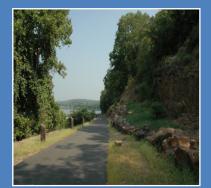
# 2013



# North Little Rock BICYCLE PLAN









4/22/2013

#### ARTICLE 7. BICYCLE PLAN (section of Master Street Plan)

#### INTRODUCTION

The purpose of this document is to revise and update the North Little Rock Bicycle Plan. The City Council has adopted legislation instructing the Community Planning Department to coordinate and update the City's Bicycle Plan on an annual basis. A Bicycle Friendly Community Committee was formed to advance the Bicycle Plan update. The committee includes a wide range of individuals involved with bicycling, advocacy groups, City planning and health personnel, and elected officials. This group endorsed the general proposal of developing a citywide system of safe paths, lanes, and suggested routes connecting major parks, schools, community centers, commercial areas and other destinations. Expanding on that objective, it is the goal of the Plan to transform the community to allow cycling to become a valid alternative to the automobile for transportation purposes. The League of American Bicyclists awarded the City a Bronze Bicycle Friendly Community designation in 2009 for advancements and accomplishments over the past decade. It is hoped that efforts of this plan will provide an outline for advancing the community to a higher award through continued progress in making the City truly bicycle friendly.

#### BACKGROUND

The federal transportation bill, Moving Ahead for Progress in the Twenty-First Century (MAP-21), requires that local governments explore and encourage alternatives to automobile transportation. Transportation by bicycle is an option widely used in other countries and many U.S. cities, but limited locally. Some of the reasons for the lack of cycling for daily transportation include the hilly terrain, the hot and humid climate, the lack of bicycle racks or showers at end destinations, the real and perceived danger of riding in local traffic, and the lack of a separated trails system. The physical barriers restricting use include freeways and rail yards that dissect the community, limited connections in the local street system and the extensive use of cul-de-sacs, all of which prevent convenient connections. But the primary reason more cycling does not occur is the fact that it can be dangerous. Leading causes for this danger include: (1) most streets in the area are too narrow to provide designated bike lanes, (2) automobile speeds are too fast, and (3) the general public is not conditioned to respect the cyclist as a vehicle of the road. Due to these constraints, cycling is likely to be associated more with recreation, exercise, or visits to neighborhood parks than a serious option for commuting. The Bicycle Friendly Community Committee's challenge is to reverse or reduce some of these obstacles.

#### **KEY TERMS**

<u>Bike lane</u> – A portion of the roadway within the right-of-way designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists. Bike lanes are one-way facilities carrying bicycle traffic in the same direction as adjacent motorized vehicular traffic.

<u>Bike path or trail</u> – A path physically separated from motorized vehicular traffic by an open space or barrier within the roadway right-of-way or an independent right-of-way. The adopted minimum standard width of a two-way, shared path is a pavement width of 12 ft. plus one foot of clearance from obstacles (trees and curbs) on each border. A bike trail is a somewhat

interchangeable term used for a bike path, the difference being that the term trail is used to describe a path typically in a park setting or in a designated right-of-way corridor specifically for the use of bicyclists and pedestrians. The term trail may also be used to refer to an unpaved or natural surface recreational facility.

<u>Bike route</u> – A designated roadway where pavement is shared with both automobile and bicycle traffic with no special provision for cycling except for signing of the bike route. Typically, bike routes are designated on low volume and relatively low speed streets but often include streets with speeds over 35 MPH. There should be sufficient space on these routes to allow cars to safely pass bicycles by crossing the center line or moving into another traffic lane. Per Arkansas state law, cars must give bicycles at least 3 feet of space when passing. Cars are allowed to cross a double center line to pass a cyclist as long as oncoming traffic allows.

Sharrow - A bicycle logo and two chevrons painted on the street. The purpose of these road



A bicycle logo and two chevrons painted on the street. The purpose of these road markings is to inform both cyclists and motorists of a designated bicycle route and indicate that bicycles have an equal right to the road. Sharrows help alert cars to take caution and share the road with cyclists. Sharrows are allowed on streets with posted speed limits below 40 MPH.

