

STATEWIDE BICYCLE AND PEDESTRIAN MASTER PLAN



In Partnership With



NOVEMBER 2022

Foreword

The mission of the Kentucky Transportation Cabinet (KYTC) is to provide a safe, efficient, environmentally sound, and fiscally responsible transportation system that delivers economic opportunity and enhances the quality of life in Kentucky.

Our mission is to provide a **safe transportation system for all users**. It is critically important that we include all modes—particularly bikes and pedestrians—as we plan, design, build, and maintain our current and future roadways. This *Statewide Bicycle and Pedestrian Master Plan* illustrates the commitment at all levels of KYTC leadership to prioritize active transportation throughout the Commonwealth's multimodal system.

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November 2022



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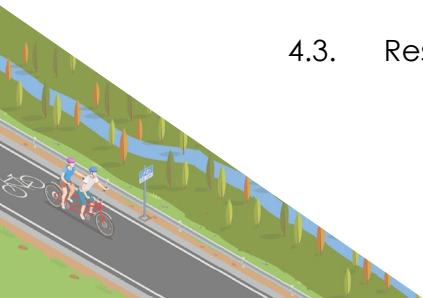
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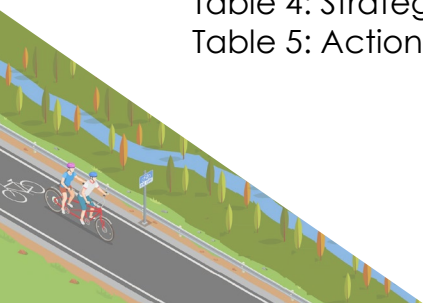
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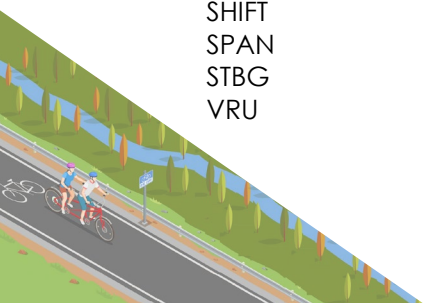


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- A. Infrastructure Maps by Area Development District
- B. Federal Highways Administration Funding Table for Bike/Ped Projects
- C. KY Pedestrian and Bicyclist Safety Program Assessment Final Report, March 2022

ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
ADD	Area Development District
BCI	Bicycle Comfort Index
CDBG	Community Development Block Group
CDC	Centers for Disease Control and Prevention
CMAQ	Congestion Mitigation and Air Quality
EMS	Emergency Medical Services
FHWA	Federal Highway Administration
HSIP	Highway Safety Improvement Program
HUD	Housing and Urban Development
IJA	Infrastructure Investment and Jobs Act
ITE	Institute of Transportation Engineers
KBBC	Kentucky Bicycle and Bikeway Commission
KRS	Kentucky Revised Statutes
KYTC	Kentucky Transportation Cabinet
LPA	Local Public Agency
LRSTP	Long Range Statewide Transportation Plan
LWCF	Land and Water Conservation Fund
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
NACTO	National Association of City Transportation Officials
NCHRP	National Cooperative Highway Research Program
NHPP	National Highway Performance Program
PROWAG	Public Rights-of-Way Accessibility Guidelines
SHIFT	Strategic Highway Investment Formula for Tomorrow
SPAN	State Physical Activity and Nutrition Program
STBG	Surface Transportation Block Grant
VRU	Vulnerable Roadway User



1 INTRODUCTION



Fast horses, fast cars, world class spirits.

Inspiring landscapes and unbridled adventures.

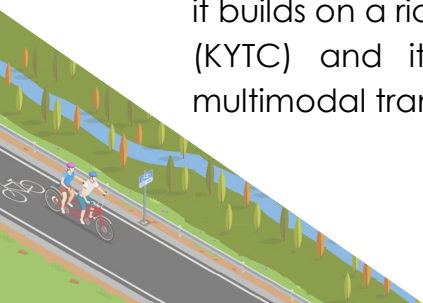
Charming small towns and vibrant urban centers.

From its rich agricultural heritage to an emerging dominance in manufacturing and logistics, the Commonwealth of Kentucky has something for everyone. Connecting people to the many places they live, work, and visit—however they prefer to travel—is key to our mission.

While this is the first Statewide Bike/Ped Master Plan for Kentucky, it builds on a rich legacy by the Kentucky Transportation Cabinet (KYTC) and its partners working towards a safe, efficient, multimodal transportation system.

This Master Plan focuses on one mode of travel that impacts us all: **Active Transportation—getting around powered by human energy.**

This guide is intended to document the players, processes, and plans advancing active transportation throughout the Commonwealth. It lays out our vision for the future of Kentucky’s active transportation system and key steps to get there.



1.1 PURPOSE OF THE MASTER PLAN

While active transportation occurs in many places for many purposes, this plan focuses on transportation elements—trips intended to get people from place to place—over recreational trips like a hike through the woods to enjoy nature.

The purpose of this Plan is three-fold:



To inventory the extents of Kentucky’s current bicycle and pedestrian networks.



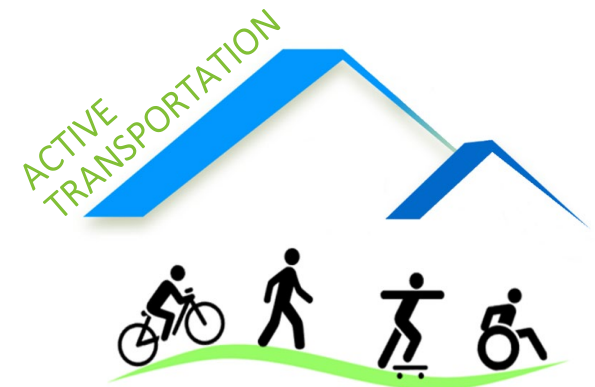
To identify current policies, programs, and tools available—both within KYTC and by other partners supporting active transportation.



To establish a framework to advance bike/ped planning within local, regional, and agency jurisdictions over the next few years.

The following chapters explore each of these elements in greater detail.

BUT FIRST, WHY IS ACTIVE TRANSPORTATION SO IMPORTANT?



