sumner County.

The highest priority future greenway project is a connection from Veterans Park to Arrowhead Park, which would also include connections to nearby elementary and middle schools. Currently, the Station Camp Greenway is being completed near Hendersonville through a federal High Priority Project (HPP) funds. The City of Gallatin has prepared a master plan for Town Creek Greenway that connects the Triple Creek Park to downtown. Phase one of this project is currently underway.

Existing and Planned Bicycle Facilities in Sumner County



2



Legend

- Existing Bike Lane
- Existing Bike Route
- - - Planned Bike Lane
- - - Planned Bike Route
- Existing Greenway
- - - Planned Greenway
- · - · - Greenway Under Construction
- Arterials & Collectors
- Interstate
- Parks
- Bodies of Water
- Railroad
- MPO Planning Boundary
- City Limits
- County Boundaries

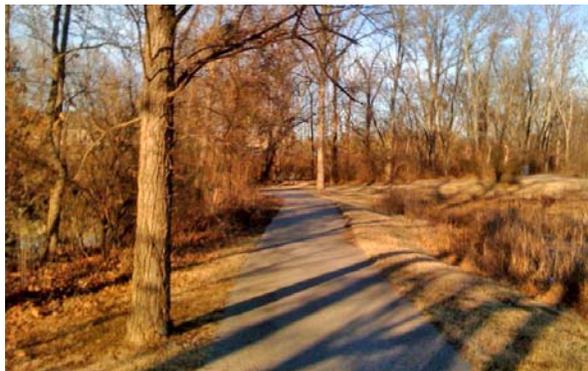
This project is funded under an agreement with the Tennessee Department of Transportation.

2.2.5 Williamson and Maury Counties (Spring Hill)

Existing Facilities

According to the inventory conducted in Williamson County and the MPO area of Maury County, there are over 12 miles of bike lanes and approximately 16 miles of bike routes, shown on Map 2.6. The majority of the bike lanes are in the cities of Brentwood and Franklin. The longest bike route is on Highway 96 West and runs from the county boundary to the downtown Franklin area.

Map 2.6 shows there are approximately 25 miles of greenways in Williamson County, which are largely located in the cities of Brentwood and Franklin. The City of Brentwood has 12.6 miles of existing trails, which are primary asphalt pathways, including an extensive trail from Concord Road to Crockett Park. There are currently 12.4 miles of existing greenways in the City of Franklin. Recently completed projects within Franklin include trails along Carothers Parkway and a trail utilizing an old roadway near the new Nissan Headquarters.



Franklin Greenway



Rendering of Future Mack Hatcher Greenway in Franklin

The inventory showed that there are 60 miles of sidewalks along arterial and collector roadways in the Williamson County area and the MPO area of Maury County. The sidewalks are provided within the city boundaries and connect commercial, office, and residential areas.

Existing Bicycle & Pedestrian and Greenway Master Plans

Both the cities of Brentwood and Franklin have bicycle and pedestrian plans and the City of Franklin has recently begun a greenway and open space master planning project. The Cities of Fairview and Spring Hill both have a bikeway plan map but no formal bicycle and pedestrian plan. Williamson County does not have a bicycle and pedestrian or a greenway master plan.

The City of Brentwood updated their 2020 plan in 2006, which includes a bicycle and pedestrian facilities inventory and review. In addition, the City of Franklin prepared a Bicycle and Pedestrian Plan in 2003, which is currently being updated. Both of the plans emphasize the importance of including bicycle and pedestrian accommodations in future development as well as in redevelopment projects. Both cities have an extensive greenway system that is complemented with on-road bicycle facilities.

The City of Fairview has a bicycle facilities map as part of its open space plan, and the Town of Nolensville has been working to establish a bicycle and pedestrian and greenways master plan.

Planned Improvements

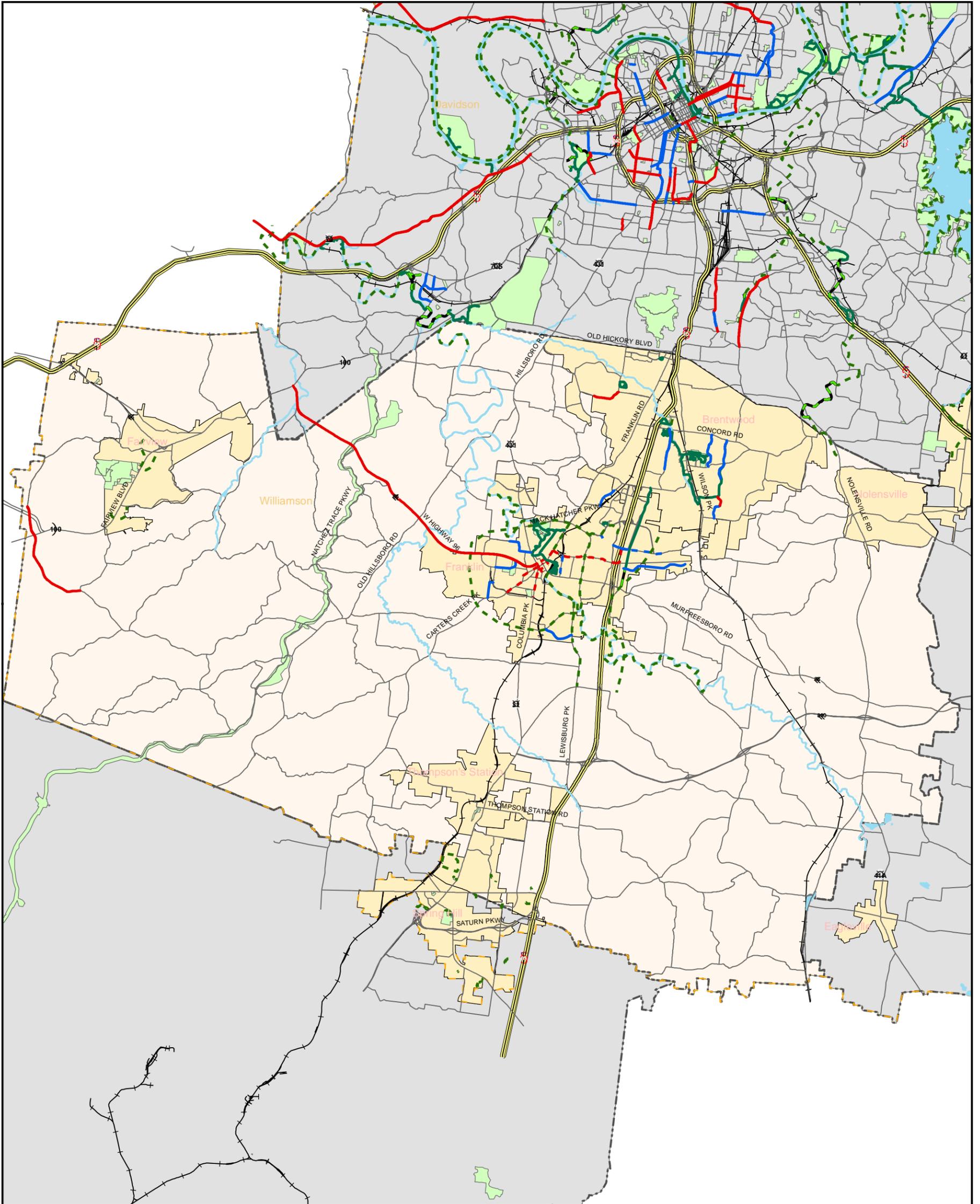
Based on the current plans, Map 2.6 shows the locations for future bike lanes, bike routes, and greenway facilities. In Franklin, projects under design include greenway trails along the Mack Hatcher Parkway from Highway 96 East to Franklin Road and another section from Highway 96 West to Hillsboro Road. These will be paralleling facilities and will typically be a 12-foot wide asphalt surface. The city's vision is for all major arterial streets to have a 12-foot wide asphalt multi-use path. There are currently future projects planned along Franklin Road and Concord Road in Brentwood and the extension of Carothers Parkway in Franklin.



Bike Lane in Williamson County

Recently, the Towns of Nolensville and Thompson Station, the City of Lebanon, and Metro Nashville-Davidson County received federal Safe Routes to School (SRTS) funds for which they are using to improve walking and biking connections from neighborhoods to schools in their respective communities.

Existing and Planned Bicycle Facilities in Williamson County



2

Legend

- Existing Bike Lane
- Existing Bike Route
- - - Planned Bike Lane
- - - Planned Bike Route
- Existing Greenway
- - - Planned Greenway
- - - Greenway Under Construction
- Arterials & Collectors
- Interstate
- Parks
- Bodies of Water
- Railroad
- MPO Planning Boundary
- City Limits
- County Boundaries

0 1 2 4 6 8 Miles



This project is funded under an agreement with the Tennessee Department of Transportation.

2.2.6 Wilson County

Existing Facilities

According to the inventory conducted, there are approximately 20 miles of bike routes in the Wilson County area and about 2 miles of bike lanes. Map 2.7 shows the bicycle routes, bike lanes, and greenway facilities found during the inventory in Wilson County. The bike lanes are located in the City of Mount Juliet on State Route 171. The bike routes are located on Highway 231, South Mount Juliet Road and Sparta Pike between Lebanon and Watertown.

Currently, there are approximately 3.1 miles of existing trails in Wilson County. These trails are located in the City of Lebanon. The City of Mount Juliet does not currently have any greenway trails on the ground; however, there is an eight-foot wide sidewalk as part of the recent Providence development in Mount Juliet. This facility was not included in the total for the greenways.

The inventory also showed approximately 19 miles of sidewalk along arterial and collector roadways in Wilson County. The majority of these sidewalks are provided in the City of Lebanon and Mount Juliet.



Bike Route in Wilson County

Existing Bicycle & Pedestrian and Greenway Master Plans

The *Bicycle and Pedestrian Master Plan for Mount Juliet, Lebanon, and Wilson County*, was prepared to guide the county in developing a bicycle and pedestrian system that will be usable for the two major cities in the county as well as for Wilson County. Since this plan was developed the cities and county have implemented several policies that support the construction of pedestrian and bicycle accommodations. In 2003, the City of Mount Juliet updated its bicycle and pedestrian plan and added additional recommendations for greenway improvements.

Planned Improvements

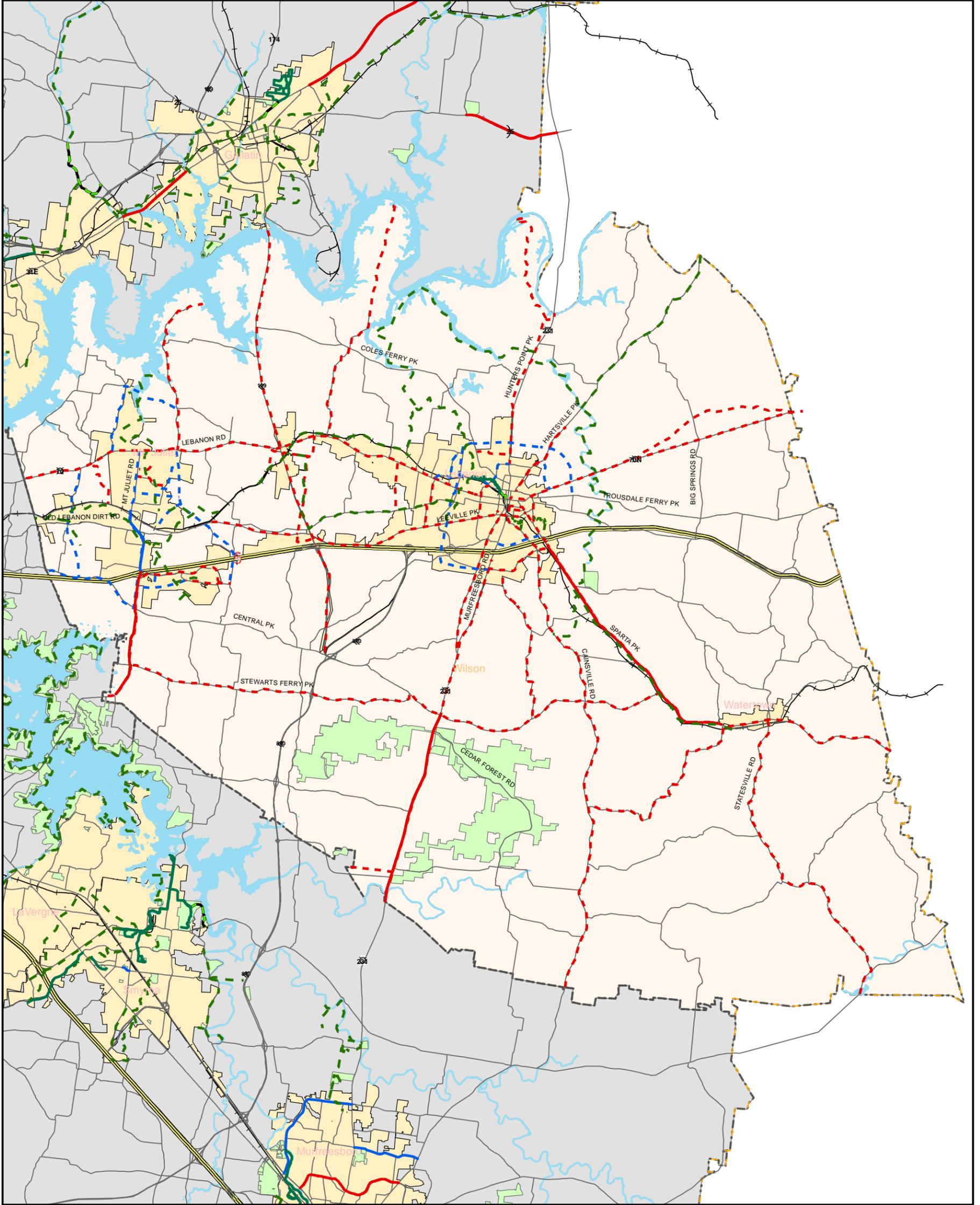
Based on the bicycle and pedestrian master plans for Mount Juliet, Lebanon, and Wilson County, the locations for future bike lanes, bike routes, and greenway facilities are shown on Map 2.7. The map shows that the bike routes are planned to be provided throughout Wilson County and provide connections to Rutherford, Sumner, and Davidson Counties. They will also provide connections between Mount Juliet and Lebanon.