# KEY GOALS OF THIS PLAN

- 1. Provide relatively safe transportation by bicycle to major parks, schools, community centers, commercial areas and other destinations;
- 2. Identify cross city connections for work commuting, errands, access to trails, and connecting to other regional routes;
- 3. Improve bicycle safety education and awareness within the community; and
- 4. Encourage bicycling as a means of transportation.

#### GOAL 1 – SAFE TRANSPORTATION

Provide relatively safe transportation by bicycle to major parks, schools, community centers, commercial areas and other destinations.

The ideal safe bicycle facility would provide paths separated from motorized vehicles and designed properly to accommodate 18 MPH cycling speeds. A good example is the Arkansas River Trail. Still, as the Arkansas River Trail has become a popular destination, the mixing of pedestrians, their pets, skaters, runners, and cyclists has resulted in conflicts. Even with separate facilities, courtesy and user rules are required for a safe and pleasant experience. Informational signs at trail heads have been implemented by the Parks and Recreation Department. These signs contain safety reminders and rules for the area that are important for all users of the trail system.

The focus of this plan is providing a safe setting for cyclists of any comfort and skill level. This means providing bike paths and trails where possible, followed by providing bike lanes. Some cyclists join street traffic and follow normal traffic flow. Other cyclists do not feel comfortable riding in street traffic and will seek to ride where there is a greater feeling of safety.

Safe means of transportation for cyclists must accommodate all levels of experience.

Roadways that have traffic volume, pavement width, and speeds suited for use as a bike path or lane are limited in the city. However, paths, lanes and enhanced roadway shoulders give cyclists a greater sense of protection from motorized vehicles and should be implemented wherever possible. Visual cues such as signs and striped lanes along these systems are important to keep motorists aware of cyclists. All signs shall be retroreflectorized for use on bike paths, bike lanes, and bike routes.

Example sign and lane markings for designating bike paths/trails and bike lanes:



Routes are easily marked and work well for cyclists who feel comfortable riding in street traffic. Bike route signs and sharrows at regular intervals along designated bike routes remind motorists that the roadway is to be shared with bicycles, as well as identify the route for cyclists.

Example sign and pavement markings for designating bike routes:



Design features such as bicycle safe drainage grates, bridge expansion joints, railroad crossings, and smooth pavements also contribute to a safe riding environment for bicyclists.

Sign placement, design, application, and on-street markings shall be in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways, 2009 Edition published by the U.S. Department of Transportation Federal Highway Administration as well as the Guide for the Development of Bicycle Facilities, 2012 Fourth Edition published by the American Association of State Highway and Transportation Officials.

#### GOAL 2 - CROSS CITY CONNECTIONS

Identify cross city connections for work commuting, errands, access to trails, and connecting to other regional routes.

Major connections across the city include interconnecting bike paths, lanes, and routes to reach key destinations. The purpose of these connections is to provide a relatively safe way to travel across the city for commuting, errands, recreational use, and transportation outside of the city. While some cyclists may develop their own habitual routes across the city, routes marked with wayfinding would promote and encourage the use of such a system. Cyclists and motorists will become familiar with the routes and awareness will increase. The Bicycle Plan Map identifies where bike paths/trails, lanes, and routes exist and are proposed within the city.

# BIKE PATHS AND TRAILS

Existing

- Arkansas River Trail system (a section on River Road, from Rockwater Boulevard to the Big Rock Quarry gate remains an on-street route)
- Emerald Park Trail along top of Fort Roots (90% complete one section needs to be widened)
- Levy Trail from I-40 underpass to 52<sup>nd</sup> St.
- Overbrook Trail between JFK and North Hills

#### Proposed

- Levy Trail from 52<sup>nd</sup> St. to Camp Robinson
- Railroad spur trail along 15<sup>th</sup> Street west of Pike Ave. to Riverview Park
- White Oak Bayou trail from Young Road to north of Maumelle Blvd.

