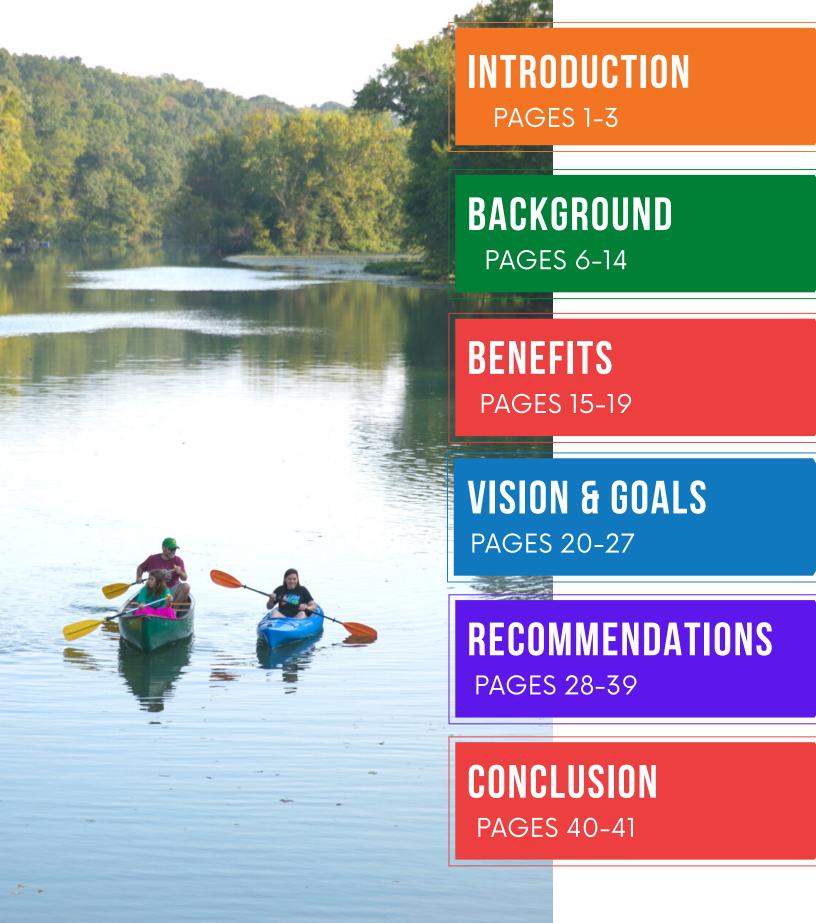
2022 ACTIV TRANSPORTATIO

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# INTRODUCTION



## WHAT IS ACTIVE TRANSPORTATION?

Active Transportation describes all humanpowered forms of travel, such as walking, cycling, in-line skating, skateboarding, paddleboarding, canoeing, and more.



# WHAT IS MULTI-MODAL TRANSPORTATION?

Multimodal transportation simply refers to the way people travel by multiple means of transportation, which includes biking, driving, taking a bus or subway, and now riding an electric scooter or even paddling waterways. As a result, more and more people will have to confront their need for multimodal transportation services.





## WHAT ARE ACTIVE TRANSPORTATION NETWORKS?

Active-transportation networks should focus on providing maximum connectivity at the lowest possible exposure to traffic risks to maximize usability for all potential users. Trails provide the backbones of such networks. On-road facilities should mimic a trail-like experience as much as possible to create a sense of safety and to make active transportation fun and convenient.

## INTRODUCTION

# ACTIVE TRANSPORTATION NETWORK SYSTEMS

As more communities make easy investments in trails, bike lanes, pedestrian streetscapes, and cycle tracks, more places are ready for the next step that comes after this harvest of low-hanging fruit: assembling the planning, creating innovative designs, and securing funding to build a complete active transportation network.

Building for active transportation has evolved to a level where the focus is about bringing elements together into one integrated system. Dedicated trails have often proved to be the beginning of convenient, quick, safe, and fun active transportation options. Building whole networks that connect people to the places they want to go in a safe, convenient, and enjoyable way will multiply the potential of the current infrastructure.

While fixing gaps may sometimes mean investment in costly features such as bicycle and pedestrian bridges, these investments need to be judged with the full active transportation system in mind.



## ATP PURPOSE & GOALS

The purpose of the ATP is to encourage increased use of active modes of transportation, such as biking and walking by achieving the goals listed below.



## PRIMARY GOALS

- Increase the proportion of trips accomplished by biking and walking
- Increase the safety and mobility of non-motorized users.
- Advance the active transportation efforts of regional agencies to achieve greenhouse gas reduction.

- Ensure that disadvantaged communities fully share in the benefits of the program
- Provide a broad spectrum of projects to benefit many types of active transportation users.
- Enhance public health, including reduction of childhood obesity through the use of programs including, but not limited to, projects eligible for Safe Routes to School Program funding.

## INTRODUCTION

#### COMMUNITY DEVELOPMENT PATTERN CHART

Completely automobile-dependent communities share many of the same characteristics; lack of pedestrian connectivity and non-vehicular infrastructure increased per capita travel mileage, increased vehicle traffic and associated costs, economic and social disadvantages for non-drivers, reduced diversity, and fewer opportunities for education, employment, and recreation. The following table shows the relationships between built environments for supporting an auto-dependent or multi-modal transportation-based community.

#### **Automobile Dependent Community**

Car Ownership

Vehicle Travel

**Priority of Travelers** 

**Parking** 

Traffic Speeds

Land Use Density

Land Use Mix

Land Area For Transportation

Site Design

Street Design

Street Scale

**Street Connectivity** 

Walking

**Planning Practices** 

High per capita car ownership

High per capita motor vehicle mileage

Automobile traffic is prioritized over pedestrian and bicycle use

Generous supply, free

Maximum Traffic Speeds

Low with common destinations dispersed from residential areas

Primarily single use development patterns

Large amounts of land devoted to roads and parking

Parking is placed in front of buildings

Streets designed for primarily automobile traffic

Large scale streets and blocks

Low levels of street connectivity with abundant cul-de-sacs

Walking can be dangerous and is primarily undertaken by those unable to afford a car

Medium per capita car ownership

Multi-Modal Transportation Community

Medium per capita car ownership

Medium to low vehicle mileage

Non-drivers are prioritized and their needs merit significant consideration

Moderate supply, priced appropriately in high destination areas

Lower traffic speeds

Medium to high with common destinations and residential areas clustered

Abundance of mixed-use development patterns

Moderate supply, priced appropriately in high destination areas

Buildings are placed at the street with parking behind or at the side

Medium to low vehicle mileage

Non-drivers are prioritized and their needs merit significant consideration

High levels of street connectivity with numerous intersections

Walking is pleasurable on most public streets and is a safe and efficient alternative to driving for many daily activities