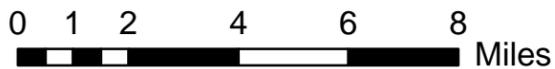
Existing Lebanon Greenway

The City of Mount Juliet has identified a section of trail near Division Street called the West Division Greenway as their highest priority for future greenway improvements. Future sections are expected to provide a connection from the Woodland subdivision to the middle school utilizing federal SRTS funding. The highest priority and planned future trail in the City of Lebanon is an extension of the current trail to The Mill shopping center and Lebanon commuter rail station.

Existing and Planned Bicycle Facilities in Wilson County



2



Legend

- | | |
|-----------------------------|------------------------|
| Existing Bike Lane | Arterials & Collectors |
| Existing Bike Route | Interstate |
| Planned Bike Lanes | Parks |
| Planned Bike Route | Bodies of Water |
| Existing Greenway | Railroad |
| Planned Greenway | MPO Planning Boundary |
| Greenway Under Construction | City Limits |
| | County Boundaries |



This project is funded under an agreement with the Tennessee Department of Transportation.

3.0 PLANS, POLICIES, & PROGRAMS

As part of the Regional Bicycle and Pedestrian Study, a review of current practices in terms of plans, policies, and programs pertaining to non-motorized accommodations in the greater Nashville region was undertaken. As part of this review, local bicycle and pedestrian plans, greenway plans, and regulatory practices such as subdivision and zoning regulations, which often include sidewalk and bikeway requirements were reviewed. The following section provides a summary of these efforts.

3.1 FACILITY MASTER PLANS

To date, a considerable number of studies have been conducted within the MPO planning area pertaining to bicycle and pedestrian accommodations. In total, 13 bicycle and pedestrian plans have been undertaken by cities and counties within the MPO along with 15 greenway master plans. In addition to these efforts, a statewide bicycle and pedestrian plan developed by TDOT as part of the State’s long range transportation plan and a statewide greenway and trails plan developed by TDEC also cover non-motorized travel activities of the region as well.

Master Plans for Bicycle & Pedestrian Facilities		
MPO Jurisdiction	Bicycle & Pedestrian Master Plan	Greenway Master Plan
Davidson County	Yes	Yes
Williamson County	No	No
City of Brentwood	Yes ¹	Yes ¹
City of Franklin	Yes	Yes ¹
City of Fairview	No	No
Town of Nolensville	No	No
City of Spring Hill*	No	No
Rutherford County	No	No
City of Murfreesboro	Yes	Yes ²
City of Smyrna	Yes ²	Yes ²
City of LaVergne	Yes ¹	Yes ¹
Wilson County	Yes	Yes ¹
City of Mt. Juliet	Yes ¹	Yes ¹
City of Lebanon	Yes	Yes ¹
Sumner County	Yes	Yes ¹
City of Hendersonville	Yes	Yes
City of Gallatin	Yes ¹	Yes
City of Goodlettsville*	No	Yes
City of Portland	Yes ²	Yes ²
City of White House*	No	Yes ²
City of Millersville	No	No
City of Springfield	No	No

* Municipality in Multiple Counties

¹ Reflective in One or More Documents (not necessarily as a stand-alone document),

² Map

3.1.1 Bicycle and Pedestrian Plans

As earlier stated a number of local bicycle and pedestrian master plans have been undertaken throughout the region. Typically these plans include an inventory of existing conditions, a listing of current policies and practices, and conclude with a list of facility recommendations along with design guidelines and policies. In a few communities bicycle and pedestrian plans are integrated into other plans such as local comprehensive plans and/or just result in a map with locations for future improvements.

The existence of these plans has allowed a number of communities throughout the region to implement a sizable number of sidewalk and bikeway improvements in their respective communities. By having such plans, these municipalities have been able to allocate local, state, and federal resources to implement envisioned planned improvements. Additionally, by having such plans municipalities have been able to have sidewalk and bikeway improvements made as part of other capital improvement projects such as the widening of a roadway whereby sidewalks are added or during roadway resurfacing projects whereby bike lanes are added. These plans have also allowed communities to require or ensure that important facility improvements are made as part of private development projects as well (either implemented by private developers and/or with government funds in association with the development).

Some example plans that have resulted in sizable investments in sidewalk and bikeway improvements locally include:

- Nashville-Davidson County's Strategic Plan for Sidewalks & Bikeways,
- City of Franklin's Bicycle and Pedestrian Plan, and
- City of Brentwood's Bikeway Plan which is part of the City's Comprehensive Plan.

In addition to local bicycle and pedestrian plans, TDOT adopted a Statewide Bicycle and Pedestrian Element in 2005 as a component of the State's Long-Range Transportation Plan. The document serves as an information and policy plan to guide the development and maintenance of a statewide bicycle network on the nearly 14,150 miles of state highways under the jurisdiction of the State over the next 25 years. This plan also addresses support facilities and other programs for pedestrians and bicyclists in Tennessee. These policies address important issues related to Tennessee's bikeways and walkways such as planning, community involvement, utilization of existing resources, facility design, multi-modal integration, safety and education, support facilities, as well as specific programs, implementation, maintenance, and funding.

3.1.2 Greenway Master Plans

Much like a bicycle and pedestrian master plan which largely deals with on-road sidewalk and bikeway facilities, a number of communities have developed local greenway master plans which deal with off-road accommodations for non-motorized users. Typically a greenway master plan will include the same elements of a traditional bicycle and pedestrian plan, an inventory of existing conditions, a listing of current policies and practices, and conclude with a list of facility recommendations along with design guidelines and policies.

The success of project improvements from these plans mirror that of local bicycle and pedestrian master plans in which communities use the greenway plan to secure funding as well

as implement improvements in connection with other capital improvements and/or as part of private developments.

Some example plans that have resulted in sizable investments in greenway improvements locally include:

- Nashville-Davidson County's Parks and Greenways Master Plan,
- Town of Smyrna's Greenway Plan, which is part of the City's Comprehensive Plan,
- City of Brentwood's Greenway Plan, which is part of the City's Comprehensive Plan, and
- City of Murfreesboro's Greenway Master Plan.

In addition to local greenway master plans, the Tennessee Department of Environment and Conservation (TDEC) and the Commissioner's Greenways and Trails Advisory Council completed the development of the Tennessee Greenways and Trails Plan in March of 2008. The document is an action program designed to address current deficiencies, resolutions to critical shortcomings, and new approaches to achieving a statewide system of greenways and trails. The action program, which covers a horizon of 2008-2010, promotes the expansion of trails and greenways statewide as a means of promoting health and fitness, economic and tourism development, resource and energy conservation, and a means of alternative transportation and safe routes to schools. Lastly, the document supports the expansion of greenways at the local level and continued funding for greenway and trail development, education, and technical assistance.

3.1.3 Streetscape Master Plans

Another planning tool local municipalities use to address aesthetic and pedestrian scale activities in their communities are streetscape master plans. These plans typically focus on an area of a community, often a downtown or an area that a community is looking to redevelop at a pedestrian scale. These plans are often tied to a municipality's zoning regulations and require all development activity to conform to specific design standards called out in the streetscape master plan. Typical requirements of a streetscape plan include sidewalk and bikeway design standards, which often are more expansive than the community's minimum requirements and include provisions for street furniture such as benches and landscaping as well as other provisions such as bike racks, lighting, and signage and wayfinding.

Within the MPO area the cities of Brentwood, Franklin, Gallatin, Goodlettsville, Murfreesboro, and Metro Nashville-Davidson County have streetscape master plans for certain designated areas within their respective communities.

3.2 REGULATORY PROVISIONS

Subdivision and zoning regulations are the regulatory tools that local municipalities use to require certain provisions relative to the development of land and buildings. A large number of communities through their zoning and subdivision regulations require sidewalk and bikeway accommodations as part of residential, commercial, and mixed-use developments. In addition to these provisions, a number of communities also require certain types of developments to include the provision of bike racks, benches, and other amenities to compliment non-motorized user accommodations.

Within the greater Nashville region all but one of the MPO's member jurisdictions requires sidewalk accommodations through their subdivision and zoning regulations. Williamson County, which does not have sidewalk requirements, does have provisions within their regulations which allow for the reservation of an easement to accommodate pedestrian and bicycle traffic to provide circulation and access to schools, playgrounds, shopping centers, and other community facilities.

Typical minimum sidewalk widths of member jurisdictions range from four to ten feet with five feet being the most common, and the inclusion of a buffer area of two to six feet in width. Typically these buffer areas will be grass or grass and trees. In addition to these typical minimum sidewalk widths, a number of MPO communities have larger sidewalk width requirements for downtown areas and locations deemed to have greater pedestrian access needs.

Subdivision and Zoning Regulations – Sidewalk Requirements				
MPO Jurisdiction	Sidewalk Requirements	Construction	Funds In Lieu of	Minimum Dimension/Buffer
Davidson County	Yes	Yes	Yes	5' / 4'
Williamson County	No	No	No	-
City of Brentwood	Yes	Yes	Yes	5' to 6' / Varies 3'
City of Franklin	Yes	Yes	Yes	5' / Varies
City of Fairview	Yes	Yes	Yes	5' to 6' / 5'
Town of Nolensville	Yes	Yes	No	5' (Varies) / Varies
City of Spring Hill*	Yes	Yes	No	4' to 6' / Varies
Rutherford County	Yes	Yes	No	-
City of Murfreesboro	Yes	Yes	Yes	5' / Varies
City of Smyrna	Yes	Yes	No	5' to 6' / 2'
City of LaVergne	Yes	Yes	Yes	5' to 6' / Up to 4'
Wilson County	Yes	Yes	No	4' to 10'
City of Mt. Juliet	Yes	Yes	No	4' to 6' / 2'
City of Lebanon	Yes	Yes	Yes	4' to 5' / 6'
Sumner County	Yes	Yes	Yes	4' to 6' / 2'
City of Hendersonville	Yes	Yes	No	5' to 6' / 5'
City of Gallatin	Yes	Yes	No	5' to 6' / 5'
City of Goodlettsville*	Yes	Yes	No	5' / 2'
City of Portland	Yes	Yes	Yes	5' to 6' / 5'
City of White House*	Yes	Yes	No	5' to 6' / 2'
City of Millersville	Yes	Yes	No	4' to 5' / 2'
City of Springfield	Yes	Yes	No	4' to 5' / 2'

* Municipality in Multiple Counties

1 Reflective in One or More Documents (not necessarily as a stand-alone document)

2 Map

Within the MPO area, five municipalities have provisions in their planning regulations which require and/or encourage the provision of bicycle racks. These requirements are largely associated with specific overlay districts such as the downtown area or town center. The

municipalities with these provisions include the cities of Brentwood, Franklin, Mount Juliet, and Spring Hill and Metro Nashville-Davidson County.

Lastly, a number of the communities allow for funds in lieu of constructing sidewalks. The in “lieu of” provision is generally set aside by the municipality and used when constructing the sidewalk at a later date or is to be timed with development activity which is yet to occur.

3.3 POLICIES

Nationally numerous communities have enacted policies pertaining to providing non-motorized accommodations as part of larger transportation projects or as part of major capital projects which may allow for the provision of sidewalk and bikeway improvements. Typically these policies are over and beyond sidewalk and bicycle facility requirements of a city’s or county’s subdivision or zoning regulations.

In fact, in 2000, the U.S. DOT drafted a policy statement to encourage states, local governments, professional associations, other government agencies, and community organizations to adopt its Policy Statement (*A U.S. DOT Policy Statement: Integrating Bicycling and Walking into Transportation Infrastructure, 2000*) as an indication of their commitment to accommodating bicyclists and pedestrians as an integral element of the transportation system. One of the key principles of the Policy Statement is that “bicycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist.”