#### BIKE LANES/ENHANCED ROADWAY SHOULDERS

Existing

- Bike lanes on Military Road in Burns Park (between Joe Poch and Funland Dr. (10% complete) possibly implement enhanced roadway shoulder instead of road widening
- Tournament Drive in Burns Park
- Donovan Briley Blvd.
- Crystal Hill Road to I-40 (50% complete)

#### Proposed

- North Hills Blvd./between 15<sup>th</sup> Street and I-40 (high-priority, needs widening)
- North Hills Lakeview to Justin Matthews
- North Hills Crestwood to City Limits
- Paul Eells Drive
- Counts Massie Road
- Fairway Ave. Lakeview to McCain, with sharrows or enhanced roadway shoulder in Lakewood Elementary school zone if bike lane not practical
- Faulkner Lake Road
- Walkers Corner Road
- Crestwood, with sharrows or enhanced roadway shoulder in Crestwood Elementary school zone if bike lane not practical
- Landski Drive from Parkway to Military Road

#### **BIKE ROUTES**

• Refer to Bicycle Plan Map

#### SHARROWS

**Existing** 

• Harper's Loop

#### Proposed

• Randolph Rd. - Crestwood to Kings River Rd. and Kings River Rd. to JFK Blvd.

- North Hills On hill from Barbara St. to Lakeview Rd., with Share the Road sign
- Kierre JFK to Levy Trail
- Lakeview Dr.
- Championship Dr. from Tournament Dr. to Landski Dr.
- Arlene Laman Dr.
- Joe K. Poch Dr.

# WAYFINDING

The following areas of the Bicycle Plan Map were found to need additional wayfinding to inform cyclists of how the route is to continue. Sharrows and/or bike route signs are acceptable wayfinding devices.

- Locust pointing east on SA Jones to Vine.
- Route from Locust to Brother Paul Dr.
- Route from Hwy 165/England Rd. to Hwy 391/Baucum Rd/State Dairy Rd.
- Additional signage along Colonel Maynard and Hwy 161, plus Walkers Corner Road and Faulkner Lake Road (Harper's Loop).
- Mark turnoff from Valentine Rd. east onto Maybelline Rd. to reach destinations further north. Otherwise riders will ride under interstate and dead-end.
- SW corner of Allen & 22nd: bike route sign should point left AND straight, since bike route continues in both directions.
- 22nd St. on each side of RR X-ing at 22nd and Percy Machin.
- 16th and Sycamore to indicate it is the way to connect to 13th St to cross RR tracks and reach Main St.
- Add directional bike route sign at end of Verizon Way needs to point east, west, and straight for Junction Bridge.
- Intersection of Kierre and Perin Rd.
- Texas/Nicole/Valerie (Military-Allen St. connection).
- N Locust St.
- Allen St.
- Parkway Dr.
- Ridge Rd.
- W 33rd St/D Ave. (extra signage on curves)
- Railroad Ave.
- Joe K Poch Dr.
- Arlene Laman Dr.
- Charles H Boyer: need sign for west bound traffic after turning from McArthur, need sign for east bound traffic after turning from Military
- Covered Bridge to Young Road; unpaved multi-use trail
- Long-term: place signage and/or sharrows at EACH intersection to indicate direction in which bike route continues

# IMPROVED STREET CROSSINGS

Safe street crossings are essential to improving the utility of the City's bike routes and paths. The following recommendations were made to improve safety along the Levy Trail-Arkansas River Trail connection. Safe crossings of major roadways can be achieved by means of:

- 1. Signage
- 2. Signals
- 3. Raised crosswalks
- 4. Road markings
- Levy Trail Crossing at 33<sup>rd</sup> Street

Motorists leaving westbound I-40 by access of 33<sup>rd</sup> Street are slowing down from highway speeds. This proves dangerous for cyclists and pedestrians crossing 33<sup>rd</sup> Street. The following measures can be taken to alert motorists to the presence of crossing cyclists and pedestrians:

- Place crossing with parallel striping, and install motion-activated flashing yellow lights on either side of road at crossing. This will automatically alert motorists to trail users' desire to cross the street.
- o Build refuge in the street, at the crossing, and reduce westbound lane to one lane.
- Add stencil-painted roadway markings to alert motorists to upcoming trail crossing.
- Install speed table and/or rumble strips on 33<sup>rd</sup> St. immediately after off-ramp, before Schaer. This will alert motorists to the need to slow down and use caution. This will also allow time to visualize trail crossing signage and markings.
- Crossing Percy Machin at Pike Ave.