1.2 BENEFITS OF ACTIVE TRANSPORTATION

Active transportation opportunities provide mobility, health, livability, economic, and environmental benefits which are critical as demographic and social trends highlight the increasing need for walkability and bikability.

At some point, nearly every trip by nearly every person includes an active transportation element—even as simple as walking from a car into the store. Walking is the most efficient mode of transportation available: requiring less infrastructure, reducing congestion, and improving people’s health.

MOBILITY. Active transportation modes are generally accessible to all ages and abilities, regardless of income or other socioeconomic barriers making them an important part of achieving equitable mobility in Kentucky.

Active transportation represents not only a current need but an opportunity to address the growing mobility needs defined by Kentucky’s demographic trends (**Figure 1**): an aging population plus younger generations with fewer drivers.

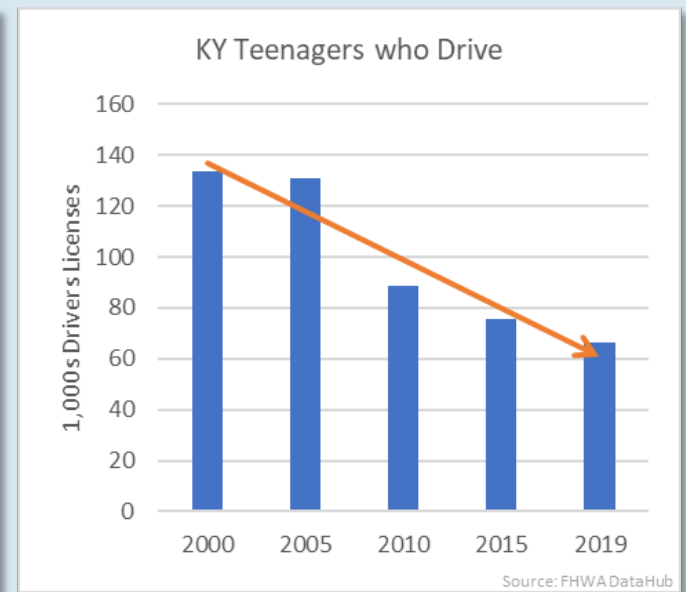
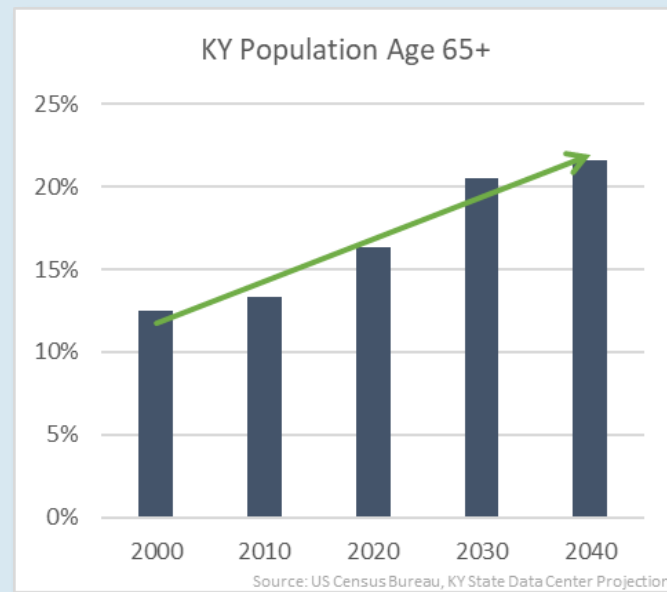
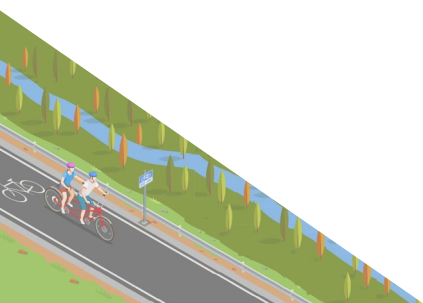