Planning places a high value on transportation modal diversity



THE PLANNING PROCESS

#### THE PLANNING PROCESS

The ATP has been developed with information gathered from a wide variety of planning studies and public input over time. This plan recognizes that exceptional bicycle and pedestrian planning, design and implementation occurs at many levels and is influenced and guided by a variety of plans, policies and advocates. In developing the Active Transportation Plan, staff incorporated data, best practices and input from a wide variety of sources including:

- Parks Master Plan
- Planning & Development Comprehensive Plan
- Garrison Springs Community Forest Management Plan
- Finley River Blueway Plan \*
- ADA Transition Plan \*

\*Plan being actively developed









	DAUNUUNU		
THE SECTION OF THE PARTY OF THE			THE PLANNING PROCESS
	PROJECT	TIMELINE:	
	Marie Land	2005	Finley River Trail at FRP 2,700' of 8' Trail running
Trail 2,400 feet of 8' Trail at Disc Golf Park.	2007		along the river.
Over 500' of trail connecting the two prior FRT. This was funded by a 80/20 RTP Grant.		2009	Finley River Trail (5,860') extension that runs along Finley river up to and behind newly built OC 5200' Mulch Trail.
	2015		
		2016	2,200' of sidewalk along Hartley connection East Elementary to nearby
Over 2,000' of sidewalks and trails built throughout Ozark including a connection to Christian County Library.	2018		neighborhoods. Funded by Safe Routes to School Grant.
		2021	2 underpasses constructed under Jackson Street for safe
3500' of trail constructed for the the Chadwick Flyer Trail. Three TAP projects completed of trail and sidewalks.	2022		crossings for pedestrian and Ozark students.
	The second		

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THE CITY OF OZARK

#### HISTORIC DOWNTOWN

The City of Ozark is fortunate to have city limits that stretch through rural land. This gives Ozark the opportunity to utilize these undeveloped parcels to provide green space and linear parks for commuting on trails, while at the same time staying well connected to our Historic Downtown. Our Downtown is the focal point of the city and showcases our rich history, heritage, and the heart and soul of the Ozarks, alongside our beautiful landscapes.





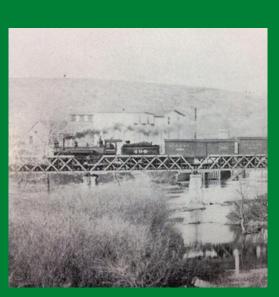


THE CHADWICK FLYER

#### CHADWICK FLYER HISTORY

The Chadwick Flyer spur of the old St. Louis San Francisco Frisco Railroad was originally established to transport timber and railroad ties produced in Christian County for railroad expansion to the west. The Chadwick Flyer made daily trips on the corridor, carrying both cargo and passengers between Springfield and Chadwick, Missouri. "Flyer" was used cheekily, as the average speed of the train was 10mph! The majority of the Chadwick Branch was left abandoned after the Great Depression. The following excerpt is from Paul Johns in the April 2017 AllAboard employees newsletter, "For more than half a century, the train ran from Springfield to Chadwick each morning and then made the return trip that afternoon. With the Ozarker's usual sense of wryness, the train was known far and wide as the Chadwick Flyer because it took all day to make the 33-mile trip to Chadwick and then back to Springfield. Of course, in all fairness, that train made stops at a number of stations along the way, both coming and going...The mixed train daily that left at 9:00 every morning and came back at 4:00 in the evening with about all the weight the locomotive could handle. The train and its crew became an important part of the daily life of those residents who lived in the towns where it made its stops. The crew was always friendly and the conductor took care of children and elders traveling alone. The Chadwick Flyer was what in trainman terms was called a "preferred run." The crewmen could have breakfast in Springfield, eat lunch at Chadwick, and then return to have dinner back home in Springfield. If a trainman got on that run, it was difficult to get him to leave voluntarily."

## **CHADWICK FLYER**



BEGINNING

Length

.75 miles built / 7.5 miles
planned
Terrain

Planned: paved surface minimal inclines
Accessibility

Walkers, runners, bicyclists,
in-line skaters,
wheelchairs, baby strollers

Hours

Daylight hours

PAGF 9



**END** 

THE CHADWICK FLYER

## **CHADWICK FLYER**

As a planned trail corridor, the Chadwick Flyer Trail offers a vital connection between the City of Ozark and the growing regional trail system. Springfield is our state's third-largest metro, and this project highlights our collaborative spirit and allows us to come together around not only a part of our history but also our future. It will allow us to celebrate and develop our unique identity of place and foster an experience economy that supports recreation, culture, and tourism. Best of all, it will connect us to our beautiful outdoors.

Approximately 4,200 linear feet have been completed as of 2021. This segment of the trail is open and being used by folks that live nearby. Construction is also underway on the segment of trail that will leave from the Ozark Community Center, travel under Jackson Street through the new underpass, and head north to Clay Street. Funding has also been secured for the at-grade crossing and short trail segment at CC and Fremont





In 2019, the City began an application for a TAP grant that would fund close to a half-mile of what will become the Chadwick Flyer Trail. Construction of this portion of trail is set to begin in 2022.



INLEY RIVER

#### FINLEY RIVER HISTORY

The Finley River is a gentle stream flowing through rolling hills and pastureland. It was easily harnessed to provide for the needs of early European settlers. Before that, it was a highway for Native American travelers.

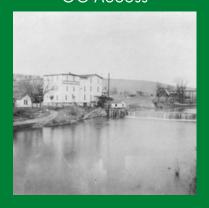
Finley River, a tributary of the James River, gets its start in the high land around Cedar Gap. Its headwaters are about 3.5 miles west of the headwaters of Bryant Creek. It flows east to west for a distance of 52.8 miles. Though it starts in Webster County, 48 miles of its length are in Christian County. The final 3 miles are in the northeast corner of Stone County. Only the last 19 miles are floatable in high or medium-high water. The floatable part begins at a put-in at Linden and ends where it meets the James River. The Finley Watershed is long and narrow, with a total area of about 269 square miles, most of it open grassland. The balance is forested. Ozark, the county seat of Christian County, with a population of about 21,060, is the only large town in the watershed. Sparta, with a population of around 1,998 is the only other town of any size in the watershed. Looking upstream from the Linden put-in, the dam shown contains Lindenlure Lake, a popular local swimming area. The lake began as a millpond, but the mill is long gone, replaced by a private resort community that has provided summer vacationing for local families for decades. From here, you can float Finley River to its confluence with James River.

In the heart of Ozark is a mill with its millpond and dam. Finley River was the engine that powered the mill, which is still in working condition.

Six miles downstream from Ozark, another dam and powerplant is a landmark for summertime swimmers as it crosses the Finley below Riverdale Dam. This powerplant is modern and was built to produce electricity.