Percy Machin is a two-lane, busy road that must be crossed in order to connect between the Levy Trail and streets leading to the Arkansas River Trail. Currently, cyclists and pedestrians have no way to safely cross the road at the end of the Levy Trail. The crossing point is barely visible to motorists, and they do not expect to see pedestrians and cyclists crossing this stretch of road. The following measures can be taken to make it safer for cyclists and pedestrians to cross here:

- Add crossing with parallel striping, and install signal light or flashers to alert motorists to the presence of crossing cyclists and pedestrians.
- Add stencil-painted roadway markings ahead of crossing to alert motorists.
- Install speed table and/or rumble strips prior to crossing on northbound and southbound lanes.
- Crossing Pershing at Schaer St.

Pershing Road is four lanes wide at Schaer St., with a center turning lane. Not only are there hazards to pedestrians and cyclists of through traffic on all four lanes, but there is also the hazard of cars attempting to turn onto Schaer from either direction within the space of the desired crosswalk. Safe crossing measures that can be taken include:

- Add painted crossing that extends across westbound and eastbound lanes of traffic.
- Install yellow flashing lights for westbound and eastbound lanes of traffic that activate when pedestrians/cyclists approach to cross Pershing.
- Add stencil-painted roadway markings and warning signs for northbound and southbound lanes to alert motorists to crossing.

Additional crossing improvement requests:

• Bicycle/pedestrian crossing at Verizon Way and Broadway intersection with yellow

flashing lights

# OTHER INFRASTRUCTURE IMPROVEMENT REQUESTS

The following suggestions were made by the Bicycle Friendly Community Committee to enhance safety in specific areas along bike routes:

- Place Stop sign at River Trail entrance west of Fike's Bikes; place sharrow after Stop line.
- Stop sign at RV park entrance: place Stop sign before tree, back far enough to be visible by motorists.
- Raise interstate signs on Percy Machin/Old Pike by 3ft or move to north side of Old Pike to allow cyclists' line of sight (see photo below)

# CONNECTIVITY CONCERNS TO BE RESOLVED

The following areas of the City have been brought forth by the Bicycle Friendly Community Committee and members of the public as connectivity concerns for cyclists and pedestrians. No specific improvement suggestions were made at this time; however the committee recommends a greater focus on finding solutions in these areas:

- Broadway crossing, Alpha St to Glenview Ln is difficult.
- Charles H Boyer: turning left onto Military is difficult (for motor vehicles as well).
- Military Drive: Bridge over I-40 is narrow and difficult to navigate when motor vehicle traffic is present.
- Intersection of Championship Drive and Tournament Drive is difficult need either signage or more education (traffic on Tournament Drive must yield to traffic coming from Championship Drive).
- Pike Avenue from roundabout to Pershing difficult for cyclists and pedestrians due to wide road width, heavy traffic and high speeds.
- Magnolia St from SA Jones to Broadway: traffic expected to increase due to new residential development. Explore possibility of off-street bike path parallel to Magnolia.

# GOAL 3 - EDUCATION AND AWARENESS

Improve bicycle safety education and awareness within the community.

Improved bicycle safety is likely to occur as a result of the development, communication and implementation of the Bicycle Plan, increased ridership, and education efforts. The education of the general public regarding best riding practices is an on-going task. The City's Safe Routes to School, or "Fit 2 School," program has incorporated bicycle and pedestrian education in four elementary schools since 2012, with the goal of expanding to reach at least 75% of NLR School District third graders in the 2013-2014 school year.

