



Hattiesburg-Petal-Forrest-Lamar MPO

Pathways Master Plan

Adopted April 2015 | FINAL REPORT

Prepared For:
Hattiesburg-Petal-Forrest-Lamar MPO



Prepared By:



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INTRODUCTION

Overview

In the fall of 2014, the Hattiesburg-Petal-Forrest-Lamar Metropolitan Planning Organization (MPO) began developing a bicycle, pedestrian, and trail plan for the entire Hattiesburg MPO area. The purpose of the Plan is to provide a clear framework for the development of new facilities, programs, and policies that will support safe and convenient walking and biking conditions for transportation and recreation.

The plan is organized into the following sections:

Introduction

Provides an overview of the project as well as the vision, goals, and summary of the public planning process.

Needs Analysis

Documents existing conditions and analysis.

Recommendations

Presents recommendations for bicycles, pedestrians and trails, support facilities, and programs and policies.

Implementation

Summarizes the responsibilities, action steps, and strategies to achieve the vision and goals established by this Plan.

CHAPTER OUTLINE:

Overview

Vision

Pathways Master Plan
Goals

Design User

Planning Process

Community Priorities

A photograph of a paved path for walking and biking. On the left, there are lush green trees. On the right, a large, modern building with blue and white panels is visible. A sign on a pole next to the path reads 'SPONSOR HANCOCK BANK'. A person is riding a bicycle away from the camera on the path. The sky is clear and blue.

Vision

“Walking, riding a bike, and taking transit in the Hattiesburg MPO region is a comfortable and integral part of daily life in the region for people of all ages and abilities. This is the future envisioned by the Hattiesburg-Petal-Forrest-Lamar MPO Pathways Master Plan, and it signifies an evolution in the way the Hattiesburg MPO community accommodates people who will be riding a bicycle, walking, or taking transit for any trip purpose.

A connected network of on- and off-street bikeways, walkways, and transit stops will provide safe and convenient access between neighborhoods, parks, job centers, tourist attractions, shops, schools, places of workshop, and other daily destinations for a wide variety of people, trip purposes, and abilities. This Plan establishes the region’s reputation as a destination for enjoying walking and bicycling as forms of transportation and recreation, as a community that considerably shares its roadways, and as a healthy place to live.

Pathways Master Plan Goals

When this Plan is fully implemented, the following key policy and infrastructure accomplishments will be achieved:

Achieve Bicycle Friendly Community designation by year 2016

Achieve Walk Friendly Community designation by year 2016

Double the combined walking, biking, and transit commute mode share within 5 years

(currently 3.8% for walking, biking, and transit within the MPO)

Create 163 mile on-street bikeway network within 10 years

(6 miles currently; 157 miles proposed)

Create 68 mile shared-use trail network within 10 years

(14 miles currently; 54 miles proposed)

Ensure all parks within the Hattiesburg MPO boundaries are connected to a sidewalk and on-street bikeway or off-street trail within 5 years

Ensure all schools within the Hattiesburg MPO boundaries are connected to a sidewalk and on-street bikeway or off-street trail within 5 years

Design User

Who should be considered when designing new infrastructure or developing outreach programs to educate, encourage, and enforce walking and biking?

Development of network, facility, policy, and program recommendations for this project focused on the types of cyclists and pedestrians that should be accommodated with new investments in infrastructure and programs.

Several key themes are embedded in these criteria, including **comfort, daily life, and all ages and abilities**. The idea that walking and biking should be “comfortable” suggests it is a **safe, convenient, and attractive travel option for a large number of people**. “Daily life” means that walking and biking is not a niche activity but is instead **desirable for a wide variety of people and trip purposes**. “All ages and abilities” means that the emphasis is on planning, designing, and building walking and biking **facilities that will be used by a broad range of people throughout the MPO region**. These themes and the design criteria above were used as guides to develop the recommendations for this Plan.

The Project Advisory Group, along with members of the public, developed the following criteria for the target design cyclists and pedestrians:

- All ages and abilities
- Future generations
- Students going to school - Elementary school through university
- Transit riders
- People walking and biking for or to recreation
- People walking and biking for transportation
- People walking and biking out of necessity
- Families
- Seniors
- Workers
- Visitors



Planning Process

Review Previous Planning Efforts

Kickoff Meeting

A project kickoff meeting with community members and the Project Advisory Group was held on September 23, 2014.



Workshops

Public meetings were held at the Hattiesburg Train Depot on October 13 and 14, 2014. Meetings included an evening workshop on October 13 and a Project Advisory Group meeting and open "office hours" for the community to stop by at their leisure on October 14.



Open House

A draft master plan presentation was given on December 11, 2014 at the Hattiesburg Train Depot.



Plan Adopted (Expected Spring 2015)

Community Priorities

At the public workshops held over two days on October 13 and 14, 2014, community members were asked to prioritize different types of infrastructure improvements and programs. The sections below and on the subsequent page summarize the results of the voting exercise. The results were used to develop the recommendations for this Plan.



Public workshop participants voted on a series of infrastructure improvements and programs. The top priority program is wayfinding signage, and the top infrastructure priority is shared-use paths along roadways.

Programs

What new programs (or expansion of existing programs) would have the greatest impact on walking and bicycling in the Hattiesburg Region?

Top Priorities

- Wayfinding Signage
- Bicycle and Pedestrian Resource Website
- Launch Parties for New Bikeways
- Heritage Tourism Walking/Biking/Transit Maps and Guides

Infrastructure

What would you most like to see in the Hattiesburg Region?

Top Priorities

- Shared-Use Side Paths Along Roadways
- Bicycle Lanes/Buffered Bicycle Lanes
- Bicycle-Friendly Intersections
- New Sidewalks

Figure 1. Program Voting Results

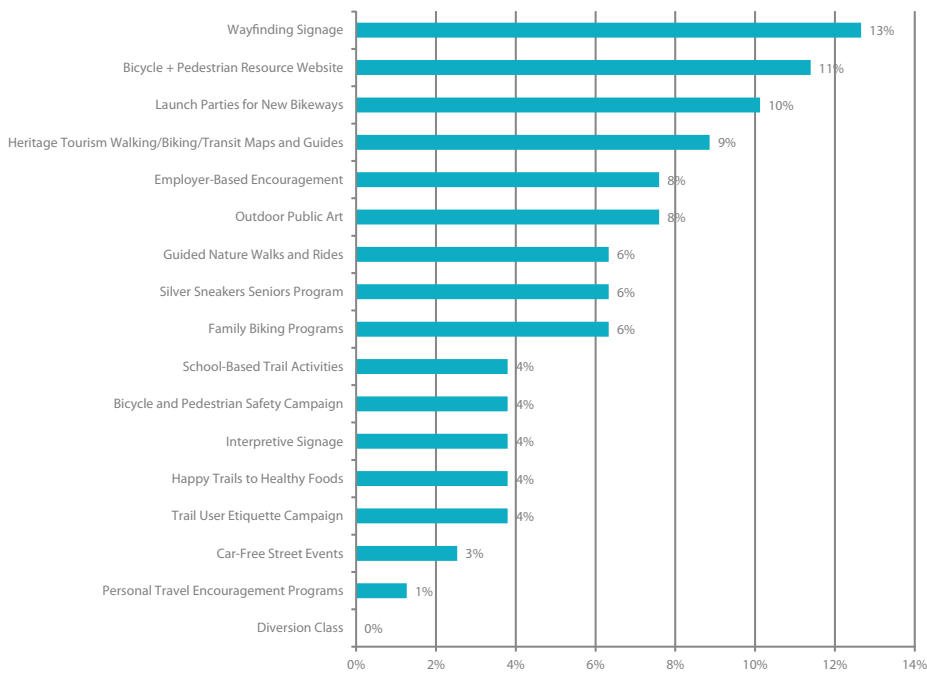


Figure 2. Program Voting Poster

EDUCATION, ENCOURAGEMENT, AND ENFORCEMENT

FOR TRANSIT, BIKING, AND WALKING

An inviting network of pedestrian and bicycle facilities for all ages and abilities, providing access to transit and destinations

Community understanding and respect for sharing the road with ALL road users (bus, bike, pedestrian, car, and truck)

Increased walking and biking activity, as well as transit usage

A safer environment for every road user

A community that serves a diverse population geographically, socioeconomically, and demographically

Institutional support and long-term planning for active transportation

WHAT SUCCESSFUL PROGRAMS ALREADY EXIST IN THE HATTIESBURG REGION?

TRAIL USER ETIQUETTE CAMPAIGN
Shared-use greenways and trails are available for use by bicyclists, walkers, runners, skateboarders, rollerbladers, parents with strollers, dogs, children, and, in some cases, equestrians, as well as other modes. A campaign for trail user etiquette works to ensure that all users safely and responsibly share the trail. The campaign may include media advertisements, trail signage, brochures, an "ambassador" program, etc.

SILVER SNEAKERS SENIORS PROGRAM
Interested agencies, nonprofits, health departments and senior centers can partner to develop an active lifestyles program for senior citizens utilizing the bicycle, pedestrian, and greenways network. Activities could include adult tricycle or bicycle rides, nature walks, walks to lunch, and safety education.

WAYFINDING SIGNAGE
The connectivity of a trail network is contingent upon physically linking bicycle, pedestrian, and transit infrastructure, as well as communicating to trail users the connections available. Wayfinding signs direct users along the trail, bikeway, and walkway network and to community destinations. These signs can also include mileage, estimated travel time, and even calories burned. The signs also provide an opportunity for recognition of trail partners and sponsors, where applicable.

GUIDED NATURE WALKS & RIDES
Naturalists are a significant user group of a trail and greenway network. Unique natural resources, such as the Leaf and Boule Rivers, can attract significant eco-tourism opportunities. Guided nature walks and bicycle rides could be led by trained volunteers or interested partners, such as a college extension service.

BICYCLE - PEDESTRIAN RESOURCE WEBSITE
The City should create a website that serves as a one-stop resource for bicyclists, pedestrians, and trail users of all types. Information could include tips for commuters, route planning services, message boards, and more.

HAPPY TRAILS TO HEALTHY FOODS
Many communities are recognizing the role that both physical activity and healthy eating play in improving overall public health and wellness. This important link can be highlighted in a fun and interactive manner through promoting healthy food outlets along the bicycle, pedestrian, trail, and transit network and partnering with health food providers to identify safe routes for active transportation to these locations.

OUTDOOR PUBLIC ART
Public art along a bicycle, pedestrian, greenway, and transit network can bring attention to the network, encourage usage of it, and attract newcomers to bicycling, walking, and transit. By combining art and greenway facilities, the community is creating a unique interactive amenity for both residents and visitors. Such programs also attract new partners, promoters, and sponsors of the active transportation network.

SCHOOL-BASED TRAIL ACTIVITIES
In partnership with potential Safe Routes to School efforts, local schools can capitalize on segments of the proposed bicycle, pedestrian, and trail network that intersect their campus. Activities could include Bike and Walk to School Day routes, outdoor classrooms for science curriculum, educational after-school walks and bike rides, and programs for physical education curriculum.

HERITAGE TOURISM WALKING/BIKING/TRANSIT MAPS & GUIDES
Walking, biking, and transit guides can capitalize on and promote the Hattiesburg area's rich history. The guides would be targeted to a variety of ages and abilities, offering varying routes for families, touring cyclists, and others.

EMPLOYER-BASED ENCOURAGEMENT
Companies that establish a bicycling, walking, and transit incentive program for employees increase the number of employees who commute to work, meetings, or lunch by biking, walking, or transit. Such programs can highlight health benefits, increased productivity, and cost-savings related to parking costs.

CAR-FREE STREET EVENTS
Car-free street events involve periodic street "openings" that create a temporary park that is open to the public for walking, bicycling, dancing, etc. The purpose of the event is to encourage biking and other forms of physical activity to the general public by providing a fun, welcoming environment for activity. Car-free street events have been very successful internationally and are rapidly becoming popular in the U.S.

INTERPRETIVE SIGNAGE
Interpretive signage along a trail and greenway network serves as an education tool. Information related to the history of an area, its cultural significance, or natural features is provided on a graphically appealing sign. Topics could range from native species of plants to river currents to famous historical figures.

PERSONAL TRAVEL ENCOURAGEMENT PROGRAM
PTE programs are proven to reduce drive-alone trips by approximately 10% and increase bicycling, walking, and transit use within a target area. The program:
• Delivers customized travel information packets;
• Hosts fun events such as guided rides, walks, and classes; and
• Sends trained outreach staff to farmers' markets and other community events

FAMILY BIKING PROGRAMS
Family bicycling programs help parents figure out how to safely transport children by bicycle and help children learn bicycling skills. Activities may include bicycle safety checks, a group ride or parade, "freedom from training wheels" clinics, and opportunities to try out different ways to transport children (e.g., trailers, cargo bicycles, kid seats, etc.).

BICYCLE & PEDESTRIAN SAFETY CAMPAIGN
A high-profile marketing campaign is an effective strategy for highlighting the importance of respect and shared responsibility on the road between bicyclists, motorists, and pedestrians. This type of campaign is particularly effective when launched in conjunction with other events such as Walk to School Day or National Bike Month.

WHAT NEW PROGRAMS (OR EXPANSION OF EXISTING PROGRAMS) WOULD HAVE THE GREATEST IMPACT ON WALKING AND BICYCLING IN THE HATTIESBURG REGION? (Spend your dots! You have 3 dots to vote for programs you think would provide the greatest benefit to the region.)

KEY QUESTION: ARE THERE OTHER PROGRAM IDEAS YOU WOULD LIKE TO SEE IN THE REGION?
(write your thoughts or place a dot beside an existing idea to show your support)

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Figure 3. Infrastructure Voting Results

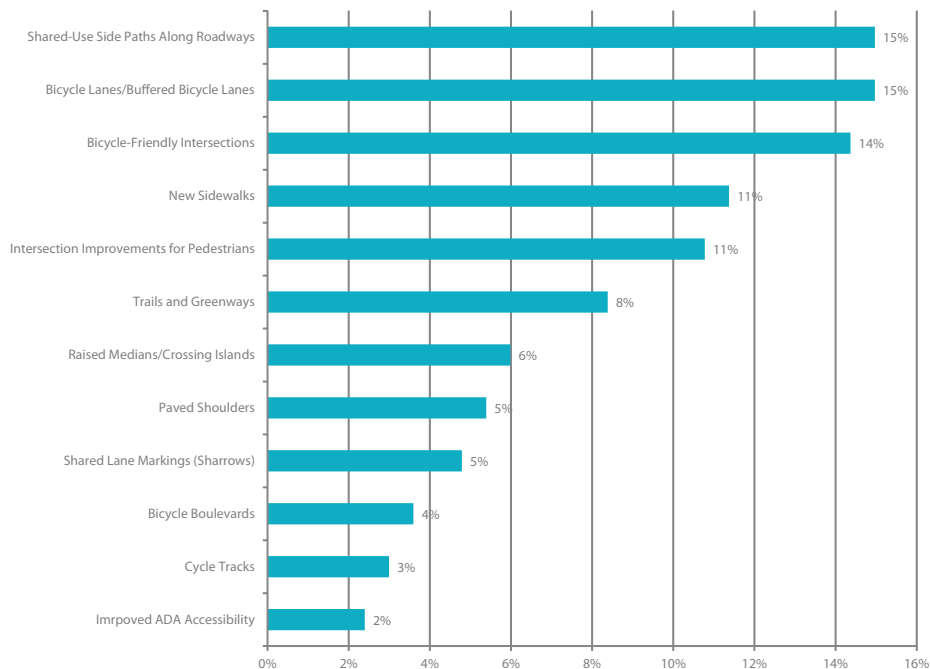


Figure 4. Infrastructure Voting Poster

PEDESTRIAN AND BICYCLE INFRASTRUCTURE

HATTIESBURG MPO BIKE, PED & TRAILS MASTER PLAN

A Project of Hattiesburg-Petal-Forrest-Lamar Metropolitan Planning Organization

PLANNING + DESIGN

What would you most like to see in the Hattiesburg region? (vote with 6 stickers)

| | |
|--|---|
| <p>CYCLE TRACKS</p> <p><small>A cycle track is an exclusive bike facility that combines the user experience of a separated path with the infrastructure of a conventional bike lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk (NACTO).</small></p> | <p>SHARED-USE PATHS</p> |
| <p>BICYCLE LANES/BUFFERED BICYCLE LANES</p> | <p>SHARED-USE SIDE PATHS ALONG ROADWAYS</p> |
| <p>SHARED LANE MARKINGS (SHARROWS)</p> | <p>RAISED MEDIANS/CROSSING ISLANDS</p> |
| <p>PAVED SHOULDERS</p> | <p>IMPROVED ADA ACCESSIBILITY</p> |
| <p>BICYCLE BOULEVARDS</p> <p><small>Bicycle boulevards are streets with low motorized traffic volume and speed, designated and designed to give bicycle users priority. Bicycle boulevards use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets (NACTO).</small></p> | <p>NEW SIDEWALKS</p> |
| <p>BICYCLE-FRIENDLY INTERSECTIONS</p> | <p>INTERSECTION IMPROVEMENTS FOR PEDESTRIANS</p> |



NEEDS ANALYSIS

Overview

CHAPTER OUTLINE:

Overview

Community Profile

Walking, Biking, and Transit Trends

Health Trends

Bicycle and Pedestrian Demand Analysis

Existing Facilities

Existing Funding

Bicycle Friendly and Walk Friendly Community Assessment

Previous Plans and Policy

Many factors influence the quality and quantity of walking and biking in a particular place. The presence of sidewalks and bikeways, proximity to destinations, connectivity of the road network, and the number of people walking and biking are just a few. Further, these factors and others influence the viability of particular improvements and therefore will guide the recommendations of this Plan. Recommendations will vary throughout the Hattiesburg Region given the different needs in rural and urban areas.

This chapter documents existing conditions and trends within the Hattiesburg MPO related to walking and biking. It also provides an overview of the Bicycle Friendly Community and Walking Friendly Community programs and how ready the region is for key criteria for each program. Finally, previous planning efforts that relate to this Plan are summarized.

Community Profile

The Hattiesburg MPO is located within the Pinebelt region of southern Mississippi. Portions of Lamar and Forrest Counties are within the MPO boundaries, and the cities of Hattiesburg and Petal are completely within the MPO's boundaries. In 2013, the MPO had a population of approximately 148,110. The Cities of Hattiesburg and Petal account for 32% and 7% of the MPO's population, respectively.

Based on the 2010 census, the population density in Hattiesburg is over 10 times greater than the MPO overall and over 15 times more than Mississippi as a whole. In addition, the population density in Petal is over 7 times greater than the MPO overall and over 10 times greater than in Mississippi overall. Table 1 summarizes the land areas and population per the US Census.

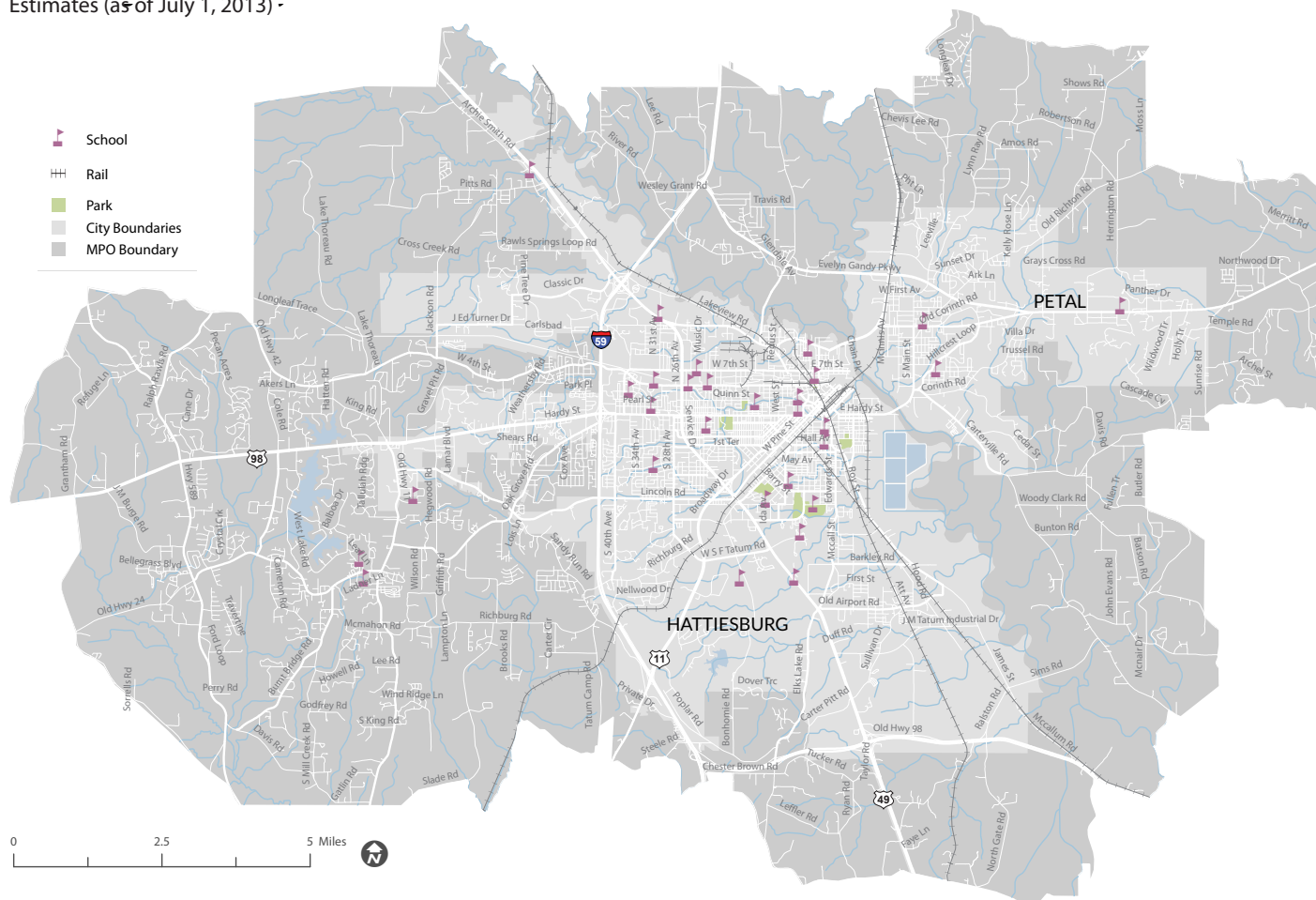
Table 2. Land Area, Population and Population Densities

| Community | Land Area * (sq miles) | 2013 Population** | 2013 Population Density* (persons/sq mile) |
|-------------------------------|---------------------------|-------------------|---|
| City of Hattiesburg | 50 | 47,556 | 957 |
| City of Petal | 17 | 10,815 | 641 |
| Lamar County | 500 | 58,801 | 118 |
| Forrest County | 470 | 77,059 | 164 |
| Hattiesburg Metropolitan Area | 1,621 | 148,110 | 91 |
| Mississippi | 48,432 | 2,991,207 | 62 |
| U.S. | 3,531,905 | 313,873,685 | 89 |

*US Census 2010 Decennial Census Data

** US Census 2013 Population Estimates (as of July 1, 2013) -

Figure 5. Study Area



Walking, Biking, and Transit Trends

Walking and biking rates vary across the country, regionally, and locally. Population density, available infrastructure, and development patterns all impact rates of walking and biking.

Nationally, the rate of people walking and biking to work are 2.8% and 0.6%, respectively. Comparing across states, Mississippi has the lowest rate of biking to work in the country, and the 47th lowest walk to work rate in the country. The states with the highest rate of walking to work is Alaska at 7.9%, and the highest rate of biking to work is Oregon at 2.3%.