## **FINLEY RIVER**

Length 52.8 miles **Terrain** Majority Agriculture **Accessibility** Canoe, kayak, paddleboard, approved motorboats. **Access Points** Current Linden Finley River Park <u>Planned</u> Riverside Park **OC Access** 



## **BEGINNING**



END

FINLEY RIVER

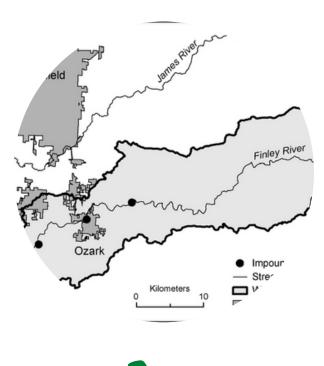
## FINLEY RIVER: OZARK'S BLUEWAY

**BLUEWAY** 

A water trail is a designated route along a river, lake, canal, or bay specifically designed for people using small boats – like kayaks, canoes, paddleboards, or rowboats. These trails are sometimes called blueways because they are the aquatic equivalent to a hiking trail (or greenway).

The Finley River is one of the finest natural amenities running through the City of Ozark. This river gives our residents a unique opportunity to combine Ozark's greenway trails with a blueway within our community. Utilizing this opportunity will further our efforts in cultivating a higher quality of life, providing clean water awareness, and outdoor recreation activities. It will also make Ozark stand out from other communities in our areas that are not as fortunate to have this natural resource.

Providing a well-maintained blueway and greenway will help improve air and water quality. Protecting land along rivers, streams and greenways prevents soil erosion and filters pollution caused by agricultural and road runoff.



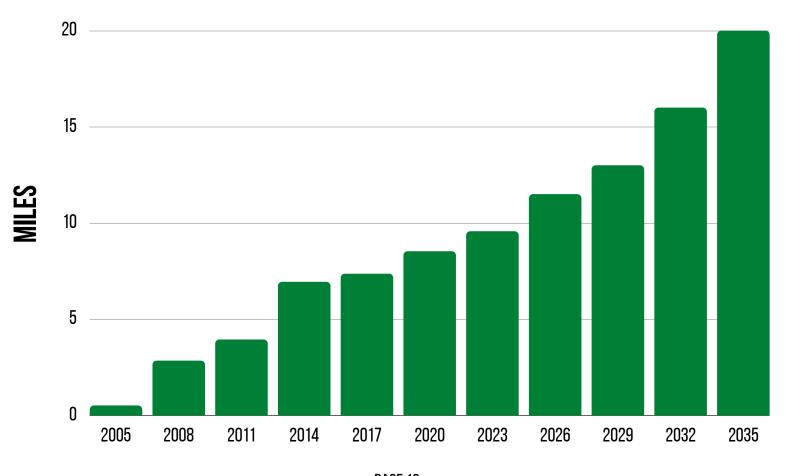


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**SHARED USE TRAILS** 

In the early 2000s, the City of Ozark began construction of the Finley River Trail within our Finley River Park. This was the start of the city's effort to provide the city with pedestrian trails throughout the community. The city then built the Community Center and extended the FRT further down the river. Since beginning their efforts the city has built a total of 9.57 miles at the end of 2022.

## TOTAL CURRENT TRAIL CONSTRUCTION WITH PROJECTED FUTURE GROWTH



## BENEFITS OF A BICYCLE AND PEDESTRIAN PLAN



Active transportation not only has health benefits but can also help address many environmental challenges. Some of the most important benefits are reduced air pollution and greenhouse gas emissions. Other environmental benefits include energy savings, less noise pollution, less water pollution, and more.



#### TRANSPORTATION BENEFITS OF BIKING AND WALKING

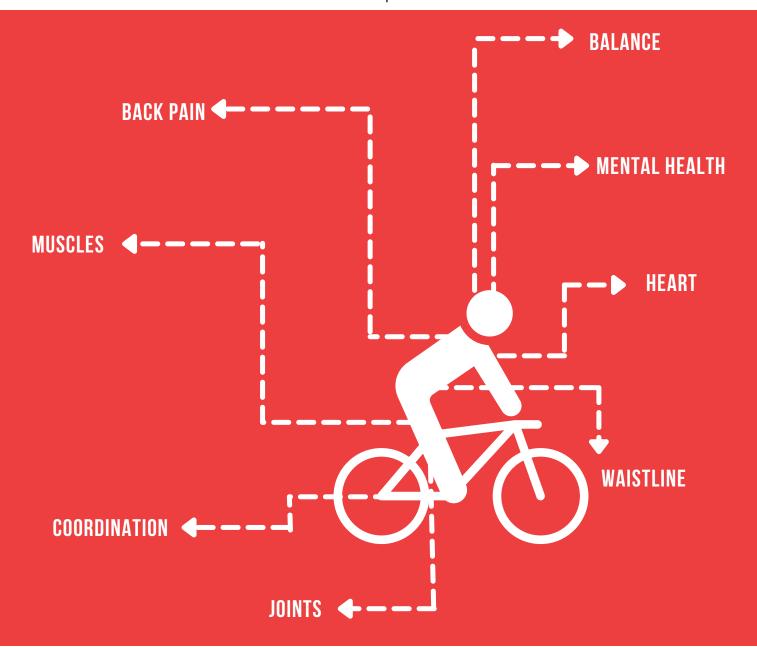


## THE PROMOTION OF HEALTHY LIFESTYLES

Fewer health problems – living a healthier lifestyle means a lower risk of developing many adverse health issues and a better quality of life.

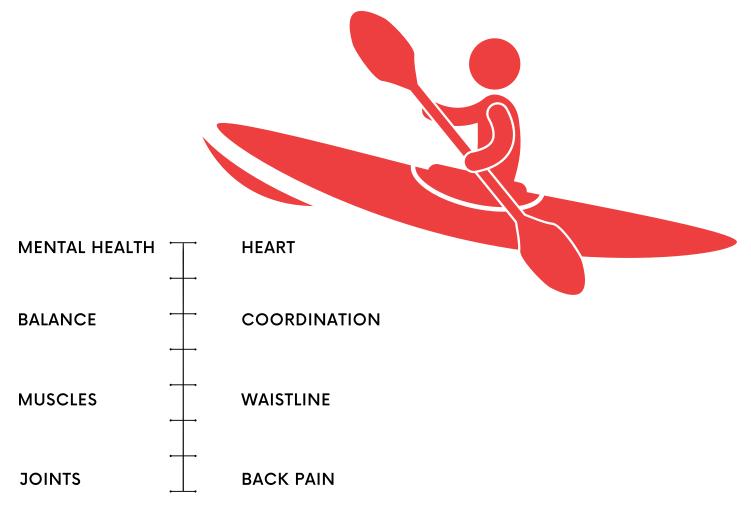
Feeling better mentally – regular exercise can lift your mood and help you feel better.