Active implementation of nationally standardized signage and roadway markings will serve to increase awareness by motorized vehicles and bicyclists alike, thus increasing safety. Diligent efforts through the local media may have an impact on motorist behavior, for example the City's 2013 3-foot passing law awareness campaign. More information on the 3-foot campaign is available at <a href="http://nlrfit2live.org/fit-2-get-active/#nlr-bicycle-friendly-community-committee">http://nlrfit2live.org/fit-2-get-active/#nlr-bicycle-friendly-community-committee</a>.

Another means of educating motorists is through driver education programs and the State Driver's Licensing Program. The Arkansas State Police recently updated their driver's license manual, and included a section about sharing the road with bicycles. The manual is available at <a href="http://www.asp.state.ar.us/divisions/hp/pdf/dl%20study%20guide\_vol%201%20edition%206\_august%202011.pdf">http://www.asp.state.ar.us/divisions/hp/pdf/dl%20study%20guide\_vol%201%20edition%206\_august%202011.pdf</a>. The bicycle section begins on page 44.

Two bicycle-related questions have been added to the driver's exam:

When you are passing a bicycle and an oncoming vehicle is approaching, you must:

- a) slow down and let the vehicle pass first
- b) stop and move to the shoulder
- c) accelerate and pass the bicycle quickly
- d) blow the horn to alert the bicyclist

Do not share a lane with \_\_\_\_\_\_, because they need extra space.

- a) motorcycles
- b) pedestrians
- c) bicyclists
- d) All of the above

However, the driver's exam will miss the great majority of motorists who renew their driver's license without additional testing. One effort that might help is distributing pamphlets when renewing driver's licenses.

Additional educational efforts implemented by the City in 2012-2013 include offering Traffic Cycling Skills 101 courses and training 13 new League Cycling Instructors to serve North Little Rock as Bicycle Ambassadors.

<u>Smart Cycling Rules of the Road from the League of American Bicyclists:</u> http://www.bikeleague.org/resources/better/roadrules.php

- tp://www.bikeleague.org/resources/better/roadrules.p
  - Follow the Law

Your safety and the image of bicyclists depend on you. You have the same rights and duties as drivers. Obey traffic signals and stop signs. Ride with traffic; use the rightmost lane headed in the direction you are going.

• Be Predictable

Make your intentions clear to motorists and other road users. Ride in a straight line and don't swerve between parked cars. Signal turns, and check behind you well before turning or changing lanes.

Use the following arm signals:



• Be Conspicuous

Ride where drivers can see you; wear bright clothing. Use a front white light and red rear light and reflectors at night or when visibility is poor. Make eye contact with drivers. Don't ride on sidewalks.

• Think Ahead

Anticipate what drivers, pedestrians, and other bicyclists will do next. Watch for turning vehicles and ride outside the door zone of parked cars. Look out for debris, potholes, and utility covers. Cross railroad tracks at right angles.

• Ride Ready

Check your tires have sufficient air, brakes are working, chain runs smoothly, and quick release wheel levers are closed. Carry repair and emergency supplies appropriate for your ride. Wear a helmet.

• Keep Your Cool Road rage benefits no-one and always makes a bad situation worse.

Additional cycling tips available at: <u>http://www.bikeleague.org/resources/better/index.php</u>.

# GOAL 4 – ENCOURAGEMENT

Encourage bicycling as a means of transportation.

Many cyclists perceive local streets as a relatively dangerous setting for cycling. Riding on streets with slow traffic speeds and low traffic volumes provides a good setting for cyclists, but separated trails are often the preferred choice. The primary way of encouraging greater bicycle transportation is to fully implement the Bicycle Plan as proposed.

# IMPLEMENTATION

Development of these routes is likely to be the result of a combination of efforts, including the following suggestions:

- The North Little Rock Bicycle Plan shall be revised annually to provide a current statement of community intentions and support.
- The Master Street Plan shall be modified to provide additional pavement widths as recommended in the Bicycle Plan or other locations where special accommodation is needed.