Figure 1: Age-Based Kentucky Demographic Trends Influencing Mobility Demands



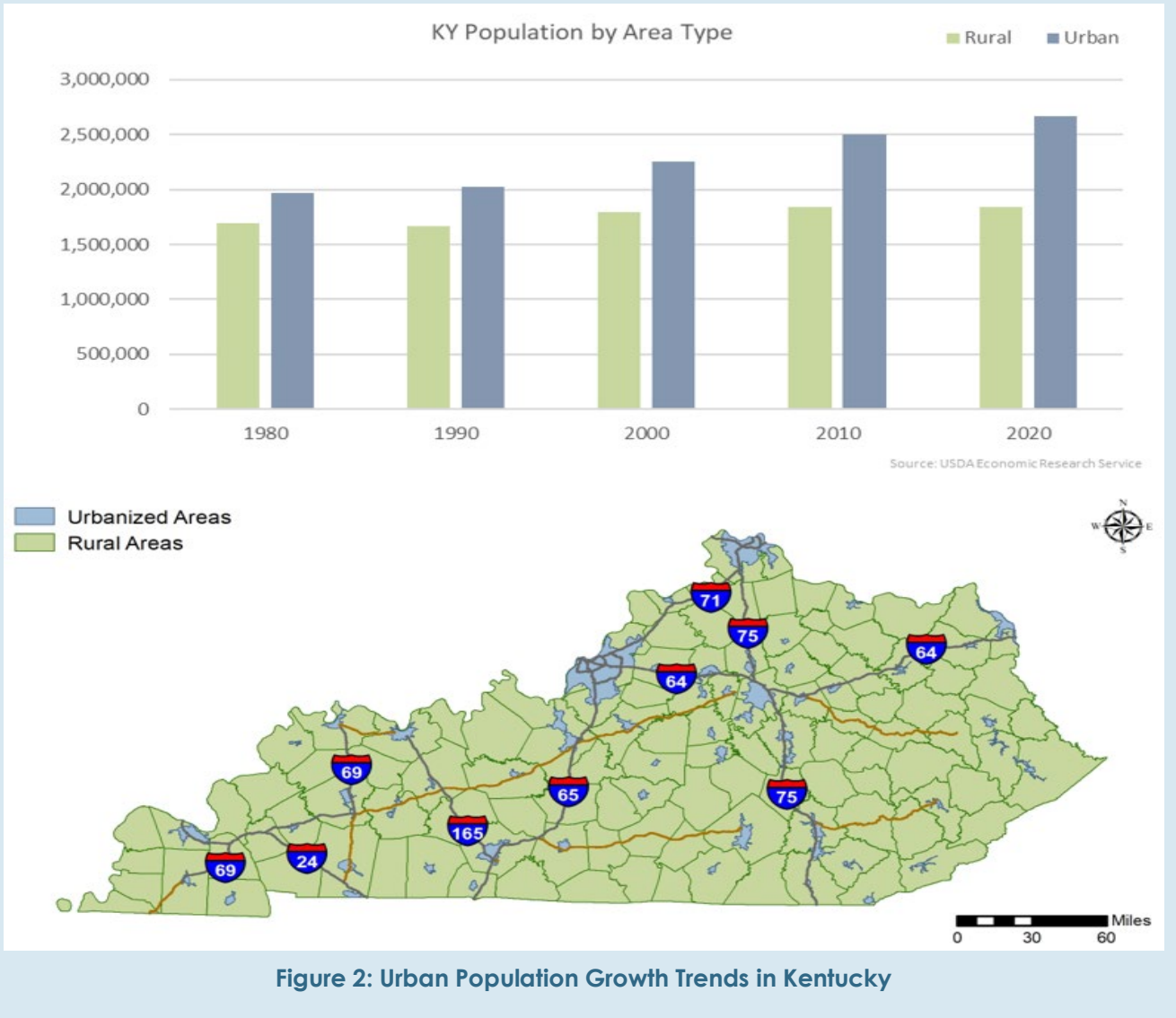


Figure 2: Urban Population Growth Trends in Kentucky

Where we choose to live is changing too. Shifting growth patterns throughout the state (**Figure 2**) show more trips being concentrated in more capacity-constrained, urban/suburban environments. Interconnected, multimodal networks that enable active transportation choices are an efficient, appealing way to move more people than traditional single occupancy vehicles.

Kentucky's urban population has grown over 30% since 1980.

These multimodal networks are especially important for short trips (under three miles) which accounted for over half of all daily trips in the United States last year.¹

¹ Online at <https://www.energy.gov/eere/vehicles/articles/fotw-1230-march-21-2022-more-half-all-daily-trips-were-less-three-miles-2021>

HEALTH. Kentucky ranks among the worst in the nation for weight-related health concerns: ²

Childhood obesity (ages 10-17): 24% ranked worst

High school obesity: 18% ranked fifth

Adult obesity: 37% ranked sixth

Adults with diabetes: 13% ranked seventh

Adults with hypertension: 41% ranked seventh



These numbers have been growing steadily for the past three decades (**Figure 3**). As a state, we ranked in last place for exercise and for fruit/vegetable consumption.³

We can do better.

Creating spaces to promote healthier, more active communities can bring meaningful change in everyday lives. Extensive research⁴ exists that documents the health benefits of biking/walking: lower risks for heart disease, stroke, cancer, diabetes, mental health issues, and premature death. At a broader level, this extends to lower health care costs and improved quality of life for communities and individuals.

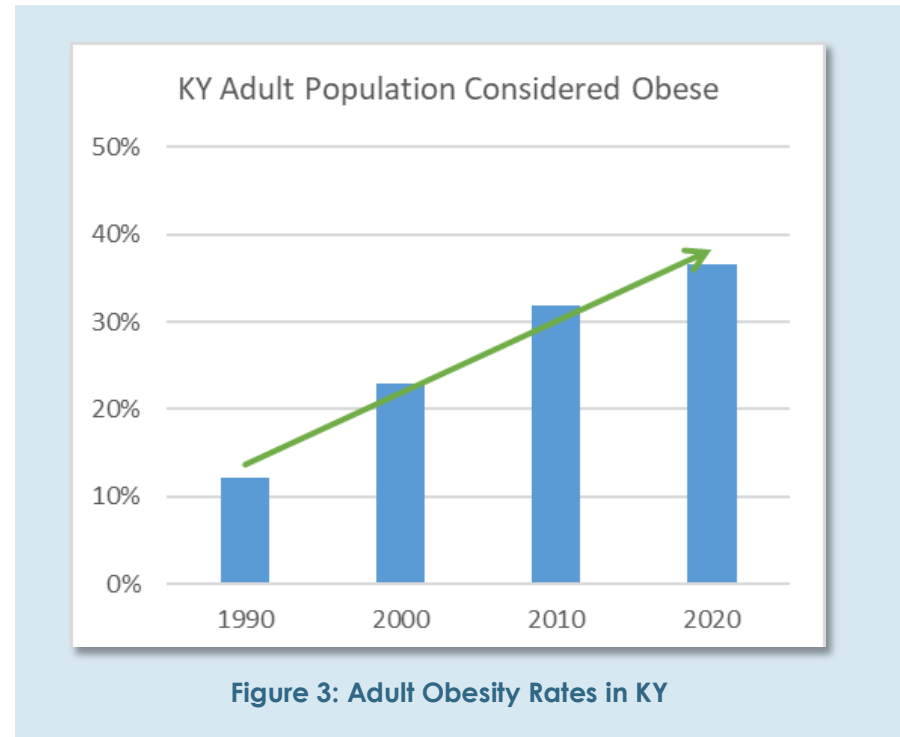
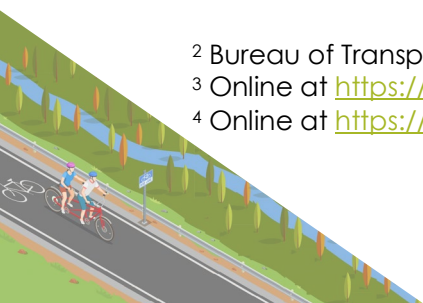


Figure 3: Adult Obesity Rates in KY

² Bureau of Transportation Statistics, 2021

³ Online at <https://www.americashealthrankings.org/learn/reports/2021-annual-report>

⁴ Online at <https://www.peoplepoweredmovement.org/>

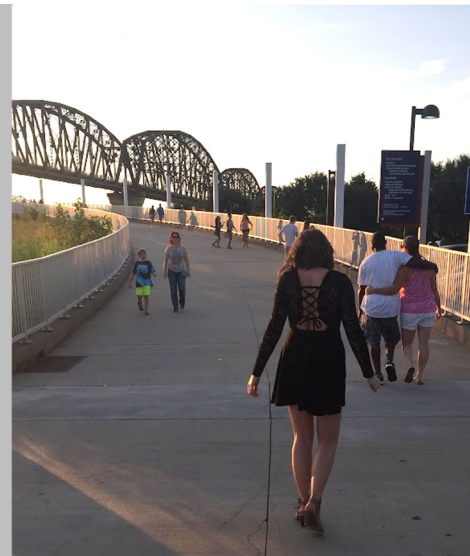


LIVABILITY. Active transportation facilities lead to more desirable, livable communities. A 2017 survey⁵ of residents from America's 50 largest cities shows that when deciding where to live, access to sidewalks ranked highest--above access to the highway, commute length, and public transit.