Currently no local municipalities within the MPO have such a policy in place; however, the Tennessee Department of Transportation (TDOT) does have such a policy. Many of Tennessee’s laws and policies originate from Federal laws that require planning for non-motorized transportation and as a result of U.S. DOT Policy Statement on Integrating Bicycling and Walking into Transportation Infrastructure, TDOT adopted its policy.

The following reflects TDOT’s accommodations policy.

TDOT Bicycle and Pedestrian Policy

The policy of TDOT is to routinely integrate bicycling and pedestrian facilities into the transportation system as a means to improve mobility and safety of non-motorized traffic. Below are specific aspects of the policy as it relates to each non-motorized element.

Bicycle

TDOT is committed to the development of a transportation infrastructure that improves conditions for bicycling through the following actions:

- Provisions for bicycles will be integrated into new construction and reconstruction of roadway projects through design features appropriate for the context and function of the transportation facility.
- The design and construction of new facilities should anticipate likely future demand for bicycling facilities and not preclude the provision of future improvements.

Pedestrian

TDOT is committed to the development of a transportation infrastructure that improves conditions for pedestrians through the following actions:

- In urbanized areas, sidewalks or other types of pedestrian travel ways should be incorporated in new construction or reconstruction projects, unless one or more of the conditions for exception are met as described in this policy.
- The design and construction of new facilities should anticipate likely future demand for pedestrian facilities and not preclude the provision of future improvements.
- By addressing the need of pedestrians to cross corridors as well as travel along them and designing intersections and interchanges to accommodate pedestrians in a manner that is accessible and convenient.
- The design of facilities for pedestrians will follow design guidelines and standards as adopted by TDOT.
- Provisions for pedestrians will be integrated into new construction and reconstruction projects through design features appropriate for the context and function of the transportation facility.
- Pedestrian facilities must be designed to accommodate persons with disabilities in accordance with the access standards required by the Americans with Disabilities Act (ADA). All sidewalks, shared use paths, street crossings and other pedestrian facilities must be constructed so that all pedestrians, including people with disabilities, can travel independently.

Exceptions

There are conditions where it is generally inappropriate to provide bicycle and pedestrian facilities. These conditions include:

- Facilities, such as interstates, where bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists elsewhere in the same transportation corridor.
- The cost of providing bicycle and pedestrian facilities would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent of the project's total right-of-way costs.
- Bridge replacement rehabilitation projects funded with federal Highway Bridge Program funds on routes where no pedestrian or bicycle facilities have advanced to the stage of having engineering drawings nor are there any funded state bridge maintenance projects.
- Other prudent factors where there is a demonstrated absence of need. Exceptions for not accommodating bicyclists and pedestrians in accordance with this policy will be documented describing the basis for the exception. For exceptions on federal aid highway projects, concurrence from FHWA must be obtained.
- Facilities for bicyclists and pedestrians which conflict with local municipality plans or as requested by the Commissioner of TDOT.

3.4 PROGRAMS

Beyond physical infrastructure there are a number of programs and activities which add to the overall foundation of the walking and biking environment in a community. These activities are educational, awareness, and encouragement programs which influence positive behavior and increase the use of walking and biking within a community.

Within the Nashville MPO area there are a number of programs that complement the Region's built environment. A large number of these activities are provided outside the realm of government although government funding of these activities sometimes exists. The following is a listing of bicycle and pedestrian programs that currently exist in the MPO area:

- Walking and Biking Awareness and Encouragement Programs – There are a number of organizations in Metro Nashville that currently working together to raise awareness and encourage greater walking and biking as a means of improved health and wellbeing.

The Nashville Community Health and Wellness Team, a non-profit community coalition, annually hosts an event called, Walk Nashville Week, which is held in October and includes a daily walking event for the week to promote walking. The week consists of Walk to Worship Day, Walk Your Neighborhood Day, Walk to Work Day, Walk to School Day, Walk for Active Aging, and Walk at Lunch Day all geared towards promoting a healthy and active lifestyle.

Metro Nashville Public Schools through the Community Health and Wellness Team annually organize the "Walk to School" program for Metro Schools to increase physical activity in the community. This program has been highly successful and follows the same principles of the National Safe Routes to School Coalition program. On average over 50 elementary and middle schools participate with approximately 10,000 students, teachers, and parents walking to school.

In addition to these events, Walk/Bike Nashville hosts an annual bike ride event called Tour de Nash, in May, as a means of raising awareness to the many bicycle facility options that exist in Metro Nashville. A component of this annual event also includes a walking event which is geared at promoting the walking opportunities within the City as well. The shorter walks and rides have traditionally been free to the public and are geared towards all ability levels. The tour is meant to provide an encouraging environment for those who may not be physically active on a regular basis. Lastly, Walk/Bike Nashville also coordinates an annual Bike to Work event and the Great Commuter Race to highlight the opportunities for greater walking and biking in Metro Nashville.

- Bicycle Safety Training – Walk/Bike Nashville, which is a non-profit organization located in Nashville, offers a variety of programs and activities geared toward promoting safe walking and biking in the Nashville area. Walk/Bike Nashville offers a bicycle training course for biking on the road in Nashville. In addition to Walk/Bike Nashville's efforts, local bicycle clubs like the Harpeth Bike Club, Major Momentum Cycling Club, and the Murfreesboro Bicycle Club also offer bicycle safety training programs.

Locally a number of communities also host bicycle rodeos, which are geared towards teaching children bicycle safety and how to be safe when riding a bike. Most of these events are offered in connection with a school or school system.

- Safe Routes to School (SRTS) – is a federally funded grant program administered by TDOT providing funding to local municipalities and school systems to increase walking and biking to and from school. Its primary purpose is to encourage elementary and middle school children to safely walk and bike to and from school thereby promoting a healthier lifestyle, reducing traffic congestion, and minimizing air pollution. A successful program integrates health, fitness, traffic relief, environmental awareness, and safety under one program.

In the MPO area, Nashville, Lebanon, the Town of Nolensville and the Town of Thompson Station have received SRTS funding and have an active safe routes to school program.

Also, local Safe Routes to School efforts are taking place that are separate from the TDOT funding grants and are geared towards education and encouragement.

- Health Based Programs – In 2000, the State enacted the Coordinated School Health Improvement Act calling for the creation of a Coordinated School Health Program within Tennessee focused on education and intervention that encourages healthy eating habits, increased physical activity, and comprehensive health education. The law first piloted the program in a few local school systems within the Tennessee, and in 2006, the law was expanded to allow all local school systems to receive additional funding for developing a Coordinated School Health Program for their school system.

A number of local school systems in the MPO area are beginning to develop programs and activities which are similar to Metro's Walk to School Day Program. Additionally, a number of health organizations and entities within the MPO area involved in health benefits are looking at walking and bicycle activities and programs as a means of improved health.

- Bike and Transit Programs - to enhance the use between public transit and bicyclists, it is important for public transit such as buses, subways, and rails to accommodate bicycles both on the vehicles and at the stations. Often bicycle racks or areas are provided on transit vehicles and policies are in place to ensure that bicyclists can easily utilize the public transit.

All of Nashville Metro Transit Authority's (MTA's) fixed route vehicles are equipped with bicycle racks on the front of all buses. Additionally, the Regional Transportation Authority (RTA) which operates Music City Star, the commuter rail line from Nashville to Wilson County, also allows bikes onboard at no charge with bike storage areas on each rail car. Murfreesboro's transit system, Rover, has bike racks on buses, and the City of Franklin's transit system is looking to add bike racks to all of its fixed route vehicles.

4.0 PEER COMMUNITY REVIEW

As part of the Regional Bicycle and Pedestrian Study six peer communities were identified for the purposes of determining bicycle and pedestrian accommodation practices of more established walk and bike friendly communities.

Communities selected for the peer review included:

- Charlotte, NC
- Chattanooga, TN
- Chicago, IL
- Denver, CO
- Louisville, KY
- Phoenix, AZ

As part of the peer review effort, current and innovative solutions employed by these communities were reviewed. The following table provides a comparison of the peer communities in terms of population and land area size, population density, labor force, and if the community is certified by the American League of Bicyclists as a Bicycle Friendly Community.

Major City	2007 Est. Population	2007 Est. Metro Area Population	Land Area (Sq. Miles)	Density (Persons per Sq Mile)	2007 Est. Labor Force	American League Bicyclist Bicycle Friendly Community
Nashville, TN	570,167	1,521,437	526	1,084	323,402	No
Charlotte, NC	675,229	1,651,568	281	2,407	377,106	Yes
Chattanooga, TN	161,365	658,201	143	1,128	82,917	Yes
Chicago, IL	2,836,659	9,785,747	227	12,496	1,382,876	Yes
Denver, CO	588,349	2,464,866	155	3,798	316,566	Yes
Louisville, KY	561,398	1,233,735	399	1,407	285,402	Yes
Phoenix, AZ	1,513,777	4,179,427	517	2,928	756,238	No

For the peer communities, copies of each jurisdiction's most recent bicycle and pedestrian plans, policies, and standards were reviewed along with a follow-up conversation with a representative from each of the respective organizations in these communities. A survey instrument was developed to assist in conducting the peer review with a total of fifty questions covering a broad spectrum of accommodation practices and policies.

The following depicts the categories and emphasis areas explored as part of the peer review:

Policies

- Routine Accommodation Policy
- Complete Streets Policy
- Bicycle and Pedestrian Accommodation Provisions in Local and Regional Plans
- School Siting Policy
- Bike Parking Policy
- Health Impact Assessment Policy

Programs

- Education and Awareness Programs
- Health Based Programs

- School Based Education Programs and Safe Routes to School Programs
- Enforcement Programs

Design and Engineering

- Comprehensive Regional Inventory of Bicycle and Pedestrian Facilities
- Locally Adopted Design Guidelines
- MPO Involvement in Design and Engineering Activities

Funding

- Local and Regional Funding Dedicated for Bicycle and Pedestrian Accommodations
- In Lieu of Funding Provisions
- Funding Linked to Accommodation Provisions
- MPO Funding for Education and Awareness Programs

Practices

- Use of BPAC Standing Committee
- BPACs at the Local Level
- Multi-Use Paths and Greenways as Transportation
- Use of Health Impact Assessment Process

Planning and Programming

- Existence of a Regional Bicycle and Pedestrian Plan
- MPO Bicycle and Pedestrian Project Selection Criteria
- Use of Performance Measures for Walking and Biking
- Emphasis of Walking and Biking Needs in the States Strategic Highway Safety Plan

The following subsection summarizes key findings from each of the peer communities relative to the above accommodation provisions and practices. Appendix A of this Technical Memorandum provides detailed findings for each community from the peer review.

4.1 POLICIES

Routine Accommodation Policy - The U.S. DOT encourages states, local governments, professional associations, other government agencies, and community organizations to adopt its Policy Statement (*A U.S. DOT Policy Statement: Integrating Bicycling and Walking into Transportation Infrastructure*, 2000) as an indication of their commitment to accommodating bicyclists and pedestrians as an integral element of the transportation system. One of the key principles of the Policy Statement is that “bicycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist.”

Nearly every state DOT has such an accommodation policy including the state of Tennessee. Of the peer communities, Charlotte, Chicago, and Denver have accommodation policies.

Complete Streets Policy - More than 80 jurisdictions spanning all regions of the country have adopted complete streets policies through legislation, internal agency policies, and design manuals. Complete streets are streets that work for all users, not just those using a car. Instituting a complete streets policy ensures that transportation agencies routinely plan, design, and operate the entire right-of-way to enable safe access for drivers, transit users and vehicles, pedestrians, and bicyclists, as well as for older people, children, and people with disabilities.

Of the peer communities, Charlotte, Chicago, Denver, and Louisville each have Complete Street policies. Typically communities will develop a manual which defines the scope and intent of their Complete Streets Policy. Denver and Louisville each have such a manual.

Bicycle and Pedestrian Accommodation Provisions in Local and Regional Plans – At the planning level many communities have begun to call out specific provisions pertaining to the accommodation of non-motorized users. Some of these provisions are policy in nature such as the requirement that all arterial roadways have sidewalk accommodations while other provisions are more general in nature such as encouraging local communities to adopt certain accommodation policies.

Of the peer communities, all have some level of bicycle and pedestrian accommodation provisions within their regional and/or local plans.

School Siting Policy - State and local-level decisions regarding school siting, construction, and design have significant impacts on whether homes are located within walking and cycling distance of schools. Numerous site selection policies unintentionally discourage and/or make walking or biking to school impossible given minimum acreage requirements on site selection, etc.

Of the peer communities, Charlotte is the only peer community with policies and practices in place concerning school siting. A few states, such as Oregon and Wisconsin have recently developed policies to encourage greater coordination in school site selection.

Bike Parking Policy - Providing bicycle parking facilities is an essential element in an overall effort to promote bicycling. Many communities have local land use and design standards which call for the provision of both short-term bike parking such as bike racks and long-term bike parking such as bike lockers.

All of the peer communities have bike parking requirement provisions at the local level.