- Funding opportunities should be investigated, such as implementing specific projects through the Arkansas Highway & Transportation 50/50 match program, the State Parks Outdoor Recreation Program, and through competition for MAP21 Transportation Alternatives Program funds available through the local Metropolitan Planning Organization. Additional State Enhancement funds may be available to develop elements of the plan.
- Funds from City Capital Improvement allocations should be made available for incremental implementation of the Bicycle Plan.
- Local neighborhood organizations should work with their Ward Aldermen to secure funding for specific elements of the Plan.
- The off-street parking section of the Zoning Ordinance should be amended to require that bicycle parking is made available for all new commercial development and major renovations.
- Appropriate markings (signage and roadway markings) should be used in order to make the Bicycle Plan visible in the daily lives of citizens, thereby increasing awareness among cyclists and motorists.
- The City has adopted a Complete Streets policy to safely accommodate all modes of transportation. Roads being resurfaced or rebuilt should be automatically considered for bicycle and pedestrian facilities in coordination between the Mayor's Office/Fit 2 Live, Engineering, and Community Planning departments.
- Bicycle facility improvements requested by the Bicycle Plan should be designed and made "shovel ready" for available funding and grants.
- Private funding may also assist in implementing the Bicycle Plan.
- The City shall leverage its Bicycle Friendly Community committee and Bicycle Ambassadors to advocate for implementation and provide community service to encourage cycling among all demographic groups.
- Maintenance: The City shall ensure that bike lanes and enhanced roadway shoulders are swept regularly and kept free of debris.

# COST ESTIMATES OF IMPLEMENTATION

- Striping Bike Lanes A survey of city streets revealed approximately 45,000 linear feet of available roadways identified on the Bicycle Plan Map as having enough pavement width available to stripe bike lanes or enhanced roadway shoulders without modification of the roadway width. Adding this striping would be a quick and immediate boost to these streets' functionality for cyclists. A 4" white continuous stripe costs about \$0.44/Linear Foot. Estimated cost of implementing the entire system of striped bike lanes is about \$19,800.
- Street Widening to Add Bike Lanes/Shoulders There are approximately 91,436 feet of proposed bike lanes/shoulders. For planning purposes, the estimated cost for widening a street to add paving for bike lanes is between \$100-200/linear foot or about \$9-\$18 million for the entire system.
- Placing Sharrows on Routes The survey of city streets for proposed routes with sharrows indicated the need for approximately 175 sharrows throughout the city. Placing sharrows on designated routes will immediately increase motorist awareness of the presence of cyclists and identify preferred routes for cyclists. Sharrows cost approx.

\$250/each. The cost estimate of placing sharrows on designated routes of the bike plan is approx. \$43,750.

- Bike Route Signs Signage is needed on all designated paths, lanes, and routes of the Bicycle Plan. A standard highway traffic sign costs approx. \$40 and the post costs approx. \$75. The estimated total cost of signs on the Bicycle Plan is \$78,200: \$10,350 for 90 signs along routes with sharrows, \$16,100 for 140 signs along streets with bike lanes/shoulders, and \$51,750 for 450 signs along routes with no other markings.
- Bike Racks Single-hoop bike racks cost approx. \$110 each. The City currently has bike racks in-stock, so there is no need to purchase additional racks at this time.
- Bike Trails The estimated cost is \$60 per linear foot not counting the additional rightof-way costs. Completing the 72,122 feet of proposed trails or paths is estimated to cost \$4.3 million.

#### DESIGN STANDARDS

**Bike Paths** are most commonly designed for two-way travel, with the users being non-motorized bicyclists, inline or roller skaters, skateboarders, motorized or non-motorized wheelchair users, and pedestrians, including walkers, runners, people with baby strollers, and people walking domestic pets.