In addition to convenience, active transportation fosters neighborhood interactions. When residents travel on foot, by bike, or using other human-powered transportation modes, they interact more with their neighbors and local places of business and create less automobile traffic. These extra eyes on the street lead to safer, more integrated neighborhoods.⁶

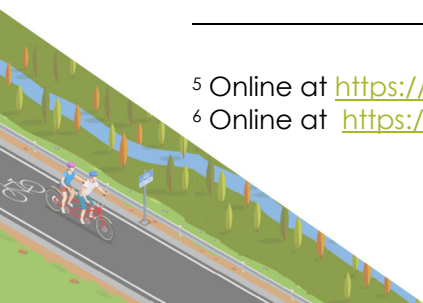


“The more walkable the community, the more satisfied residents are with their quality of life.”⁵”



⁵ Online at <https://www.nar.realtor/reports/nar-community-and-transportation-preference-surveys>

⁶ Online at <https://impactsciences.com/featured-news/5-ways-active-transportation-benefits-our-communities/>



ECONOMY. Active transportation projects deliver an array of positive economic benefits as well, supported by numerous studies in urban areas worldwide. The League of American Bicyclists⁷ explains it simply:

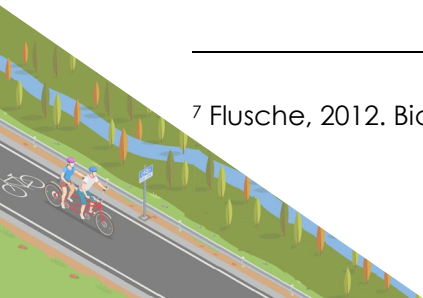
“The research can get technical, but the principles are simple: People who ride bikes buy bikes. This puts people to work in bicycle shops and apparel stores. People who ride bikes buy other things, too. Bike-accessible business districts benefit by catering to these customers. People on bikes are also more likely to make repeat trips to their local stores. People who ride bikes on vacation buy food, have travel costs, and pay for lodging. Bicycling tourists bring millions of dollars to cities and towns across the country that wouldn’t otherwise end up there.

All that spending means jobs—and tax revenues—for communities. But people who ride bikes also save money. With the money saved from lower travel costs, people who ride bikes have more of their money to spend on local businesses. People who ride bikes can save their companies money on health insurance costs. Developers, cities, and individuals can save money on parking costs by providing space-efficient, low-cost bike parking instead of expensive car parking.

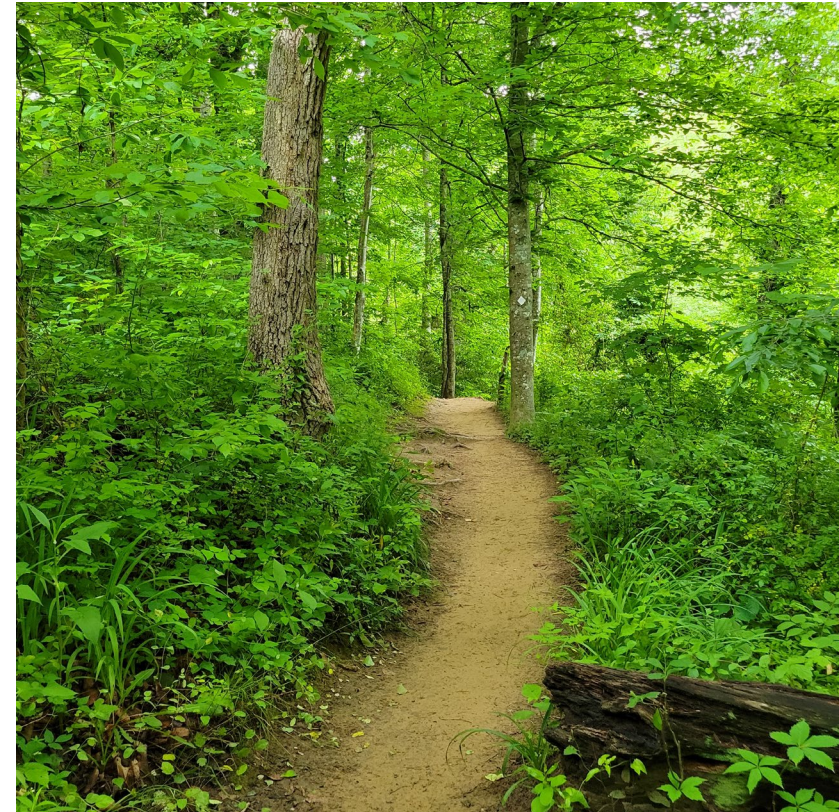
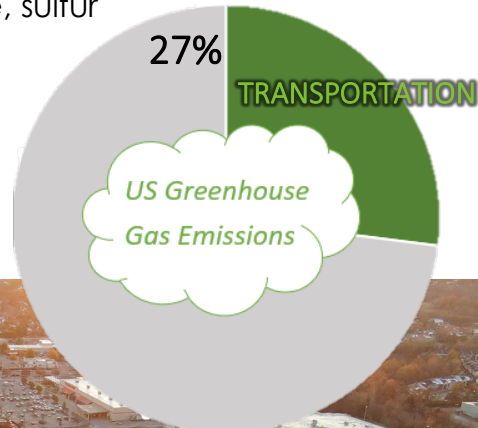
The best way to attract people who ride bikes and accrue all of these benefits is by building infrastructure that makes it more attractive for people to ride. Building that infrastructure creates jobs and does so extremely cost effectively.”