**Saving money** – eating junk food, smoking, and drinking sugary drinks or alcohol are all expensive habits.



RENEFITS OF KAVAKS

# HEALTH BENEFITS OF CANOEING, KAYAKING, AND PADDLEBOARDING:



Canoeing and kayaking are low-impact activities that can improve your aerobic fitness, strength, and flexibility.

Specific health benefits include:

- Improved cardiovascular fitness
- Increased muscle strength, particularly in the back, arms, shoulders, and chest, from moving the paddle
- Increased torso and leg strength, as the strength to power a canoe or kayak comes mainly from rotating the torso and applying pressure with your legs
- Reduced risk of wear-and-tear on joints and tissues, since paddling is a low impact activity.

#### **SOME OTHER GOOD REASONS TO PADDLE INCLUDE:**

- Kayaking and canoeing can be peaceful and meditative or can be exhilarating depending on where and how you do it.
- · Paddling is a great way to enjoy our waterways.

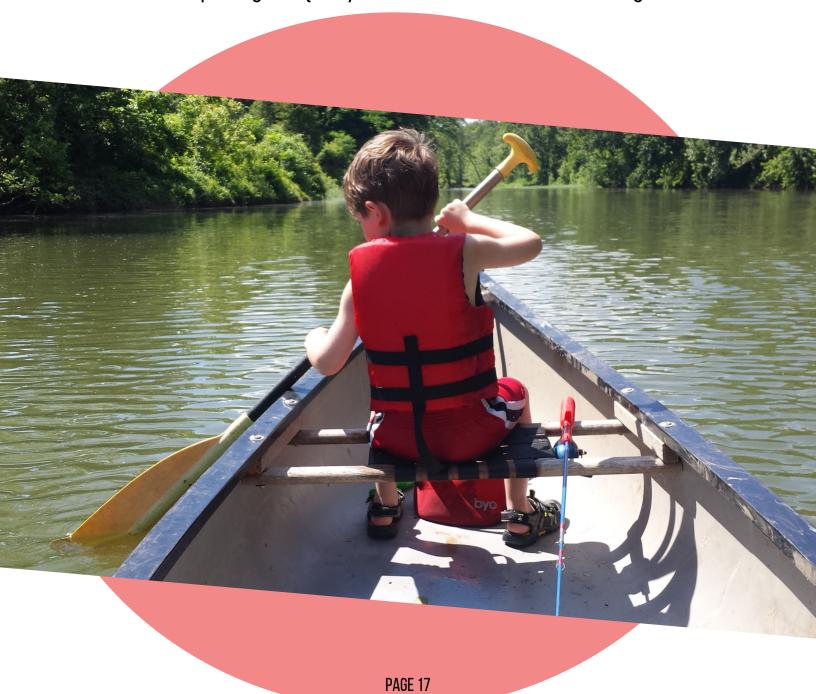
TRANSPORTATION BENEFITS OF BIKING, WALKING, AND WATERSPORTS



## **ENHANCED QUALITY OF LIFE**

Quality of life is the degree to which an individual is healthy, comfortable, and able to participate in or enjoy life events.

Dedicating time now to educating, preserving, enhancing, and improving the quality of life we will invest in our future generations.



TRANSPORTATION BENEFITS OF BIKING, WALKING, AND WATERSPORTS



#### **ENVIRONMENTAL BENEFITS FOR THE COMMUNITY**

- Cuts down on greenhouse gas emissions and global climate change.
- Reduces air pollutants (walking and biking emit no greenhouse gases).
- Reduces noise pollution and congestion.
- Reduces the need for new parking lots and roadways.
- Saves valuable green space from development.
- Reduces your ecological footprint.





TRANSPORTATION BENEFITS OF BIKING, WALKING, AND WATERSPORTS



## **ECONOMIC BENEFITS FOR THE COMMUNITY**

By improving affordable access to economic opportunities, including education, employment and basic services, active transportation tends to increase economic mobility and economic resilience. Economic mobility is the chance that children raised in a lower-income household become economically successful as adults and economic resilience is the ability to respond to unexpected financial stresses such as reduced incomes or new financial burdens. This is amplified for physically, economically and socially disadvantaged people as well as those who lack a driver's license or access to transportation.

THE AVERAGE ANNUAL OPERATING COST OF A

BICYCLE 1S 26X LESS

THAN THAT OF A

**VEHICLE** 



\$308



\$8,220

## **LOCAL ECONOMY PAYBACK**

OZARK'S SECTION OF THE CHADWICK FLYER PROJECT WILL COST APPROXIMATELY \$10.3 MILLION TO COMPLETE AND COULD GENERATE \$103 MILLION IN REVENUE

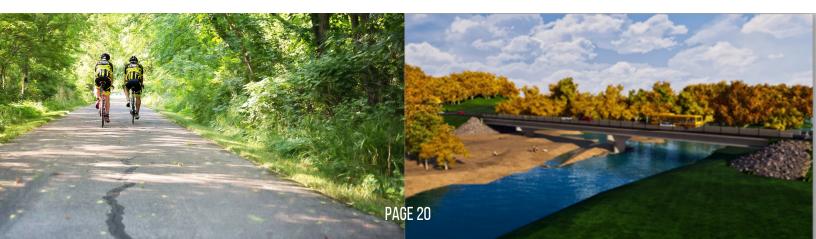
## **PLAN VISION**

The City of Ozark is uniquely positioned in an area surrounded by Springfield/Greene County, Branson and Nixa. Due to the high level of indoor and outdoor experiences provided in the area by others, this positioning results in numerous relatively close-to-home opportunities for Ozark citizens that need not be financed by Ozark tax dollars. Rather, the City must carefully select the projects it wishes to invest in by understanding the ones that citizens are willing to support.









#### **PLAN GOALS**

## > EN

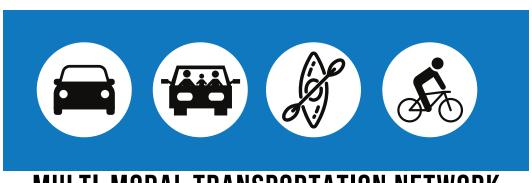
# ENDEAVOR TO CREATE AN INCLUSIVE MULTI-MODAL TRANSPORTATION SYSTEM

Developing a truly multi-modal transportation system is consistent with the City of Ozark's dedication to increasing pedestrian mobility via walkways, trails, and parks. The 3/8 Cent Transportation Sales Tax is dedicated to easing vehicular traffic concerns, neighborhood roads, and increasing accessibility to all of Ozark. To some degree, the ATP addresses all of these modes with the primary emphasis on bicycling and walking. A multi-modal transportation system has a number of significant benefits for the community including, promoting an active and healthy lifestyle, expanding mobility options for all users, reducing overall travel costs for residents and providing environmental benefits through the reduction of traffic congestion and associated air pollution.