Locally, Hattiesburg has the highest walking and biking to work rates in the region at 2.9% and 0.9%, respectively. The City's rates are roughly equal to rates nationally and above rates for Mississippi. Forrest County has rates above the state's average rates, while Lamar County and the City of Petal have rates lower than the state rates in Mississippi.

Regionally, biking to work accounts for 0.6% of total commute trips, walking accounts 2.8%, and transit accounts for 0.3%. In total, these three commute options account for 3.7% of all commute trips in the Hattiesburg region.

The following table presents the walking and biking commute rates from select national, state, regional, and local geographies from the 2009-2011 and 2010-2012 US Census ACS three-year estimates, and the following figure shows the commute rates distribution for the Hattiesburg Metropolitan Area from the 2008-2012 US Census ACS five-year estimates.

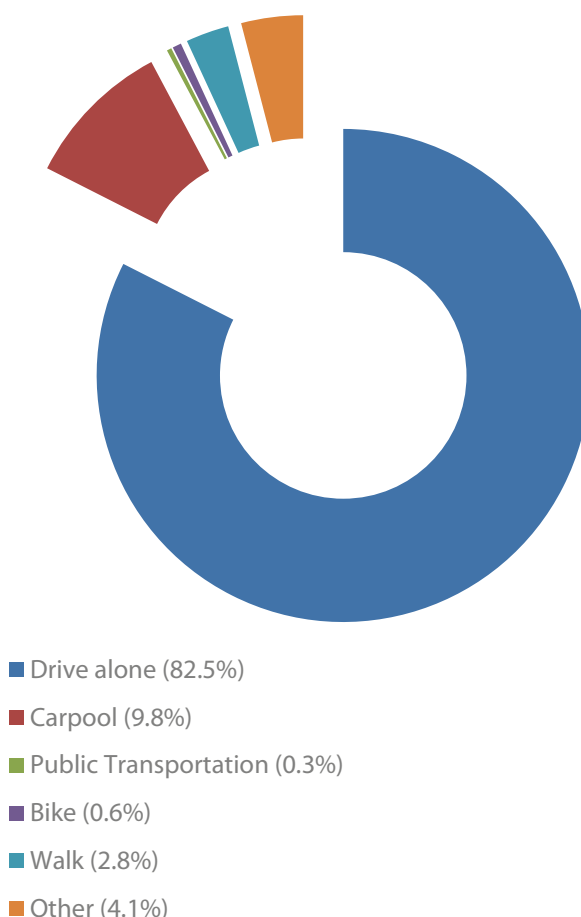
Table 3. Walking and Biking Commute Rates

| Area | Walking | Biking |
|--|-------------|-------------|
| US* | 2.8% | 0.6% |
| Alaska (Highest walk rate in US)* | 7.9% | 1.0% |
| Oregon (Highest bike rate in US)* | 3.9% | 2.3% |
| MS* | 1.8% | 0.2% |
| Avg. Large US Cities* | 5.0% | 1.0% |
| Hattiesburg** (Highest rates w/in MPO) | 2.9% | 0.9% |
| Forrest** | 2.4% | 0.5% |
| Lamar** | 1.1% | 0.1% |
| Petal** | 0.5% | 0.0% |

* US Census ACS 2009-2011

** US Census ACS 2010-2012

Table 4. Commute To Work Rates for Hattiesburg Metropolitan Area



Source: US Census ACS 2008-2012

Health Trends

As of 2013, Mississippi has the highest adult obesity rate in the country according to *The State of Obesity: Better Policies for a Healthier America*, which is a report published annually by the Robert Wood Johnson Foundation and the Trust for America's Health.

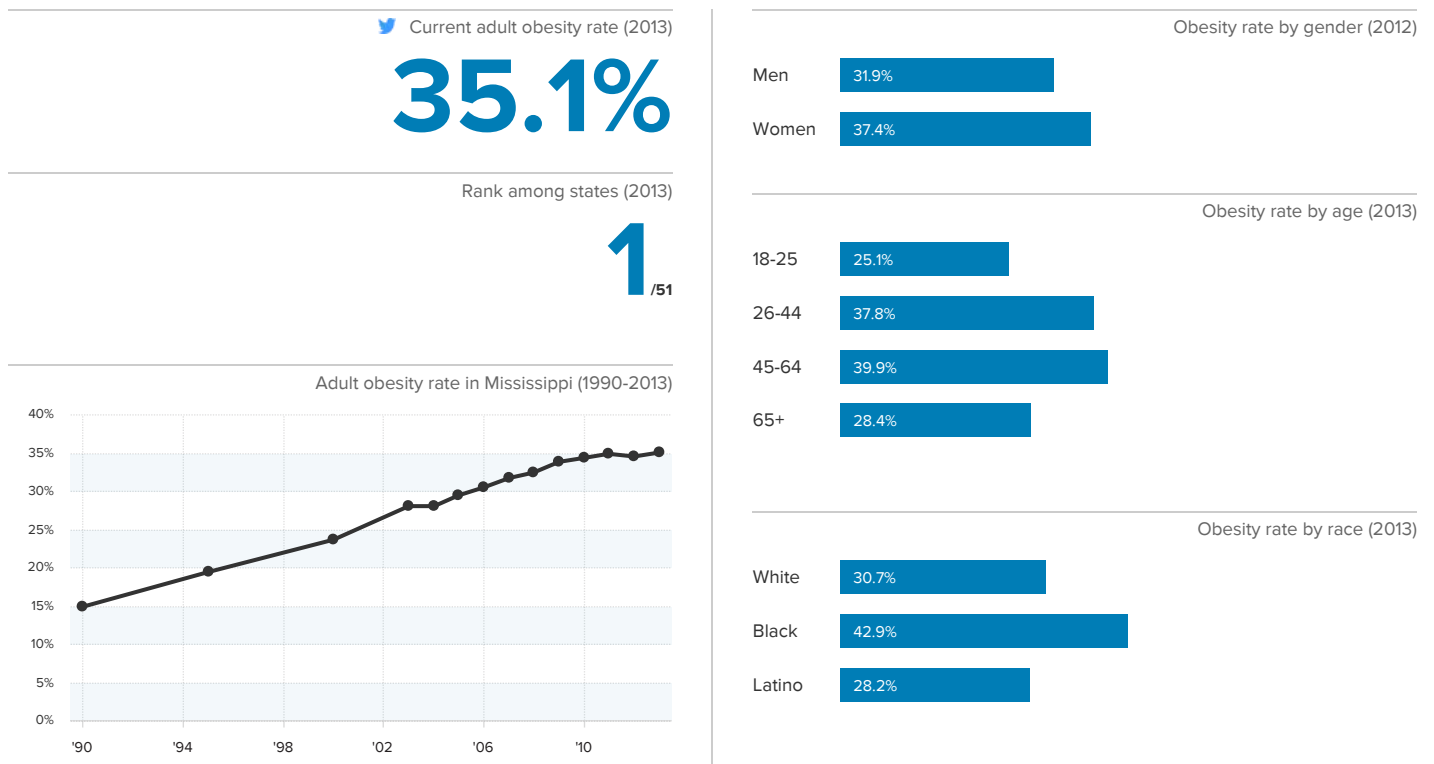
Mississippi's adult obesity rate is 35.1% in 2013, up from 28.1% in 2012, and 15% in 1990. Twenty states now have an adult obesity rate at or above 30%. In 2013, a new category, greater than 35%, needed to be created for Mississippi and West Virginia.

The obesity epidemic is also impacting all ages in Mississippi. Every age group has an obesity rate above 25% in 2013. That means that at least 1 in 4 in Mississippi residents are obese.

These trends have significant impacts on personal health, economic development, and quality of life. Obesity increases healthcare costs and negatively impacts daily life.

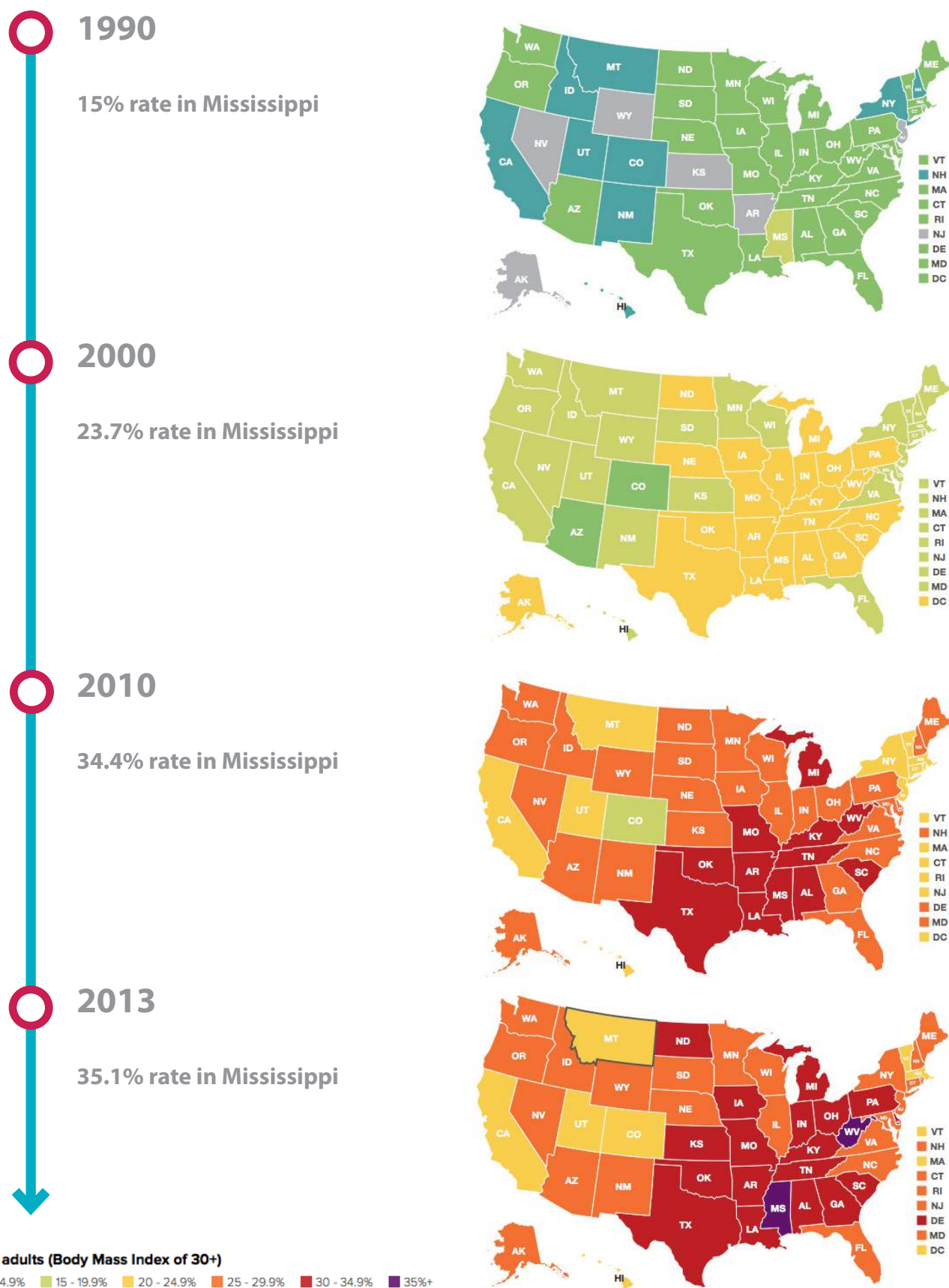
Investing in walking and biking infrastructure and programs for transportation and recreation can have a significant impact addressing these health trends. Providing opportunities to integrate physical activity into daily activities can help reduce these obesity trends and their negative impacts on daily life.

Figure 6. State of Mississippi Adult Obesity Rate Trends for 2013



Source: Trust for America's Health and Robert Wood Johnson Foundation. *The State of Obesity 2014* [PDF]. Washington, D.C.: 2014.

Figure 7. Adult Obesity Rate Trends for US 1990 to 2013



Bicycle and Pedestrian Demand Analysis

Overview

The Bicycle and Pedestrian Demand Analysis (B/PDA) provides a general understanding of expected activity in the bicycle and pedestrian environment by combining categories representative of where people live, work, play, access public transit and go to school into a composite sketch of demand. The findings were used to develop and confirm the recommendations for this plan.

Models serve as an effective means to understand how factors in a complex system interact by providing a simplified version of the system for study. However, by definition, models are representations of reality and are constrained by the quality of available data and the complexity of the system under consideration. Throughout the modeling process, significant effort was made to collect the best data possible for input to the model and field verify data as necessary and possible.

Summary of Findings

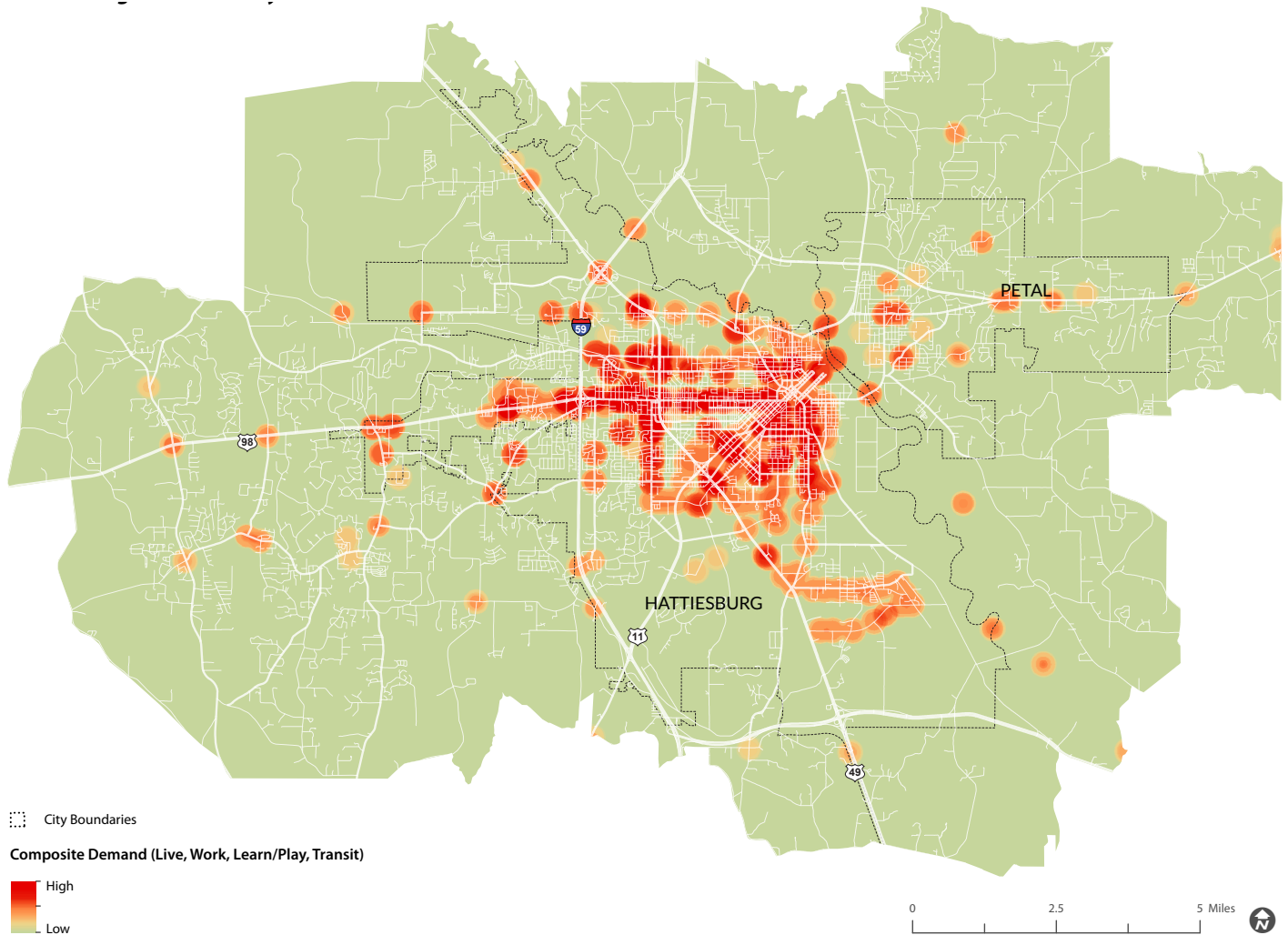
The B/PDA map on the subsequent page highlights several key findings:

- Walking and biking demand is concentrated in Hattiesburg between the University of Southern Mississippi (USM) campus and Downtown Hattiesburg.
- Hardy Street has significant demand for walking and biking that extends from Downtown Hattiesburg to west of I-59.
- Bicycle and pedestrian demand in rural areas is concentrated at major intersections.
- Major roadway crossings, such as Hardy Street and I-59, or river crossings, such as Leaf River and State Highway 11, have high demand for walking and biking but lack dedicated infrastructure for pedestrians and cyclists.
- Areas around schools and universities have increased demand for walking and biking.



Demand for walking and biking is high along major roads, such as Hardy Street above, because of the close proximity to schools, parks, residential areas, businesses and transit service.

Figure 8. Composite Bicycle and Pedestrian Suitability Analysis (B/PDA) Map



Methods

Generally speaking, the scoring method is a function of density and proximity. Scores reflect relative impact on walking or bicycling to and from census block group corners that are located adjacent to the features used in the analysis. As such, scores are represented as density patterns of census block corners within a $\frac{1}{4}$ mile of each other. Subsequently, the scores are effectively a result of two complementing forces:

- **Distance decay** – the effect of distance on spatial interactions yields lower scores for features over $\frac{1}{4}$ mile away from other features; and
- **Spatial density** – the effect of closely clustered features yields higher scores.

Scores will increase in high feature density areas and if those features are close together. Scores will decrease in low feature density areas and if features are further apart. The highest density/usage/activity locations (shown in red) on the B/PDA Map on the subsequent page do not represent specific physical facilities but rather represent relative higher use zones as calculated above.

Categories are scored on a scale of 1 – 5 based on density and proximity and then assigned weighted multipliers to reflect the relative influence that categories have on pedestrian activity. The feature weighting method is discussed in the following section.

Factors

Where people live includes 2008-2012 American Community Survey (ACS) data by census block group level population density. These locations represent potential trip origin locations. More trips can be made in areas with higher population density if conditions are right. This category also includes data on the percentage of households without an automobile as well as the percentage of working age adults who use active transportation modes (i.e., walking and bicycling) to get to work.

Where people work mainly represents trip ends for people working in the Hattiesburg MPO region regardless of residency. Its basis is 2011 total employment by census block, aggregated to the block group level. Depending on the type of job, this category can represent both trip attractors (e.g., retail stores or cafes) and trip generators (e.g., office parks and office buildings) in terms of base employment population. It is therefore also used in the **where people play** category by overlaying with specific job types, such as arts, recreation, and retail.

Where people learn/play is a combination of varied land use types and destinations. Overlays such as schools and parks contribute to this category. While all destinations are not exactly where one would expect to “play”, these civic amenities are still destinations of importance reflected in this category due to the temporary nature of the visit. This category includes K-12 schools, community colleges, and universities.

Where people access transit is assessed by bus stop location. This category accounts for the transit stops within ¼ mile of each other.



Bus stops are a significant source of pedestrian and bicycle activity in Hattiesburg and contribute to the “demand” for pedestrian and bicycle infrastructure, such as crosswalks, sidewalks, and dedicated bikeways, along transit routes.

Existing Facilities

The Hattiesburg MPO has some dedicated facilities for those walking and biking; however, the coverage of the network is low relative to the entire roadway network. On-street bikeways account for less than 1% of the roadway network, and shared use paths are just 6%. Likewise, sidewalks cover approximately 5% of the roadway network within the MPO.

The Hattiesburg region is unique in that it has mountain bike trails too. Access to off-road trails is a new category of facilities for Bicycle Friendly Community (BFC) designation. The existence of these trails will help Hattiesburg MPO communities apply for BFC designation. However, most importantly, they provide an opportunity for recreation and physical activity and can be a venue for bicycle events.

Existing Funding

The Hattiesburg-Petal-Forrest-Lamar MPO is the federally designated agency to coordinate and distribute federal transportation funding for the Hattiesburg Urbanized Area. Funds are prioritized using the Long Range Transportation Plan for the MPO and the Transportation Improvement Plan (TIP). These two documents help the MPO and its member jurisdictions allocate federal transportation funds for specific projects.

Federal funding allocated to the MPO that can be used for bicycle and pedestrian projects comes primarily from two funding programs: Surface Transportation Program (STP) funding and Federal Transit Administration (FTA) funding. STP funds can be used for a variety of roadway projects including travel lanes, bike lanes, and sidewalks. FTA funds can be used for transit operations or infrastructure projects near transit service, such as sidewalks that connect to a bus stop. A summary of these resources for the Hattiesburg MPO are provided below.

STP Funds

- Receive approximately \$1.2 million annually
- Annual allocation has been increasing at approximately 1% inflation rate

FTA Funds

- Received approximately \$1.375 million in 2014
- Approximately \$975,000 was used for transit infrastructure projects in 2014
- Approximately \$400,000 was used for transit operations in 2014
- Annual allocation has been increasing at approximately 1% inflation rate

Table 5. Existing Facilities

| Facility Type | Miles | % of Total Roadway Miles |
|--------------------|-------|--------------------------|
| Bikeways* | 6 | 1% |
| Shared Use Paths** | 14 | 1% |
| Sidewalks | 60 | 5% |
| Roadways | 1,181 | 100% |

*Include marked shared lanes

**Include paved paths that accommodate walkers and bicyclists



On-street bikeways and shared use paths combine to cover 7% of the roadway network in the Hattiesburg MPO.



Sidewalks cover approximately 5% of the entire roadway network in the Hattiesburg MPO.

Existing Pedestrian and Transit Infrastructure

Below is a photo-inventory of typical opportunities and constraints for walking and transit use found throughout the study area.

Opportunities

A nearly complete network of sidewalks is present in the Downtown Hattiesburg neighborhood, and the USM campus has been steadily moving towards being a pedestrian-oriented environment. The Hattiesburg School District has implemented several Safe Routes to School infrastructure projects in recent years to improve the safety of children walking to and from schools in the City.

The region is well served by Amtrak passenger rail service with a depot located in Downtown Hattiesburg. The City of Hattiesburg is further served by Hub City Transit's network of low-cost bus routes. All vehicles in the Hub City Transit fleet are equipped to carry two bicycles on a front rack. Transit shelters are available at many high-volume bus stops throughout the City of Hattiesburg.



Raised crosswalk on the USM campus prioritizes pedestrian travel.