Other research documents how bike/ped infrastructure can enhance tourism, increase property values, catalyze small business development, and encourage investment to attract a talented workforce.

⁷ Flusche, 2012. Bicycling Means Business: The Economic Benefits of Bicycle Infrastructure.



ENVIRONMENT. The transportation sector represents 27% of US greenhouse gas emissions,⁸ which in turn affects climate change and human health. Decreasing reliance on automobiles and reducing congestion will improve our environment—specifically reducing emissions such as nitrous oxide, sulfur oxide, particulate matter, methane, fluorinated gases, and carbon dioxide that negatively affect air quality.



In addition to reducing emissions, active transportation corridors conserve open space, provide a filter for runoff, increase resiliency in flooding situations, preserve wetlands and other natural resources, and protect natural habitats.

⁸ Online at <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>



1.3 PLANNING PROCESS

This Master Plan represents one of many ongoing planning efforts within KYTC. Individual system plans for various travel modes and other emphasis areas work together to shape the *Long-Range Statewide Transportation Plan (LRSTP)*, currently under development, which defines the Commonwealth's vision for its multimodal transportation system over the next 20 years. In fact, this Master Plan relies on an extensive public outreach campaign for the LRSTP to understand what Kentuckians have to say about our existing bike/ped networks and our needs for the future.



Public Perspectives

October 2021, more than **8,000 residents** completed surveys about the issues that matter most for the future of Kentucky's transportation system:

- 19% of respondents prioritize increased options for pedestrians and bicyclists—the top category beyond roadway improvements.
- On average, respondents allocated 11% of the total transportation budget for these modes.
- Participants were also provided an open-ended prompt to write in any additional comments. With over 400 responses, bike needs were the second-most common topic (following funding), and pedestrian needs were fourth.

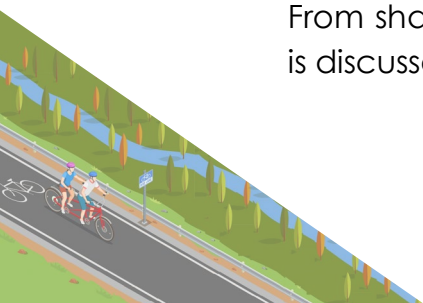
This Master Plan was also developed with periodic input from a steering committee, comprised of representatives from KYTC, metropolitan planning organizations, area development districts, and the Kentucky Transportation Center.

2 EXISTING CONDITIONS: WHERE ARE WE TODAY?



This chapter describes the current state of Kentucky's bicycle and pedestrian networks, looking at existing conditions from several perspectives.

- ☑ **Section 2.1** presents maps that highlight which areas in Kentucky are seeing the most frequent bike/ped uses.
- ☑ There are many different types of bike/ped facilities throughout the Commonwealth, with design features varying based on the landscape and communities they connect. From shared lanes to standalone trails, existing infrastructure is discussed in **Section 2.2**.





- ☑ Besides physical improvements, many designated routes have been identified. These routes come in all shapes and sizes: from short walking paths through a local park up to a US Bike Route stretching the entire length of Kentucky. Larger regional designated routes are discussed in **Section 2.3**.
- ☑ **Section 2.4** describes current KYTC practices to integrate bicycle and pedestrian needs into its project development process.
- ☑ Kentucky's transportation network spans many geographies and jurisdictions. **Section 2.5** presents information on partner agencies and organizations that work alongside KYTC to promote active transportation modes, a critical component to create a convenient, connected system. It also lists some available resource reports to explore specific topics further.

2.1. GEOGRAPHIC SPREAD OF WALKERS/BIKERS

Understanding existing bicycle and pedestrian behavior is crucial to active transportation and planning efforts. To get the most complete look possible at the existing geographic spread of walkers and bikers, multiple sources were considered. Each source has limitations but offers valuable data on where pedestrians and cyclists travel in Kentucky.

US CENSUS COUNTY ESTIMATES.

Using data from the 2020 Census, **Figure 4** presents the number of commuters by county who cycle or walk to work as their primary mode of transportation. Statewide, that's over 45,000 people: an estimated 2.1% on foot and 0.2% by bike. Counties with the highest rates of walking commuters (workers aged 16+) are Christian County (9.4%) and Calloway County (8.4%). For biking, Todd County (2.4%) and Lee County (1.6%) show the highest rates.