Two-directional shared use paths shall have a minimum paved width of 12 ft. plus a minimum 1 ft. wide graded area, free of obstacles, with a maximum 1:6 slope adjacent to both sides of the shared use bike path. Where used on a shared use path, no portion of a sign or its support shall be placed less than 2 ft. laterally from the edge of the path, or less than 8 ft. vertically over the entire width of the path. The clearance for overhead signs should be adjusted to accommodate maintenance or emergency vehicles and equestrian users when applicable.

**Bike Lanes** are within the roadway, are one-way and carry bicycle traffic in the same direction as adjacent motor vehicle traffic. Lanes delineate road space for the exclusive use by cyclists. Bike lanes must be at least 4 feet wide when there is an open shoulder, or 5 feet from face of curb when a curb is present.

Where parking is permitted but a parking stripe or stalls are not utilized, the shared area should be a minimum of 11 ft. without a curb face and 12 ft. adjacent to a curb face.

Bike lanes shall be delineated from the motor vehicle travel lanes with a 6 inch solid white line. A 4 inch solid white line can be placed between the parking lane and the bike lane to encourage parking closer to the curb. In no instance shall a bike lane be between the curb and the parking lane of vehicles. Markings for bike lanes should be placed at the beginning of a bike lane and at periodic intervals along the bike lane based on engineering judgment. The American Association of State Highway and Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities* contains in depth guidelines for marking bike lanes at intersections and crosswalks. It is recommended that this publication be used as a guide for marking bike lanes within the city.

#### **Enhanced Roadway Shoulders**

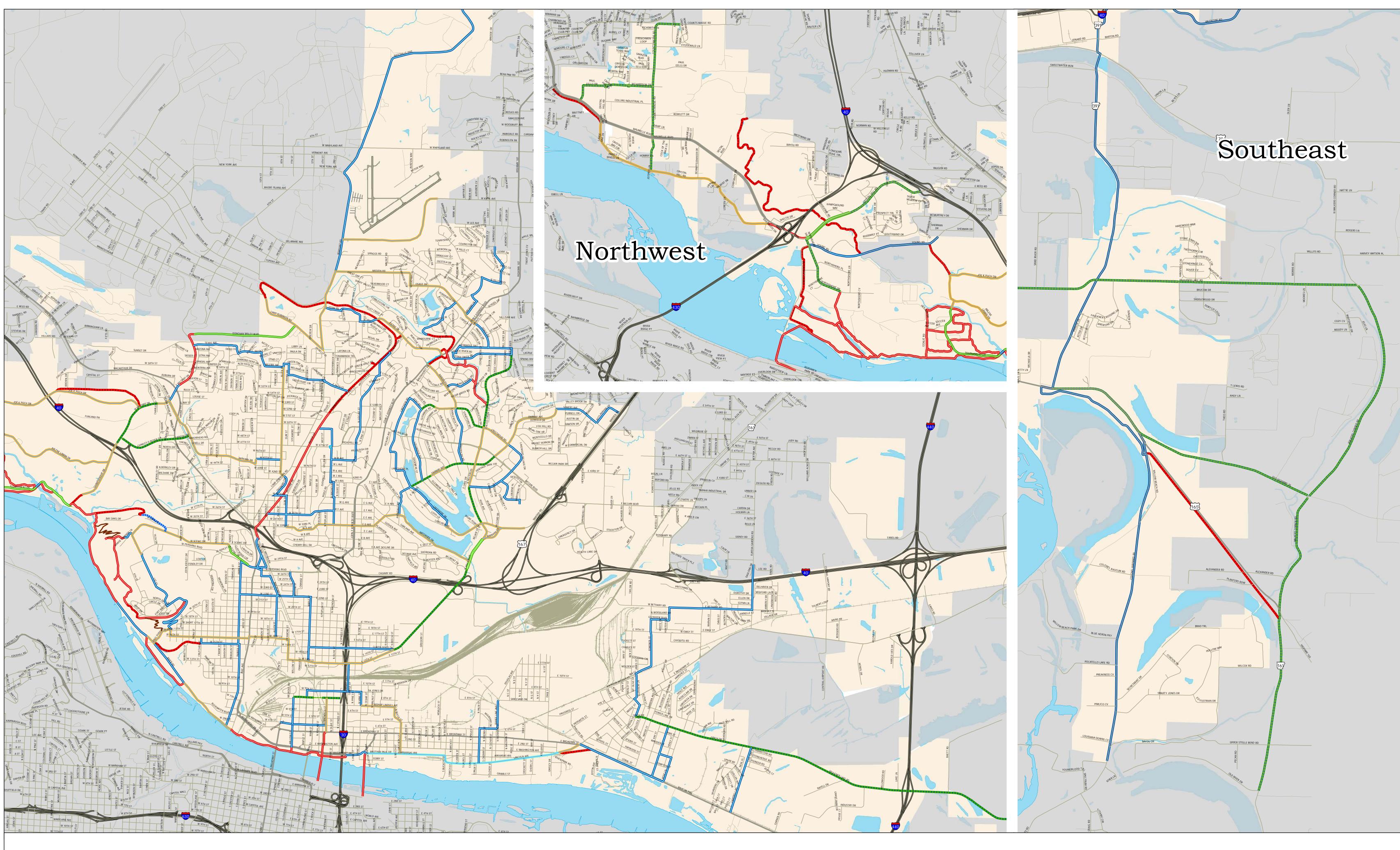
Adding paved shoulders can greatly improve accommodation for cyclists on roadways with higher speeds or traffic volumes, in addition to benefiting motorists. Paved shoulders are not bike lanes and can be used for on-street parking or disabled vehicles. Shoulders stay on the right of the right turning lane whereas bike lanes stay to the left of the right turning lane. Shoulders should be at least 4 feet wide or 5 feet if against a guard rail or curb.