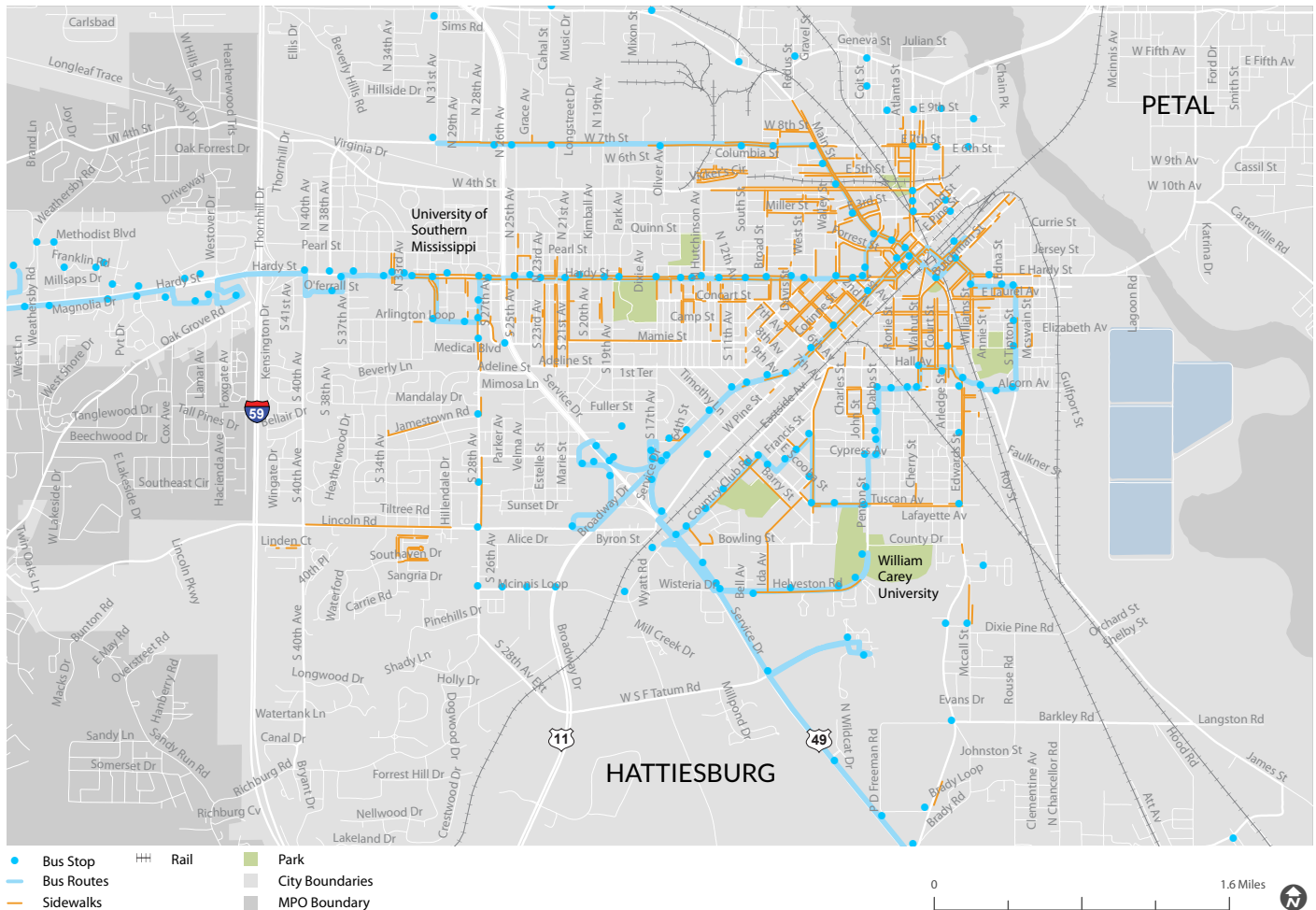
Sidewalks, such as the one above, have been constructed as part of Safe Routes to School grants.



ADA ramps and high visibility crosswalks improve the visibility of pedestrians and help all ages and abilities cross streets.



Hub City Transit bus stops, such as this one at Forrest General Hospital, provided space for riders to wait comfortably.



Constraints

Many parts of the City of Hattiesburg and surrounding jurisdictions lack sidewalks along primary and secondary roadways, including major arterials such as Hardy Street in West Hattiesburg. Several major intersections, such as the Hardy Street/US Hwy 49 junction, do not provide comfortable crossing facilities, while other roadways lack mid-block crosswalks at high-demand locations. Most traffic signals lack dedicated pedestrian crossing indications. A large proportion of sidewalks in the City of Hattiesburg do not meet ADA accessibility requirements.

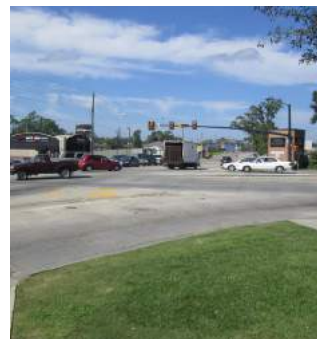
Public transit vehicles in the City of Hattiesburg operate at relatively low frequencies, reducing the attractiveness and convenience of this mode. In addition, many Hub City Transit bus stops do not provide safe and convenient waiting spaces. Fixed route transit service does not exist outside of Hattiesburg, with only demand response service and school bus service available in the City of Petal and in unincorporated portions of Forrest and Lamar Counties.



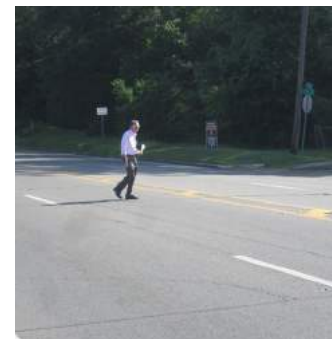
Central Avenue in Petal lacks sidewalks on both sides of the main street.



Sidewalks end abruptly, such as this one in Downtown Hattiesburg.



The Hardy Street/Highway 49 intersection does not provide comfortable pedestrian crossings.



Pedestrian running across Pine St/Broadway Dr where no crosswalk exists.

Existing Bicycle Infrastructure

Below is a photo-inventory of typical opportunities and constraints for walking and transit use found throughout the study area.

Opportunities

Currently, there are several on-street painted bike lanes in the City of Hattiesburg, along with “sharrows” painted along bicycling-priority streets with limited right-of-way width. Neighborhood streets in Central Hattiesburg provide natural bicycle-friendly routes away from arterials. Bicycle parking is available in some limited areas of Hattiesburg, such as on the USM campus, at the Amtrak station, and in Downtown.



On-street bike lanes, such as this one along Ronie Street, provide dedicated space for those biking.



Traffic circles result in calm neighborhood streets by slowing vehicles through intersections.



Bike parking, such as this shelter on the USM campus, improves bicycling convenience by providing a secure, covered location to lock one's bike.



Wayfinding signs along current bike routes in Hattiesburg help cyclists navigate existing routes.



Constraints

Current constraints for bicycling include a lack of a fully connected network of on-street bikeways, especially in the communities outside of central Hattiesburg. Busy roads without bicycle facilities also present major challenges, not only for riding safely along these roadways, but also for simply crossing them. There is a general lack of high-quality bicycle parking facilities at businesses outside of Downtown Hattiesburg and the USM campus.



Bridges without bicycling facilities pose significant barriers to potential riders.



Major roadways, such as Highway 49, lack dedicated bicycling facilities.



Bikes locked to railing due to lack of parking racks



Major intersections lack dedicated space for bicyclists to cross comfortably.

Existing Shared Use Paths and Mountain Bike Infrastructure

Below is a photo-inventory of typical opportunities and constraints for trails found throughout the study area.

Opportunities

The Longleaf Trace off-street shared-use path is a high-quality bicycling and walking facility that extends from the USM campus to the community of Prentiss, a little over 40 miles to the northwest of Hattiesburg. Another segment of the Trace is complete near Downtown Hattiesburg. Other shared-use paths in Hattiesburg are at Chain Park, between Jaycee Park and the Hattiesburg Zoo, and on the USM campus. Plans are underway to construct bicycling/walking paths along Gordon's Creek, at USM's Lake Thoreau property, and within unused railroad rights-of-way in the City of Hattiesburg.

There is an existing mountain bike trail/park along the Longleaf Trace immediately west of Jackson Road, and a second mountain bike trail is currently being planned for the Petal River Park along the Leaf River in the City of Petal.



The Longleaf Trace Trail provides recreation and transportation benefits.



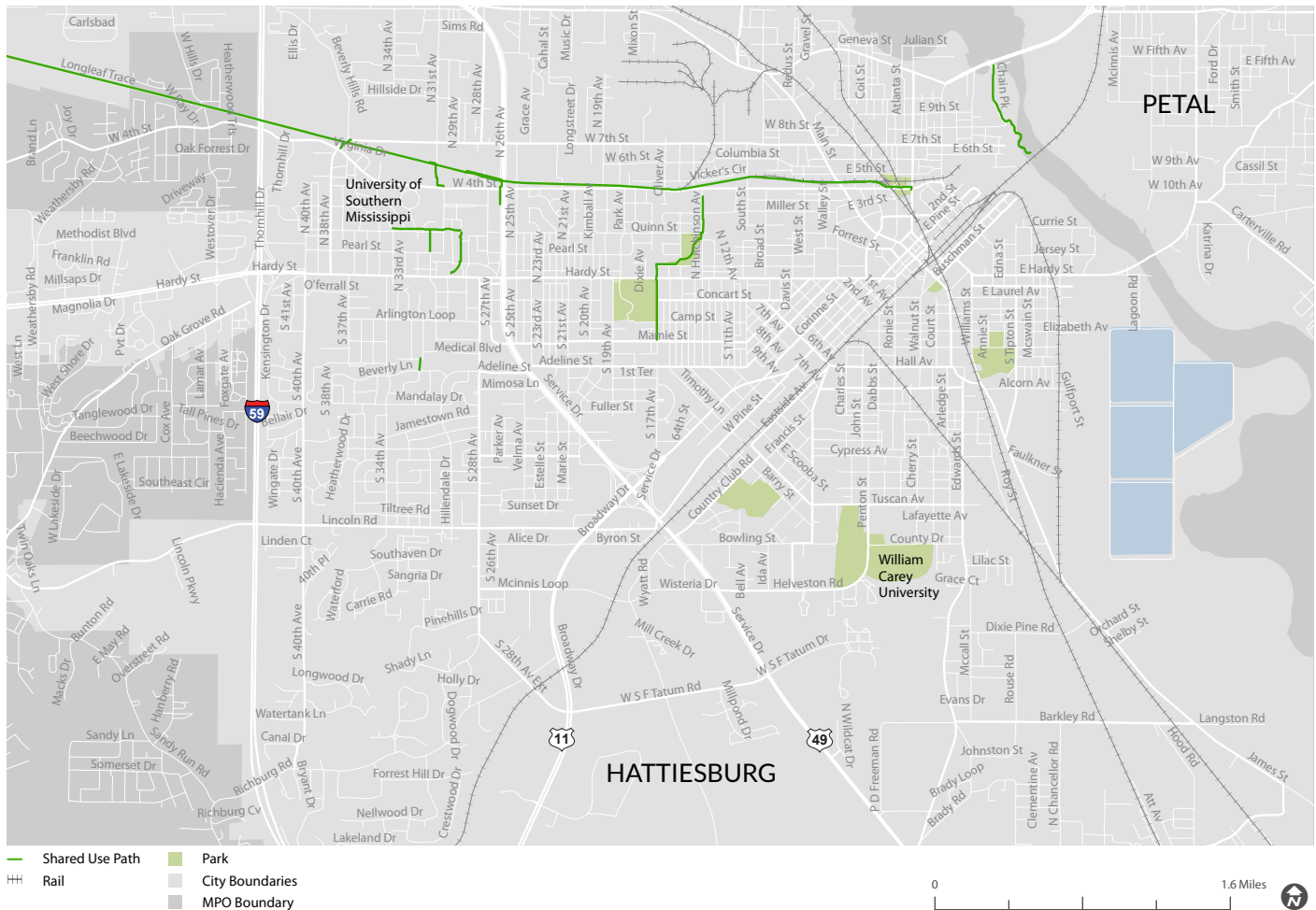
Shared-use paths, such as this one through Jaycee Park, provide connections to parks and recreation opportunities.



Abandoned rail lines provide opportunities to expand the existing shared-use path network.



Trailheads with informational signs and amenities, such as bathrooms, support the use of trails by residents and visitors.



Constraints

There is currently a gap in the Longleaf Trace between the USM campus and Downtown Hattiesburg. High visibility crossing treatments are lacking at many locations where the Longleaf Trace crosses roadways, especially outside of urban areas. Access to the trail from adjacent properties is also limited and infrequent along many sections of the trail.



Connections to adjacent businesses along the Longleaf Trace trail could be enhanced or created.



Approaches to trail crossings along roadways lack signage and/or pavement markings to alert motorists about trail crossings.



Some sections of trail are narrow and do not provide adequate buffers between the path and the roadway.



Several segments of the trail network are currently connected by on-road routes rather than shared use paths.

Bicycle Friendly and Walk Friendly Community Assessment

Overview

The Walk Friendly Community (WFC) program is a national initiative, led by the Pedestrian and Bicycle Information Center (PBIC), intended to encourage communities to improve their local pedestrian environments. Similarly, the Bicycle Friendly Community (BFC) program, led by the League of American Bicyclists (LAB), is intended to help communities make bicycling a viable transportation and recreation option regardless of age.

Both programs incorporate assessments that are useful for discovering where a community stands with respect to pedestrian and bicycling facilities and activities. The WFC and BFC assessments recognize existing success in communities that already promote walking and biking as well as provide a framework for those areas trying to achieve higher walking and bicycling rates.

Both assessments address the “Five E’s”: engineering, education, evaluation, enforcement, and encouragement. The engineering category refers to infrastructure-related elements (e.g., bikelanes, sidewalks, ADA accommodations, etc.), while the other four E’s refer to non-infrastructure efforts (such as safety campaigns, planning efforts, etc.). Comprehensive pedestrian and bicycle plans should address all five E’s to effectively advance pedestrian and bicycling activities in a community. Communities seeking status as WFC and BFC must make relevant advances in each of the Five E’s.



Conclusions

For both walking and biking, the Hattiesburg MPO, and the City of Hattiesburg in particular, has infrastructure, policies, and programs in place to become a WFC or BFC. However, there are still some gaps related to these topics too. Using the WFC scorecard and the BFC scorecard, the Hattiesburg MPO scored moderately with each assessment.

The City of Hattiesburg is likely ready to apply for WFC and BFC designation. However, the City of Petal and Forrest and Lamar Counties are likely not ready but they can make significant steps towards implementing the needed improvements to achieve the designation for either program. The recommendations for the plan were developed using the Five E’s as a framework and identified using community input, Project Advisory Group input, and guidance from the consulting team. The recommendations for this plan, when implemented, will position the cities and counties within the Hattiesburg MPO to apply for and receive WFC and BFC designation.

BFC/WFC in Mississippi

Two communities in Mississippi have achieved BFC status, and one community has received WFC status honorable mention.

The Mississippi BFC communities:

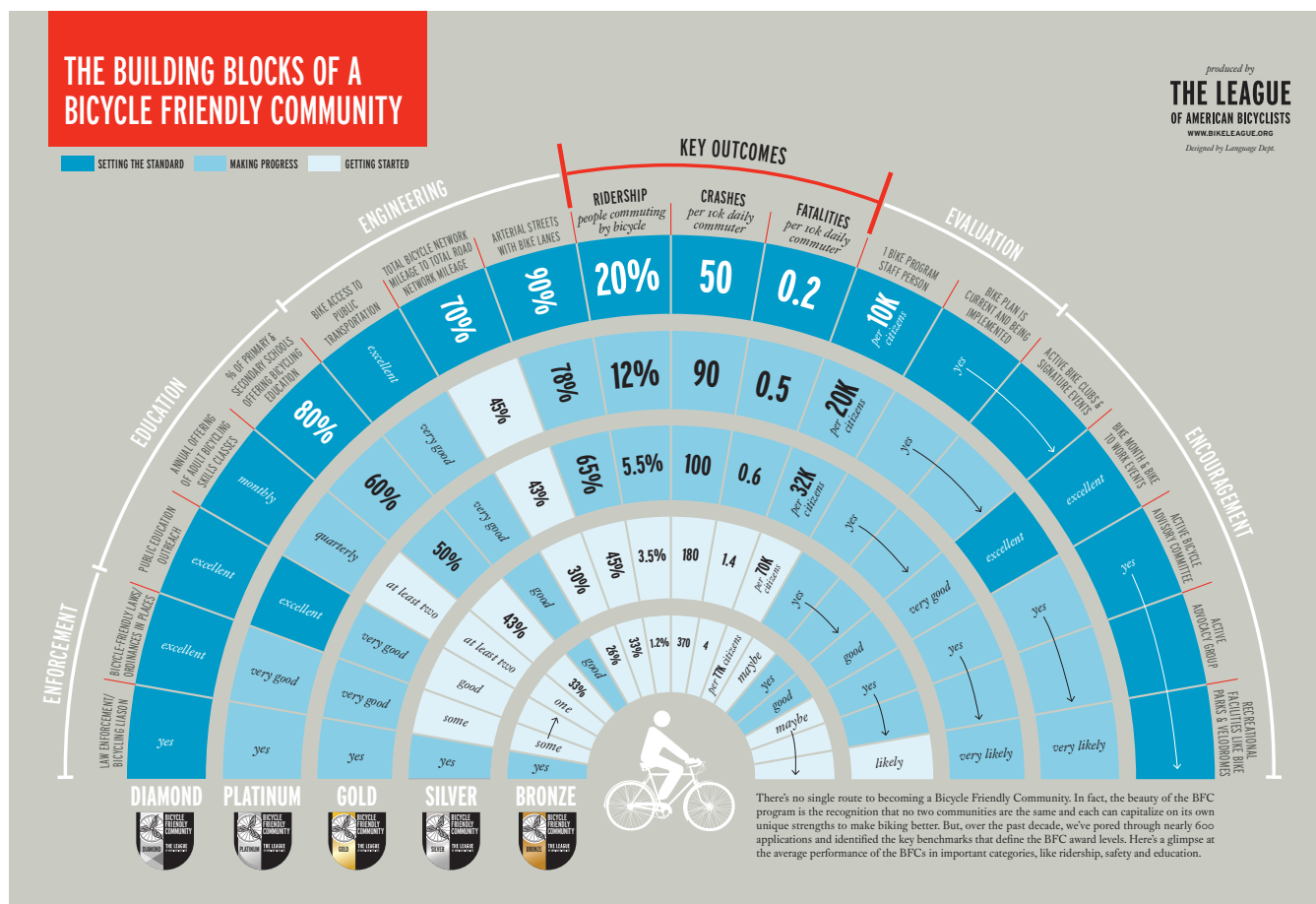
- Oxford, MS (Bronze-Level)
- Ridgeland, MS (Bronze-Level)

WFC Honorable Mention:

- Oxford, MS (Honorable-Mention)



Oxford, MS has made significant investments in infrastructure and changes in policy to work towards applying for BFC and WFC designations.



BFC Infographic. Download the full version here: <http://bikeleague.org/sites/default/files/BFC%20infographic.pdf>

Achieving BFC/BFC Scorecard

Communities wishing to become a BFC must submit an application to the League of American Bicyclists that answers questions related to the Five E's and provides other relevant community information. After an application is submitted, a local review is conducted to obtain local feedback and is followed with a review by a panel of national bicycle professionals. Communities designated a BFC will receive an award and two Bicycle Friendly Community road signs.

Table 5 provides a quick "scorecard" assessment of existing conditions in the Hattiesburg MPO based on key elements of the Bicycle Friendly Community designation criteria. The assessment of each of the Five E's is based on the field observations and research conducted by the consulting team and Project Advisory Group input.

The Hattiesburg MPO scored a 9 out of a possible 19 points. Points were counted in all five categories. The score shows that the Hattiesburg MPO communities, and the City of Hattiesburg in particular, are well positioned to achieve BFC designation.

It should be noted that the City of Petal and Forrest and Lamar Counties have some improvements to make before becoming a designated BFC. For Petal and the counties, several BFC elements are shared with Hattiesburg and, in a relatively short time frame, these communities could make significant progress towards becoming a BFC.

Table 6. Hattiesburg MPO Bicycle-Friendly Community Scorecard

| Question | Yes | No | Notes |
|---|------|----|---|
| Engineering | | | |
| Does your community have a comprehensive, connected, and well-maintained bicycling network? | 0 | 1 | There are several gaps in the network, especially along major arterials. |
| Is bike parking readily available throughout the community? | 0 | 1 | There is some parking available, but not sufficient. |
| Is there a complete streets ordinance or another policy that mandates the accommodation of cyclists on all road projects? | 1 | 0 | The City of Hattiesburg has adopted a Complete Streets (CS) ordinance. |
| Does your community require bike lanes to be constructed or upgraded with all (or the majority of) new private development? | 1 | 0 | Hattiesburg |
| Engineering Score Total | 2/4 | | |
| Education | | | |
| Is there a community-wide Safe Routes to School Program that includes bicycle education? | 0 | 1 | Hattiesburg's SRTS program appears to only include infrastructure. |
| Are there bicycling education courses available for adults In the community? | 1 | 0 | Moore's Bike Shop leads bike maintenance classes, but I couldn't find evidence of riding courses. |
| Does your community educate motorists and cyclists on their rights and responsibilities as road users? | 0 | 1 | There is not any education provided to motorists on bicycle safety outside of MDOT. |
| Education Score Total | 1/3 | | |
| Evaluation | | | |
| Is there a specific plan or program to reduce cyclist/motor vehicle crashes? | 0 | 1 | No |
| Does your community have a current comprehensive bicycle plan? | 1 | 1 | Pinebelt Pathways Master Plan; this plan will update the previous bicycle plan. |
| Is there a bicycle advisory committee that meets regularly? | 0 | 1 | No |
| Does your community have a bicycle program manager? | 0 | 1 | No |
| Has your community established a connectivity policy, bicycle-friendly block length standards and connectivity standards for new developments, or convenient bicycle access requirements? | 1 | 0 | Hattiesburg's CS ordinance and bike access requirements are in several planning documents. |
| Evaluation Score Total | 2/5 | | |
| Enforcement | | | |
| Do law enforcement officers receive training on the rights and responsibilities of all road users? | 0 | 1 | There is one certified bicycle and pedestrian safety trainer at Hattiesburg Police Department (HPD), but training for other officers is limited. Officers do receive bicycle training while they are in the Police Academy. |
| Does your community have law enforcement or other public safety officers on bikes? | 1 | 0 | Hattiesburg PD & USM PD |
| Do local ordinances promote safety and accessibility for bicyclists? | 1 | 0 | The City of Hattiesburg has adopted a Complete Streets ordinance. |
| Enforcement Score Total | 2/3 | | |
| Encouragement | | | |
| Does your community have an up-to-date bicycle map? | 0 | 1 | The city's map is outdated and was not completed as part of a Master Plan process. |
| Does the community celebrate bicycling during National Bike Month with community rides, Bike To Work Day, or media outreach? | 1 | 0 | Hattiesburg Bike to Work Day. |
| Does the community host any major community cycling events or rides? | 1 | 0 | Hattiesburg Rotary Club's Bike-a-Thon. Red Ribbon Bike Ride. |
| Is there an active bicycle advocacy group in the community? | 0 | 1 | Pinebelt Pathways does not currently meet regularly. |
| Encouragement Score Total | 2/4 | | |
| Bicycle Friendly Total | 9/19 | | |

Achieving WFC/WFC Scorecard

Communities wishing to become a WFC must apply to Walk Friendly Communities via the online application. The WFC Assessment Tool available from the website includes all of the questions related to the Five E's and other relevant community information needs contained within the application for communities to prepare. After an application is submitted, a multi-person review panel scores the applications, and then WFC award designations are announced.

Table 6 provides a "scorecard" assessment of existing conditions in the Hattiesburg MPO based on key elements of the WFC Assessment Tool. The assessment of each of the Five E's for the MPO is based on the field observations and research conducted by the consulting team and input from the Project Advisory Group.

The Hattiesburg MPO scored an 11 out of a possible 21 points. Points were scored in the Engineering, Evaluation, Enforcement, and Encouragement categories. No points were recorded in the Education category.

The score shows that the Hattiesburg MPO communities, and the City of Hattiesburg in particular, are well positioned to achieve WFC designation.