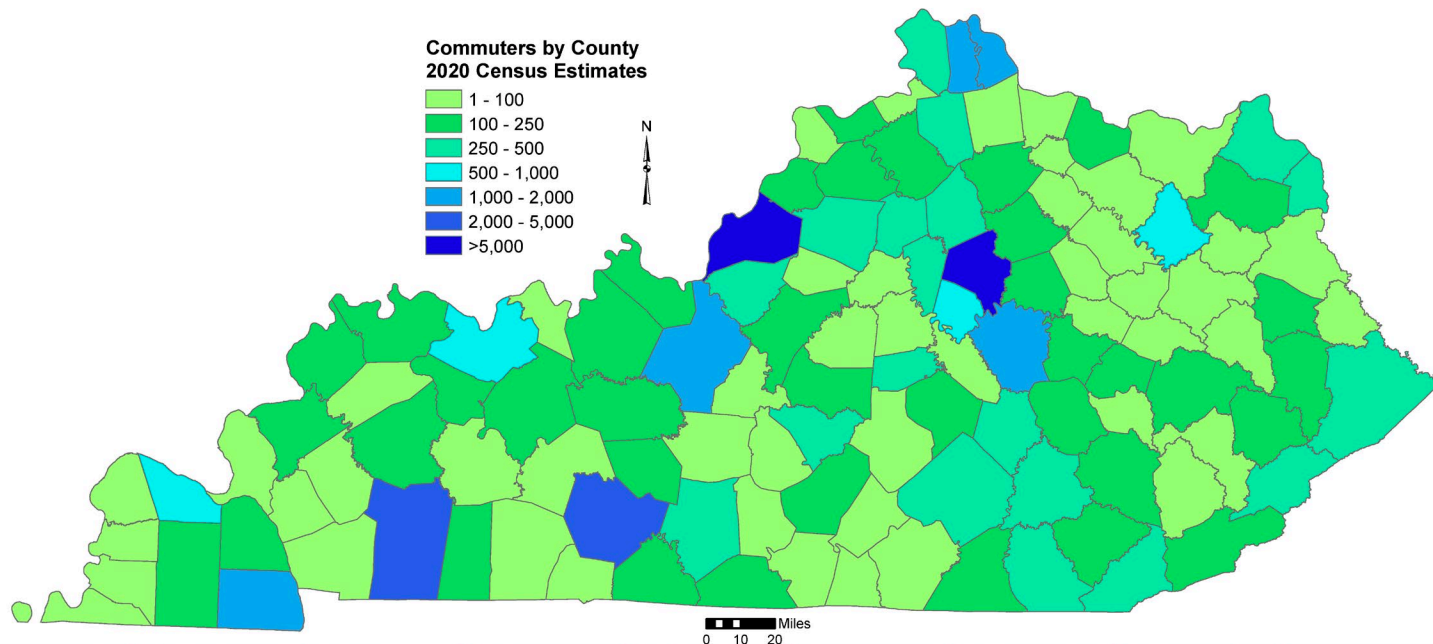


Figure 4: Bike/Walk Commuters by County per 2020 Census

While the primary travel mode reported by commuters is an important planning consideration, it isn't an accurate indicator of overall alternative mode usage. It only accounts for travel modes for commuting to work, not other utilitarian or recreational trips—which outnumber commuting trips four to one—and it doesn't capture semiregular or occasional commuting trips—like riding a bike to work only when it's nice outside.

STRAVA HEAT MAPS FOR RECREATIONAL TRIPS.

As shown in **Figure 5**, most of Kentucky's documented bicycle trips are occurring in urbanized areas—where most of the population is concentrated. Lighter colors represent higher concentrations.

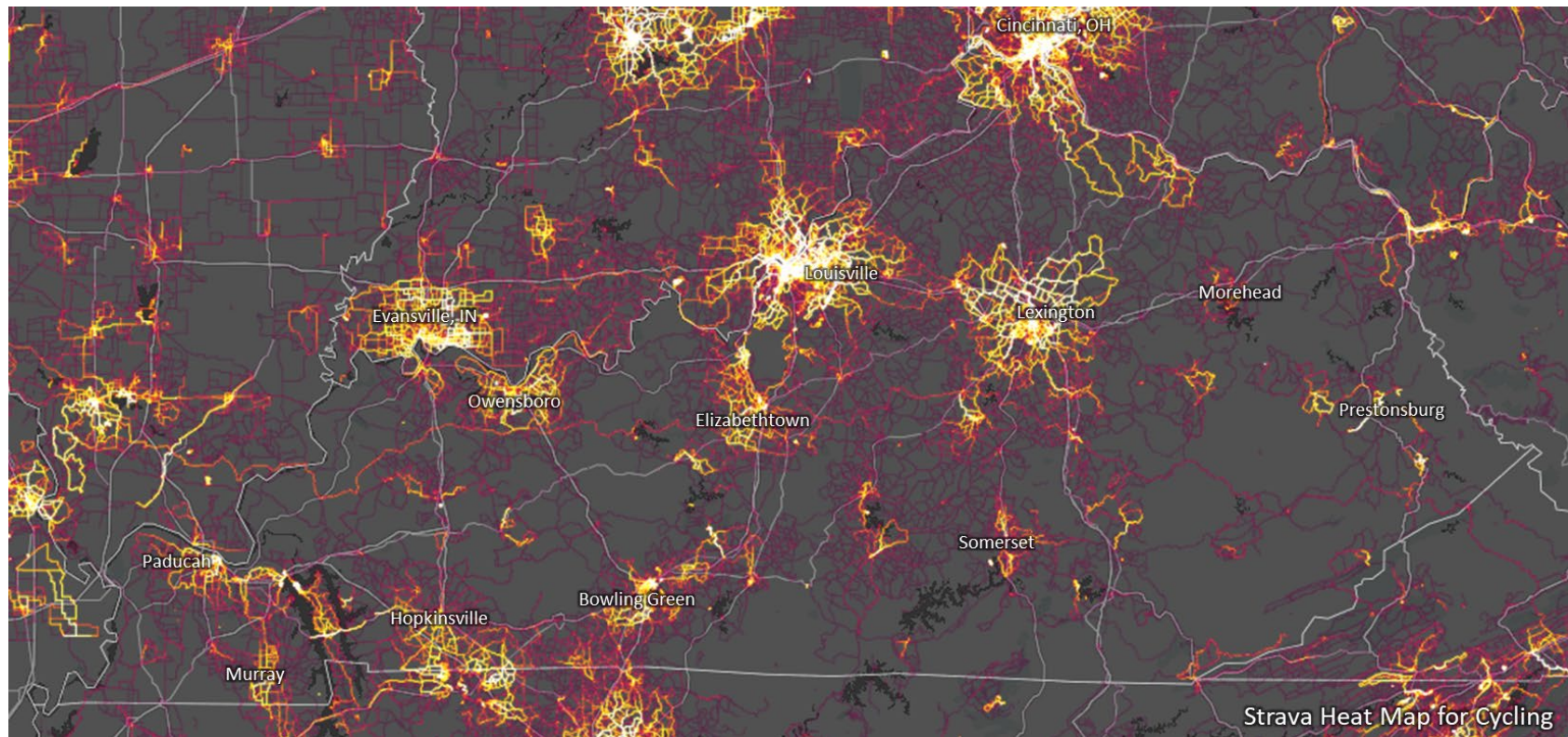
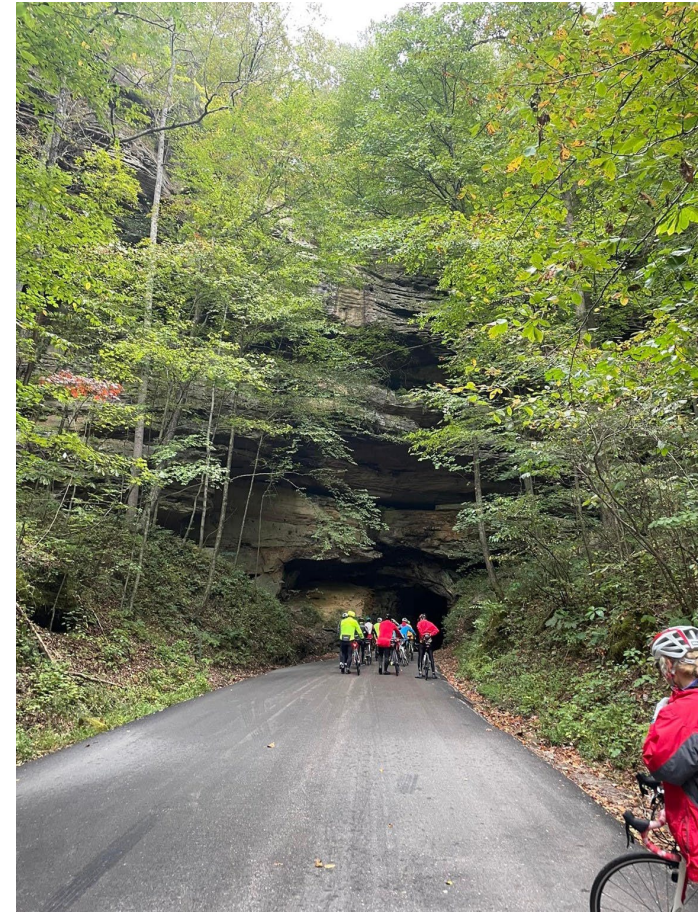