Success in this goal area can be quantified through data gathered by the U.S. Census Bureau, City of Ozark ADA Transition Plan, public forums, increased trail usage determined through mechanical counts, and strong partnerships with community organizations.







**MULTI-MODAL TRANSPORTATION NETWORK** 

#### **PLAN GOALS**



# WORK TO BUILD A TRAIL CONNECTION WITHIN ONE-HALF MILE OF EVERY RESIDENCE

The ATP Map shows the existing trail system and identifies future trail locations. Once current ATP goals are completed, the Ozark Trail System will include approximately 20 miles of shared-use paved trails. At the current rate of trail construction, it is estimated the City will have achieved this goal by 2035. This goal is essential to ensuring that the trails system and its benefits are inclusive for all residents regardless of the location of their residence. Success will be measured through locational data collected by the City of Ozark Geographic Information Systems Division.



## TRAIL CONNECTION HIGHLIGHTS



#### **PLAN GOALS**



# PARTNER WITH ADVOCATES TO ADDRESS BICYCLE AND PEDESTRIAN NEEDS

The City Of Ozark, with its partners, began engaging with nearby communities to support efforts to improve the environment and safety for pedestrians throughout Ozark. These efforts included reaching out to communities in other states that have built a pedestrian transit system to learn about what to expect through the growth process

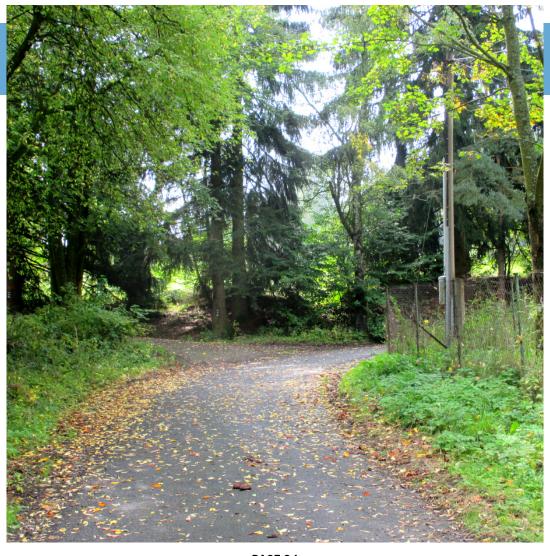
- Making the case for pedestrian safety, which included gaining support from elected officials and emergency management agencies.
- Engaging the public, including raising funds to support their work, distributing surveys, hosting focus groups, and conducting engineering of focused areas; and
- Supporting the development and implementation of the ATP.
- Support in the education of the importance of water quality.

The City Of Ozark along with their partners identified the areas that were safety concerns which included high trafficked areas to schools and activity areas. These areas included underpasses and crosswalks. Prioritizing these areas helped the city obtain grants to help in our efforts.





The Ozark Transportation Organization (OTO) is the transportation planning organization for the Springfield region. The Metropolitan Planning Organizations (MPO) includes local elected and appointed officials from Christian and Greene Counties, and the cities of Battlefield, Nixa, Ozark, Republic, Springfield, Strafford, and Willard. It also includes technical staff from the Missouri Department of Transportation, Federal Highway Administration, Federal Transit Administration, and the Federal Aviation Administration. Staff from local governments and area transportation agencies serve on OTO's Technical Planning Committee (TPC) which provides technical review, comments, and recommendations on draft MPO plans, programs, studies, and issues.



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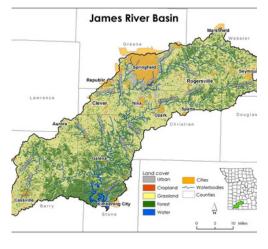


Ozark Greenways was formed in 1991, with the mission is to build a trail system that connects and enhances communities. They are the driving force behind a 140+ mile system of multi-use trails a dynamic network of connected streams, parks, businesses, and neighborhoods. Trails are recreation, transportation infrastructure, tourism destinations, and quality-of-life necessities. Most importantly, trails connect people to our beautiful outdoors, each other, and to the places they want to go.





The James River Basin Partnership (JRBP) is a grassroots, not-for-profit, 501(c)(3) organization working to improve and protect the water quality of the springs, streams, rivers, and lakes in the James River watershed which consists of almost a million acres of land in portions of eight counties.



## **Additional Partners**

Ozark School District

Christian County Missouri

Ozark Special Road District

Christian County Health Department

Christian County Library

**Historic River District** 

**Department of Natural Resources** 

Ozark Chamber of Commerce

Community Foundation of the Ozark's

Missouri Department of Transportation

Watershed Committee of the Ozarks

Missouri Department Of Conservation

Ozark Transportation Organization Bike Ped

## PARKS MASTER PLAN

Parks and open spaces do more than provide recreational opportunities for our residents; they also represent a cultural identity and a natural legacy. It is the goal of our staff to provide well-maintained facilities, creative educational opportunities, and top-notch services that allow people to enjoy their outdoor experiences

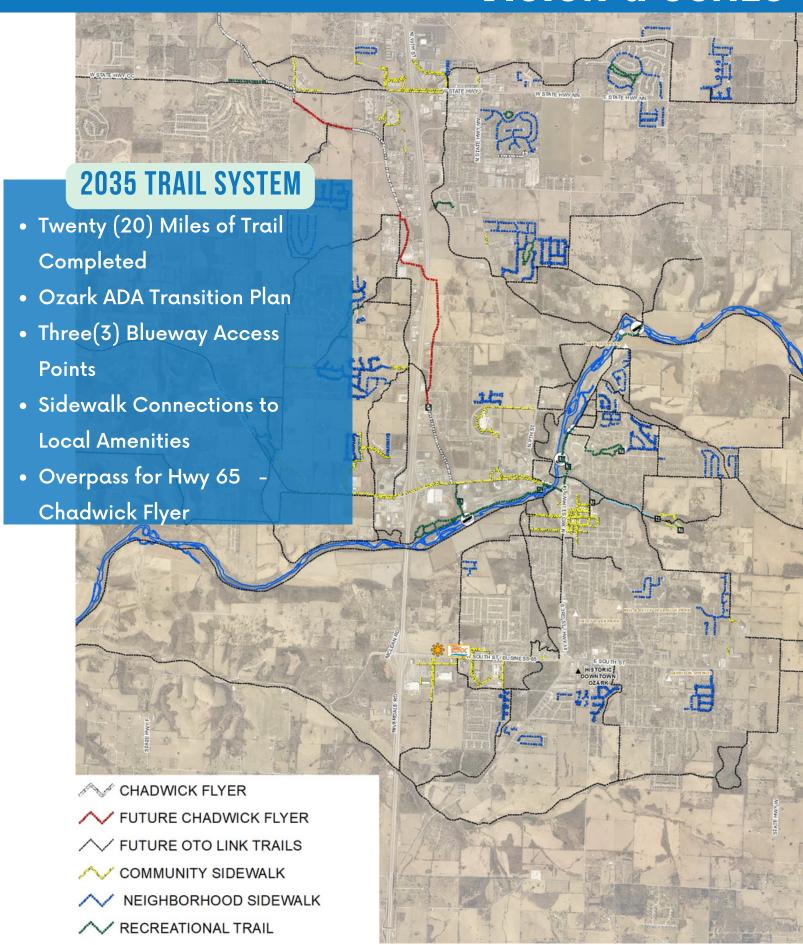
Comprehensive Master Planning intends to seek out the highest park and recreation needs present within the City of Ozark at the time the work is performed and to prioritize action items in a manner consistent with the agency's Mission, Vision and Values. On behalf of the Board of Alderman, and all who have participated, we congratulate the City of Ozark community for embracing this journey with us. We trust the community will benefit from the implementation of the Ozark Parks and Recreation Master Plan.