It should be noted that the City of Petal and Forrest and Lamar Counties have some improvements to make before becoming a designated WFC. For Petal and the counties, several WFC elements are shared with Hattiesburg, and in a relatively short time frame, these communities could make significant progress towards becoming a WFC.

Table 7. Hattiesburg MPO Walk-Friendly Community Scorecard

| Question | Yes | No | Notes |
|---|------------|----|---|
| Engineering | | | |
| Does your community have a comprehensive, connected and well-maintained pedestrian network? | 0 | 1 | City of Hattiesburg has 482.66 Miles of Roadways and 78.07 miles of sidewalks |
| Is there a Complete Streets Ordinance or another policy that mandates the accommodation of pedestrians on all road projects? | 1 | 0 | City of Hattiesburg adopted a Complete Streets ordinance in 2011. |
| Has your community adopted an ADA Transition Plan for the public right of way? | 1 | 0 | City of Hattiesburg adopted an ADA transition plan in 2011. |
| If yes, provide more info (e.g., what year was the plan adopted, provide a copy of the plan, what has been implemented, etc.) | | | 2011 |
| Does your community have a policy requiring sidewalks on both sides of arterial streets? | 1 | 0 | There is a policy to build sidewalks on both sides of the street if a new road is built. If a new building is built, they are only required to build sidewalks on their property. (Hattiesburg) |
| Does your community have a policy requiring sidewalks on both sides of collector streets? | 1 | 0 | There is a policy to build sidewalks on both sides of the street if a new road is built. If a new building is built, they are only required to build sidewalks on their property. (Hattiesburg) |
| Does your community require sidewalks to be constructed or upgraded with all (or the majority of) new private development? | 1 | 0 | Yes, with a few exceptions. (Hattiesburg) |
| Engineering Score Total | 5/6 | | |

Continued from the previous page.

| Question | Yes | No | Notes |
|---|--------------|----|---|
| Education | | | |
| Is there a community-wide Safe Routes to School Program that includes pedestrian education? | 0 | 1 | The City of Hattiesburg's SRTS program is for Infrastructure projects only. |
| Are there pedestrian education courses available for adults in the community? | 0 | 1 | There is not any provided. |
| Does your community educate motorists and pedestrians on their rights and responsibilities as road users? | 0 | 1 | There is not any education provided to motorists on pedestrian safety outside of MDOT. |
| Education Score Total | 0/3 | | |
| Evaluation | | | |
| Is there a specific plan or program to reduce pedestrian/motor vehicle crashes? | 0 | 1 | There is not anything that we aware of. (Hattiesburg) |
| Does your community have a current comprehensive pedestrian plan or pedestrian safety action plan? | 0 | 1 | We do not have a comprehensive pedestrian plan. (Hattiesburg) |
| Is there a pedestrian advisory committee that meets regularly? | 0 | 1 | Pinebelt Pathways does not meet regularly. |
| Does your community have a pedestrian program manager? | 0 | 1 | No |
| Has your community established a connectivity policy, pedestrian-friendly block length standards and connectivity standards for new developments, or convenient pedestrian access requirements? | 1 | 0 | Hattiesburg has done this in various planning documents, including the Midtown Master Plan. |
| Is your community served by public transit, and if so, what route planning/trip information is provided for transit passengers? | 1 | 0 | Provided by Hub City Transit |
| Evaluation Score Total | 2/6 | | |
| Enforcement | | | |
| Do law enforcement officers receive training on the rights and responsibilities of all road users? | 0 | 1 | There is one certified bicycle and pedestrian safety trainer at Hattiesburg Police Department (HPD), but training for other officers is limited. Officers do receive bicycle training while they are in the Police Academy. |
| Does your community have law enforcement or other public safety officers on foot? | 1 | 0 | Hattiesburg PD conducts foot patrols of apartment complexes and foot patrols at USM home football games. |
| Do local ordinances promote safety and accessibility for pedestrians? | 1 | 0 | Hattiesburg ordinances require sidewalks to be clear of obstructions, and they prohibit bicycle riding on sidewalks. |
| Enforcement Score Total | 2/3 | | |
| Encouragement | | | |
| Does the community celebrate pedestrians with special events or media outreach? | 1 | 0 | Hattiesburg has a Downtown Art Walk during summer months, and the city's schools have participated in International Walk to School Day. |
| Does the community host any major community pedestrian events? | 1 | 0 | Periodic block parties downtown for pedestrians during away football games. Downtown Art Walk. Pine Belt Pacers hosts several walk/run events. |
| Is there an active pedestrian advocacy group in the community? | 0 | 1 | |
| Encouragement Score Total | 2/3 | | |
| Walk Friendly Total | 11/21 | | |
| | | | |

Review of Existing Relevant Plans and Policies

This plan and policy review has been prepared to evaluate relevant background information related to preparation of the Hattiesburg-Petal-Forrest-Lamar MPO Pathways Master Plan.

State & Regional Plans and Policies

Mississippi Safe Routes to School Action Plan (2012)

The Action Plan lays out Mississippi's Safe Routes to School (SRTS) state network's objectives and tactics to succeed in the SRTS National Partnership's five strategic focus areas:

- Opening Minds through Research and Communication
- Changing Policies and Infrastructure
- Building Capacity for Leadership
- Advancing Social Equity
- Assuring Sustainability

The Mississippi SRTS network is especially interested in the adoption and implementation of Complete Streets ordinances around the state. The Action Plan also calls for thorough collection and analysis of data related to active transportation projects and levels of use.



Pinebelt Pathways Progress Report (2010)

The Progress Report summarizes recent efforts by the non-profit Pinebelt Pathways advocacy organization to support active transportation initiatives in the region, focusing separately on bicycling, walking, and off-street trail efforts. Many of the planning efforts covered in the progress report are further discussed in this chapter. The report also includes several maps showing recommended bicycling, walking, and equestrian infrastructure throughout the Lamar and Forrest Counties region, with the following staging schedule for trail construction:

Stage 1

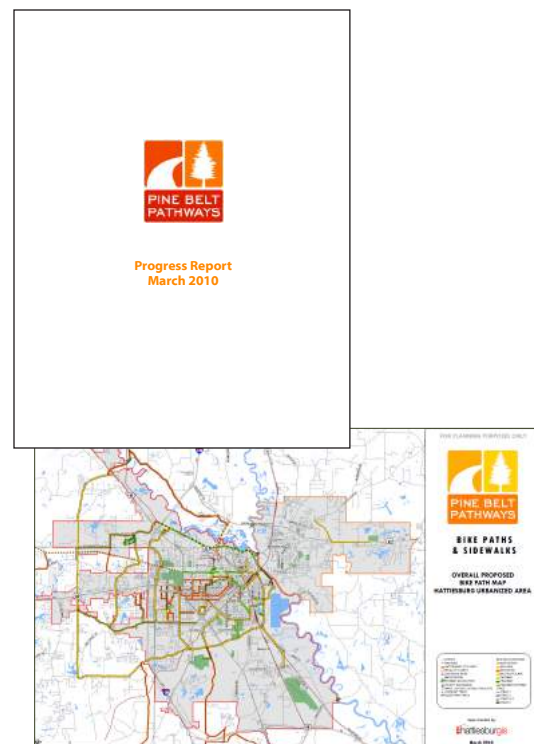
- Additional trails adjacent to Longleaf Trace near Jackson Rd. Station
- Trails on old USM Van Hook golf course
- Trails adjacent to the Leaf River and East Hardy St.

Stage 2

- Trail along Gordon's Creek between Downtown Hattiesburg and High School
- Additional trails at Little Black Creek Water Park and Paul B. Johnson State Park
- Trail along the Leaf River and Bouie River from Chain Park to the Lake Terrace Convention Center.

Stage 3

- Extension of the Black Creek Trail into Lamar County



County Plans and Policies

Lamar County Comprehensive Plan (2008)

The Lamar County Comprehensive Plan does not provide any goals, objectives, or policies to address walking or bicycling for transportation purposes. The plan does, however, offer recommendations for recreational trails in unincorporated portions of Lamar County. For instance, the plan calls for additional multipurpose trails.

Lamar County should build upon the success of the Longleaf Trace trail by designing a trail that would connect Longleaf Trace to Jackson Road and the extension of Jackson Road. From this centrally-located multipurpose trail, additional trails should be designed and built to connect residential areas to parks, schools, shopping facilities, and other destinations.

Further, the comprehensive plan recommends the construction of more neighborhood parks that include walking/jogging, bicycling, and/or nature trails. In fact, the plan projects that at least fifteen pedestrian/bicycle trails will be needed for the county's population by 2030.

City of Hattiesburg Plans and Policies

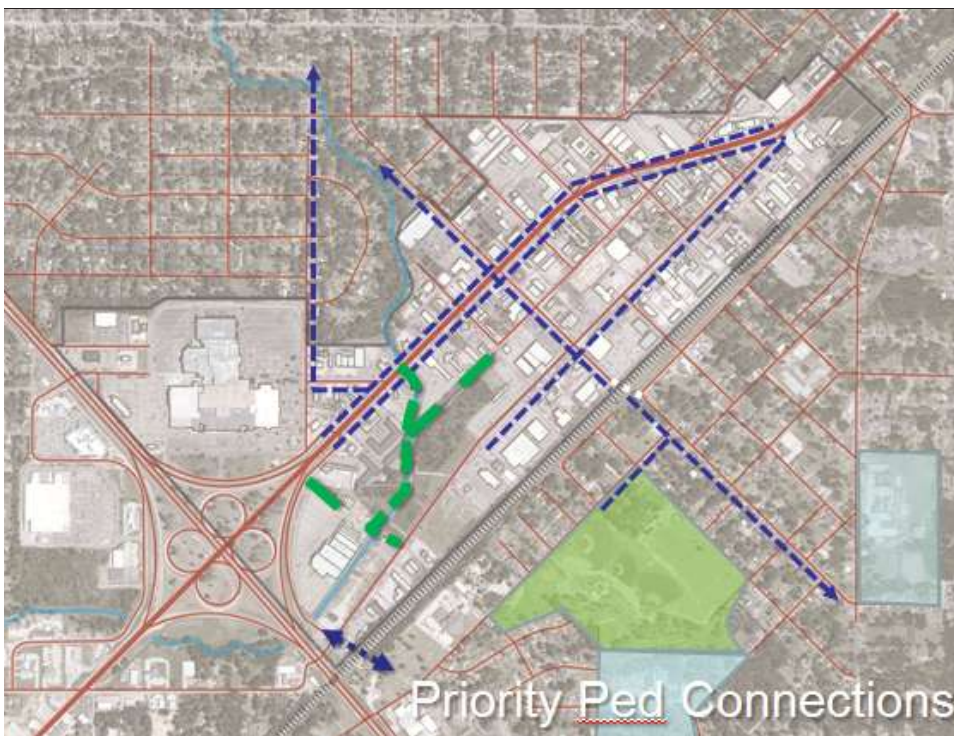
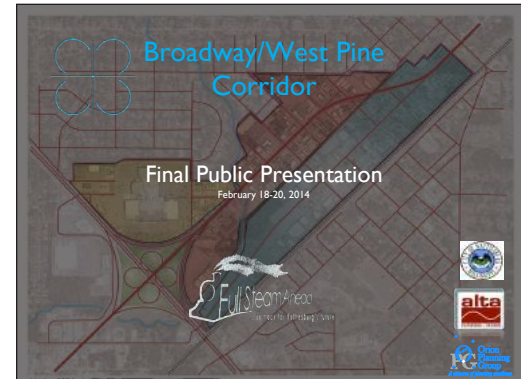
East Hardy Park Conceptual Master Plan (2014)

This plan was developed to complement the City of Hattiesburg's growing pedestrian and bicycle network, and it will eventually connect to planned extensions of both the Longleaf Trace and the Gordon Creek Linear Park. The proposed East Hardy Park is also a key part of the Twin Forks Rising initiative. In addition to providing linkages to the overall city and regional active transportation networks, East Hardy Park will contain over five miles of internal trails for walking, bicycling, and equestrian uses. The probable combined cost of the paved and natural trails is about \$990,000.



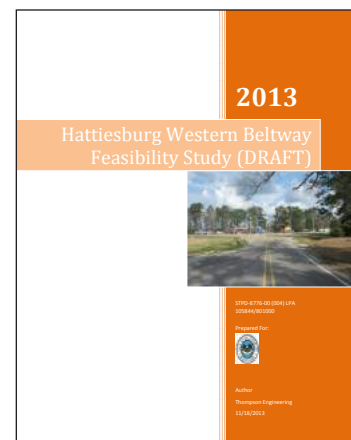
Broadway/West Pine Corridor Charrette (2014)

The Broadway/West Pine Corridor Charrette brought together a diverse range of community members to envision the future of the corridor. The vision for Broadway-West Pine that emerged calls for a revitalized district with highly attractive, safe, pedestrian-friendly redevelopment to create a positive district identity. Among the key objectives are improved access for pedestrians, bicycle riders, transit users, and motorists; complete streets that reflect the community's vision and surrounding land uses; and a reallocation of pavement assets to maximize safety, efficiency, access, economic development/revenue, and public space. The charrette resulted in specific recommendations for streetscape enhancements, pedestrian routes, bicycling facilities, and intersection improvements.



Hattiesburg Western Beltway Feasibility Study-Draft (2013)

This study examines the feasibility of creating a beltway on the west side of Hattiesburg to connect Highway 98 West to Highway 49 North, primarily utilizing the existing Jackson Road segment. In addition to alleviating automobile congestion, the City seeks a design solution that "incorporates interconnecting bicycle pathways for its citizens". After analyzing seven corridor alternatives, the study concludes that the preferred design is a 120-foot wide, four-lane divided roadway with a raised median and bicycle lanes. The proposed bike lanes in this alternative would complete the connection of the existing Longleaf Trace pathway at Jackson Road Station to the proposed bike route connection between the existing Highway 49 North intersection at Peps Point Road and the proposed bike lane at the Highway 98 West intersection at Jackson Road.



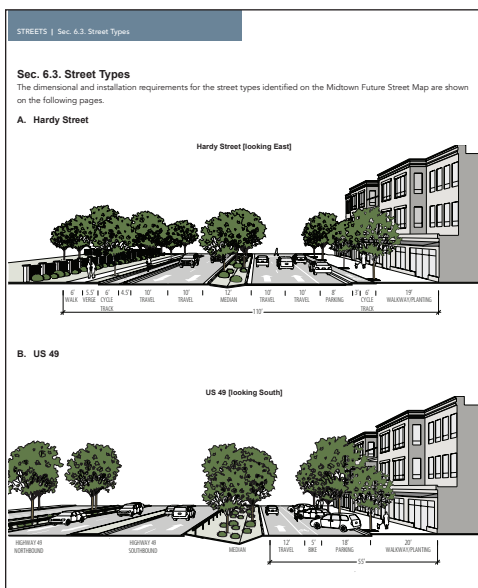
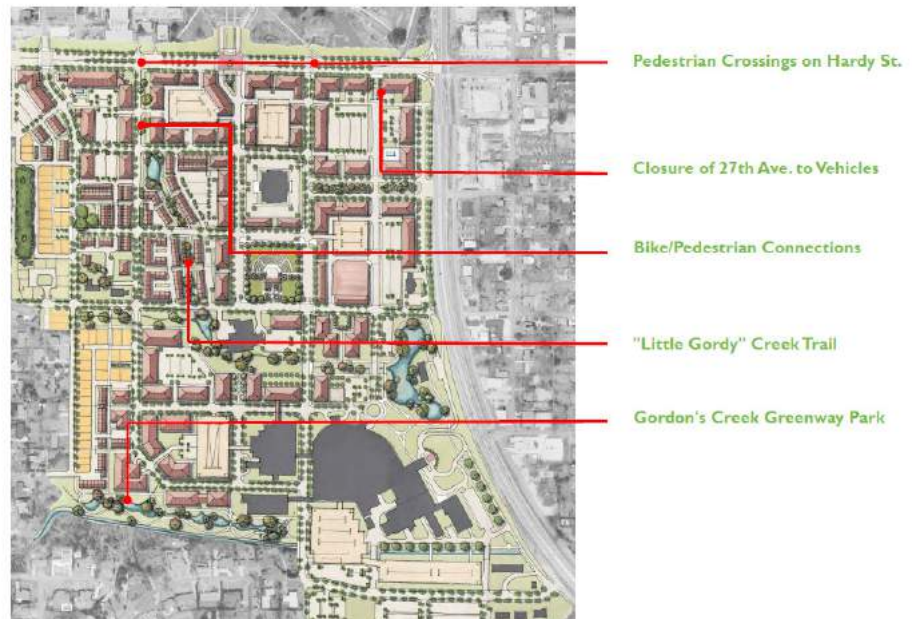
Midtown in Motion – A Master Plan for Midtown Hattiesburg (2013)



The Midtown in Motion Master Plan's primary goal is "to create a walkable, workable, livable mixed-use community that connects people to living, shopping, dining, entertainment, educational, medical, cultural, and recreational venues." A crucial part of this vision is the creation of a multi-modal transportation network that is friendly for all road users. For example, sidewalks are currently nearly nonexistent within Midtown, but the master plan will require future development to include provision of sidewalks along the public right-of-way. A network of bike routes and improved transit service are also included in the plan's recommendations.

Exhibit 27

5. Enhance Bike & Pedestrian Connections: Improving connections is key to ensuring that pedestrians and cyclists can safely travel around and throughout Midtown.



Midtown Hattiesburg Form-Based Code (2013)

The Midtown Form-Based Code was developed to implement the Midtown Master Plan by amending the Hattiesburg Land Development Code. Specifically, the new code "fosters predictable results and a high-quality public realm by prescribing the physical form of buildings and other elements and addressing the relationship between building facades and the public realm, the form and mass of buildings in relation to one another and the scale and types of streets and blocks." Among other items, the form-based code intends to make streets more conducive and friendly to bicycling and walking while enhancing existing bike and pedestrian connections. The code requires that all streets be constructed with sidewalks, street trees, bike facilities, medians, travel lanes, and on-street parking as illustrated for various street types in the document.

Twin Forks Rising Master Plan-Phase II (2013)

The Twin Forks Rising Master Plan was initiated by the City of Hattiesburg to create a future land use plan for the Ward 2 neighborhoods surrounding Downtown Hattiesburg on the north, east, and south. Among other elements, the plan calls for continued implementation of the City's Complete Streets Policy on east-west roadways to connect to Chain Park. The plan also embraces a connection to William Carey University along the Ward's southern edge.

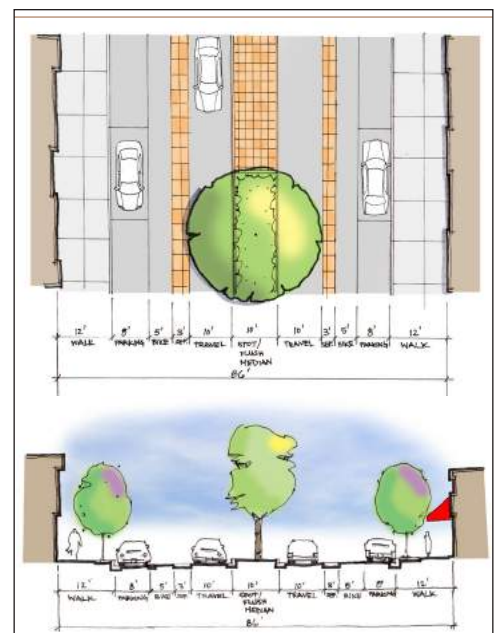
Implementation strategies include:

- Enhance pedestrian connections across the new overpass bridge by providing a dedicated and separated pedestrian/bicycle travel lane.
- Promote the overall character of Twin Forks Rising through low-maintenance design of streetscapes and other public spaces.
- Encourage multi-modal connections, specifically pedestrian and bicycle, between all neighborhoods.
- Require that all transportation projects, whether developer or government initiated, consider pedestrian and bicycle level of service as part of the analysis.
- Provide convenient access to existing amenities:
- Upgrade streets for better pedestrian and bike access from Ward 2 to Chain Park.
- Upgrade streets for better pedestrian and bike access from William Carey University to Downtown.
- Upgrade streets for better pedestrian and bike access from Dabbs/Katie and East Jerusalem neighborhood to Duncan Lake Park.
- Provide convenient access to Leaf River for recreational use.



Hardy Street Corridor Plan-Draft (2013)

The Hardy Street Corridor Plan resulted from a design charrette focused on Hardy Street between Highway 49 and Downtown Hattiesburg. The recommendations include larger urban design changes, as well as specific roadway reconfigurations intended to create a more pedestrian- and bicycle-friendly corridor that would better support a rejuvenated commercial destination. In addition to wider sidewalks for pedestrians, the Plan recommends reducing the number of travel lanes to one in each direction so that buffer-separated bicycle lanes can be added to each side of the street.



Hattiesburg Land Code Amendment for Complete Streets (2012)

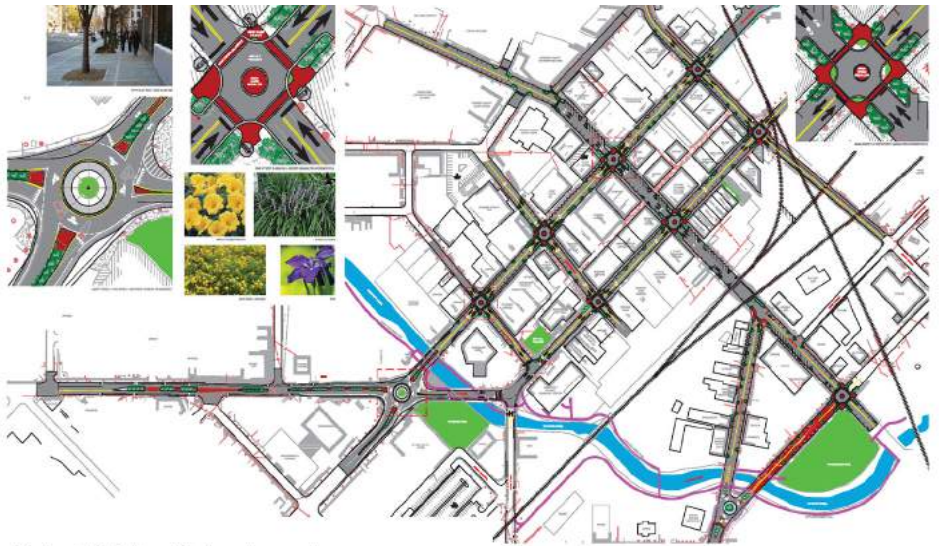
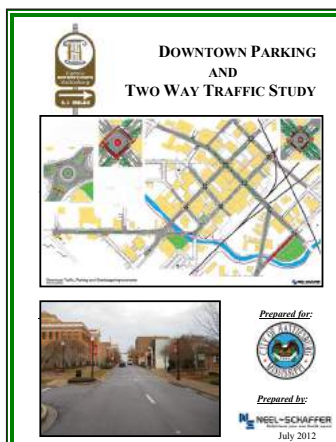
The code amendment supports the City's Complete Streets ordinance by incorporating specific policies into the City's charter. First, the amendment requires provision of and defines acceptable siting and design for bicycle parking at all new developments within a one-mile radius of an existing or under construction bicycle lane or shared-use pathway. Second, all new developments or significant property upgrades shall provide for pedestrian and bicycle access by installing sidewalks, bicycle lanes, and/or shared-use paths within and on the perimeter of the development (certain exemptions apply in limited situations). Third, the land code amendment requires pedestrian and bicycle access easements between the ends of cul-de-sacs and the nearest walking and/or bicycling facility. Finally, new developments must ensure that new pedestrian and bicycle facilities connect with adjoining existing and developable properties in a way that continues the pathway network.