Figure 5: Heat Map of Existing Cycling Patterns

Strava collects trillions of data points worldwide from phones, smartwatches, and other GPS-enabled devices using their app to create heat maps showing the relative distribution of modal trips, but this data also has limitations. It only records data for those who utilize the application, typically habitual commuter and recreational users, but a 2016 study by the Centers for Disease Control and Prevention (CDC) show Strava data correlates with census data better than other available crowdsourced and GPS-based activity tracking data,⁹ making it useful data to review.

It also is one of few readily available sources that show trips linked to individual paths/roadways instead of distributed over a larger geographic area like a county or census tract. While it does not present the full picture, this level of detail adds value when considering regional trips and project-level transportation needs.

In addition to urban areas, several large recreational areas also show up as popular biking destinations: Land Between the Lakes (west from Hopkinsville) and Red River Gorge (southwest from Morehead) are visible in **Figure 5**, though they serve less dense demands than busier cities.



⁹ Online at <https://www.cdc.gov/mmwr/volumes/65/wr/mm6536a4.htm>

Figure 6 contains a similar heat map for walking/running; again, lighter colors represent higher concentrations. As you might expect, the sizes of these busy pedestrian areas are more compact than their cycling equivalents as the length of pedestrian trips tend to be shorter than bicycle trips.

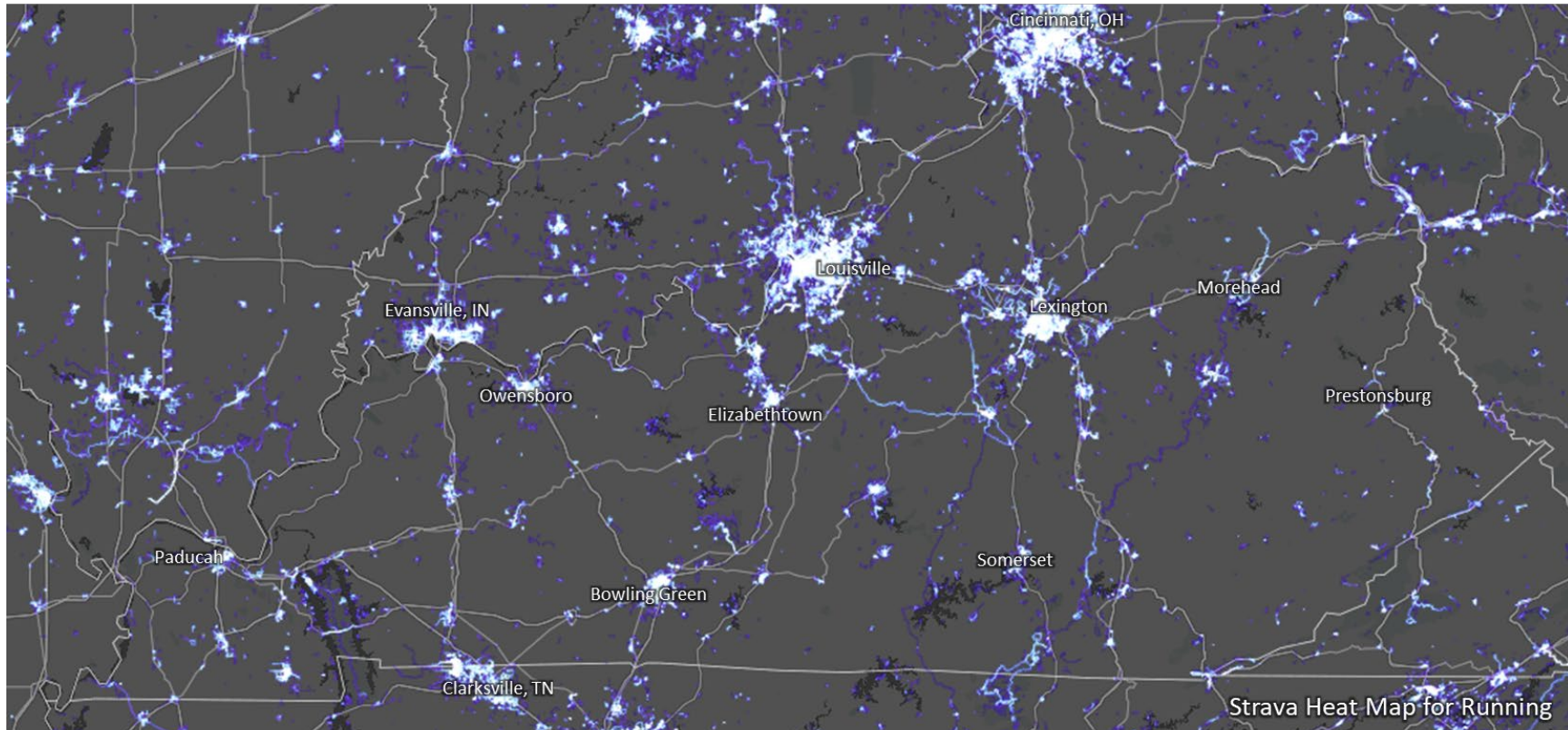
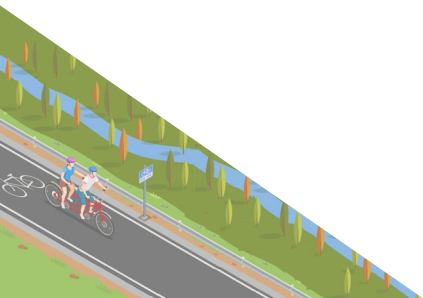


Figure 6: Heat Map of Existing Pedestrian Patterns



NATIONAL SURVEY.