In June of 2017, City of Ozark contracted with Dick Horton Consulting LLC to develop a comprehensive Parks, Recreation and Trails Master Plan. The draft plan was developed through a highly interactive process involving public forums, stakeholder meetings, citizen survey, site evaluations, benchmarks to like communities and meetings with Parks and Recreation staff and Board of Alderman.

A consistent theme throughout the development of this plan has been the City's commitment to a quality parks and recreation system that delivers high-quality parks, trails and recreation programs, facilities and events for all residents, while contributing to the economic well-being of a the City. To meet this commitment to its residents, this plan is organized around the following themes:

- Provide high quality parks and recreation facilities
- Trails that connect the community and connect the community to open space
- Promoting community health through recreation programs
- Opportunity to hold/host special events throughout the city





PENESTRIAN GNALS

## **PLANNING**

Sidewalks serve as more than mere conduits for pedestrian movement and access. In highly walkable places sidewalks activate the street by providing pedestrian space for social and economic interactions. Highly walkable places are comfortable and encourage walking with a dense mixture of land uses and building types in spaces that were designed at a human scale. This can be difficult to achieve in suburban places that were designed at the automobile scale, with wide streets, large building setbacks and an overabundance of surface parking lots. However, even highly suburban places may be retrofitted, densified and redeveloped into highly walkable places over time. This type of transformation is ambitious but possible with strong leadership, smart investment and sound planning. Planning for highly walkable development is prioritized in Ozark. The following action steps should guide the planning process as it relates to pedestrian infrastructure.

- Identify, evaluate and recommend economic impact models, zoning incentives, tiered impact fees, or other means that encourage and prioritize bicycle and pedestrian-oriented development.
- Conduct a baseline sidewalk condition survey in a Geographic Information Systems (GIS) database for the City's entire existing sidewalk network. Adverse conditions would be noted and geolocated like cracking, buckling, or spalling of the concrete surface.
- Utilize city staff and our partners as a venue to elicit public input to determine high-priority projects that fill the missing links in the current trail and sidewalk network.

PEDESTRIAN GOALS

## **ENGINEERING & EVALUATION**

The major challenges for expanding the City's ATP network are topography, easement acquisition, and a limited budget. Many streets that lack sidewalks are located on steep inclines and they were not originally designed with stormwater infrastructure or sidewalks. Trail projects are often difficult to design and build as well as are more expensive than sidewalk projects in flatter areas of town. Another challenge is the limited funds for sidewalks in the annual budget. The following action steps will help to guide the sidewalk program in order to create the greatest value for the most people regarding sidewalk construction.



- Focus on sidewalk connections to key destinations such as schools, parks, and entertainment and shopping areas.
- Continue to expand the shared-use paved trail system, especially routes that run parallel to major streets and routes that traverse difficult topography.
   Emphasis should be placed on east-west streets connecting to the Chadwick Flyer Trail.
- Make street intersections and trail
  crossings safer and more comfortable for
  pedestrians through the use of colored
  pavement markings, signage, medians,
  and signalization. Grade-separated trail
  crossings are preferable particularly with
  high volume and high-speed streets.
- Evaluate and prioritize high-use sections of the shared-use paved trails system for expanded cross-sections that include separated space for pedestrians and cyclists.
- Provide a buffered area with trees and ground cover between the street curb and the sidewalk when possible.

BICYCLE GOALS



## WAYFINDING

As bicycle and trail networks mature, special attention should be paid to developing and installing appropriate wayfinding signs to provide users with information about direction, distance, and destinations. This signage will provide trail users with on-the-ground information to help them navigate the trail system without the aid of maps. On-street bicycle infrastructure should include directional signage alerting motorists to the presence of bicyclists on the streets. Lastly, the innovative use of temporary signage can be utilized to educate users on bicycle safety and etiquette along the trail.

- Design and install wayfinding signage along with the trail network that provides users with information about direction, distance, and destinations.
- Update the trails and bikeways maps every 1 - 2 years.
- Design and install wayfinding signage on streets with on-street bicycle facilities.
- Develop digital options for wayfinding and maps
- Update website with new information regularly.

**BICYCLE GOALS** 

#### STREET CROSS-SECTIONS

# The City of Ozark's complete codes and ordinances provides design standards for developers building new streets and for the transportation of their development as they rebuild or construct existing streets. These standards ensure that new streets include facilities for all transportation modes: vehicular, pedestrian and bicycle.

## **ETIQUETTE**

Bicyclists on public streets have the same rights and responsibilities as automobile drivers and are subject to the same laws. By all parties obeying traffic laws, the vast majority of conflict between bicyclists and automobile drivers can be prevented. Education efforts targeted at both drivers and cyclists can reduce hostility between these groups and help to foster a sense of mutual respect. Similarly, conflicts between trail users (both cyclists and pedestrians) often result from poor trail etiquette and can be prevented through improved education and strategic enforcement.

## **ACTIONS**

- Implement recommendations from city staff and our partners for sidewalks and trails infrastructure projects.
- Make street intersections and trail crossings safer and more comfortable for pedestrians through the use of colored pavement markings, signage, medians, grade separation, and signalization.

- Design and install temporary signage displaying information that educates users about trail safety and etiquette.
- Update bicycle ordinances to clarify current law and add additional protections for cyclists.
- Work with partners such as the Missouri
  Bicycle and Pedestrian Federation of the
  Ozarks to offer a greater variety of
  training opportunities for adults to learn
  and enhance their bicycling skills.