In addition, the amendment requires the following:

- Where block length exceeds 1,200 feet, sidewalks or shared-use paths shall be provided mid-block to connect parallel streets on the long side of the block.
- All bridges shall be provided with substantial guard rails on both sides of two five (5) foot minimum width sidewalks.

Downtown Hattiesburg Parking and Two Way Traffic Study (2012)

The Downtown Parking and Two Way Traffic Study report recommends converting many of Downtown's current one-way streets to two-way circulation in order to create a more pedestrian-friendly commercial and residential district. In addition, the study recommends roundabouts, curb extensions, narrowed travel lanes, gateway features, wayfinding signage, and other improvements aimed at slowing automobile speeds and encouraging more walking and bicycling.



Hub City Transit Service Route Improvements Study (2012)

The Study shows ridership volumes at particular transit stops. This data can illustrate potential priority stops that should be linked to the bicycling and walking network. In addition, pedestrian amenities such as shade structures and benches, should be provided at stops with high ridership volumes.

Many participants in public outreach requested a midtown transfer point that would be located south of Hardy Street near USM and Forrest General Hospital.



Hattiesburg Complete Streets Ordinance (2011)

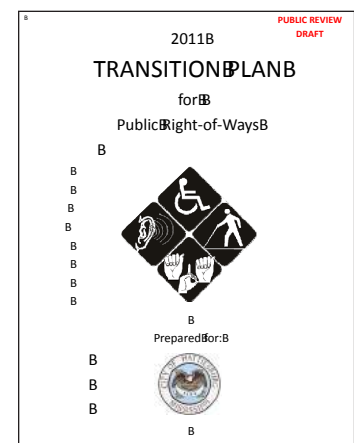
The ordinance states that “The City of Hattiesburg will plan for, design and construct all new Transportation Improvement Projects to provide appropriate accommodation for pedestrians, bicyclists, motorists, and persons of all abilities, while promoting safe operation for all Users.” In addition, “Every Transportation Improvement Project shall incorporate Complete Streets Infrastructure including both Bicycle and Pedestrian Ways sufficient to enable reasonably safe travel along and across the right of way for each category of Users”, unless one or more of a set of specific conditions exist. All pedestrian facilities “shall be designed, constructed, operated, and maintained so that all pedestrians, including people with disabilities, can travel safely and independently.”

City of Hattiesburg ADA Transition Plan for Public Right-of-Ways (2011)

The City of Hattiesburg’s 2011 ADA Transition Plan “develop(s) a program to upgrade pedestrian facilities and bring them into compliance with ADA standards”. Audits performed as part of the study found the following non-compliant facilities (with the estimated cost to reach compliance shown in parentheses):

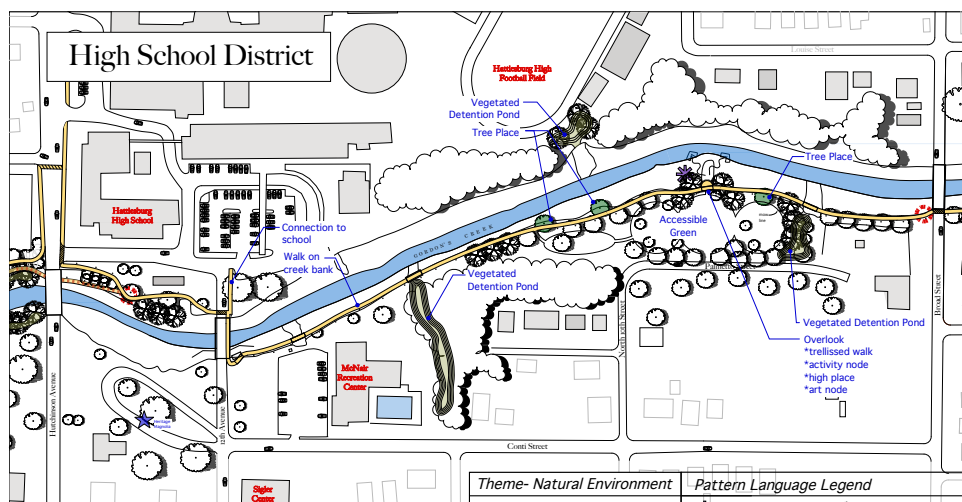
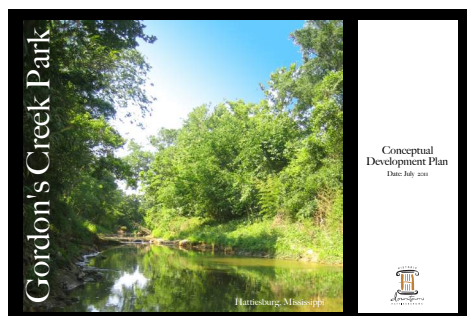
- 850 curb ramps out of more than 500 intersections (\$1,384,080 to repair)
- 25.6 miles of sidewalks out of ~60 miles (\$370,406 to correct maintenance issues)
- 18 of 82 traffic signals did not have pedestrian signals; 17 of the 82 traffic signals do include pedestrian signals but were non-compliant (\$1,025,000 to attain compliance)

The first priority group of ADA compliance improvements are based on public input requests for localized access, while a secondary priority for improvements is in the City’s Downtown District. Phase I improvements will take place within a half-mile radius around public elementary schools, Phase II improvements will be within the public right-of-way along commercial corridors, and Phase III improvements will occur in residential neighborhoods and industrial areas.



Gordon's Creek Park Conceptual Development Plan (2011)

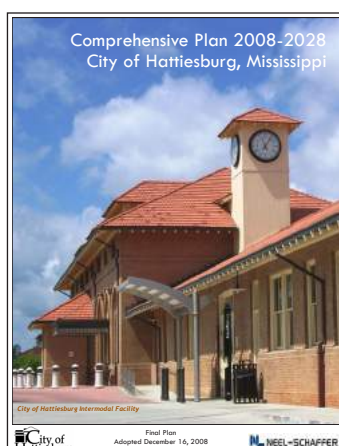
The conceptual plan for the Gordon's Creek Linear Park provides detailed designs and cost estimates for the entire length of the proposed project. While most of the proposed facilities prioritize walking as a mode of travel, the conceptual plan does include provision of bicycle parking racks at parks and hubs along the linear park. The proposed design includes several pedestrian bridges and connections to nearby destinations, sidewalks, and trails. At road crossings, the plan recommends curb extensions at crosswalks to narrow the road crossing for pedestrians, median crossing islands, and raised crosswalks. In addition, the plan provides specific designs and regulations related to pedestrian undercrossings of the Norfolk Southern railroad bridges.



Hattiesburg Comprehensive Plan 2008-2028

Hattiesburg's Comprehensive Plan approaches community development in a coordinated and unified manner, seeking to preserve, promote, protect, and improve the public health, safety, comfort, good order, and appearance within its jurisdiction. The plan's Infrastructure section provides an overall plan for improving infrastructure facilities including sidewalks and bicycle paths. It commits the City to provide sidewalk and bicycle paths/lanes to provide stronger connections to schools, shopping, and employment districts. The plan also documents public support for a Complete Streets policy adoption, which has since become a part of the Land Development Code. That Complete Streets policy currently requires sidewalk or bicycle lane additions or a combination of the two for any new street construction or major upgrade.

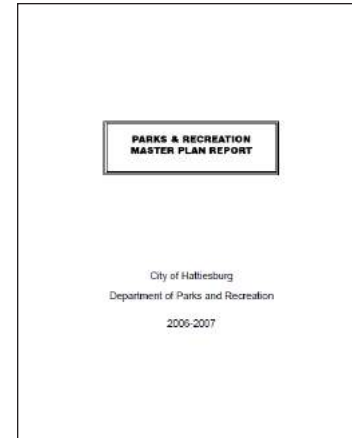
During the public outreach phase of the plan, community stakeholders discussed specific issues and priorities related to transportation and enhanced quality-of-life. For example, William Carey University stated one of their priorities is to "partner with the City of Hattiesburg to address pedestrian and bicycle connections between the university, Downtown Hattiesburg, and the Longleaf Trace". In general, residents expressed a desire for more bicycle facilities to connect the Longleaf Trace with other parts of the City. The Comprehensive Plan responds by calling for "a bikeway master plan designating areas where bicycle pathways or bicycle lanes should be constructed or designated".



Hattiesburg Parks and Recreation Master Plan (2007)

As part of the Parks and Recreation Master Plan process, the City of Hattiesburg conducted a survey of residents to gauge public preferences and level of current use of facilities. According to the survey results, “the highest rate of participation by Hattiesburg citizens is in the wellness activities group, such as aerobics, weight training, yoga, walking, and jogging”. Recommendations from the master plan that are relevant to the Pathways Master Plan are:

- Develop a comprehensive, citywide greenway system and inter-modal connectivity. The Longleaf Trace is an outstanding resource for the community but lacks safe routes that reach into surrounding neighborhoods. A citywide comprehensive trail system of pedestrian ways, continuous sidewalks, and bicycle lanes should be utilized to link together neighborhoods, schools, parks, business and entertainment districts, and the Longleaf Trace to provide a contiguous flow of non-automobile traffic.
- Increase and improve street tree planting, landscape enhancements, green spaces, and open natural spaces throughout the city. This could be in conjunction with the above mentioned greenway system.

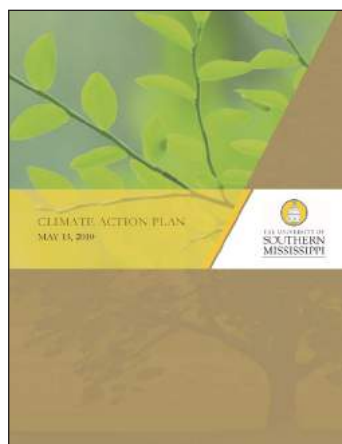
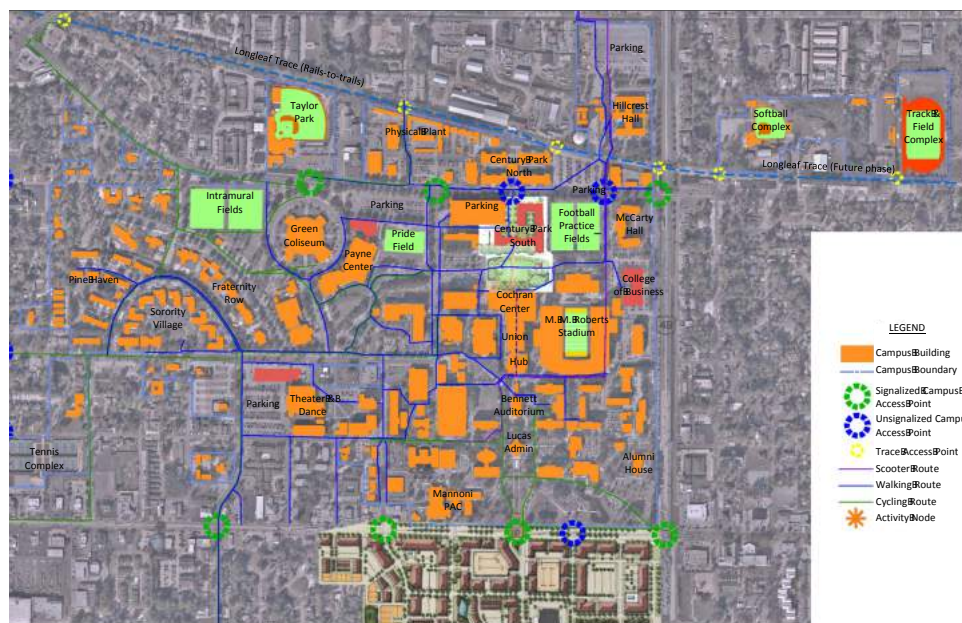


University of Southern Mississippi Plans and Policies

University of Southern Mississippi Campus Bicycle and Pedestrian Master Plan (2014)



The USM Bicycle and Pedestrian Master Plan serves to complement the University's Master Campus Facilities Plan from 2007. The Bicycle/Pedestrian Plan's goals are "to provide safe and affordable mobility, a transportation system that significantly lowers greenhouse gas emissions, and healthy, active lifestyles for the University community". In addition to recommended walking and bicycling infrastructure and routes, the plan included design guidelines for facilities. The master plan also prioritizes the various infrastructure projects into three categories based on estimated year of completion.



University of Southern Mississippi Climate Action Plan (2010)

As stated in the action plan, "29% of the University's greenhouse gas emission are related to transportation. Providing pedestrian and bicycle infrastructure to create a more walkable and bike-friendly campus will help decrease the GHG emissions caused by members of the campus community using motorized vehicles to travel to campus and from different locations once on campus". The document discusses current efforts to encourage active and sustainable transportation, such as the "EcoEagle Bike" program that loans bikes to students. The plan then outlines planned mitigation strategies, including working with local agencies to improve public transportation options on and to campus and increasing awareness of existing sustainable transportation facilities and programs.

University of Southern Mississippi Master Campus Facilities Plan (2007)

In addition to discussing the overall development vision for the Hattiesburg campus, the Master Facilities Plan includes a focus on sustainable and safe transportation within the school's physical boundaries. The plan identifies pedestrian gathering spaces (plazas), major pedestrian corridors, shared service corridors, and the campus fitness trail. The plan also identifies regional bicycle and pedestrian infrastructure and links to the campus bicycle and pedestrian network.

The plan includes a goal of creating a mostly walkable core campus by increasing space for pedestrian and bicycle movements and decreasing vehicular traffic within a five to ten minute walk circle of key academic, residential, and student life destinations. Key components include convenience, comfort, accessibility, safety, provision of shade, lighting, and tactics to resolve pedestrian/bicycle and vehicular conflict points.



USM Lake Thoreau Environmental Center Master Plan

The Lake Thoreau Environmental Center Master Plan includes trails and linkages to the Longleaf Trace, and the text promotes the environmental center as a "short-drive or bike ride from Hattiesburg, Sumrall and the USM campus". One of the University's three main principles for the campus is "Develop an Integrated Circulation System that includes pedestrian and bicycle access". In particular for the center, future restroom and visitor center facilities will accommodate users of the Longleaf Trace and others. Bicycle racks will also be included at the site. As for walking and bicycling opportunities on the site itself, there will eventually be over five miles of hiking trails and over ten miles of bicycling paths for use by the public.





RECOMMENDATIONS

Overview

CHAPTER OUTLINE:

Overview

Pedestrian and Transit Access

Bikeways and Shared Use Paths

Support Facilities

Program Recommendations

A comprehensive set of infrastructure improvements, policy changes, and programs are recommended to increase the safety, convenience, and enjoyment of bicycling, walking, and riding transit in the Hattiesburg MPO. These recommendations should be implemented in coordination with Forrest and Lamar Counties, Cities of Hattiesburg and Petal, Hattiesburg MPO, and MDOT.

Bicycle and pedestrian infrastructure recommendations are presented first, divided into two major sections:

- Pedestrians and Transit Access
- On-Street Bikeways and Shared-Use Paths

These sections are followed by sections that focus on support facilities and programs that can encourage, enforce, and educate those in the community about walking and biking.

For more detailed guidance on pedestrian, transit, bikeway, and trail design, see *Appendix A: Hattiesburg MPO Pathways Master Plan Design Guidelines* at the end of the document.

Pedestrians and Transit Access

Overview

The focus of the pedestrian and transit recommendations is on access to transit, parks, and schools as well as along major corridors. These areas present the greatest need in terms of safety as well as access to jobs, recreation, and education.

Investments in walking infrastructure within the Hattiesburg MPO, including sidewalks, street crossings, and transit stops, should be prioritized when considering funding. Improvements in walking infrastructure will need to be coordinated between different departments, jurisdictions, and property owners, depending on the type of facility (e.g., crosswalk versus sidewalk) needed, right-of-way ownership (e.g., city versus county street), and type of project (e.g., maintenance project versus a capital project).

The recommendations presented within this section should be followed, regardless of the responsible party, facility type, or source of funding.

Design User

As stated in the *Introduction* chapter of this plan, the recommendations are developed with specific user groups in mind. These groups are restated here. The policies and recommendations within this chapter are focused on accommodating these groups. The target design users are:

- All ages and abilities
- Future generations
- Students going to school - elementary school through university
- Transit riders
- People walking and biking for or to recreation
- People walking and biking for transportation
- People walking and biking out of necessity
- Families
- Seniors
- Workers
- Visitors



Facility Selection

For guidance on selection specific sidewalk features, amenities, and crossing treatments, see the Pedestrian section of *Appendix A: Design Guidelines*.



Pedestrian recommendations focus on access to community destinations for all ages and abilities.

Pedestrian Priority Area Policies

For Priority Pedestrian Corridors and Zones, the following conditions should be provided. If they are not provided, the communities within the Hattiesburg MPO should identify ways to provide them.

Gaps in the sidewalk network should be closed.

The sidewalk network should be complete and connected within the Priority Pedestrian areas.

Priority pedestrian areas should be universally accessible.

Sidewalks and crossings should be ADA compliant and adequately maintained.

Bus stops should be accessible by a sidewalk.

All bus stops in Priority Pedestrian areas should be connected to the sidewalk network, and the waiting areas should be paved and ADA compliant.

Frequent and safe street crossings should be provided.

Within Priority Pedestrian Zones and along Priority Pedestrian Corridors, pedestrians should be able to cross frequently. Crossing should be marked or signalized to provide a safe crossing.

Bus stops should be located in close proximity to street crossings.

Bus stops should be located as close as possible to marked or signalized street crossings to encourage riders to cross the street safely.

Bridges and underpasses should provide sidewalks on both sides of the roadway.

Pedestrians should be able to cross under or over canals and interstates on both sides of the roadway.

Pedestrians should have access and a pathway along the roadway or street.

Along major roads in urban areas, sidewalks should be on both sides of the roadway.

Along minor roads or neighborhood streets in urban areas, sidewalks should be on at least one side of the roadway.

In remote areas that pedestrian corridors pass through, a paved shoulder or sidewalk should be provided.

Pedestrian Priority Areas

Pedestrian Priority Corridors

The Pedestrian Priority Corridors are the arterials, collectors, and major transit corridors within the MPO. These corridors are characterized by higher vehicle speeds and volumes than on neighborhood streets. Some are served by transit as well. Many of the major destinations and commercial areas are also located along these corridors.

For these corridors, a particular focus should be made on providing frequent and safe crossings, appropriate bus stop space and locations, and access to adjacent neighborhoods and businesses. A focus should also be made to coordinate infrastructure improvements with MDOT, Forrest and Lamar Counties, Cities of Hattiesburg and Petal as well as Hub City Transit. These corridors are maintained and served by multiple jurisdictions and agencies.

Pedestrian Priority Zones

Similar to priority corridors, Priority Pedestrian Zones have unique needs and should be a top priority when considering investments in pedestrian infrastructure. For these areas, a particular focus should be made on providing frequent and safe crossings as well as reducing vehicle speeds.

Schools, Colleges and Universities

Children and young adults should be able to walk to school safely. Most students in elementary, middle, and high school are not old enough to drive and should have the opportunity to get to school by means other than driving. For students attending colleges or universities, walking, biking, and taking transit can be a cost-effective and convenient way to access campus.

Additionally, schools are community centers and often have activities going on after regular school hours, both for school-related activities as well as other community events. Adequate sidewalks, frequent crossings, and other safety infrastructure should be provided to accommodate safe access from neighborhoods surrounding schools, particularly for students.

Parks

Parks provide recreation opportunities for the community and should be accessible by foot from adjacent neighborhoods. All parks should be accessible from the adjacent neighborhoods by sidewalk.

Consideration should also be given to pedestrian only access points to parks. This strategy can decrease the distance one has to walk to enter a park, which in turn decreases the time it takes to walk to a park.



Commercial areas along major streets, schools, and parks make up the core elements of the Priority Pedestrian Areas.

Figure 1. Hattiesburg MPO Pedestrian Priority Areas Map

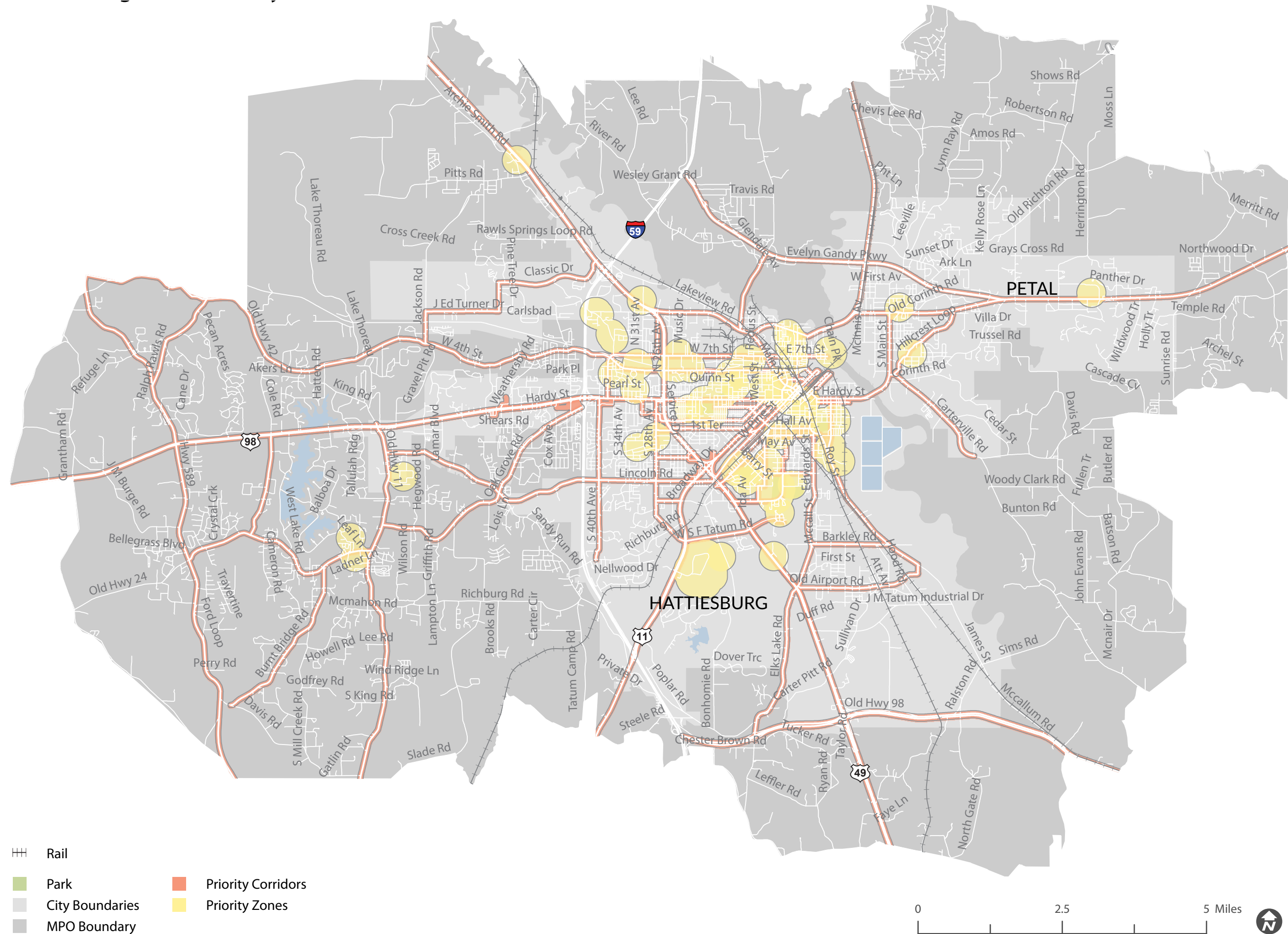
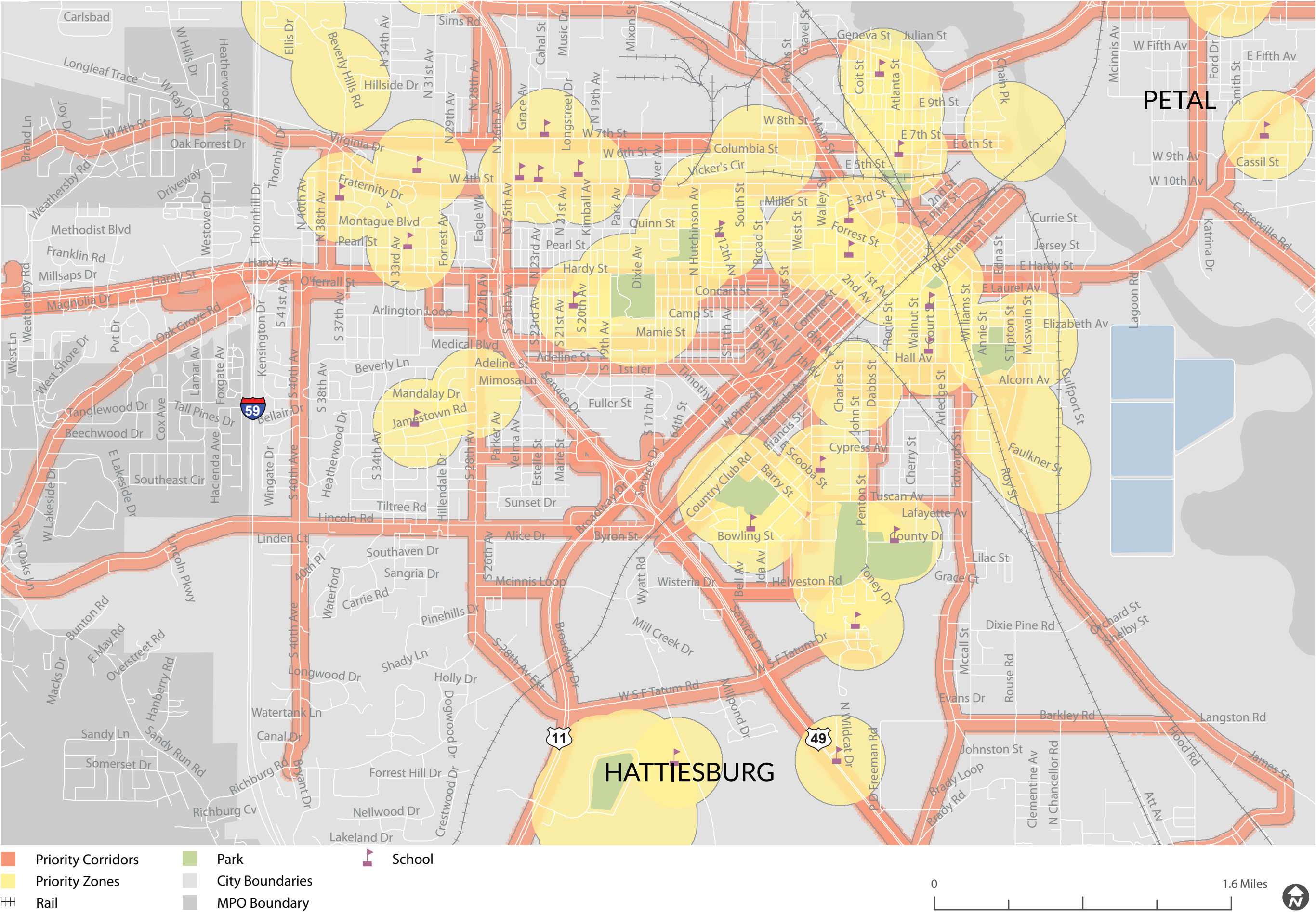