Health Impact Assessment Policy – A health impact assessment (HIA) is a process that identifies and measures potential health impacts, both positive and negative, that may result from a particular policy or project. A growing number of communities throughout the United States and abroad are beginning to use such processes to evaluate the impacts of transportation decisions specifically non-motorized accommodations.

At this time none of the peer communities have such a policy or practice in place although Chattanooga and a few of the other peer communities are exploring the use of HIAs in their planning processes.

4.2 PROGRAMS

Education and Awareness Programs – Educational and awareness programs are an effective means of influencing positive behaviors and increasing the use of walking and biking within a community. Typically such programs will include teaching or training bicyclists, pedestrians, motorists, and other road users on the rules of the road as well as safe practices important to all system users and skill levels.

Of the peer communities, all have some level of bicycle and pedestrian education and awareness programs in place. Typically these programs are handled by other organizations in the region with some level of participation by the MPO.

An example program in Chattanooga is their “Share the Road” program which includes numerous classes including a “Street Smarts” class which is a short course designed for beginning cyclists to feel comfortable riding in traffic.

Health Based Programs – A growing number of communities throughout the United States are seeing a larger level of participation by health organizations in promoting active living and active transportation. Of the peer communities, Charlotte and Denver have actively participated with their health agencies on walking and biking initiatives.

Safe Routes to School and School Based Programs – Safe Routes to School (SRTS) is a popular school based program spreading across United States and abroad which uses a variety of education, engineering, evaluation, and enforcement strategies that help make routes safer for children to walk and bicycle to school and encouragement strategies to entice more children to walk and bicycle. In August 2005, federal transportation legislation devoted \$612 million for The National Safe Routes to School Program from 2005 through 2009.

Nearly every peer community is involved in their State’s Safe Routes to School Program either in a grants program capacity and/or through active participation with school systems and schools.

Enforcement Programs - Often a component of bicycle and pedestrian educational and encouragement programs is enforcement. A motorist, who understands that bicyclists have a right to be on the road and must sometimes venture into the middle of a lane to avoid an obstacle, is not likely to honk at or threaten a bicyclist. Likewise, a knowledgeable cyclist will obey traffic signals and will not ride against the flow of traffic. Enforcement programs help law enforcement agencies make sure that all road users understand and obey laws regarding bicyclists and pedestrians.

Of the peer communities only Denver indicated that they actively participate in, and contribute to enforcement related bicycle and pedestrian activities.

4.3 DESIGN AND ENGINEERING

Comprehensive Regional Inventory of Bicycle and Pedestrian Facilities – A key component in understanding walking and biking conditions within a community is having an inventory of current conditions and provisions for non-motorized users. Of the peer communities, all but two have a region-wide inventory of existing bicycle and pedestrian facilities.

Locally Adopted Design Guidelines – A number of communities throughout the United States have developed local design guidelines for bicycle and pedestrian facilities. While these guidelines largely adhere to AASHTO design guideline standards, often communities will have one or two locally specific standards or innovative design practices.

Of the peer communities, all either have specific design guidelines and/or a design guideline manual for bicycle and pedestrian accommodations.

MPO Involvement in Design and Engineering Activities – Most peer communities seem to be playing a more active role in the design and engineering of bicycle and pedestrian improvements within their respective communities. A few of the peer communities indicated that they are involved in the project development process at the environmental phase of a project while others indicated that they are assisting in the specific design aspects of individual projects.

4.4 FUNDING

Local and Regional Funding Dedicated for Bicycle and Pedestrian Accommodations – Most communities are tapping into traditional federal and state funds for bicycle and pedestrian improvements. A number of the peer communities have small pots of funds that are available within their region for non-motorized accommodations; however, none are classified as dedicated specifically for non-motorized accommodations.

Three peer community examples were found as part of the peer review process. The first was Chicago which has access to a number of private funding sources. Second was Denver which has access to revenue generated from on-street parking that is reinvested back into the local streets where it was earned. Lastly was Louisville which has access to funding from several organizations including the state.

In Lieu of Funding Provisions – A common practice at the local municipal level is the practice of allowing developers to contribute to a fund instead of (e.g. in lieu of) providing a specific improvement such as a sidewalk or bikeway improvement. While most of the peer communities indicated that such a practice exists within their communities at the local level, none of the peer communities employ such a practice at the regional level.

Funding Linked to Accommodation Provisions – A growing practice within many communities is the specific policies which require the provision of walking and biking improvements if MPO funds are used. Two peer communities, Denver and Phoenix, have practices which employ this strategy.

MPO Funding for Education and Awareness Programs – A number of the peer communities provide both staff resources and funding for education and awareness programs within their respective communities. Examples of such practices include the Phoenix MPO which allocates \$150,000 annually for bicycle and pedestrian education and awareness programs within their region.

4.5 PRACTICES

Use of BPAC Standing Committee at the MPO – The use of bicycle and pedestrian advisory committees (BPACs) is a growing trend that many communities have begun to use to increase the level of discussion and interest in walking and biking within their communities. Of the peer communities, all but Charlotte and Denver have a standing BPAC to the MPO.

BPACs at the Local Level – At the local level the use of a BPAC is more common. Of the peer communities, all but one area has local BPACs within their region. As with the MPO level BPAC, typically these committees include both technical and citizen representatives from the community.

Multi-Use Paths and Greenways as Transportation – While greenways and multi-use paths serve a large portion of recreational trips, each of the peer communities view these facilities as a component of the overall transportation system within their respective communities.

Use of Health Impact Assessment Process – As previously stated, a health impact assessment (HIA) is a process that identifies and measures potential health impacts, both positive and negative, that may result from a particular policy or project.

At this time none of the peer communities have such a policy or practice in place although Chattanooga and a few of the other peer communities are exploring the use of HIAs in their planning processes.

4.6 PLANNING AND PROGRAMMING

Existence of a Regional Bicycle and Pedestrian Plan – Regional bicycle and pedestrian plans are becoming more common practice among regional organizations. While very common at the local level, the presence of these plans at the regional level several years ago was not as common. Of the peer communities, all but one has a regional bicycle and pedestrian plan.

MPO Bicycle and Pedestrian Project Selection Criteria – All of the peer communities have bicycle and pedestrian project selection criteria. A number of the criteria are tied to specific funding sources and others are qualitative in nature.

Use of Performance Measures for Walking and Biking – A growing trend in transportation planning is the use of performance measures as a means of tracking progress and/or changes over time. Chicago was the only peer community that indicated that they use performance measures in tracking progress relative to non-motorized accommodations.

Emphasis of Walking and Biking Needs in the States Strategic Highway Safety Plan – State strategic highway safety plans are required of all states in order for the state to remain eligible for certain federal transportation safety funds. Typically these plans identify target safety areas for which the state allocates transportation safety funding. Of the peer communities, four have specific bicycle and/or pedestrian strategies identified within their state's strategic highway safety plan. Two of the peer communities, Arizona and North Carolina, contained some of the most specific strategies for improving walking and biking safety in their respective state.

Peer Community Review Summary							
MPO Regions	Charlotte, NC	Chattanooga, TN	Chicago, IL	Denver, CO	Louisville, KY	Phoenix, AZ	Nashville, TN
Policies							
Routine Accommodation Policy	Yes	S	Yes	Yes	S	*	S
Complete Streets Policy	Yes	*	Yes	Yes	Yes	*	No
Bicycle and Pedestrian Provisions Policy	Yes	Yes	Yes	Yes	Yes	*	No
School Siting Policy	Yes	*	No	No	No	No	No
Bike Parking Policy	L	L	L	Yes	L	L	L
Health Impact Assessment Policy	No	No	No	No	No	No	No
Programs							
Education & Awareness Programs	Yes	Yes	Yes	Yes	Yes	Yes	No
Health Based Programs (e.g. primarily wellbeing/health)	Yes	No	No	No	No	No	*
School Based Programs (e.g. Bike Rodeos, In School, etc.)	Yes	Yes	No	Yes	No	Yes	No
Safe Routes to School Programs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Enforcement Programs	No	No	No	Yes	No	No	No
Design/Engineering							
Regional Comprehensive Inventory	No	Yes	No	Yes	Yes	Yes	Yes
Locally Adopted Design Guidelines	Yes	Yes	No	Yes	Yes	Yes	Yes
MPO Involvement in Design/Engineering Activities	No	Yes	Yes	Yes	Yes	Yes	*
Funding							
Local or Regional Dedicated Bicycle and Pedestrian Funding	No	No	Yes	No	Yes	No	No
In Lieu of Construction Requirements	L	No	L	L	L	No	L
Funding Linked to Bicycle and Pedestrian Provisions Policy	No	No	No	Yes	No	Yes	No
MPO Funding for Education & Awareness Programs	Yes	Yes	Yes	Yes	No	Yes	No
Practices							
MPO BPAC (Standing Committee)	No	Yes	Yes	No	Yes	Yes	No
Local Level BPAC	Yes	Yes	Yes	Yes	No	Yes	Yes
Multi-Use Paths/Greenways – As Transportation	Yes	Yes	Yes	Yes	Yes	Yes	*
Use of Health Impact Assessment Process	No	*	No	No	No	No	No
Planning & Programming							
MPO Regional Bicycle and Pedestrian Plan	No	Yes	Yes	Yes	Yes	*	*
MPO Bicycle and Pedestrian Project Selection Criteria	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MPO Performance Measures for Walking & Biking	No	No	Yes	No	No	*	No
State Strategic Highway Safety Plan (Non-Motorized Items)	Yes	No	Yes	Yes	No	Yes	*

Notes: * - In Progress, L – Local Level Only, S - State Level Only

Appendix A

Detailed Findings of Peer Community Review

**Nashville Area
Regional Bicycle and Pedestrian Study**

**Peer Community Review
Topical Area Summary Responses**

Policies

1. Routine Accommodation Policy for bicycle and pedestrian facilities (do they have one at the regional level, local level, or state level; what does it include; has it been successful; what examples can be found/attributed to the policy; what if any obstacles still exist?) Does the policy apply to new facilities or to retrofits/resurfacing projects as well? Are on and off-street facilities considered?
 - **Charlotte:**
 - *The City of Charlotte is accomplishing routine accommodation through its 2007 Urban Street Design Guidelines, which call for bicycle and pedestrian facilities on all new street construction. This applies to both new and reconstructed/resurfaced roads. Off-street facilities are considered. The City is trying to carry the routine accommodation requirements in to private development projects as well. The MPO does not have a specific routine accommodation requirement.*
 - **Chattanooga:**
 - *The City of Chattanooga as a matter of practice incorporates the expansion of their bicycle facilities largely thru their annual resurfacing program as well as when roadways are improved. The MPO's Bicycle Master Plan is the guiding force behind when accommodations are made.*
 - *TDOT Bicycle and Pedestrian Policy states the following:*
 - *TDOT is committed to the development of the transportation infrastructure and improving conditions for **bicycling** through the following actions:*
 - *Provisions for bicycles will be integrated into new construction and reconstruction of roadway projects through design features appropriate for the context and function of the transportation facility.*
 - *Addressing the need for bicyclists to cross corridors as well as travel along them, the design of intersections and interchanges should accommodate bicyclists in a manner that is accessible and convenient.*
 - *In cases where a minimum shoulder width of 4 feet cannot be obtained, such as in restrictive urban areas, an increased curb lane width will better accommodate bicycles and motor vehicles within the shared roadway. The recommended width for shared use in a wide curb lane is 14 feet.*
 - *TDOT is committed to the development of the transportation infrastructure and improving conditions for **walking** through the following actions:*
 - *In urbanized areas, sidewalks or other types of pedestrian travel ways should be established in new construction or reconstruction projects, unless one or more of the conditions for exception are met as described in this policy.*
 - *Addressing the need for pedestrians to cross corridors as well as travel along them, the design of intersections and interchanges should accommodate pedestrians in a manner that is accessible and convenient.*

- **Chicago:**
 - *From the Regional Transportation Plan: <http://www.cmap.illinois.gov/sp2030/sp2030main.aspx> (pp. 129 – 130)*
 - *The RTP recommends strategic improvements to shared-use facilities that foster “routine accommodation” of pedestrian and bicycle design in all transportation projects and services. This includes pursuing improvements that support bicycle and pedestrian access to transit and providing bicycle and pedestrian travel information and promotion as part of larger management and operation strategies applied to the entire transportation system.*
 - *The RTP also acknowledges NIPC’s Regional Greenways Plan174 and the comprehensive regional bicycle and pedestrian planning process currently underway, called Soles and Spokes, which includes a regional inventory of county and local pedestrian and bicycle plans and strategies. The RTP anticipates Soles and Spokes’ contribution to regional mobility and accessibility through additional strategic guidance in support of routine accommodation, shared use and dedicated bicycle and pedestrian facilities. The RTP recommends that project implementers consider a facility’s potential use by bicycle and pedestrian travelers and make appropriate design accommodations using flexibility included in most highway design manuals.*
 - *Bicycle travel should be accommodated with bicycle facilities. An appropriate bicycle facility type should be provided based on adjacent land use, then highway speed and access controlled appropriate through design for that facility.*
 - *Since the above language was adopted in 2003, many highway jurisdictions have adopted “Complete Streets” laws or routine accommodations guidance: City of Chicago (policy), State of Illinois (law), and DuPage County. Other counties are moving along this path as well. Kane County has an existing policy. Lake County is developing a policy.*
- **Denver:**
 - *Regional Bicycle and Pedestrian Plan has several policies which speak to routine accommodations. Example statements from Plan:*
 - *In urban and suburban areas, as roadways and bridges on the regional roadway system are constructed, reconstructed, resurfaced, or re-stripped curb lanes should be widened to provide space for bicyclists.*
 - *Over and underpasses to accommodate pedestrian and bicycle travel should be constructed to cross major obstacles such as freeways, rivers, or railways. As roadway overpasses and underpasses are constructed or reconstructed, accommodations should be made for pedestrians and bicyclists.*
- **Louisville:**
 - *STATE LEVEL--- Kentucky developed and adopted a Pedestrian and Bicycle Travel Policy in 2002 which provides policy and guidelines for incorporating pedestrian and bicycle facilities on all new or reconstructed state-maintained roadways. It also requires accommodating bicycle and pedestrian transportation when planning the resurfacing of roadways, including shoulders.*
- **Phoenix:**
 - *MAG just hired EDAW to conduct an inventory of the 29 cities and towns to determine which ones have complete streets policies and their standard cross sections. Study to be finalized in October 2009.*

-
2. Do any policies regarding planning and accommodating for bicycling and pedestrian facilities at the local, regional and/or MPO level match any state policies for accommodating these facilities? Example: all new roadways will include provisions for bicyclists and pedestrians unless prohibited by safety, topography or costs.