**Bike Routes** are designated roadways where pavement is shared by both motorists and cyclists with no special provision for cyclists except the signing of the bike route. Bicycles are permitted on all streets and highways, but are prohibited from interstate freeways. Designated routes provide connections to other features of the Bicycle Plan such as bike lanes and bike paths. Routes also connect local neighborhood streets and collectors to points of interest such as schools, parks, and commercial areas.

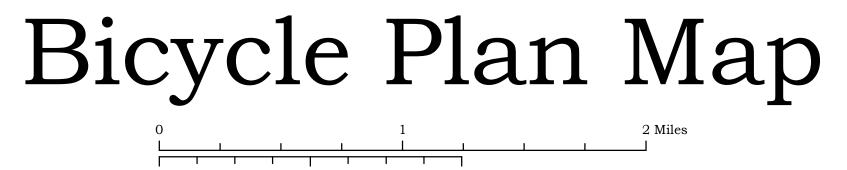
Rumble strips have been used on many State Highways to prevent vehicles from veering off the road. When these are used, a 4 foot shoulder should be provided for cyclists and 12-ft. gaps provided to allow cyclists to move across the rumble strip.

**Bike Parking Racks** are an essential element in promoting cycling in the community. Bike racks offer safety from theft and damage. This encourages more use of bicycles for everyday trips, and cyclists are more likely to patronize businesses and services that provide racks. Bike racks should be designed so that they:

- Do not damage wheels or other parts of the bicycle,
- Do not impede or interfere with pedestrians,
- Accommodate locks of varying styles and functions,
- Are easily accessed from the bike path, lane, or route, and
- Are protected from motorized vehicles.







2 Kilometers

- Bike Path Proposed Bike Lane on Future Facility Proposed Bike Route ----- Proposed Bike Path ----- Bike Route Bike Lane Bike Route w/Sharrow
- ----- Proposed Bike Lane ----- Bike Route w/Proposed Sharrow
- Multi-Use Path (unpaved)
  - Use Sidewalk

Existing Sharrows, proposed to be moved

This map is the most up to date in the possession of the City of North Little Rock; however, please note that the areas depicted are not static. Daily changes may occur in the area depicted that are not reflected in the attached map. Accordingly, the City of North Little Rock does not warrant or guarantee that the map accurately reflects any and all recent changes.

Source: PAgis; U.S. Census Bureau; Geostor