Figure 2. Hattiesburg MPO Pedestrian Priority Areas Map - Central MPO Focus



Transit Access

Bus stops should be easily visible by pedestrians and accessible by sidewalks. The frequency, placement, and size of bus stops should be based on a variety of factors including maximizing access to destinations, minimizing delay in service, and serving ridership needs.



At a minimum, bus stops should have:

Safe access

All bus stops should be accessible by a sidewalk and appropriate street crossing locations.

Dedicated space for bus stop

Adequate space should be provided for people to wait for a bus. Additionally, buses should have safe and adequate space to stop safely to allow riders to board. Bus stop space should be designed to meet demand and ridership levels.

ADA access

Bus stops should be universally accessible and comply with ADA standards. Sidewalk widths, landing pads, and curbs should allow wheelchair access and loading.

Implementing Priority Pedestrian Zones

To adequately assess the needs along the Pedestrian Priority Corridors and Priority Pedestrian Zones, the following implementation strategies should be employed:

- **Inventory.** The Hattiesburg MPO and its partner jurisdictions should inventory the pedestrian facilities, including the location and width of sidewalks along with the location of marked crossings. The inventory should be maintained in GIS and regularly updated based on maintenance and construction projects.
- **Safety Audits.** The Hattiesburg MPO and its partner jurisdictions should conduct regular safety audits along priority corridors and within priority zones to assess the unique safety needs and appropriate safety improvements. See the Programs and Policy section of this chapter for more information on Safety Audits.



Safety audits should be conducted along priority pedestrian corridors to assess conditions and needs.

On-Street Bikeways and Shared-Use Paths

Overview

The overall goal with the bikeways and shared-use path recommendations is to create a connected network of bikeways and paths that facilitate bicycling for transportation and recreation. This means connecting destinations such as schools (including colleges and universities), parks, and commercial districts. It also means facilitating access to existing rural bike routes used primarily for recreational rides and tourism. Notably, the proposed network in the plan will allow people to safely and comfortably ride a bike over major bridges and conveniently access businesses and major employment destinations in downtown Hattiesburg and Petal as well as along major corridors.

Network Recommendations

The bikeway recommendations for this plan include over 158 miles of new on-street bikeways (including bike lanes, buffered bike lanes, cycle tracks, and bicycle boulevards) to dramatically increase the Hattiesburg region’s bicycle facility network connectivity. The recommendations also include a network of rural bike routes for recreational riding and touring.

The shared-use path network includes a combination of trails, which are completely separate from the roadway, and sidepaths, which are parallel to the roadway. The path recommendations for this plan include over 48 miles of new trails and sidepaths. At full build out of the proposed path network, the Hattiesburg region will have over 114 miles of paths, improving connections to neighborhoods, schools, parks, shopping, and jobs.

Table 8. Proposed On-Street Bikeway and Shared-Use Path Facilities

| Facility Type | Miles |
|---------------------------------|-------|
| Shared-Use Paths | 54 |
| Bike Lanes | 29 |
| Bike Boulevard | 14 |
| Shared Lane Markings “Sharrows” | 17 |
| Bike Routes | 98 |

Bikeway and Shared-Use Path Types

Several different kinds of bikeways and shared-use paths are recommended in this chapter. Brief descriptions are provided here. For more detailed guidance on different types of facilities, please see Appendix A: Design Guidelines.

Consistent with bicycle facility classifications throughout the nation, these Bicycle Facility Design Guidelines identify the following classes of facilities by degree of separation from motor vehicle traffic.

Table 10. On-Street Bikeway and Shared-Use Path Types



| Type | Example |
|--|---------|
| Shared-Use Path A Shared-Use Path allows for two-way, off-street bicycle use and also may be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. | |
| Bike Lane A portion of the roadway that has been designated by striping, signing, and marking for the preferential and exclusive use of bicyclists. Variations include buffered bike lanes and protected bike lanes, or "cycle tracks". | |
| Bike Boulevard Low-volume and low-speed street that has been optimized for bicycle travel through a combination of speed and volume management strategies, wayfinding signage, shared-lane markings, and major-minor intersection crossing treatments. | |
| Shared Lanes "Sharrows" A shared lane roadway is a general purpose travel lane marked with shared lane markings, or "sharrows," to encourage bicycle travel and proper positioning within the lane. | |
| Bike Route Bike routes along rural roadways can be signed along major recreational and bike touring routes. For roadways with higher speeds and volumes, wide shoulders can create space for bicyclists to ride outside of a travel lane. | |

Figure 3. Hattiesburg MPO Bikeways and Shared Use Path Recommendations Map

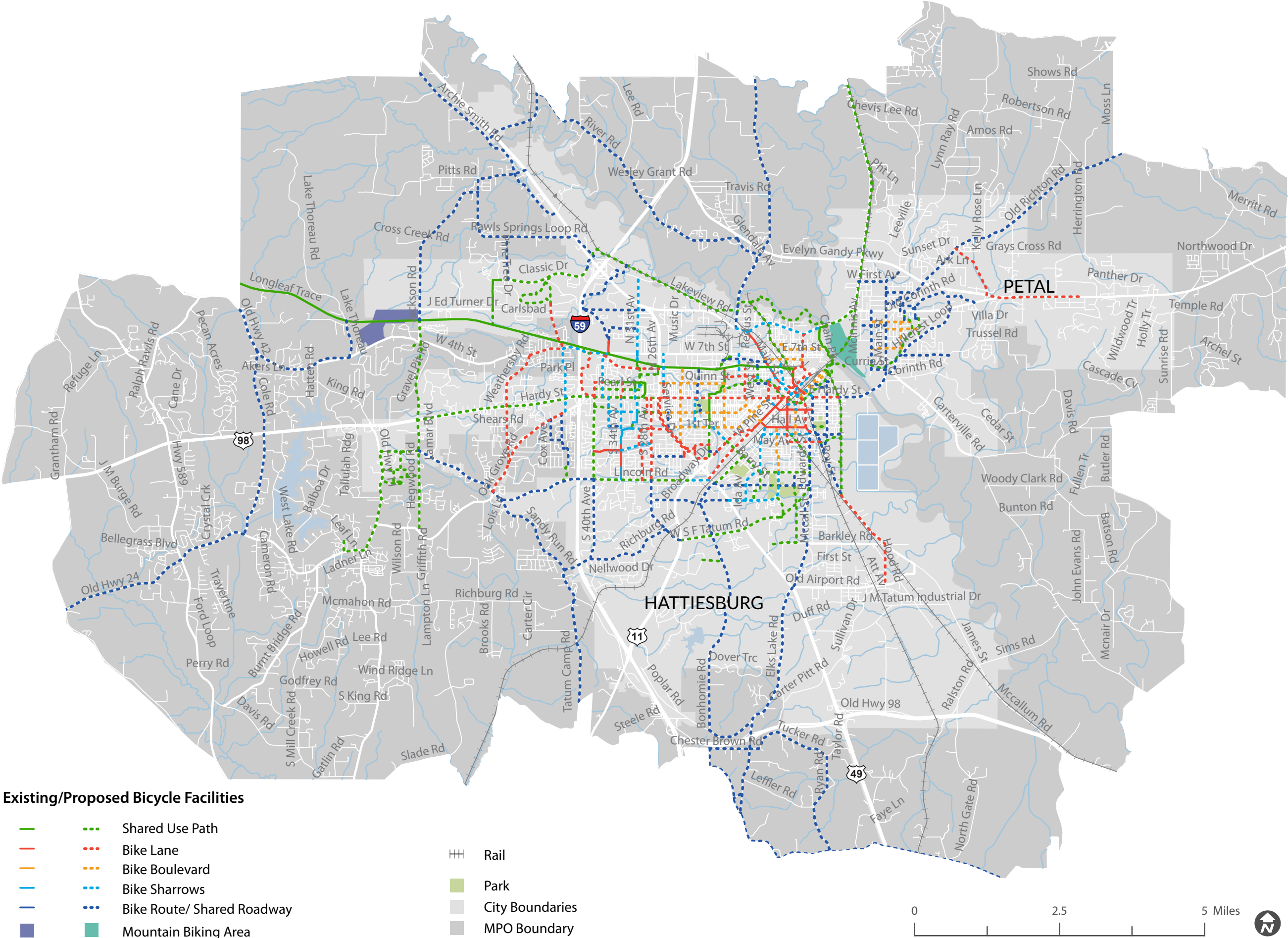
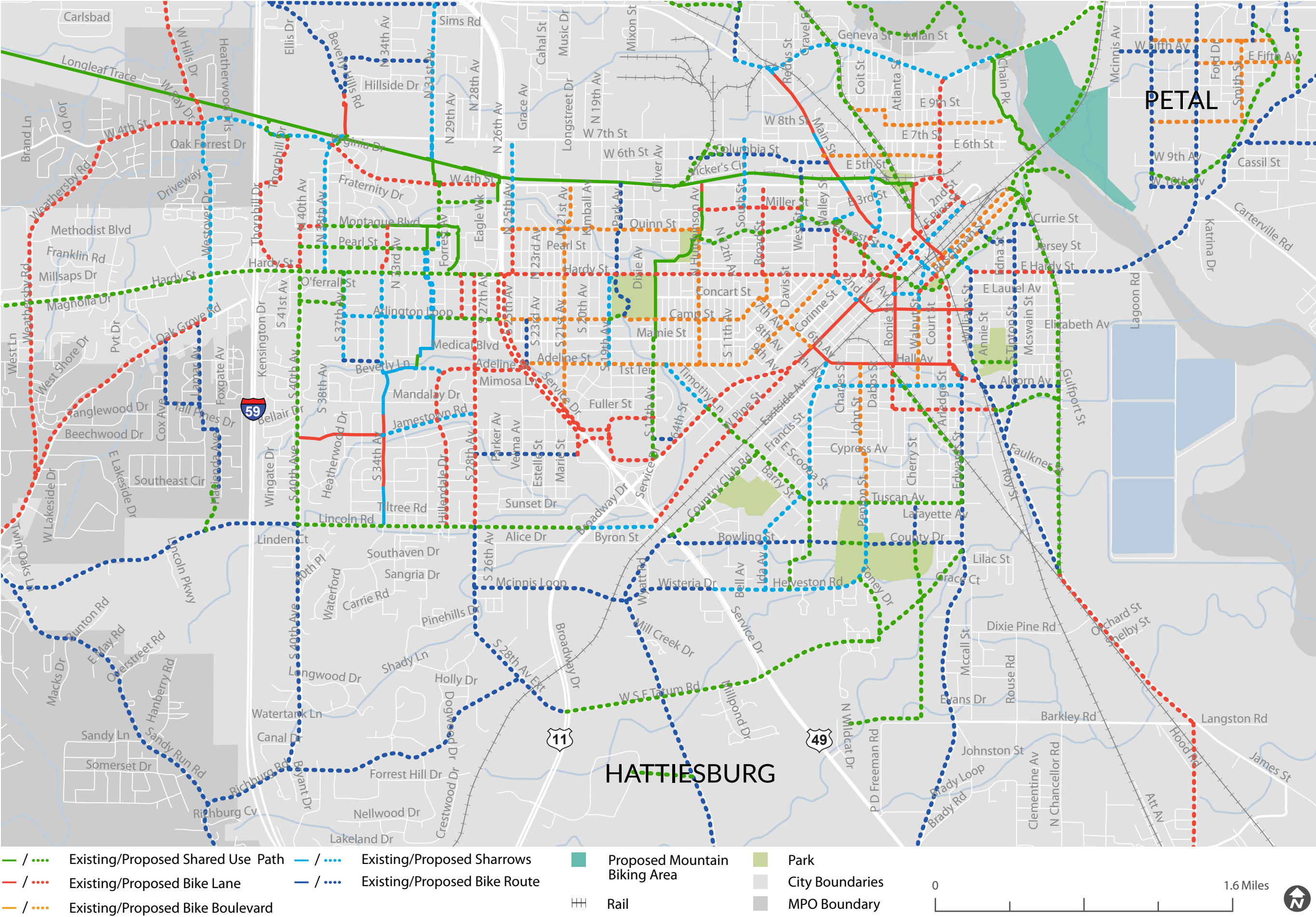


Figure 4. Hattiesburg MPO Bikeways and Shared Use Path Recommendations Map - Central MPO Focus





Mountain bike trails provide opportunities for recreation, including casual riding and bike race events.

Mountain Bike Trail Development

In addition to on-street bikeways and shared-use paths, there is interest in off-road mountain biking trails in the region. Currently, Hub City Velo Mountain Biking Club helps maintain and operate the Golden Eagle Trail Complex, which is off of the Longleaf Trace Trail.

Development of new mountain biking trails can increase opportunities for physical activity and to connect with nature. Additionally, trails can be a source of economic activity through race events or staff to maintain and operate parks.

The City of Petal is exploring opportunities to develop a mountain biking park along the Bouie River, just south of State Highway 11 and on the other side of the river from Chain Park in Hattiesburg. The City of Petal should coordinate with Hub City Velo, the City of Hattiesburg, and the local chamber of commerce to develop a mountain bike park.

Development of mountain biking trails can help Hattiesburg MPO communities work towards achieving Bicycle Friendly Community designation. It can also help attract visitors to the community and support healthy life styles.

Additional Resources:

- **International Mountain Bike Association (IMBA) Bike Park Initiative:**
<https://www.imba.com/model-trails/bike-park-initiative>



Bike parks can include elements for all ages, including pump tracks, to help riders learn and practice skills.

Bikeway Implementation Strategies

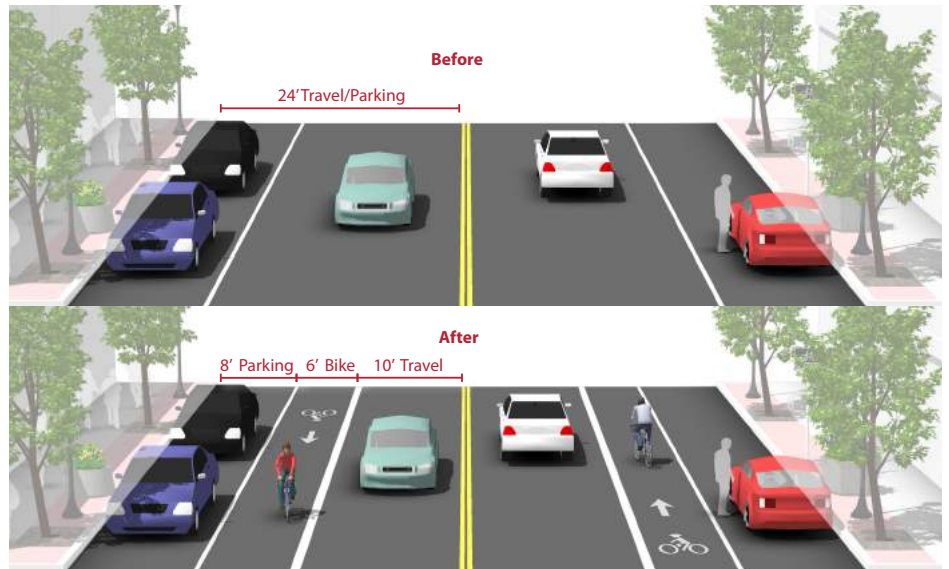
Most major streets are characterized by conditions (e.g., high vehicle speeds and/or volumes) for which dedicated bike lanes are the most appropriate facility to accommodate safe and comfortable riding. Although opportunities to add bike lanes through roadway widening may exist in some locations, many major streets have physical and other constraints that would require street retrofit measures within existing curb-to-curb widths.

As a result, examples provided in this section focus on effectively reallocating existing street width through striping modifications to accommodate dedicated bike lanes. These types of strategies can be implemented during regularly scheduled repaving or maintenance projects, done during streetscape enhancement projects, or done as stand-alone re-striping projects.

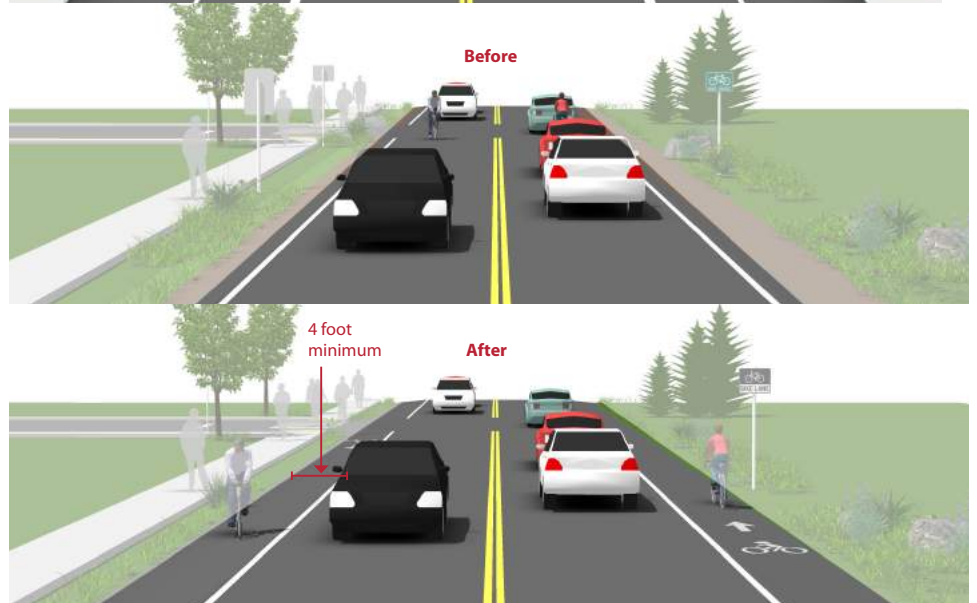
For more discussion on these types of implementation strategies, see the Implementation chapter of this report. For more discussion on bikeway design, see *Appendix A: Design Guidelines*.



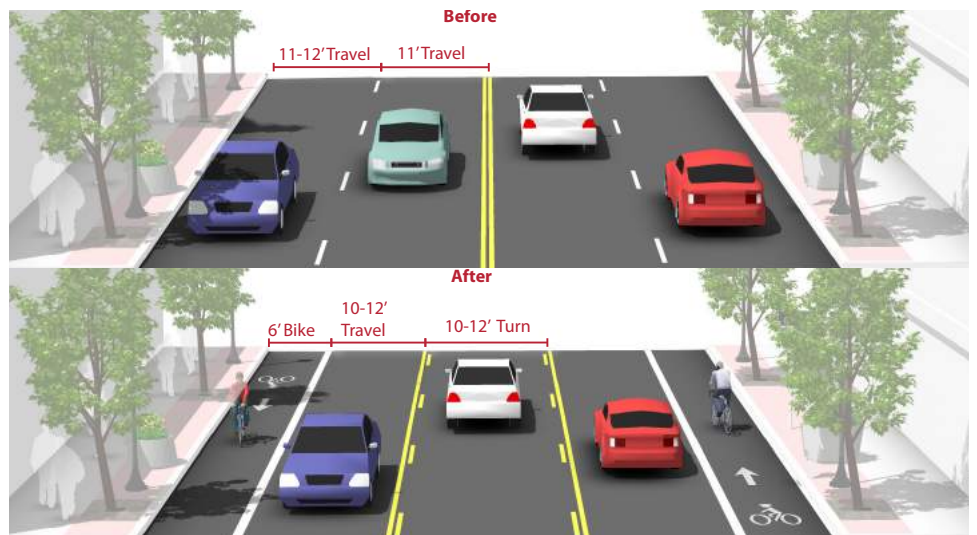
Lane Narrowing



Lane Expansion



Lane Reconfiguration



Support Facilities




Creating a biking culture in the Hattiesburg region and increasing the convenience to bike will require more than expanding the network. Support infrastructure such as bike parking and wayfinding can improve and expand how one gets around by bike, how one navigates the community, and how someone secures their bike at the end of their trip.

This section provides an overview of the different bike parking types and wayfinding. For more detailed discussion on this topics, see *Appendix A: Design Guidelines*.