- **Charlotte:**
 - *Yes, although facilities are less likely to get built on NCDOT projects. NCDOT offers to construct sidewalks if municipalities fund a portion of the cost and also agree to maintain the sidewalks once they are completed.*
- **Chattanooga:**
 - *No, however, GDOT provides bicycle and pedestrian accommodations on all improvement projects within the MPO area that are called for in the MPO's plans.*
- **Chicago:**
 - *Generally, they apply to everything but resurfacing (see, for example, the state's complete streets law). Accessibility regulations also apply to resurfacing projects.*
- **Denver:**
 - *Yes. The Regional Bicycle and Pedestrian Plan has a section which pertains to bicycle and pedestrian policies. There are numerous policies (federal, state, and local) which are contained in the plan. Many of these speak to accommodation provisions. The following are a few as examples:*
 - *FHWA's 1999 Policy Statement on Accommodating Bicyclists and Pedestrians in Transportation Projects*
 - *The importance of pedestrian and bicycle connections to transit stations and facilities.*
 - *In all urban and suburban areas, continuous sidewalks should be provided on both sides of all streets and roadways (except freeways) and where possible, detached from the roadway. Connections through developments and to the entrances of businesses, stores, schools, and other activity centers need to be established and maintained.*
 - *In rural areas, where pedestrian volumes tend to be low, paved shoulders should be provided along arterials with adequate width (in accordance with state and local guidelines) to buffer the pedestrian from the traveled roadway.*
 - *Local governments are encouraged to conduct a comprehensive review of pedestrian facilities and initiate efforts to provide any needed missing segments. In making such an analysis, local governments should also evaluate the degree to which barriers and intrusions exist and take the necessary steps to eliminate them.*
 - *The existing and planned street system should be used to the maximum extent possible, consistent with safety considerations, for bicycle travel.*
 - *Local governments are encouraged to identify specific bicycle transportation markets (i.e., home-to-school, home-to-shop, home-to-work), and provide bicycle facilities to serve these markets.*
 - *Where street improvement and drainage projects coincide with desired bikeways, provisions for bicycle and pedestrian travel should be explicitly addressed before the project proceeds and upheld throughout project development, construction, and operation.*
 - *New or reconstructed sidewalks detached from the curb along major regional and principal arterials should be a minimum unobstructed width of six feet. The width of planting or hardscape strips between the curb and sidewalk should be no less than three feet wide.*
 - *New or reconstructed sidewalks attached to the curb along major regional and principal arterials should be a minimum unobstructed width of eight feet.*
 - *Sidewalks and paved multi-use trails should be built to accommodate the needs of all pedestrians and adhere to all Americans with Disabilities Act (ADA) design and accessibility guidelines.*
 - *Specific attention should be given to pedestrian needs in the design of intersections and traffic signalization.*
 - *Right-turn-on-red should be prohibited where high pedestrian volumes exist.*

- *Roadway lighting should be provided at pedestrian crossings and other locations where conflicts could arise between drivers and pedestrians.*
 - *Property owners adjacent to sidewalks should be required by local ordinance to maintain their sidewalks and promptly remove snow from walkways.*
 - *In rural areas, paved shoulders of at least four feet in width should be provided along major regional and principal arterials, county highways, and state highways to accommodate bicycle and pedestrian travel.*
 - *In urban and suburban areas, as roadways and bridges on the regional roadway system are constructed, reconstructed, resurfaced, or re-stripped curb lanes should be widened to provide space for bicyclists.*
 - *Bicycle lanes are encouraged on busy roadways in areas where the construction of such a facility could improve the safety and/or connectivity of the regional bicycle system.*
 - *Bicycle parking facilities should be provided at major employment, retail, entertainment, commercial, and/or other activity centers in the region. Local governments should establish an off-street bicycle parking policy which considers security, placement, quality of facilities, and provision for signs directing bicyclists to the parking facilities.*
 - **Phoenix:**
 - *MAG just hired EDAW to conduct an inventory of the 29 cities and towns to determine which ones have complete streets policies and their standard cross sections. Study to be finalized in October 2009.*
-
3. Who is in charge of ensuring that such policies at the local, regional, MPO and state levels are implemented? Do individuals with this charge at each level coordinate with their counterparts at other levels?
- **Charlotte:**
 - *Individual jurisdictions are responsible at the local level. Broadly speaking, it is the MUMPO's responsibility to coordinate transportation policy for local governmental jurisdictions within the Charlotte Urbanized Area. The MUMPO, in cooperation with the State, develops transportation plans and programs for the urbanized area. There is coordination between agencies, but it is not always successful.*
 - **Chattanooga:**
 - *The MPO reviews the city and county plans, and occasionally reviews/assists the state government & its agencies with projects within their boundaries.*
 - **Chicago:**
 - *We work cooperatively, and make sure that everyone at the project study level is aware of the policy and the law. CMAP spends a great deal of effort at the MPO level working with local agencies to determine what considerations are necessary in facility design. Detailed reports on bicycle and pedestrian travel are forwarded to project engineers.*
 - **Denver:**
 - *Based on a review of policy statements - local level*
 - **Louisville**
 - *KIPDA provides regional planning, review and technical services in the areas of public administration, social services and transportation as well as community ridesharing programs. KIPDA also coordinates services for persons 60 years of age and over. KIPDA is designated by the Kentucky State Clearinghouse as the regional review agency for virtually all applications for federal and/or state funds made by organizations or governments within the state of Kentucky.*
 - **Phoenix:**
 - *It is an individual jurisdiction responsibility to ensure policies are implemented.*
-

4. Complete Streets Policy (do they have one at the regional level, local level, or state level; are there any unique aspects to the policy; what successes can be attributed to the policy; what if any obstacles still exist?) How are Complete Streets Policies put into practice and tracked?
- **Charlotte:**
 - *Complete streets are covered at the City level through the Urban Street Design Guidelines and the Charlotte Bicycle Plan. The Urban Street Design Guidelines include a detailed section about designing streets for all users.*
 - **Chattanooga:**
 - *The concept of complete streets is being developed into the MPO's 2035 LRTP which is currently under development.*
 - **Chicago:**
 - *This information is covered in more detail in the response to topic #1 above.*
 - **Denver:**
 - *At the City level - Denver for example has an initiative they call "Living Streets" which is their complete streets policy/program.*
 - *At the regional level, just policy support (which references FHWA policy statement on Complete Streets).*
 - **Louisville**
 - *STATE LEVEL- Kentucky developed and adopted a Pedestrian and Bicycle Travel Policy in 2002 which provides policy and guidelines for incorporating pedestrian and bicycle facilities on all new or reconstructed state-maintained roadways. It also requires accommodating bicycle and pedestrian transportation when planning the resurfacing of roadways, including shoulders.*
 - *City of Louisville has Complete Streets Policy Manual*
 - **Phoenix:**
 - *MAG just hired EDAW to conduct an inventory of the 29 cities and towns to determine which ones have complete streets policies and their standard cross sections. Study to be finalized in October 2009.*
-
5. Are there any innovative policies within the MPO (e.g. regionally, statewide, or locally) that require the provision of sidewalks or bikeways (e.g. beyond subdivision regulation requirements)? Are there policies which coordinate transit stops/improvements with bike/ped facilities?
- **Charlotte:**
 - *Bike parking is now required at all transit stops, including the new light rail stations. Bike racks are also included on all buses, and 82,000 people utilized the racks in 2008.*
 - **Chattanooga:**
 - *In the Comprehensive Plan 2030 prepared by CHCRPA:*
 - *Bicycle and pedestrian access to existing and new commercial development areas should be encouraged.*
 - *Provide connectivity between parks and neighborhoods, public facilities and commercial centers via sidewalks, bicycle facilities as identified in the Chattanooga Urban Area Bicycle Facilities Master Plan, and multi-use paths as identified in the Hamilton County Greenway Master Plan.*
 - *Additionally, the Chattanooga Climate Action Plan (2009) promotes the installation of sidewalks and greenways as an integral part of new developments.*
 - *Adopt pedestrian-friendly site and building design standards, including reduced setbacks, limited curb-cuts and reduced parking requirements.*
 - *Incorporate recommendations from the publicly adopted Bicycle Master Plan in all new street construction projects.*
 - *Complete the Greenway Plan and expand the number of greenway connections.*

- *Yes-several of the projects recommended in the bicycle plan (such as bike racks on all CARTA Main Line and Neighborhood routes, in addition to the Inclined Railway) have been implemented.*
 - **Chicago:**
 - *None known.*
 - **Denver:**
 - *City of Denver's Living Streets Program*
 - *Regional Plan encourages local governments to adoption such provisions*
 - *City of Denver has fairly extensive sidewalk regulations which spell out when and where facilities are to be included*
-
6. Are there any school specific accommodation requirements relative to connecting and/or providing sidewalk or bike facilities? Do these policies apply for just new facilities or apply to retrofitting as well? Does jurisdiction/s have a school siting policy which requires access to campus by sidewalks and/or bicycle facilities or multiuse paths?
- **Charlotte:**
 - *Schools are mentioned among the broader policy to provide linkages for pedestrians and/or bicyclists with neighborhoods, employment centers, services, commercial areas and other business districts, parks, and cultural facilities such as schools and churches. The City of Charlotte requires new schools to include bicycle parking.*
 - **Chattanooga:**
 - *While no requirement is listed, it is noted that: Sidewalks may be needed as part of a school development or activity center, and share-the-road bicycle facilities should be encouraged on all roads.*
 - **Chicago:**
 - *Not at this time however, they are looking at forming a committee to address this topic.*
 - **Denver:**
 - *The Regional Bicycle and Pedestrian Plan relative to the provision of facilities in association with schools. Additionally, there are policies in the plan which address the provision of bicycle and pedestrian safety and training through school systems.*
 - **Phoenix:**
 - *While no requirement is listed, there is a regional effort towards Safe Routes to School.*
-
7. Are there any bicycle parking policies, such as providing bicycle racks to businesses, requiring businesses to provide them, or providing bicycle parking at all government buildings such as schools, libraries, community centers and government office buildings?
- **Charlotte:**
 - *Yes, in the City of Charlotte, bicycle parking is required at all new developments, regardless of type.*
 - **Chicago:**
 - *Yes. Several municipalities now require bicycle parking as part of the zoning code.*
 - *See the Chicago Zoning Code 17-10-0300 Bicycle parking.*
<http://www.amlegal.com/library/il/chicago.shtml>
 - *Naperville:* http://www.naperville.il.us/dynamic_content.aspx?id=743
 - *City of Chicago Bicycle Parking Ratios are here:*
[http://www.amlegal.com/nxt/gateway.dll?f=id\\$Id=Chicago%20Zoning%20Ordinance%20and%20Land%20Use%20Ordinance%3A%3A8d0\\$cid=illinois\\$t=document-frame.htm\\$3.0\\$p=](http://www.amlegal.com/nxt/gateway.dll?f=id$Id=Chicago%20Zoning%20Ordinance%20and%20Land%20Use%20Ordinance%3A%3A8d0$cid=illinois$t=document-frame.htm3.0p=)