RICYCLE GOALS

## **ENGINEERING & EVALUATION**

The collection of accurate and relevant baseline data is key for understanding the effectiveness of a bicycle network. The ongoing evaluation of factors such as traffic speeds, transportation traffic counts, existing street cross-sections, percent of grade, and other physical barriers are all significant considerations when determining the appropriate engineering solution for a given project. Additionally, data collected from partnering advocate organizations such as the Ozark Greenways and OTO may be applicable and pertinent to the engineering design process. Major city streets that carry large amounts of motor vehicle traffic act as barriers to bicyclists, as these roads are difficult to cross and generally lack bicycle facilities.

Additionally, Ozark's hilly topography can present a barrier for lower classification streets that lack proper bicycle facilities such as side paths or onstreet climbing lanes. The development of appropriate bicycle infrastructure in key locations can provide safe connectivity that is lacking due to these existing physical barriers. Moreover, portions of the existing trail network in Ozark are discontinuous, primarily because many trails have been constructed with development projects but have yet to be connected to the larger trail network. This problem of a disjointed trail network is typical of new and developing trail networks and will be overcome in time with private and public investments in bicycle infrastructure.

- Evaluate and prioritize high-use sections of the trails system for expanded crosssections that include separated space for pedestrians and cyclists.
- Coordinate with local organizations to conduct surveys and user counts to collect active transportation data that is useful for guiding the bicycle infrastructure planning and design processes and measuring success.
- Make street intersections and trail crossings safer and more comfortable for bicyclists through the use of colored pavement markings, signage, medians, and signalization. Grade-separated trail crossings are preferable particularly with high volume and high-speed streets.
- Find topographic opportunities for grade separate trails and pedestrian pathways.



BICYCLE GOALS

## **EDUCATION & ENCOURAGEMENT**

In order to maximize the use of the developing active transportation network, an investment of time and funding in the areas of education and encouragement is necessary. Programs that teach and encourage people of all ages and from all walks of life in the advantages of an active transportation network are essential to providing a future user base. Children that have been taught bicycle safety and etiquette in school are more likely to grow up using the City's active transportation network. Ozark School District and OTC's student population provide a strong user base for trail and on-street bicycle facilities, but students may also require education, outreach, and encouragement in order to maximize their participation.



- Work with interested groups and Ozark
   Public School District to expand bicycle
   education efforts to include K-2nd
   grade balance bike learning.
- Partner with Ozark Greenways and other bicycle advocates to expand encouragement efforts during National Bike Month in May. This may include bicycle-themed community events, campaigns, and programs.
- Explore possibilities of developing a
   "bike share" program with outside help
   either locally or regionally.
- Work Ozark schools to develop safe routes to school plans to include alternate drop-off locations to increase walking and biking by students and reduce traffic congestions around schools.
- Encourage the Ozark Technical College Richwood Valley Campus to promote cycling and infrastructure with students, staff, and faculty.
- Encouraging Home Owners Associations to become active partners.

BICYCLE GOALS

## SAFETY AND ENFORCEMENT

Safety is an essential element of any comprehensive active transportation plan that must be included at every phase of planning, design, and implementation. The single most significant factor influencing bicyclist safety is the number of cyclists on the road. A strong inverse correlation has been shown between bicycle mode share and accident rates; more cyclists make cycling safer overall. This principle of "safety in numbers" should be central to planning for safer bicycling in Ozark. The real or perceived safety of riding a bicycle in the street with cars close by is a major factor in people's travel mode choice. Streets with high volumes of high-speed automobile traffic can threaten the safety of bicyclists and deter would-be cyclists. Individuals with modest bicycling skills often called the "interested but concerned" cyclists, who represent the largest population of potential cyclists, are most often discouraged by safety concerns. Courses in bicycle safety for adults can help to encourage riders that may need to build confidence in their riding skills. Bike routes that limit cyclists' interaction with high-traffic conditions by utilizing shareduse paved trails, cycle tracks, or bikeways provide users with greater safety and comfort that will yield the highest usage. Lastly, local traffic regulations should be reviewed and updated to ensure that vulnerable road users like bicyclists are protected.

- Update bicycle ordinances to clarify current law and add additional protections for cyclists.
- Make street intersections and trail crossings safer and more comfortable for bicyclists through the use of colored pavement markings, signage, medians, grade separation, and signalization.
- Work with schools to implement a Safe Routes to School program to provide young cyclists with a useful lifelong skillset.
- Work with partners such as the Ozark
   Greenways to offer a greater variety of
   training opportunities for adults to learn
   and enhance their bicycling skills.
- Work with the Ozark Police Department to provide police resources to enforce bicycle, pedestrian, and vehicular traffic as a part of bicycle education and enforcement campaign.



BLUEWAY GOALS



## **ACCESS TO BLUEWAY**

River recreation helps people discover their rivers and improve the quality of life for communities. Finley River has the power to connect us to our history by preserving important places and providing access to them. Finley River's access can enhance a sense of community identity and pride through a managed blueway.

Access points along rivers are gateways to river recreation. They can serve as launch facilities for boats or other watercraft and allow opportunities for visitors to enjoy and experience activities around the water.

- Design and construct additional access points along the Finley River.
- Provide users with information about direction, distance, and destinations.
- Provide public access and maintain those points through the city and other partnerships.
- Design and provide maps for our blueway about Finley River amenities.

## **ETIQUETTE**

The City of Ozark is working hard to ensure safety and enjoyment are had by all using our blueway. By taking care of risky behavior and observing the family-orientated attitude the area is known for, each visitor can make the most of their time and have a positive experience on the water. It is important to note that taking the proper safety measures while enjoying the water is important. In the summertime, families with children of all ages flock to the Finley River for swimming, picnicking, cycling, paddle boarding, and many other outdoor activities. By speaking with visitors and area locals, officials intend to hear the voice of the people and have worked hard at making sure outrageous, risky, and offensive behavior is eliminated. Having a plan of action for proper etiquette on our blueway will be successful in bringing a delicate balance to the rivers and making it safer and more fun for everyone.

- · Provide and promote safety along the blueway.
- Work with schools, parks, and MDC to implement safety awareness for water activities.
- Work with partners such as the JRBP, to offer a greater variety of safety training opportunities for adults and children to learn and enhance their water activity skills.
- Provide important training through summer parks department programs to adults and children.
- Continue annual cleanups that support water quality throughout our community.