Bike Parking

Bicyclists expect a safe, convenient place to secure their bicycle when they reach their destination. This may be short-term parking of two hours or less or long-term parking for employees, students, residents, and commuters.

Table 11. Bike Parking Types

| Type | Example |
|--|--|
| Short-Term Bike Parking Short-term bicycle parking is meant to accommodate visitors, customers, and others expected to depart within two hours. |  |
| On-Street Bike Parking, or “Bike Corrals” On-street bike parking, or commonly called “bike corrals”, consist of bicycle racks grouped together in a common area within the street or in a parking space traditionally used for automobile parking. |  |
| Secure Bike Parking A Secure Parking Area for bicycles, also known as a BikeSPA or Bike & Ride (when located at transit stations), is a semi-enclosed space that offers a higher level of security than ordinary bike racks. |  |



Wayfinding signs help bicyclists choose the best streets for biking to popular destinations.

Wayfinding

Wayfinding signage, as part of a signage program that also includes warning and regulatory signage, enhances resident and visitor orientation. A clear wayfinding system should contribute to economic development by pointing visitors to key destinations around the community. Hattiesburg MPO communities should develop a customized wayfinding program that includes directional signage to local destinations. Bicycle and pedestrian travel times to popular destinations could also be included on directional signage.

Bicycle wayfinding signs also visually cue motorists that they are driving along a bicycle route and should use caution. Signs are typically placed at key locations leading to and along bicycle routes, including the intersection of multiple routes. Too many road signs tend to clutter the right-of-way, and it is recommended that these signs be posted at a level most visible to bicyclists rather than per vehicle signage standards.

For more detailed discussion on this topic, see the *Programs* section of this chapter and *Appendix A: Design Guidelines*.

Program Recommendations

Overview

Of the Five E's of a Bicycle Friendly or Walk Friendly Community, four are related to programs: education, encouragement, enforcement, and evaluation. Programs will compliment engineering improvements, such as bike lanes and trails and give the Hattiesburg community the tools they need to safely and confidently walk and bike. Additionally, walking and biking related policies impact all Five E's and serve as evaluation and planning tools for institutionalizing the principles of bicycling and walking friendliness.

All of the Five E's work together to enhance the biking and walking experience in the Hattiesburg community. The following section presents recommended programs and policies to support the vision and goals of this Plan. The recommendations can be undertaken by local and regional agencies, community organizations, local businesses, or partnerships among these groups.

Education

Safe Routes to School

Safe Routes to School is a national program that supports improving walking and biking access to schools as well as programs to educate students about how to walk and bike safely to school. It can be a resource for grant funds to build improvements as well as information resource for education and encouragement programs at schools.

The City of Hattiesburg, in partnership with the Hattiesburg Public School District, has conducted several SRTS projects. The Hattiesburg MPO should meet regularly with local school representatives to coordinate walking and biking projects around schools. Additionally, events such as bike rodeos should be coordinated with schools.

Additional Resources:

- **National Center for Safe Routes to School:** <http://www.saferoutesinfo.org/>
- **Mississippi Safe Routes to School:** http://www.msdlh.state.ms.us/msdlh/site/_static/43,0,98,442.html



Road safety education can help overcome barriers to walking or biking to school.



Hands-on courses help students develop the skills needed to bike on the road.

Bike Rodeos and Classes

A Bike Rodeo is an event where children can learn and practice bicycling skills in a controlled, supervised environment. Depending on the age of the children involved, a bike rodeo event can include educational components, such as teaching hand signals, proper helmet fitting, and even basic maintenance skills such as changing and inflating a tire. The highlight of any bike rodeo event is a skills course, where children ride through a designed obstacle course to practice turns, braking, and coasting. Some bike rodeo leaders hand out awards to positively reinforce good bicycling habits.

Additional Resources:

- **National Center for Safe Routes to School:** <http://www.saferoutesinfo.org/program-tools/organizers-guide-bicycle-rodeos>
- **Safe Kids Worldwide:** <http://www.safekids.org/sites/default/files/documents/Bike-Rodeo-Station-Guide.pdf>



Encouragement

Wayfinding Program

A coordinated wayfinding program can help visitors and residents navigate the community by walking and biking, in particular. Hattiesburg MPO communities should develop a customized program that includes directional signage and other information at key locations, such as trail heads or major destinations.

Materials for signage should reflect the character of the Hattiesburg region and be selected for longevity and ease of maintenance. A wayfinding program could include directional signage, on-road markings, and kiosks with town maps. If funding is not immediately available to develop a complete wayfinding program, a good first step is temporary wayfinding signage that is colorful and informative. The Chamber of Commerce, local bicycle clubs, or local businesses may be ideal partners based on the nexus with tourism and economic development.

Sample wayfinding signage programs:

- **Oakland, CA:** <http://www2.oaklandnet.com/oakca/groups/pwa/documents/report/oak025118.pdf>
- *2014 Croatan Regional Bicycle + Trails Plan; Signage Appendix (NCDOT)*

Wayfinding was the number one priority program identified through voting at the public meetings.

NCDOT and the Eastern Carolina Council recently completed the *2014 Croatan Regional Bicycle + Trails Plan*. This plan included guidance for bicycle route and trail signage. The Hattiesburg MPO could take a similar approach, using a local logo or symbol in conjunction with the required standards for signage.



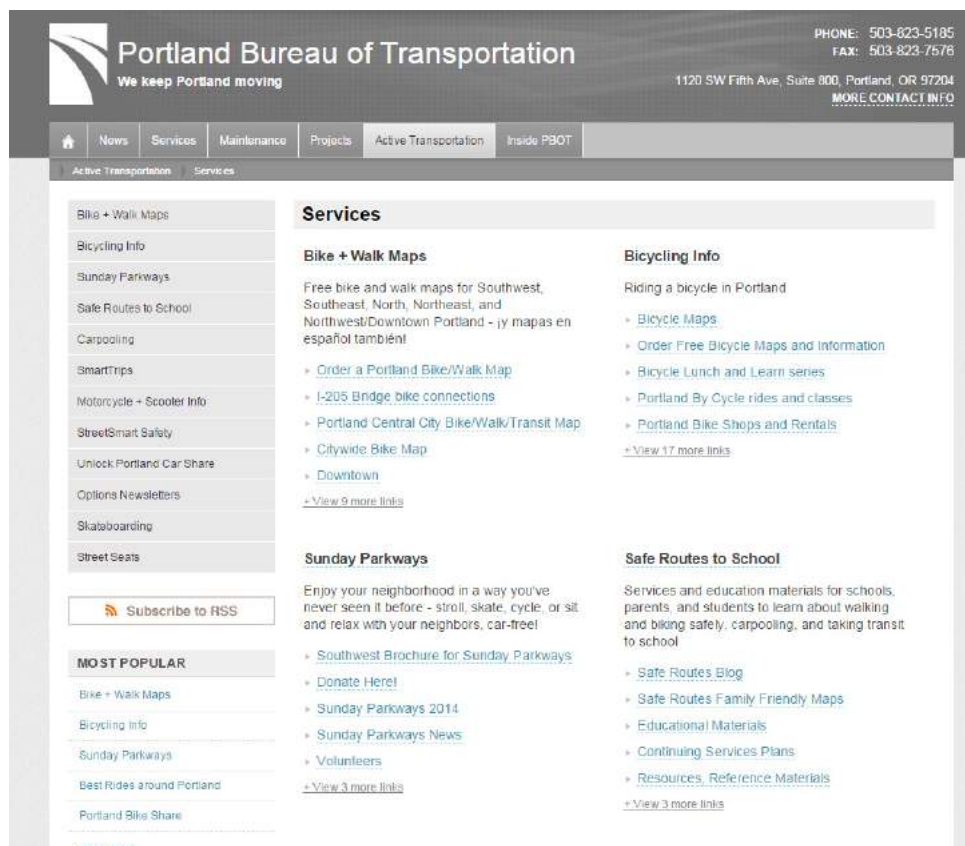
Bicycle and Pedestrian Resource Web Page

Many current and potential pedestrians and bicyclists do not know where to find information on traffic laws, events, maps, tips, and recreation groups. The Hattiesburg MPO and the City of Hattiesburg could develop a “one-stop” webpage on the agency’s website that houses all pedestrian- and bicycle-related information and promotions. A webpage is not difficult to set up, but it will only be successful if the site is easy to use, easy to find, and updated frequently. The site should be reviewed and updated regularly with the most current information. A Bicycle and Pedestrian Advisory Committee can assist in keeping the site up to date. Other recommended programs in this chapter could be housed on the website, such as a bike map, safety campaign information, and a calendar of upcoming events.

Additional Resources:

- **Portland, OR:** <http://www.portlandoregon.gov/transportation/60164>
- **Duck, NC:** <http://www.townofduck.com/ducktrail/>

The City of Portland has a great example website for bicycle and pedestrian information. The page presents safety information, route and project information as well as events and commuter resources.



Hike and Bike Map

One of the most effective ways of encouraging people to walk and bicycle is through the use of maps and guides to show where you can walk and bike and to guide people to enjoyable routes and destinations for walking and biking. The Hattiesburg MPO should create a community Hike and Bike Map to reflect the most current public bicycle and pedestrian infrastructure in town, with a list of bicycle rental locations, suggestions for self-guided bike rides and walks around town, and recommended routes. A portion of the map could be devoted to bicycle and pedestrian safety education, such as informational graphics that demonstrate bicycle hand signals and how to share the road and the trail safely. The map should be made available online and printed as needed to be actively distributed to residents and visitors. It should also be updated on a regular basis as new facilities are implemented.

Sample Maps and Self-Guided Walks:

- <http://www.bikewalktwincities.org/maps-routes/walking-maps>
- <http://durhamnc.gov/ich/op/dot/Pages/Durham-Bike--Hike-Map.aspx>

Launch Parties for New Bikeways

Celebrating successes should be a key focus for this plan and the Hattiesburg MPO community. When new facilities are built, particularly large or important sections, special events should be held to celebrate the occasion. Elected officials, advocates, residents, community members, businesses, and others involved with the implementation of the project should all be invited to attend the event.



Durham, NC's Hike and Bike Map helps residents and visitors navigate the city on foot or on two wheels.



Celebrating construction of new facilities should be a regular event in the Hattiesburg MPO.



National Bike Month events can include commuter challenge events and other activities, such as light or helmet giveaways.

National Bike Month Events

Cities and towns across the country participate in National Bike Month annually, which is held in May. The League of American Bicyclists hosts a website for event organizers.

It is recommended that the Hattiesburg MPO host National Bike Month events and activities annually, with support from the Bicycle and Pedestrian Advisory Committee and local bicycling groups and businesses. Examples of Bike Month activities include:

- A bike ride with the Mayor
- Bike to Work Day events, such as morning commuter energizer stations with food encouragement, information, and sponsored goodies for participants
- Bike Commuter Challenge program with awards for participants

Additional Resources:

- **National Bike Month:** <http://bikeleague.org/bikemonth>

Employer-Based Programs

A Bicycle and Pedestrian Advisory Committee, local community organizations, Chamber of Commerce, or the City and County should encourage local businesses to offer discounts to patrons who bicycle or walk to their business. The discount could be a daily or once-weekly promotion that encourages residents and visitors to visit local businesses by an alternative mode. This could be especially popular with businesses in areas that have limited motor vehicle parking and overly congested lots. In return for businesses' participation, the City, County, or Chamber of Commerce could develop a list of "Bicycle-Friendly Local Businesses" to feature, along with discount information, on its one-stop website for bicycle and pedestrian information.



A bicycle-friendly business program could be particularly attractive to businesses in Downtown Hattiesburg or along major corridors, such the Longleaf Trace Trail or Hardy Street.

Open Street Event

Car-free, open street events have many names - Sunday Parkways, Ciclovias, Summer Streets, and Sunday Streets - and involve periodic street "openings" that create a temporary park that is open to the public for walking, bicycling, dancing, and other physical activity. The purpose of the event is to encourage physical activity by providing a fun, welcoming environment for activity. Car-free street events have been very successful internationally and are rapidly becoming popular in the US. Local businesses open doors and set up tables along sidewalks to support the event and generate foot and bike traffic for their businesses.

Additional Information:

- **Open Streets Project:** <http://openstreetsproject.org/>
- **Fiesta de Ciclovia:** <https://www.facebook.com/events/285851718278569/>



Open Streets events allow people to connect with the people and places in their community in a new ways.

Pascagoula Riverfront
3104 Front Street
November 8, 2014 • 9 am - 4 pm

Ciclovia is a car free event that opens the streets to people of all ages to bicycle, walk, run, skate, dance, play, and socialize in fun free activities.

Pascagoula
 228.938.2356
www.cityofpascagoula.com

"Connecting Cultures within our Community for a Happier, Healthier, more Human Powered Pascagoula"

1 Mile • 5k • 10k Fun Run-R-Roll

MOVEMENT • MUSIC • CONNECTION • FOOD • ARTS • DIVERSITY

The City of Pascagoula recently launched the Inaugural Fiesta de Ciclovia, a car-free event that opens the street for people of all ages to walk, skate, run, bicycle, dance, play, and socialize in fun and free activities.



Police officers with strong knowledge of bicycle and pedestrian laws are an asset to the community.



Targeted enforcement actions can have positive impacts on behavior.

Enforcement

Safety Training for Officers

Public safety officer training courses provide officers with safety education related to the rights and responsibilities of bicyclists, pedestrians, and motorists. The training can explain matters such as common errors in reporting a bicycle or pedestrian collision, laws related to motorists passing a bicyclist, or pedestrians and crosswalk use.

Additional Resources

- ***Pedestrian and Bicycle Information Center – Law Enforcement:*** http://www.pedbikeinfo.org/programs/enforcement_enforcelaws.cfm

Targeted Enforcement

Public safety officers should conduct regularly scheduled enforcement efforts to educate and enforce laws that impact walking and biking. The enforcement should be conducted in areas where there are known safety issues, such as high bicycle or pedestrian crash locations. These efforts should support an active and safe walking and biking culture in the community.

Public Safety Officer on BPAC

To re-enforce the focus on enforcement and to help with coordination, a public safety officer should serve on the Bicycle and Pedestrian Advisory Committee (BPAC) when it is formed. The officer can provide regular updates on bicycle and pedestrian crashes, coordinate safety campaigns with the BPAC, and help with other safety related policies that help implement this plan.

Evaluation/Planning

Conduct Annual Bike/Ped Counts and Key Locations

The BPAC, in coordination with regional partners, should establish an annual bicycle and pedestrian count and survey program. The effort will help document increases in walking and biking rates, measure impacts of facilities after they are installed, and document and track needs and concerns of those currently walking and biking within the Hattiesburg MPO. The count program can include manual counts and surveys, online surveys, or installing automated counters along key routes, such as the Longleaf Trace Trail.

Additional Resources:

- **National Bicycle and Pedestrian Documentation Project:** <http://bikepeddocumentation.org/>
- **Pedestrian and Bicycle Information Center – Data Collection Tools:** <http://www.pedbikeinfo.org/planning/tools.cfm>

Conduct Roadway Safety Audits

Safety audits help identify safety issues related to walking and biking along a specific roadway as well as potential solutions to correct safety issues. Audits typically include analyzing available data, conducting site visits with multiple stakeholders, and forming consensus on action steps to improve safety conditions along the street.

Additional Resources

- **Pedestrian and Bicycle Information Center:** http://www.pedbikeinfo.org/planning/tools_audits.cfm
- **FHWA Road Safety Audit:** <http://safety.fhwa.dot.gov/rsa/>



Better data on walking and biking can assist with future planning efforts.



Road safety audits can help decision makers prioritize safety issues along corridors.



IMPLEMENTATION

Overview

CHAPTER OUTLINE:

Overview

Roles for Implementation

Funding Strategy

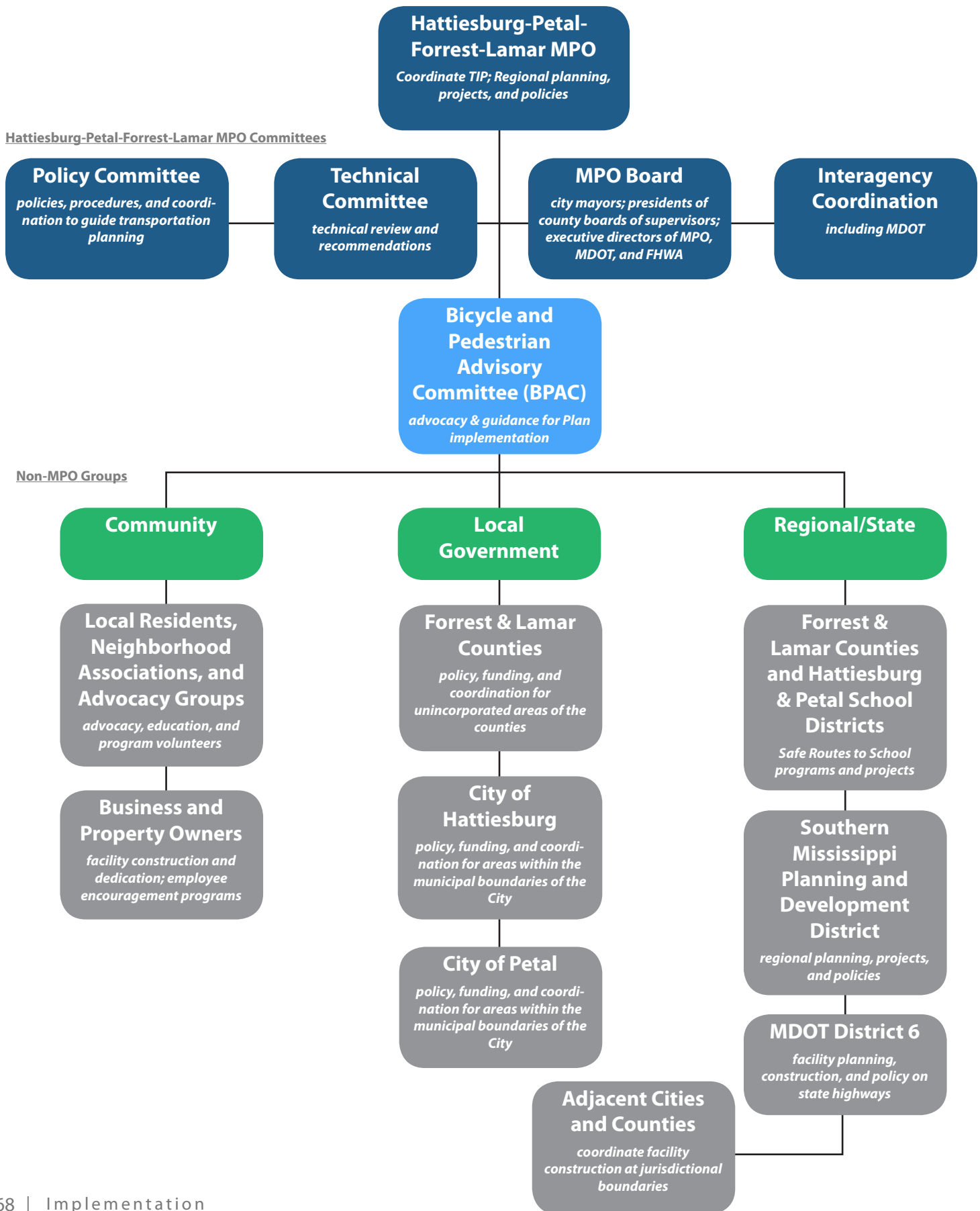
Key Action Steps

Infrastructure Implementation Strategies

This chapter defines a structure for managing the implementation of the Hattiesburg-Petal-Forrest-Lamar MPO Pathways Master Plan. Implementing the recommendations within this plan will require leadership and dedication to bicycle and pedestrian facility development on the part of a variety of groups and agencies. Equally critical, and perhaps more challenging, will be meeting the need for a recurring source of revenue. Even small amounts of local funding could be very useful and beneficial when matched with outside sources. Most importantly, the MPO and its local partners need not accomplish the recommendations of this plan by acting alone; success will be realized through collaboration with regional and state agencies, the private sector, and non-profit organizations.

Given the constant change in funding availability at local, state, and federal levels, it is difficult to know what financial resources will be available at different time frames during the implementation of this plan. However, there are still important actions to take in advance of major investments, including key organizational steps, the initiation of education and safety programs, and the development of strategic, lower-cost infrastructure improvements. Following through on these priorities will allow the key stakeholders to prepare for the development of larger walkway or bikeway projects over time, while taking advantage of strategic opportunities as they arise.

Roles for Implementation

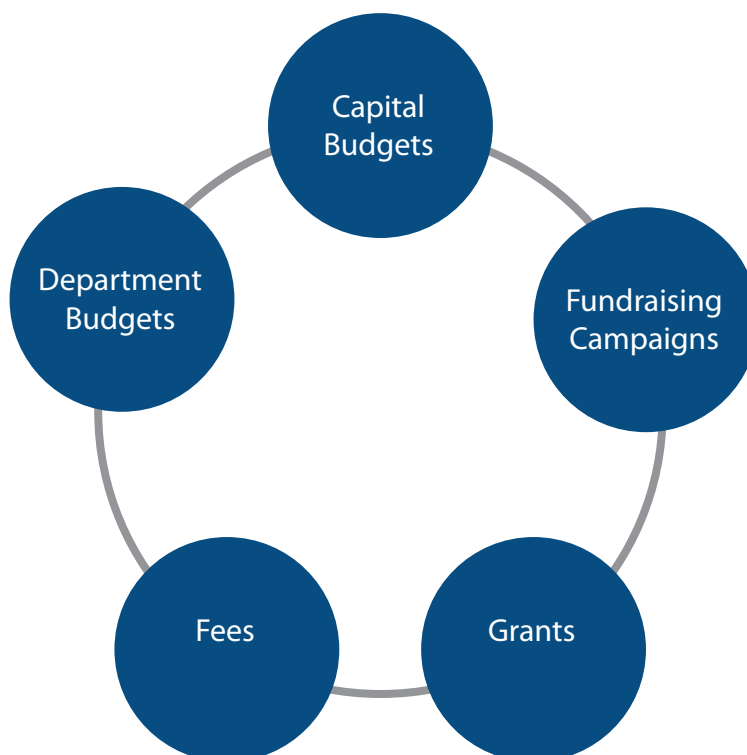


Funding Strategy

In order to achieve the goals of this plan, the Hattiesburg MPO and its partners will need to fund improvements from a variety of funding sources and partners. Regional communities will need to be opportunistic and consistent in sourcing funding for this plan. Particularly when dealing with Federal funding for transportation projects, the planning and construction process can take years.

Five primary sources of funding make up the core funding strategy for this plan:

- **Capital Budgets** - The MPO can use the concepts and policies presented in this plan to implement this plan through regularly scheduled capital projects, such as streetscape projects, street resurfacing, or new public or private property construction.
- **Department Budgets** - Departments like Public Works or Parks and Recreation can use their maintenance resources and staff to support programs and infrastructure maintenance.
- **Fees** - User fees or development impact fees provide an opportunity to generate revenue to fund infrastructure projects, such as sidewalk construction, and programs, such as bicycle education classes.
- **Grants** - Competitive grants through public agencies or through private or non-profit foundations can generate additional resources for projects and programs.
- **Fundraising Campaigns** - Fundraising through neighborhood groups, advocacy groups, or even crowd-funding can help generate additional resources for projects and programs.



Estimated Funding Outlay

As noted in the *Needs Analysis* chapter, the Hattiesburg-Petal-Forrest-Lamar MPO is the federally designated agency to coordinate and distribute federal transportation funding for the Hattiesburg Urbanized Area. Federal funding allocated to the MPO that can be used for bicycle and pedestrian projects comes primarily from two funding programs: Surface Transportation Program (STP) funding and Federal Transit Administration (FTA) funding.