- *Through the CMAQ Program, CMAP has provided funds to on- and off-street parking in Chicago, suburban municipalities, and DuPage County.*
 - *The City of Chicago is developing a bicycle parking database at <http://www.chicagobikes.org/bikeparking/>*
 - *Some years ago, the Active Transportation Alliance (then the Chicagoland Bicycle Federation) developed a “Bike Parking for your Business” guide for the suburban mayoral councils and the City of Chicago: http://egov.cityofchicago.org/webportal/COCWebPortal/COC_EDITORIAL/bike_parking_2003.pdf*
 - **Denver:**
 - *Yes.*
 - **Phoenix:**
 - *The trip reduction program run through Maricopa County encourages this as one of the air quality strategies with employers over 50 employees.*
-
8. Are there any Health Impact Assessment policies used when conducting local land use and/or transportation planning policies?
- **Charlotte:**
 - *No.*
 - **Chattanooga:**
 - *There are no such policies in the 2030 comp plan, but they do site Health as a benefit of implementing Multi-Use trails as follows: Multi-use paths provide opportunities for moderate exercises such as walking and bicycling, activities that when performed regularly can have significant health benefits.*
 - **Chicago:**
 - *No, however, the topic of health is a going area of interest that is beginning to be included.*
 - **Denver:**
 - *None stated although it appears there is a fair amount of coordination with health agencies and the provision education and awareness through these organizations relative to walking and biking.*
 - **Phoenix:**
 - *There are no such policies, but health information is used when promoting the development of bike/ped facilities.*
-
9. Does the MPO have any policies which are linked to funding requirements (e.g. in order to receive or apply for) that involve the provision of non-motorized accommodations? If so, what are they and has it been successful?
- **Chicago:**
 - *No.*
 - **Denver:**
 - *The MPO through the TIP process gives priority to projects that are along specific corridors within their plan which call for walking and biking facilities. There is a map titled, “2030 Regional Bicycle Corridor System” improvements along these roadways receive more emphasis than those that are not.*
 - **Phoenix:**
 - *In the application for the TIP, there is this criteria:*
 - *The local jurisdiction has a bicycle plan that has been adopted by the appropriate governing body.*
 - *Within any new development proposal, bike lanes are required on all arterial streets.*

- *Within any new development proposal, bike lanes are required on all collector streets.*
- *Within any retrofit of existing arterial streets, bike lanes are required.*
- *Within any retrofit of existing collector streets, bike lanes are required.*
- *Within new and/or retrofit of existing developments, shared-use paths/trails are required.*
- *Bicycle parking and other end of trip amenities are required of all new and retrofit developments.*
- *Bicycle programs are in place such as safety programs, bike rodeos, and promotional events.*
- *Jurisdiction wide or local area bicycle maps and brochures are developed for public use.*

Programs

10. What programs are offered within the region relative to walking and biking (e.g. education, awareness, etc.)? Are these programs provided by the MPO and/or by other entities (public, private, or non-profit)?

- **Charlotte:**
 - *Promotional efforts are highlighted by “BIKE! Charlotte,” a weeklong series of events. Bicycle education is being addressed by the development of a Video that tells drivers how to share roads with cyclists. This video is available for driver education programs. Other activities include bicycle awareness campaigns, printed materials and a bicycle program page on the CDOT website. Training on how to interact with bicyclists is given to all transit operators. There are now seven League Certified Instructors in the area, so League training is now common.*
- **Chattanooga:**
 - *The City has a ‘Share the Road’ program which includes numerous classes including a ‘Street Smarts’ class which is a short course designed for beginning cyclists to feel comfortable riding in traffic.*
- **Chicago:**
 - *CMAP Bicycle and Pedestrian Program, including:*
 - *Pedestrian Safety Initiative*
 - *Soles and Spokes Workshops*
 - *City of Chicago Bicycle Program <http://www.chicagobikes.org> (E.g., bike lane marking and parking (both CMAQ-funded), safety, and promotion. The City’s Bicycle Ambassadors program is a big hit. So is their bike map.*
 - *City of Chicago Pedestrian Program <http://www.cityofchicago.org/city/webportal/portalEntityHomeAction.do?entityName=Pedestrian+Program&entityNameEnumValue=181> (E.g., Pedestrian Safety, Sidewalk Snow Removal, Accessibility; Crosswalk Enforcement, Safe Routes to School)*
 - *DuPage County <http://www.dupageco.org/bikeways> (E.g., bikeways and trails, parking, safety, coordinated planning).*
 - *Naperville: http://www.naperville.il.us/index_template.aspx?id=221 (Planning, Safety, Bike Map, Lockers, Safe School Walking Routes. Note: The MUTCD safe routes to school guidance uses Naperville as a model – e.g., Figure 7A-1 is from Naperville north of 75th Street. <http://mutcd.fhwa.dot.gov/htm/2003r1/part7/part7a.htm>*
 - *Schaumburg: <http://www.ci.schaumburg.il.us/vos.nsf/schaumburg/SBUN-5853PN> (Lockers, bikeways, safety)*
 - *Kane County: <http://www.co.kane.il.us/dot/COM/BikePed/index.asp> (bikeway planning, walkable communities workshops)*
- **Denver:**

- *Most programs are provided by other organizations (at the local level, state, and by non-profit groups). Examples of programs include:*
 - *Boulder Valley School District's (BVSD) Safe Routes to School Program*
 - *The annual Cycle Safety Circus, held in Denver every June, educates children on bicycling safety, including proper helmet use and how to ride a bicycle effectively.*
 - *Local police bicycle rodeos*
 - *The City of Boulder (GO Boulder) publishes a pamphlet on how pedestrians, bicyclists, and motorists can share roadways and multi-use trails courteously.*
 - *CDOT publishes the Colorado Bicycling Manual that details the rules of the road for bicyclists as well as helpful information on many aspects of bicycling (equipment, parking, etc).*
 - *The back panel of the Denver Bike Map has information with regards to sharing the road.*
- **Louisville**
 - *Kosair Children's Hospital offers - B.I.K.E.S. (Behaviors Illustrating Knowledge that Ensures Safety) Project*
 - *Madison County Health Department offers Traffic Safety Education Program*
 - *The state offers the Kentucky Crime Prevention Coalition—Highway Safety Clearinghouse.*
- **Phoenix:**
 - *Regional bike education campaign*

11. What support, if any, does the MPO provide to these programs?

- **Chicago:**
 - *Many of these projects are supported through MPO planning funds and staff. However, these are often bundled within larger programs (e.g., our Bicycle and Pedestrian Program is part of our congestion management process.*
- **Denver:**
 - *Funding*
- **Phoenix:**
 - *Funding and oversight*

12. Does the MPO provide funding and/or staff for programs, and if so, what is the amount and type of funding?

- **Charlotte:**
 - *At the City level, Charlotte's bicycle and pedestrian programs are funded through bonds. \$500,000 is allocated annually to fund the programs, which include staff. New street construction (hence bicycle and pedestrian facility construction) has separate bond funding. The City allocates \$4 million annually for sidewalk construction.*
- **Chicago:**
 - *Many of these projects are supported through MPO planning funds and staff. However, these are often bundled within larger programs (e.g., our Bicycle and Pedestrian Program is part of our congestion management process.)*
- **Denver:**
 - *Yes, as well as staff interaction with programs and organizations*
- **Phoenix:**
 - *A total of \$150,000 is budgeted per fiscal year.*

13. Does the MPO interact with school based programs relative to walking and biking? If so, how?

- **Charlotte:**
 - *Mostly through the Mecklenburg County Safe Routes to School coordinator.*
- **Chattanooga:**
 - *Yes through SRTS program.*
- **Chicago:**
 - *No.*
- **Denver:**
 - *Yes, thru SRTS Program and other Program activities*
- **Phoenix:**
 - *Only in conjunction with the regional bike education and safe routes to school program through the sister regional agency Valley Metro.*

14. Does the MPO interact with health based programs relative to walking and biking (e.g. through health departments, senior and community centers, neighborhood groups)? If so, how?

- **Charlotte:**
 - *Yes, the County Health Department succeeded in getting the area named a "Fit Community," which was partly due to coordination with the bicycle and pedestrian programs.*
- **Chicago:**
 - *No.*
- **Denver:**
 - *Yes, to a limited degree. One such organization is Park Hill Thriving Communities Program. Park Hill Thriving Communities is part of the City of Denver's Healthy People 2010 Program. After six months of planning, Kaiser Permanente awarded Park Hill Thriving Communities full funding in early 2006 to support active living and healthy eating via community-based programs, environmental changes, and policy changes. The goals of this three-year initiative are to eliminate health disparities and to increase active living and healthy eating among all Park Hill residents.*

15. Are there any local SRTS programs? How are they funded and who runs them? Do they work on infrastructure and non-infrastructure projects such as education, enforcement, encouragement, etc?

- **Charlotte:**
 - *Mecklenburg County administers Safe Routes to School among its component jurisdictions. The County has a SRTS Coordinator that is not grant-funded and is housed within the Health Department. The program is new, but projects currently under consideration include both infrastructure and non-infrastructure components.*
- **Chattanooga:**
 - *They work on both infrastructure and non-infrastructure projects. They offer classes and safety courses. They are funded through federal monies and they are run by The Regional Planning Agency. Additionally, Activate Chattanooga enables the process that prioritizes all elementary and middle schools in Hamilton County, TN each year and invites them to participate in the countywide comprehensive Safe Routes to School program.*
- **Chicago:**
 - *A locally originated Safe Routes to School program, preceding the federal dedicated fund source, was funded with CMAQ fund in the south suburbs. The*

program was sponsored by the South Suburban Mayors and Managers Association, and was staffed by the Chicagoland Bicycle Federation.

- **Denver:**
 - *Sixteen local governments and other eligible organizations in the DRCOG region received approximately \$750,000 in infrastructure improvements and approximately \$350,000 in education program funding in the 2005-2006 allocation process.*
- **Louisville**
 - *The state takes part in International Walk or Bike to School Day, which Safe Routes to School sponsors.*
- **Phoenix:**
 - *There are local, regional and state efforts. Example projects include: MAG Regional School Crossing Guard Training Workshops, Guardians of the Future: Keeping Children Safe in Yellow Crosswalks” School Crossing Guard training DVD, numerous sidewalk and crosswalk improvements.*

16. Are there any unique programs offered by the MPO and/or others in the MPO’s planning area relative to walking and biking (e.g. education, encouragement, enforcement, or awareness)?

- **Chicago:**
 - *Soles and Spokes Workshops*
 - *Designing Pedestrian Facilities for Accessibility:*
<http://www.cmap.illinois.gov/WorkArea/linkit.aspx?LinkIdIdentifier=id&ItemID=7648>
 - *Nuts and Bolts of Implementing a Local Bikeway Plan:*
<http://www.cmap.illinois.gov/WorkArea/linkit.aspx?LinkIdIdentifier=id&ItemID=11660>
- **Denver:**
 - *Route maps and internet website*
- **Phoenix:**
 - *MAG administers the Design Assistance Program. Funding is set aside for project design in competitive process for the local jurisdictions.*

17. What role does the MPO play in the SRTS grant program?

- **Charlotte:**
 - *SRTS projects typically receive resolutions of support from the MPO. Most of the infrastructure projects are ultimately funded through the MPO’s transportation plan.*
- **Chicago:**
 - *They are encouraging it via The Regional Comprehensive Plan; the state however, runs the program via federal funding.*
- **Denver:**
 - *State DOT administers the SRTS grant program.*
- **Louisville**
 - *They promote it on their website and have contact person on their website.*
- **Phoenix:**
 - *MAG assists the state by collecting all the local SRTS program requests, reviews and ranks the applications, and forwards the recommendations to the state; MAG participates on the state selection committee and assists in developing the process.*

18. What successes has the MPO seen with its SRTS program, what gaps, if any and what improvements could be made? How many years of funding have been awarded? How many

applications and in what dollar amounts have been received? How many applications have been awarded and in what amount?

- **Charlotte:**
 - *The Town of Davidson has an ongoing demonstration project (\$15K) for four schools with a good parent volunteer group and involvement from the Town's PR Director. Seven applications totaling approximately \$500K have been received for consideration.*
- **Chicago:**
 - *The Safe Routes to School Program has been limited by delays and tight funding. In this region, 54 projects have been awarded for approximately \$4,355,000.*
- **Denver:**
 - *Sixteen local governments and other eligible organizations in the DRCOG region received approximately \$750,000 in infrastructure improvements and approximately \$350,000 in education program funding in the 2005-2006 allocation process (the funding cycle is expected annually through 2009).*
- **Phoenix:**
 - *ADOT has processed two years and they are in the third cycle now. In this region, 11 projects have been funded.*

19. Does the State SRTS coordinator work solely in a grant administrator capacity, or is that person working on other SRTS efforts, including working with any local SRTS programs?