RI IIFWAY GNAI S

## ENGINEERING, MS4 & WATER QUALITY

#### What Is an MS4?

## MS4 stands for Municipal Separate Storm Sewer System

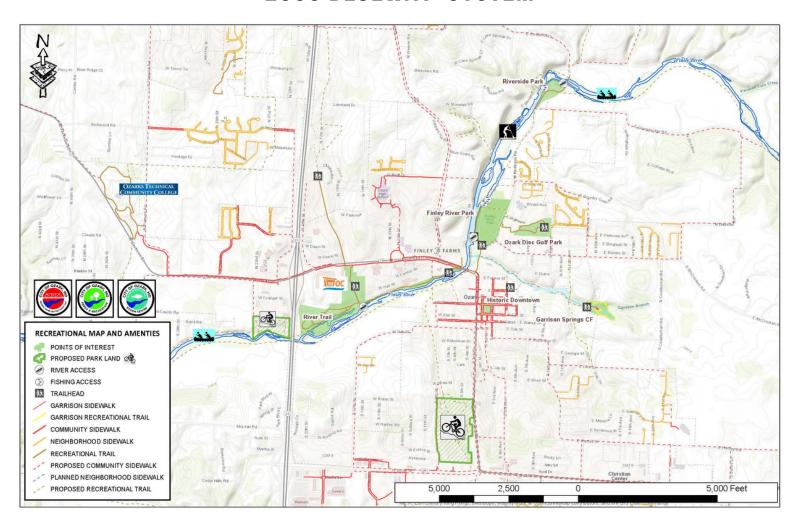
- Owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.
- Designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.)
- Not a combined sewer
- Not part of a Publicly Owned Treatment Works (sewage treatment plant)
- Polluted stormwater runoff is commonly transported through Municipal Separate Storm Sewer Systems (MS4s), from which it is often discharged untreated into local water bodies. To prevent harmful pollutants from being washed or dumped into an MS4, operators must obtain a National Pollutant Discharge Elimination System, (NPDES permit), and develop a stormwater management program.
- These regulations were developed to ensure compliance with the federal Clean Water Act and work to increase the number of water bodies that can safely be used for swimming and fishing.

- Public Education/Outreach and Participation/Involvement
- Illicit Discharge Detection and Elimination (IDDE)
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Pollution Prevention/Good Housekeeping Fact Sheets



BLUEWAY GOALS

## **2035 BLUEWAY SYSTEM**



2.7 MILLION

People visit Missouri rivers annually for recreation

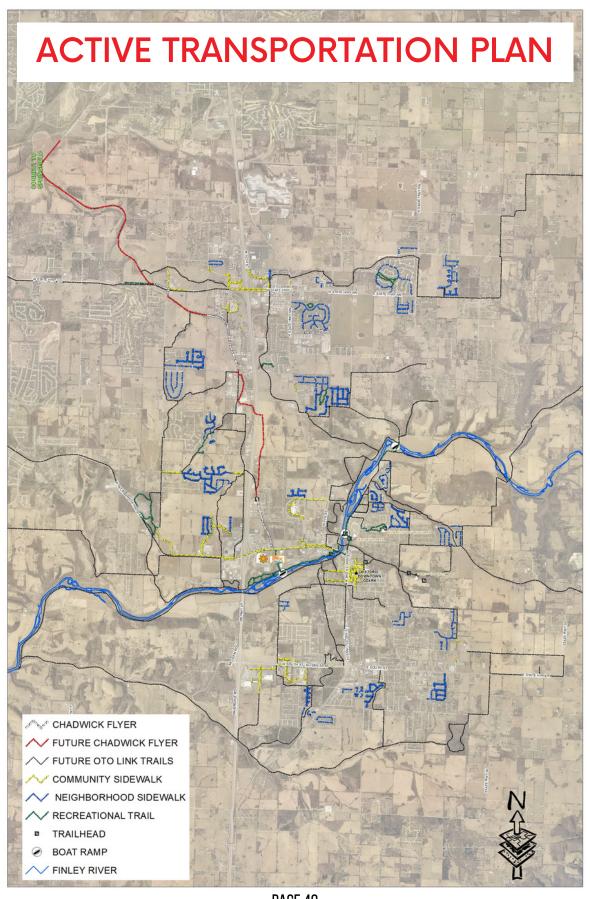
## CONCLUSION

The 2017 Parks Master Plan succeeded in spurring the development of the City's ever-expanding trail network over the last five years. This Active Transportation Plan builds upon past success and reaffirms the City's commitment to planning for the future of active transportation. This plan sets a path forward by identifying a progressive yet achievable vision, developing a set of realistic goals, and implementation of important action steps. By combining pedestrian and bicycle planning into active transportation planning we recognize that a comprehensive approach will yield the maximum return on the public's investment. Many of the action steps in this plan are similar to steps taken in other prominent bicycle and pedestrian-friendly communities. The implementation process is designed to be ongoing and dynamic with the progress made through constant innovation and adaptation. Success will be measured through identified metrics collected over time. Ultimately, this plan provides Ozark with the framework for building an active transportation network that will lead to a more healthy and vibrant community.





# CONCLUSION



## REFRENCES & QUICK LINKS

American Association of People with Disabilities <a href="https://www.aapd.com/">https://www.aapd.com/</a>

Christian County Missouri Health Department <a href="https://www.christiancountyhealth.com/">https://www.christiancountyhealth.com/</a>

Columbia MO Market Study

https://www.como.gov/wpcontent/uploads/2021/02/mktstudy.pdf https://mobikefed.org/sites/default/files/Katy\_T rail\_Economic\_Impact\_Report\_Final.pdf

James River Basin Partnership <a href="https://www.jamesriverbasin.com/">https://www.jamesriverbasin.com/</a>

Missouri Bike & Pedestrian Foundation <a href="https://mobikefed.org/">https://mobikefed.org/</a>

Missouri Department of Conservation <a href="https://mdc.mo.gov/">https://mdc.mo.gov/</a>

Missouri Department of Natural Resources <a href="https://dnr.mo.gov/">https://dnr.mo.gov/</a>

Missouri State Parks
<a href="https://mostateparks.com/page/55072/facts-and-figures">https://mostateparks.com/page/55072/facts-and-figures</a>

Northwest Arkansas Study

https://www.waltonfamilyfoundation.org/aboutus/newsroom/bicycling-provides-137-million-ineconomic-benefits-to-northwest-arkansas Ozark Greenways
<a href="https://www.ozarkgreenways.org/">https://www.ozarkgreenways.org/</a>

Ozark Master Parks Plan https://ozarkmissouri.com/482/Master-Parks-Plan

Ozark MS4 https://ozarkmissouri.com/151/Municipal-Separate-Storm-Sewer-Systems-M

Ozark School District <a href="https://www.ozarktigers.org/">https://www.ozarktigers.org/</a>

Ozark Transportation Organization <a href="https://www.ozarkstransportation.org/">https://www.ozarkstransportation.org/</a>

Ozark 3/8 cent Transportation Sales Tax <a href="https://ozarkmissouri.com/465/38-cent-Transportation-Sales-Tax">https://ozarkmissouri.com/465/38-cent-Transportation-Sales-Tax</a>

United States Census Bureau <a href="https://www.census.gov/">https://www.census.gov/</a>

Walton Family Foundation
<a href="https://www.waltonfamilyfoundation.org/">https://www.waltonfamilyfoundation.org/</a>