Currently, the MPO receives approximately \$2,175,000 annually for the STP and FTA funds. Money from local jurisdictions is used to supplement this allocation for federal funding sources that require a local percent match of the total cost of a project.

The tables on the next page summarize the potential use of federal funds to implement the infrastructure recommendations of this plan. The tables summarize the annual outlay of funds needed to implement this plan over a 10 or 20 year planning period.

They also provide a summary of the gap between potential federal funds for pedestrian and bicycle projects and other funding sources, such as state, local or private funds. **For planning purposes, it is recommended that the MPO establish an annual set aside for federal funds to implement this plan. Peer MPOs have established ranges from 5-25% set asides. This set-aside policy can create a dedicated annual funding source for implementation of this plan.** For illustration purposes, a set-aside of 25% was used with the *Federal Funding Set-Aside Scenario* table on the next page.

Potential Funding Strategy Part 1: Estimated Annual Outlay

| | Sidewalks* | On-Street Bikeways | Shared Use Paths | Total |
|--|--------------|--------------------|------------------|--------------|
| Total Length (in miles) | 30 | 157 | 54 | 241 |
| Total Cost | \$10,137,600 | \$3,407,750 | \$16,980,480 | \$30,525,830 |
| Ten Year Implementation Schedule | | | | |
| Length Per Year (in miles) | 3 | 16 | 5 | 24 |
| Cost Per Year | \$1,013,760 | \$340,775 | \$1,698,048 | \$3,052,583 |
| Twenty Year Implementation Schedule | | | | |
| Length Per Year (in miles) | 2 | 8 | 3 | 12 |
| Cost Per Year | \$506,880 | \$170,388 | \$849,024 | \$1,526,292 |

Cost estimates are an estimate of probable cost and should be used for planning purposes only. Cost estimates do not include costs for design, right-of-way acquisition or utilities.

Potential Funding Strategy Part 2: Federal Funding Set-Aside Scenario

| Annual Hattiesburg MPO Federal Funds | Total for Infrastructure | 25% Set-Aside |
|--|--------------------------|---------------|
| STP | \$1,200,000 | \$300,000 |
| FTA | \$975,000 | \$243,750 |
| Total Estimated Annual Funds | | \$543,750 |
| Ten Year Implementation Schedule | | |
| Per year cost estimate for 10 year implementation schedule | | \$3,052,583 |
| Gap in MPO funding (10 year per year cost estimate - 25% annual set-aside) | | \$2,508,833 |
| % of gap | | 82% |
| Twenty Year Implementation Schedule | | |
| Per year cost estimate for 10 year implementation schedule | | \$1,526,292 |
| Gap in MPO funding (20 year per year cost estimate - 25% annual set-aside) | | \$982,542 |
| % of gap | | 64% |

The "Gap in MPO funding" is the estimated per year funding required for implementation that is potentially not covered by a 25% set-aside of MPO Federal funds. The gap in funding will require funding from other sources, such as capital budgets, grants, fees, fundraising campaigns and other sources of funding.

Federal Funding

Federal funding is typically directed through State agencies to local governments either in the form of grants or direct appropriations, independent from State budgets. Federal funding typically requires a local match of 20%, although there are sometimes exceptions, such as the recent American Recovery and Reinvestment Act stimulus funds, which did not require a match.

The following is a list of possible Federal funding sources that could be used to support construction of many pedestrian and bicycle improvements. Most of these are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. However, it should be noted that the FHWA encourages the construction of pedestrian and bicycle facilities as an incidental element of larger ongoing projects. Examples include providing paved shoulders on new and reconstructed roads, or building sidewalks, on-street bikeways, trails and marked crosswalks as part of new highways.

- Surface Transportation Program (STP)
- Transportation Alternatives Program (TAP)
- Federal Transit Administration (FTA)
- Safe Routes to School (SRTS)
- Highway Safety Improvement Program (HSIP)
- National Recreational Trails Fund Act (Symms Act)
- Land and Water Conservation Fund (LWCF)
- Transportation and Community and System Preservation Program (TCSP)
- Section 402: The State and Community Highway Safety Grant Program

State of Mississippi Funding Sources

The State of Mississippi administers several grant and loan programs to fund infrastructure and non-infrastructure traffic safety programs, often making use of federal funds that have been disbursed to the states.

- Capital Improvements Revolving Loan Program (CAP)
- Community Development Block Grant (CDBG) Program
- Custom License Plate Sales
- Development Infrastructure Grant Program (DIP)
- Local Planning Assistance Grants
- Mississippi State Department of Health – STARS (Students Taking Active Routes Safely) Program

Local Funding Sources

Local funding sources that would support bicycle and pedestrian facility project construction will most likely be limited but should be explored. Below are some potential local funding sources.

- Annual capital budgets
- Bonds/Loans
- Business Improvement Districts
- Development Impact Fees
- Special Local Tax
- Tax Increment Financing District

Private Sector Funding Sources

Many communities have solicited bicycle and pedestrian funding assistance from private foundations and other sustainability and health-minded benefactors. These funds are typically allocated through competitive grant programs. Below are several examples of private funding opportunities.

- Local businesses and foundations
- Bank of America Charitable Foundation, Inc.
- The Conservation Alliance
- Health Foundations/Local Hospitals
- PeopleForBikes
- Robert Wood Johnson Foundation
- Surdna Foundation
- Trust for Public Land

Key Action Steps

| Task | Lead Agency | Support |
|--|---|--|
| Policy Action Steps | | |
| Adopt This Plan | HPFL MPO | Member governments and agencies |
| Coordinate Development Plans | City and county Planning Departments | City and county Infrastructure Departments |
| Form a Bicycle and Pedestrian Advisory Committee | HPFL MPO | Member governments and agencies; Community advocacy organizations |
| Seek Multiple Funding Sources and Facility Development Options | HPFL MPO | BPAC; Community, Local Government and Regional/State partners |
| Program Action Steps | | |
| Designate Staff | City and County Board of Commissioners | HPFL MPO; BPAC |
| Become designated as a Bicycle-Friendly Community (BFC) | BPAC | HPFL MPO; City of Hattiesburg; City of Petal; Lamar County; Forrest County |
| Become designated as a Walk-Friendly Community (WFC) | BPAC | HPFL MPO; City of Hattiesburg; City of Petal; Lamar County; Forrest County |
| Communication and Outreach | BPAC; local advocacy groups; local bike shops and cycling clubs | HPFL MPO |
| Establish Evaluation and Reporting Program | HPFL MPO | BPAC; Member governments and agencies |
| Begin annual Meeting with Key Project Partners | HPFL MPO; BPAC | Community, Local Government and Regional/State partners |
| Improve Existing Programs and Launch New Programs | BPAC | Community and Local Government partners |
| Provide Enforcement and Education Training for Public Safety Officials | Police, sheriff and fire departments | BPAC |
| Infrastructure Action Steps | | |
| Identify Funding | HPFL MPO | Elected officials; BPAC |
| Complete Short-Term Priority Projects | HPFL MPO; BPAC | City and county Planning and Infrastructure departments |

| Details | Phase |
|---|---|
| Through adoption, the Plan becomes an official planning document of the MPO. Adoption shows that the MPO has undergone a successful, supported planning process. | Short-Term (2015) |
| During the development review process, City and County staff should reference this plan. If a new development requires changing the public right-of-way, the changes should be used to support walking and biking improvements identified in this Plan. The site design should also be supportive of walking and biking access on the property. | Ongoing |
| Form the Bicycle and Pedestrian Advisory Committee and confirm the goals of the BPAC to include the implementation of this plan. | Short-Term (2015) |
| To implement this plan, funding from a variety of funding sources will need to be leveraged. Working with MPO and other partners, the BPAC should identify public and private funding sources and pursue these resources on an ongoing basis. | Short-Term/Ongoing (2015 onward) |
| Designate staff to oversee the implementation of this plan and the proper maintenance of the facilities that are developed. Designated staff should include City and County staff. | Short-Term (2015) |
| The development and implementation of this plan is an essential first step toward becoming a designated BFC. With ongoing efforts and the short-term work program recommended here, MPO jurisdictions should be in a position to apply for and receive recognition within a few years. | Short-Term (2015) City of Hattiesburg Mid-Term/Long-Term (2017 onward) City of Petal, Forrest and Lamar County |
| The development and implementation of this plan is an essential first step toward becoming a designated WFC. With ongoing efforts and the short-term work program recommended here, MPO jurisdictions should be in a position to apply for and receive recognition within a few years. | Short-Term (2015) City of Hattiesburg Mid-Term/Long-Term (2017 onward) City of Petal, Forrest and Lamar County |
| The BPAC should establish a communication campaign to celebrate successes as facilities are developed and otherwise raise awareness of the overall pedestrian and bicycle network and its benefits. A key first task of this group is to design and launch a one-stop website. Set up the one-stop website to provide information to residents and tourists on walking and biking in the community. To begin, the website can include the maps included in this plan. | Short-Term (2015) |
| The MPO and the BPAC should brainstorm specific benchmarks to track through a monitoring program and honor the completion of projects with public events and media coverage. | Mid-Term/Ongoing (2016 onward) |
| Key project partners (see org. chart on page 68) should meet on an annual basis to evaluate the implementation of this Plan. Meetings could also occasionally include on-site tours of priority project corridors. | Short-Term/Ongoing (2015 onward) |
| These groups should coordinate to improve existing bicycle and pedestrian programs and to launch new programs, such as those described in Recommendations chapter. | Short-Term/Ongoing (2015 onward) |
| Provide police and fire officers with training through free online resources available from the National Highway Traffic Safety Administration, and through webinars available through the Association of Pedestrian and Bicycle Professionals. Provide officers with an informational handout to be used during bicycle and pedestrian-related citations and warnings. Coordinate regular in-person training workshops for officers to learn bicycle and pedestrian laws and enforcement strategies. | Short-Term/Ongoing (2015/2016 onward) |
| To allow continued development of the overall walkway and bikeway system, capital funds for pedestrian and bicycle facility construction should be set aside every year. Local and Federal funds should be programmed for facility construction. Funding for an ongoing maintenance program should also be included in the Cities and County's operating budgets. | Short-Term/Ongoing (2015 onward) |
| The Recommendations chapter identifies projects for implementation. Aim to complete at least two of these projects by the end of 2017. | Mid-Term (2017) |

Policy Action Steps

Several policy steps are crucial to the success of future facility development. These steps will legitimize the recommendations found in this plan and support policy decision-making necessary to carry out those recommendations.

Adopt This Plan

Before any other action takes place, the MPO should adopt this plan. This should be considered the first step in implementation. Through adoption of this plan, the MPO will be better able to shape transportation and development decisions so that they fit with the goals of this plan and the MPO's Long Range Transportation Plan. Most importantly, having an adopted plan is extremely helpful in securing funding from state, federal, and private agencies. Adopting this plan does not commit the MPO to dedicate or allocate funds, but rather indicates intent to implement this plan over time.

Coordinate Development Plans

The MPO and its partner agencies and local governments should ensure that adopted walkways, bikeways, trails, and walking and biking support infrastructure recommendations from this plan are included in future residential and commercial developments that connect with such proposed facilities. Changing development regulations to include requirements for sidewalks, bike parking, and providing easements for future trail development should also be reviewed.

Form a Bicycle and Pedestrian Advisory Committee (BPAC)

The MPO should form a bicycle and pedestrian advisory committee (BPAC) to assist in the implementation of this plan. This committee can reconvene the Pinebelt Pathways committee or it can start anew. The BPAC should have representation from active pedestrians and commuting and recreational cyclists, local government representatives, and other groups with an interest in improving walking and biking in the Hattiesburg region. The committee should champion the recommendations of this plan, and the formation of this group would be a significant step in becoming designated as a Walk-Friendly Community or Bicycle Friendly Community. The committee would provide a communications link between the citizens of the community and local government. They should also continue to meet periodically and be tasked with assisting the MPO staff in community outreach, marketing, and educational activities recommended by this plan.

Seek Multiple Funding Sources and Facility Development Options

Multiple approaches should be taken to support bicycle and pedestrian facility development and programming. It is important to secure the funding necessary to undertake priority projects but also to develop a long-term funding strategy to allow continued development of the overall system. Dedicated local funding sources will be important for the implementation of this plan. Capital and local funds for pedestrian facilities and trail construction should be set aside every year, even if only for a small amount. Small amounts of local funding can be matched to outside funding sources or could be used to enhance federally-funded projects with pedestrian features that may otherwise not be budgeted for by the state. A variety of local, state, and federal options and sources exist and should be pursued.

A priority action is to immediately evaluate the recommendations against transportation projects that are currently programmed in the Hattiesburg MPO Transportation Improvement Program (TIP) to see where projects overlap, compliment, or conflict with each other. The MPO should also evaluate which of the proposed projects could be added to future TIP updates and which projects can be handled entirely by local money or private funding.

Program Action Steps

While policies provide a legal basis for on- and off-road facility development, the program recommendations included in *Recommendations* chapter of this plan will build community support for the creation of new facilities and establish a strong bicycling and walking culture.

Designate Staff

Designate staff to oversee the implementation of this plan and the proper maintenance of the facilities that are developed. It is recommended that a combination of existing Planning, Public Works, and City and County management staff oversee the day-to-day implementation of this plan. In many municipalities, a full-time bicycle and pedestrian coordinator covers this task, but in smaller communities, such as Hattiesburg, it makes more sense to fold these responsibilities into current staff responsibilities.

Become Designated as a Bicycle Friendly and Walk Friendly Community

A goal for the Cities of Hattiesburg and Petal as well as Forrest and Lamar Counties should be to seek a “Walk Friendly Community” (WFC) designation from the UNC Highway Safety Research Center’s Pedestrian and Bicycle Information Center and “Bicycle Friendly Community” (BFC) designation from the League of American Bicyclists. The WFC and BFC campaigns are awards programs that recognize municipalities that actively support pedestrian and bicycle activity and safety. A WFC and BFC provides safe accommodation for walking and biking and encourages its residents to walk and bike for transportation and recreation.

Becoming designated as a WFC or BFC signals to current residents, potential residents, and visitors that the town is a safe and welcoming place for individuals and families to live and recreate. The development and implementation of this plan is an essential first step toward becoming a WFC or BFC. With ongoing efforts and the short-term work program recommended here, the MPO and its member governments should be in a position to apply for and receive WFC and BFC status within a few years.

Communication and Outreach

The BPAC should lead the effort to establish a communication campaign to celebrate successes as facilities are developed and otherwise raise awareness of the overall bicycle and pedestrian network and its benefits. A key first task of this group is to design and launch a one-stop website or page on the City-MPO website about walking and biking initiatives, programs, and infrastructure in the region.

Many current and potential pedestrians and bicyclists do not know where to turn to find out about traffic laws, events, maps, tips, and groups. Developing a “Walk and Bike Central” site online provides information to a wide audience and encourages people to walk and bike. A one-stop site is not usually difficult to set up, but it will only be successful if the site is both easy to use and updated frequently. All site content should be reviewed regularly for accuracy. Walking groups, the bicycling community, and volunteer organizations interested in safety and health can assist in keeping the site up to date.

Establish Evaluation and Reporting Program

From the beginning and continuously through the life of this plan, the BPAC should establish specific benchmarks to track through a monitoring program. The monitoring will help track progress towards achieving the goals of this plan and honor the implementation successes associated with this plan, such as completion of projects with public events and media coverage. The BPAC should also develop an annual report to document work towards achieving the goals and recommendations in this plan.

Begin Annual Meeting with Key Project Partners

Coordination between key project partners will establish a system of checks and balances, provide a level of accountability, and ensure that recommendations are implemented. This meeting should be organized by the designated government staff and should include representatives from the Roles for Implementation chart shown on page 96. The purpose of the meeting should be to ensure that this plan’s recommendations are integrated with other transportation planning efforts in the region as well as long-range and current land use planning, economic development planning, and environmental planning. Attendees should work together to identify and secure funding necessary to immediately begin the first year’s work, and start working on a funding strategy that will allow the MPO and its government partners to incrementally complete each of the suggested physical improvements, policy changes, and programs over a five- to ten-year period. A brief progress benchmark report should be a product of these meetings, and participants should reconfirm the plan’s goals each year. The meetings could also occasionally feature special training sessions on pedestrian, bicycle, and trail issues.

Improve Existing Programs and Launch New Programs

The program recommendations found in the *Recommendations* chapter provide a set of programmatic resources that will support the goals of this plan. The MPO should reference the recommendations to expand and improve upon existing programs as well as to develop new programs that promote walking.

Through cooperation between the MPO, city and county government, the BPAC, schools, and groups such as walking and bicycling clubs, strong education, encouragement, and enforcement campaigns could also occur as new facilities are built. When an improvement has been made, the roadway environment has changed and proper interaction between motorists, bicyclists, and pedestrians is critical for the safety of all users. A campaign through local television, on-site enforcement, education events, and other methods will bring attention to the new facility, and educate, encourage, and enforce proper use and behavior. The *Recommendations* chapter provides program ideas to choose from, some of which are included in the action steps table at the beginning of this chapter.

Provide Enforcement and Education Training for Public Safety Officials

Public safety officers, such as Police and Fire, have many important responsibilities, including improving safety conditions and behaviors that impact pedestrians and bicyclists safety. The Police, Fire, and Sheriff Departments have been aware of this planning process and should be involved in implementation. In many cases, citizens (and even sometimes officers) are not fully aware of state and local laws related to bicyclists and pedestrians. Training on this topic can lead to additional education and enforcement programs that promote safety. Training for Hattiesburg-area public safety officers, as well as information and grant resources to support public safety education and enforcement campaigns, are available through local, state, and federal programs and organizations.

Infrastructure Action Steps

While establishing the policies and programs described, the Hattiesburg MPO and its government partners should move forward with the design and construction of priority projects. They should also work to identify funding for long-term, higher-cost projects.

Identify Funding

Achieving the vision defined within this plan will require, among other things, a stable and recurring source of funding. Communities across the country that have successfully engaged in pedestrian and bicycle programs have relied on multiple funding sources to achieve their goals. No single source of funding will meet the recommendations identified in this plan. Instead, stakeholders will need to work cooperatively with municipal, state, and federal partners to generate funds sufficient to implement the programs.

A stable and recurring source of revenue is needed that can then be used to leverage grant dollars from state, federal, and private sources. The ability of local agencies to generate a source of funding for pedestrian facilities depends on a variety of factors, such as taxing capacity, budgetary resources, voter preferences, and political will. It is very important that these local agencies explore the ability to establish a stable and recurring source of revenue for facilities.

Donations from individuals or companies are another potential source of funding. The BPAC should establish an “Adopt a Trail” program as a mechanism to collect these donations for the development of the greenway trail and sidepath recommendations discussed in the *Recommendations* chapter.

Federal and state grants should be pursued along with local funds to pay for necessary right-of-way acquisition and project design, construction, and maintenance expenses. Also, the MPO should continually maintain a backlog of designed projects that are “shovel ready” to take advantage of future funding opportunities as they become available.

Complete Short-Term Priority Projects

By quickly moving forward on priority projects, the Hattiesburg MPO will demonstrate its commitment to carrying out this plan and will better sustain the enthusiasm generated during the public outreach stages of the planning process. Refer to the *Recommendations* chapter for a list of priority projects.

Infrastructure Implementation Strategies

This section describes different construction methods for the proposed bicycle and pedestrian facilities outlined in the *Recommendations* chapter. Note that many types of transportation facility construction and maintenance projects can be used to create new facilities. It is much more cost-effective to provide facilities during roadway construction and re-construction projects than to initiate the improvements later as “retrofit” projects.

To take advantage of upcoming opportunities and to incorporate bicycle and pedestrian facilities into routine transportation and utility projects, the Hattiesburg MPO should keep track of MDOT, Forrest and Lamar Counties, and Cities of Hattiesburg and Petal projects as well as any other local transportation improvements. While doing this, MPO and government staff should be aware of the different procedures for state and local roads and interstates.

Hattiesburg MPO Transportation Improvement Program

The Hattiesburg MPO’s Transportation Improvement Program (TIP) is based on the Hattiesburg MPO’s Long Range Transportation Plan, which is now called Hattiesburg Metropolitan Transportation Plan 2035 (MTP 2035). The TIP is a federally mandated transportation planning document that details transportation improvements prioritized by stakeholders for inclusion in the Work Program over the next ten years. The TIP is updated every year.

Local Roadway Construction or Reconstruction

Pedestrians and bicyclists should be accommodated any time a new road is constructed or an existing road is reconstructed. In the longer-term, all new roads with moderate to heavy motor vehicle traffic should have sidewalks and safe crossings at intersections. Bicyclists should have dedicated space in the form of a bike lane or buffered facility. However, side paths can be an acceptable solution when a road has few driveways and high-speed, high-volume traffic.

Also, case law surrounding the Americans with Disabilities Act (ADA) has found that roadway resurfacing constitutes an alteration, which requires the addition of curb ramps at intersections where they do not yet exist. The Department of Justice and the Federal Highway Administration recently released guidance on the Title II of the Americans with Disabilities Act requirement to provide curb ramps when streets, roads, or highways are altered through resurfacing. More information is available on the following website:

<http://www.ada.gov/doj-fhwa-ta.htm>.

Residential and Commercial Development

The construction of sidewalks, trails, and safe crosswalks should be required during development. Construction of facilities that corresponds with site construction is more cost-effective than retrofitting. In commercial development, emphasis should also be focused on safe pedestrian and bicyclist access into, within, and through large parking lots. This ensures the future growth of the pedestrian network and the development of safe communities.

Repaving

Repaving projects provide a clean slate for revising pavement markings. When a road is repaved, the roadway should be restriped to create narrower vehicle lanes and provide space for bike lanes and shoulders where feasible.

Retrofit Roadways with New Bicycle and Pedestrian Facilities

There may be critical locations in the bicycle and pedestrian network that have safety issues or are essential links to destinations. In these locations, it may be justifiable to add new facilities before scheduling a roadway to be repaved or reconstructed. In some other locations, it may be relatively easy to add a sidewalk or to add extra pavement for bike lanes, but other segments may require removing trees, relocating landscaping or fences, or re-grading ditches. Retrofitting roadways with side paths creates similar challenges.

Some roads may require a “road diet” solution in order to accommodate bicycle and pedestrian facilities. Road diets involve reallocating motor vehicle travel lanes for the benefit of increasing roadway safety and efficiency for all users and, in some cases, increasing space for other uses such as parking, on-street bicycle facilities, sidewalks, and/or side paths. These are generally recommended only in situations where the vehicular traffic count can be safely and efficiently accommodated with a reduced number of travel lanes. When considering how a road diet might affect road capacity, however, it is important to keep in mind that pedestrian and bicycle facilities may increase roadway capacity by allowing a greater number of total people and vehicles - including pedestrians and bicycles - to move along the roadway in a given time period. Further study may be necessary for recommended road diets to ensure that the needs of all road users are being met.

Bridge Construction or Replacement

Provisions should always be made to include a walking and bicycling facility as a part of vehicular bridges. All new or replacement bridges should accommodate two-way travel for all users. Even though bridge construction and replacement does not occur regularly, it is important to consider these policies for long-term pedestrian planning.

Easements

The Cities of Hattiesburg and Petal, along with Forrest and Lamar Counties, should explore opportunities to revise existing easements to accommodate public access greenway trail facilities. Similarly, as new easements are acquired in the future, the possibility of public access should be considered. Sewer and utility easements are very commonly used for this purpose, offering cleared and graded corridors that easily accommodate trails. This approach avoids the difficulties associated with acquiring land, and it better utilizes the local government resources.