- **Charlotte:**
 - *In addition to grant administration, the State SRTS Coordinator is an excellent resource for program knowledge.*
- **Chattanooga:**
 - *David Baird (Senior Transportation Planner Chattanooga - Hamilton County Regional Planning Agency) is the current coordinator of SRTS and he does work with the elementary and middle schools in the county.*
- **Chicago:**
 - *They oversee all SRTS efforts and conduct training for SRTS.*
- **Denver:**
 - *The CDOT oversees all SRTS efforts.*

Design/Engineering

20. How many miles of sidewalks, greenways, bike lanes/routes exist in the MPO area and how many are planned?

- **Charlotte:**
 - *Numbers are not known at the regional level. In the City (as of 2008), there were 51 miles of bike lanes, 20 miles of greenways, and 4.5 miles of bike routes, with 35 miles of bike routes to be added in 2009. Greenways are administered through the Mecklenburg County Parks and Recreation Department.*
- **Chicago:**
 - *CMAQ does not have a comprehensive list except for the Regional Greenways and Trails Plan. For regional trails, Chicago has approximately 1000 miles completed (500 more than in 1997); the plan, with a horizon year of 2040, has approximately 2500 miles of existing and planned facilities.*
- **Denver:**
 - *483 miles of signed shared roadways, 194 miles of bike lanes, 1,121 miles of multi-use paths/trails = 1,798 miles in total. About 70% of the 660 miles of arterial roadways in the MPO area have sidewalks on at least one side.*

- **Phoenix:**
 - *2008 Bike Map*
Multi-Use Trail Unpaved = 238.7 miles
Multi-Use Trail Paved = 218.8 miles
Paved Shoulders = 313.9 miles
Bike Lanes = 1,270.0 miles
Bike Routes = 480.8 miles
Total Miles = 2,522.2
MAG does not keep track of planned facilities.

21. Does the MPO (or its member jurisdictions) have locally adopted design guidelines (e.g. a manual) for bicycle and/or pedestrian accommodations?

- **Charlotte:**
 - *Charlotte has the previously discussed Urban Street Design Guidelines. Other jurisdictions' plans are focused more on policies than design standards.*
- **Chattanooga:**
 - *Yes, within the 2030 plan*
- **Chicago:**
 - *No.*
- **Denver:**
 - *Yes*
- **Louisville**
 - *City of Louisville has Complete Streets Manual which includes design provisions for bicycle and pedestrian accommodations.*
- **Phoenix:**
 - *Yes, MAG has a Pedestrian Policies and Design Guidelines and a Bikeway Master Plan.*

22. Beyond AASHTO Standards, are there any innovative design applications and/or best practices within the MPO area?

- **Charlotte:**
 - *AASHTO is the primary resource.*
- **Chicago:**
 - *There are many innovative designs in the area. See for example http://www.acec-il.org/exawards_honor01.cfm: Old Plank Road Trail Bridge and South Lake Shore Drive. The City of Chicago has also developed a Bike Lane Design Guide http://egov.cityofchicago.org/webportal/COCWebPortal/COC_EDITORIAL/bike_lane.pdf. A new facility design guide is in the works.*
- **Denver:**
 - *Numerous. One example is the parking design standards.*
- **Phoenix:**
 - *No*

23. What role, if any, does the MPO play in design or engineering related activities relative to the provision of sidewalk and/or bikeway facilities?

- **Chicago:**
 - *Guidance on a project basis as needed. Example: During a recent project review, CMAP suggested moving a crosswalk to the opposite side of an intersection and building a pork-chop island to separate pedestrians from turning vehicles at a T intersection on a Strategic Regional Arterial.*

- **Denver:**
 - *Participate in NEPA and project reviews.*
- **Phoenix:**
 - *MAG administers the Design Assistance Program. Funding is set aside for project design in a competitive process for the local jurisdictions.*

Funding

24. Are there any local or regional funding sources (beyond traditional federal transportation funds) that are used specifically for walking and biking within the MPO? If, so, what are they, how much, and how are they used?

- **Charlotte:**
 - *The MPO does not have a specific bicycle/pedestrian funding source, though it does receive CMAQ funding that can be used for bicycle/pedestrian projects.*
- **Chattanooga:**
 - *Federal Government, State Government, Special Authorities, Assessment Districts, Local Government Contributions, Impact Fees, & Tolls. There is a detailed list in the 2002 Chattanooga Urban Area Bicycle Master Plan that outline the various federal, state, local , and non- profit options.*
- **Chicago:**
 - *Yes, there are plenty. Please refer to the following webpage:
<http://cmap.illinois.gov/bikepedfunding.aspx>*
- **Denver:**
 - *Yes*
- **Louisville:**
 - *STATE---Kosair Children's Hospital - B.I.K.E.S. (Behaviors Illustrating Knowledge that Ensures Safety) Project, Madison County Health Department Traffic Safety Education Program, Kentucky Crime Prevention Coalition—Highway Safety Clearinghouse.*
- **Phoenix:**
 - *No*

25. Are there any innovative applications of “in lieu of construction” (e.g. developer dedication, private funds, etc.) for sidewalks or bike facilities at the local level or within the region?

- **Charlotte:**
 - *Not for the bicycle mode, but it is done at the City level for sidewalks through developer dedication.*
- **Chicago:**
 - *No*
- **Denver:**
 - *Mostly traditional*
- **Phoenix:**
 - *No*

26. Are there any funding programs within the MPO that are unique (e.g. beyond traditional funding programs like enhancement funds, etc.)?

- **Charlotte:**
 - *Not at the MPO, but cities in North Carolina are eligible to receive planning grants to produce bicycle and pedestrian plans. The funding can be up to 80% for smaller cities and up to 50% for larger cities. The City of Charlotte used this funding to produce its 2008 Bicycle Plan.*
- **Chicago:**
 - *Yes, Schaumburg has a great program*

- **Denver:**
 - *A unique practice as in some cities nationwide is to take the revenue generated from on-street parking and reinvest it back into the local streets where it was earned (as opposed to the city's general fund). Much of this revenue is spent on enhancements to pedestrian and bicycling infrastructure on those streets (such as wider sidewalks, bicycle parking, ADA-compliant curb ramps, streetscape redesign, lighting, benches, and other pedestrian amenities).*
- **Phoenix:**
 - *No*

27. Does the MPO provide any incentive funding (e.g. special pots of funding for non-motorized accommodations, planning and/or implementation funding) to its MPO member jurisdictions to promote/encourage the provision of non-motorized accommodations? If so, what type of funding, how much, and for what purpose?

- **Chicago:**
 - *No.*
- **Denver:**
 - *No. The MPO through the TIP process gives priority to projects that are along specific corridors within their plan which call for walking and biking facilities. There is a map titled, "2030 Regional Bicycle Corridor System" improvements along these roadways receive more emphasis than those that are not.*
- **Phoenix:**
 - *\$400,000 for the Design Assistance Program*

Practices

28. Does the MPO have a bicycle and pedestrian advisory committee (BPAC)? What is the size (number of members), what is the general makeup (public, private, non-profit, etc.), and how often do they meet? What are the term limits?

- **Charlotte:**
 - *The MPO does not have a BPAC. The City of Charlotte has a very active Bicycle Advisory Committee, and a similar pedestrian advisory committee is being considered*
- **Chattanooga:**
 - *Yes, there are actually four of them under the umbrella of the MPO, one for each of the four districts that the MPO is broken down into. They have ten members in each and are made up of public, private, and non-profit members. The task force has been instrumental in bringing to fruition the bike route between the Tennessee Aquarium and the Incline Railway at the base of Lookout Mountain in addition to the 2002 Chattanooga Urban Area Bicycle Master Plan.*
- **Chicago:**
 - *The Bicycle and Pedestrian Task Force (25 members) is comprised of advocacy organizations, community groups, businesses, as well as representatives of local, regional and state governments. They meet four times yearly.*
- **Denver:**
 - *No but the City and County of Denver has a bicycle advisory committee. It is a 25 member committee with members serving 3 year terms. The BPAC meetings month. Their role is to oversee the implementation of the Denver Bicycle Master Plan, working with the City to develop engineering standards for street, roadway and trail designs to accommodate bicycles, review roadway and trail projects.*
- **Louisville**
 - *Bicycle and Pedestrian Subcommittee (BPS).*

- **Phoenix:**
 - *The bike/ped committee is composed of representatives from the jurisdictions, the regional bicycle advocacy group, Assoc of Landscape architects, transit agency. (23 Members) Typically meet monthly.*

29. What role/function does the BPAC serve relative to the MPO?

- **Charlotte:**
 - *Bicycle representation at the MPO committee level is through the City of Charlotte bicycle coordinator, who serves as a member of the Technical Coordinating Committee.*
- **Chicago:**
 - *They are under the umbrella of the MPO and their key issues include safety, convenience, economic development, and access for people with disabilities.*
- **Denver:**
 - *None*
- **Louisville**
 - *It is a subcommittee of the MPO.*
- **Phoenix:**
 - *Reviews and ranks the TIP applications, serves in advisory capacity.*

30. What role/function does the MPO serve/play relative to the BPAC?

- **Charlotte:**
 - *None.*
- **Chicago:**
 - *Staff and program are provided.*
- **Denver:**
 - *None*
- **Phoenix:**
 - *Staffs the committee*

31. How effective is the BPAC? How long has the BPAC been in existence and does the BPAC have any sort of decision-making or recommendation authority?

- **Charlotte:**
 - *The City BAC is perceived as playing a pivotal role in improving the region's bicycle facilities. It has been in existence since 2000 and its recommendations are given heavy consideration.*
- **Chattanooga:**
 - *They do have some decision-making authority; they were involved with the 2002 Chattanooga Urban Area Bicycle Master Plan.*
- **Chicago:**
 - *Effective in raising issues, many of which are then addressed by member agencies.*
- **Denver:**
 - *Highly effective as a committee of the Mayor's office*
- **Louisville**
 - *Yes, they do have some decision-making authority within the MPO.*
- **Phoenix:**
 - *Been in existence over 15 years. First level of technical advisory committee structure.*

32. Are there BPACs at the local level within the MPO area? How do these BPACs relate to the MPO's BPAC and/or to the MPO?

- **Charlotte:**
 - Yes, as described above.
- **Chattanooga:**
 - Yes, there are four separate BPACs under the MPO. The BPACs guide the planning process and provide a conduit for disseminating information to the public.
- **Chicago:**
 - Yes. Much of the MPO's work gets done at the subregional level; the local committees are an important part of this.
- **Denver:**
 - Yes. In the development of the MPO's bicycle and pedestrian plan, the MPO used these organizations to assist in the development of their plan (providing input on policies, inventory, gaps, design considerations, and other planning items).
- **Louisville**
 - No.
- **Phoenix:**
 - There are a few locals. The local committees only advise the local agencies.

33. What if any, private and/or non-profit organizations (such as advocacy groups) exist in the MPO area which play a key role to the MPO and/or in promoting walking and biking? Describe the relationships/partnerships. If any, that the MPO has with these organizations.

- **Charlotte:**
 - The primary advocacy group in the area is the Charlotte Area Bicycle Alliance. There is another advocacy group that promotes improvements for the disabled community. The City has a cooperative arrangement with CABA. As an example, there is an ongoing public/provide partnership with the owners of existing developments wherein the City provides free bike racks if the owner installs them; CABA provides all outreach to the business community for this program.
- **Chattanooga:**
 - The only non-profits I could find related to funding. They are outlined in the 2002 Chattanooga Urban Area Bicycle Master Plan.
- **Chicago:**
 - MPO maintains active partnerships with the Active Transportation Alliance, the League of Illinois Bicyclists, the Center for Neighborhood Technology, the Metropolitan Planning Council, and Chicago Metropolis 2020. In addition, even more edgy groups like Break the Gridlock also participate in the process.
- **Denver:**
 - There are numerous. Education, training, and awareness. Used in development of regional bicycle and pedestrian plan. They largely work with local entities.
- **Louisville**
 - The Kentucky Rail-Trail Council.
- **Phoenix:**
 - The bike/ped committee is composed of representatives from the jurisdictions, the regional bicycle advocacy group, Assoc of Landscape architects, transit agency

34. What limitations and successes has the MPO seen in promoting, incorporating, and/or encouraging the provision of walking and biking within the MPO area?

- **Charlotte:**
 - One particular area of difficulty has been providing connectivity given the region's many cul-de-sac dominated developments.
- **Chicago:**

- *CMAP maintains active partnerships with the Active Transportation Alliance, the League of Illinois Bicyclists, the Center for Neighborhood Technology, the Metropolitan Planning Council, and Chicago Metropolis 2020. In addition, even more edgy groups like Break the Gridlock also participate in our process.*
- **Denver:**
 - *As part of the regional bicycle and pedestrian plan a questionnaire was developed and circulated throughout the region. The following items/factors were identified as barriers/limitations in promoting/encouraging walking and biking:*
 - *Inattentive or aggressive drivers*
 - *Lack of a shower at their destinations*
 - *Bicycle theft*
 - *Environmental factors: weather, terrain, lack of daylight*
 - *Distance and time required*
- **Phoenix:**
 - *The amount of facilities has increased 592% since 1991.*

35. How is transit and non-motorized accommodations addressed within the MPO (e.g. what planning and/or funding consideration exists for transit and walking and biking provisions – at stops, stations, etc.)?

- **Charlotte:**
 - *See above.*
- **Chattanooga:**
 - *As of October 2004, several of the projects recommended in the bicycle plan (such as bike racks on all CARTA Main Line and Neighborhood routes, in addition to the Inclined Railway) have been implemented.*
- **Chicago:**
 - *The connection between transit and non-motorized transportation is critical, particularly in the loop. In some loop locations, 20000 or more people may walk per blockface, far outnumbering car traffic. Much of this is related to transit trips. Our Regional Transportation Authority offers planning grants for communities; many of these grants focus on improving walkability near transit stops.*
- **Denver:**
 - *A lot of effort has been made to increase the linkage between walking and biking and transit. The MPO has several policies aimed toward improving the connectivity of transit with walking and bike facilities. Accommodation provisions in design guidelines on transit connections (including bike lockers at transit stations).*
- **Phoenix:**
 - *There is a huge bike on bus program and currently working to develop a bike to bus program.*

Planning & Programming

36. Does the MPO have a regional bicycle and pedestrian plan? Is it stand-alone or a component of the MPO's Long Range Transportation Plan? When was the plan established and how often is it updated?

- **Charlotte:**
 - *The MPO does not have a stand-alone regional bicycle and pedestrian plans. Each of these modes is discussed in the existing conditions and the transportation plan components of the 2030 LRTP, which is updated every five years. The LRTP includes close to 300 miles of proposed bicycle projects, mostly bike lanes and wide outside lanes.*
- **Chattanooga:**
 - *2002 Chattanooga Urban Area Bicycle Master Plan (Included within the 2030 Comp Plan), The 5-Year Greenways Strategic Plan, The Facilities Master Plan,*

and the Transportation Demand Management Plan. The Chattanooga Urban Area Bicycle Facilities Master Plan, a TPO project completed in 2002, recommends and prioritizes over 377 miles of facilities. Additional recommendations, as provided by TransPlan 2030 and emphasized in this plan, include:

- Incorporate the goals from the adopted bicycle plans as part of the L RTP update.
- Ensure that roadway improvements accommodate bikes to some degree.
 - Need better signage on identified routes.
 - Review existing routes for usage and safety.
 - Coordinate routes with greenways and connectivity to parks.
 - Ensure that connections occur to the facilities where people to go. The primary focus is currently recreation.
 - Designate Highway 319 (CB Robinson Bridge), which is now posted as a non-bike route, for bikes.
 - Consider Broad Street and Cummings Highway for bike route.
 - Consider signals for tunnels that indicate when bikes are present.
 - Improve east-west connectivity in suitable geographic areas.
 - Consider showers, accommodations, and bike security at end route destinations.
 - Need safe routes to school and places to secure bikes.
 - Coordinate the Georgia and Tennessee state plans.
 - Consider major bike destinations in Hamilton County.
- **Chicago:**
 - Yes, the Soles and Spokes Plan (in development) which began an update earlier in the decade but was delayed to more fully address safety issues..
- **Denver:**
 - Yes. It is a stand-alone document but it is also a component of the MPO's L RTP. It was developed in 2006 and recently updated in response to the L RTP schedule.
- **Louisville**
 - Yes, it is a part of the MPO's Long Range Transportation Plan. It is a part of the 2030 Horizon Plan.
- **Phoenix:**
 - MAG has a Pedestrian Policies and Design Guidelines and a Bikeway Master Plan. Elements are incorporated into the Long Range Plan that is updated annually.

37. What, if any, unique aspects of the plan exist (e.g. demand assessment, level of service, project priority index etc.)?

- **Chattanooga:**
 - All mentioned above.
- **Chicago:**
 - Level of Service is expected to be included in the Plan for both pedestrians and bicyclists. CMAP is evaluating usefulness of LOS in improving actual safety, as opposed to the perception of safety and comfort.
- **Denver:**
 - Includes a comprehensive inventory of existing facilities. Designates a regional corridor system for bicycle improvements (e.g. priority corridors for bicycle improvements)
- **Louisville**
 - Projected Level of Service (E or F)
 - Density (Medium to High)
 - Functional Classification (Major Arterials)

- *Transit Service*
- *Regional Significance*
- *Connectivity to Existing/Planned Bicycle and/or Pedestrian Facilities*
- *Number of Schools along a Corridor*
- *Proximity to Major Employment Centers (1/4 mile)*
- *Proximity to Major Recreational Centers (1/4 mile)*
- *Corridors with High Accident Rates or other noted Safety Issues*
- *Proximity to Downtowns throughout the Louisville (KY-IN) Metropolitan Planning Area*

38. Are plans incorporated/incorporate other local, regional and state plans?

- **Charlotte:**
 - *Yes, primarily in the City of Charlotte, though some smaller jurisdictions have local non-motorized planning documents.*
- **Chattanooga:**
 - *Yes, it is included in the Comp Plan 2030.*
- **Chicago:**
 - *Yes. 11 of 12 subregional councils have bikeway plans. Chicago has a Greenways and Trails Plan. Soles and Spokes Plan will be a policy plan. However, the Soles and Spokes Plan developed an inventory of local and bikeway plans:
http://www.cmap.illinois.gov/uploadedFiles/planning_activities/transportation/bikeped/plan/BISManualRevised_2008.pdf*
- **Denver:**
 - *Yes by reference.*

39. Does the MPO have any specific project selection criteria relative to walking and biking projects (e.g. used for selecting/funding purposes)?

- **Charlotte:**
 - *There is a new project ranking criteria that was developed to determine which projects would potentially receive Stimulus money. Criteria include ROW availability and existing construction plans.*
- **Chicago:**
 - *Recently approved modifications to CMAQ funding. See pp 5 ff at
<http://www.cmap.illinois.gov/WorkArea/linkit.aspx?LinkIdIdentifier=id&ItemID=14548>*
- **Denver:**
 - *Yes – but general in nature (more or less driven by supportive of policies – increases priority) – priority is linked to: emphasis areas, safety, connectivity, and usage*
- **Phoenix:**
 - *Yes, and these criteria are being re-examined in 2009*

40. Does the MPO have any performance measures and/or benchmarks for walking and biking (e.g. targets for miles of sidewalks or bikeways, reduction in crashes, funding, etc.)?

- **Charlotte:**
 - *The City of Charlotte has an annual goal of 10 miles of new bike lanes and sidewalks, respectively.*
- **Chicago:**
 - *Yes. A few regional indicators have been fully approved at
<http://www.goto2040.org/WorkArea/linkit.aspx?LinkIdIdentifier=id&ItemID=11360>, including LOS. In addition, CMAP will have more performance measures in Soles and Spokes Plan.*

- **Denver:**
 - No
- **Phoenix:**
 - A plan is being developed in 2009.

41. Who collects local, regional and state data for bicycle and pedestrian crash data? How often is data collected and updated?

- **Charlotte:**
 - At the state level, data are collected and maintained by NCDOT and UNC, with data currently available going back to 1997. The City of Charlotte also regularly updates their bicycle and pedestrian crash database.
- **Chattanooga:**
 - TDOT and GDOT
- **Chicago:**
 - The Illinois Department of Transportation and Illinois Department of Public Health. Collected continuously; reported annually. Moving to quarterly reports. Data sharing has improved dramatically.
- **Denver:**
 - Obtain crash data from state DOT (CDOT)
- **Phoenix:**
 - No one collects crash data.

42. How do the state and MPO area rank for bicycle and pedestrian crashes compared to other states and MPOs within the state?

Note: Responses are NHTSA 2007 state pedestrian/bicycle fatality rates (adjusted for population; higher ranking equals higher crash rate). (Pedestrian Ranking / Bicycle Ranking)

- **Charlotte:**
 - NC: 12th/20th
- **Chattanooga:**
 - TN: 34th/37th
- **Chicago:**
 - IL: 25th/32nd
- **Denver:**
 - CO: 31st/17th
- **Louisville**
 - KY: 35th/44th
- **Phoenix:**
 - AZ: 5th/8th

43. Does the state Strategic Highway Safety Plan address bicycling and pedestrians? Does the MPO sit on this committee?

- **Charlotte:**
 - Yes/No
- **Chattanooga:**
 - No, although it does mention pedestrians.
- **Chicago:**
 - Yes/No
- **Denver:**
 - Yes/ No
- **Louisville:**
 - No/No
- **Phoenix:**
 - Yes/No

44. Are there any regular coordination meetings with the MPO bike/ped coordinators in the state?

- **Charlotte:**
 - *No.*
- **Chicago:**
 - *No.*
- **Denver:**
 - *Yes*
- **Louisville**
 - *Yes via the Louisville (KY-IN) Metropolitan Planning Organization Transportation Policy Committee.*
- **Phoenix:**
 - *Both the state bike/ped coordinator and the SRTS coordinator sit on the MPO bike/ped committee*

45. Does the state employ a bike/ped coordinator? A SRTS coordinator?

- **Charlotte:**
 - *Yes (Tom Norman) and yes (Sarah O'Brien).*
- **Chattanooga:**
 - *Yes to both.*
- **Chicago:**
 - *Yes (Todd Hill) and yes (Megan Holt).*
- **Denver:**
 - *Yes/Yes*
- **Louisville**
 - *While there is a contact section on the state's website for a bike/ped coordinator, it does not list a specific person to the job.*
 - *Safe Routes to School Program Coordinator: Jennifer M. Cook*
- **Phoenix:**
 - *Yes, Arizona has both a bike/ped coordinator and a SRTS coordinator*

46. Are there any unique planning or programming activities that the MPO does concerning non-motorized accommodations?

- **Chicago:**
 - *No.*
- **Denver:**
 - *Use of terms such as "Community Corridors", "Regional Corridors" to represent priority for funding. They establish a ¼ mile buffer around those corridors as facilities that could serve to meet the stated corridor movement.*
- **Phoenix:**
 - *No.*

47. Relative to multi-use paths and/or greenways, what if any, consideration does the MPO have concerning these facilities as a means of transportation infrastructure (e.g. are these facilities viewed as transportation and/or does the MPO account for these facilities in its plans)?

- **Charlotte:**
 - *The MPO and the City of Charlotte both consider greenways transportation facilities in addition to their recreation functions.*
- **Chattanooga:**
 - *They account for them in the 2030 plan as follows: As of April 2002, there were approximately 140 miles of existing and previously planned greenways within the*

planning area. Currently, 13.5 miles are in place. The *5-Year Greenways Strategic Plan* identifies the region's top priority greenway projects, including:

- North Chickamauga Greenway extension
- South Chickamauga Greenway connection
- Alton Park Safewalk extension/Chattanooga Creek Greenway
- Guild Trail extension

Note that the MPO defines a multi-use path as: A multi-use path is a linear park located in a right-of-way or easement. Often, but by no means exclusively, located adjacent to waterways in the floodplain, multi-use paths are multipurpose, though some types serve one purpose to a greater extent than others. Multi-use paths provide protection for environmental areas, recreational opportunities for the community, and, frequently, enhanced neighborhood connectivity for walkers, runners, and bikers. Chattanooga has three differing types of multi-use paths: Riverwalks, Safewalks, and Greenways.

- **Chicago:**
 - *CMAP did a study showing that many of these facilities, when routed through, were used for transportation. We discourage stubs and loops.*
- **Denver:**
 - *Included in plan and eligible for funding.*
- **Phoenix:**
 - *MAG has off-road component to its bike plan and highly encourages the local jurisdictions to create crossings to connect the canal system.*

48. Is the MPO currently participating in or using the health impact assessment (HIA) process in it planning? If so, what examples do they have. If they are not using the HIA process, has there been any discussion of its use in the future and if so, in what capacity?

- **Charlotte:**
 - *No.*
- **Chicago:**
 - *No.*
- **Denver:**
 - *No.*
- **Phoenix:**
 - *Not formally.*

Promotion, Encouragement, & Enforcement

49. Is the MPO involved in any types of promotion and or encouragement activities?

- **Chattanooga:**
 - *The MPO in conjunction with the City of Chattanooga promote the 'Ride to Work Day' once a month that encourages individuals to bike to work and promote biking rather than driving.*
- **Chicago:**
 - *No.*
- **Denver:**
 - *Only those previously stated. The following statement is in the MPO's Regional Bicycle and Pedestrian Plan "DRCOG will facilitate regional forums, ad hoc committees, or workgroups as issues pertaining to pedestrian and bicycle transportation arise."*
- **Louisville**
 - *They have a community outreach through the Louisville Metro Mayor's Community Conversation that takes place monthly.*
- **Phoenix:**
 - *Only in conjunction with the regional bike education and safe routes to school program through the sister regional agency Valley Metro*

50. Is the MPO involved in any type of enforcement activities with law enforcement personnel?

- **Charlotte:**
 - *No, though the City of Charlotte has a “Report an Aggressive Driver” program.*
- **Chicago:**
 - *No.*
- **Denver:**
 - *Yes through ongoing programs. The following statement is from the MPO’s Regional Bicycle and Pedestrian Plan “The state is encouraged to develop and implement a law enforcement-training program to educate police officers on the rights and responsibilities of motorists, pedestrians, and bicyclists on roadways and off-street multi-use trails.” As is the following statement, “Transportation and public works departments at the local level are encouraged to partner with local schools, recreation departments, senior centers, law enforcement agencies, churches, and other community groups to provide education opportunities.”*
- **Phoenix:**
 - *No.*