The 2017 National Household Travel Survey conducted by the Federal Highway Administration (FHWA) reports travel modes for non-commuting trips. The national average for daily trips taken is 11.5% by walking and biking. **Figure 7**¹⁰ summarizes trip purposes for bike/walk trips based on the area type where respondents live. While this data isn't Kentucky specific, it shows that there are likely many walking and biking trips not captured by the commuter and recreational data above.

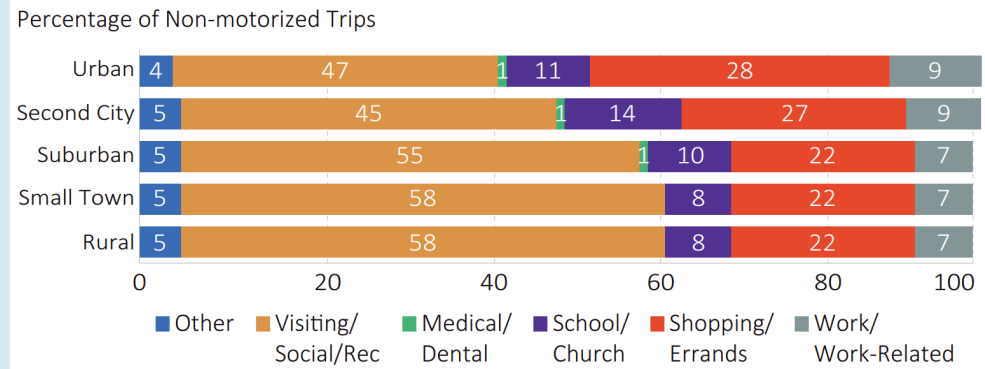


Figure 7: Non-motorized Trip Purpose by Home Geography

BIG DATA FROM STREETLIGHT.

Other resources are available to gather information on biking and walking trips. For example, StreetLight has developed algorithms and machine learning techniques that utilize Location-Based Services data to identify street-level bicycle and pedestrian trips across the United States. KYTC purchased a data subscription in 2022 which could provide useful information that isn't captured by other means available and should be explored in future Master Plan updates.

¹⁰ Online at https://nhts.ornl.gov/assets/FHWA_NHTS_Brief_Bike%20Ped%20Travel_041520.pdf



2.2. EXISTING BIKE/PED INFRASTRUCTURE

There are many different types of facilities for biking and walking throughout the Commonwealth, including over 300 miles of shared use paths. **So what kind of on-the-ground facilities are Kentucky's cyclists and pedestrians using?** Maps in **Appendix A** present a geographic inventory of the bicycle and shared infrastructure that exists throughout Kentucky, organized by the 15 Area Development Districts (ADD) spanning the state. Common types of infrastructure for cyclists and pedestrians are listed below. Although with constantly changing demands, development patterns, and travel modes, the list of “common” infrastructure types changes over time too.

Common Types of Pedestrian Facilities



Sidewalks are pedestrian paths that provide people with places to walk within the public right-of-way but separate from motor vehicles.

Crosswalks are striped on roadways, indicating preferred locations for pedestrians to safely cross a street. Some crosswalks are supplemented by flashing or audible pedestrian beacons, some of which introduce a pedestrian phase at traffic signals.





Curb Ramps transition between sidewalk and roadway, often with special ADA-compliant markings for people with mobility limitations.

Pedestrian Refuges are raised islands in the roadway that provide a safe space for pedestrians to wait while crossing the street.



Common Types of Bicycle Facilities



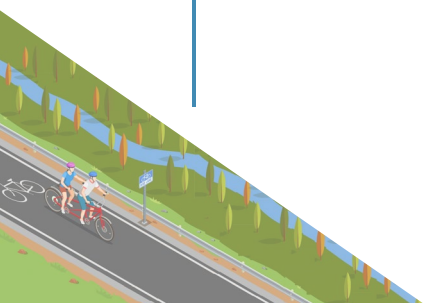
Separate Bicycle Lanes or “Cycle Tracks” run along roadways but are separated by a physical element—buffer space, parking, bollards, etc.

Buffered Bicycle Lanes run along roadways but have a painted buffer space separating the bike lane from vehicle traffic.



Bicycle Lanes run alongside travel lanes but are not physically separated from vehicular traffic beyond a single painted stripe. In some instances, the bike lane is painted green as a visual queue.

Shared Lanes or “Sharrows” let bicycles and vehicles travel in the same low-speed, low-volume travel lane.





Bike Boxes are painted refuges at busy signalized intersections that designate a safe space in front of traffic for bikes to safely turn or wait for lights to change.

Common Types of Shared Bicycle and Pedestrian Facilities

Paved Shoulders are not ideal for pedestrians but provide a potential connection for bicyclists, especially in rural areas.

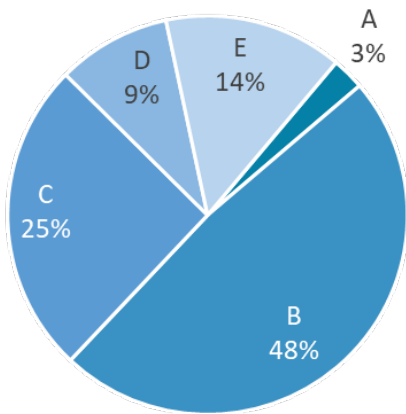


Multi-Use or Shared Use Paths cover a host of different facility types separated from the roadway and dedicated to one or more active transportation modes. Converted Rail-Trails and Greenways fit into this category.



In addition to standalone facilities, the state-maintained highway network provides an important link for cyclists, particularly in rural areas. Per Kentucky Revised Statutes (KRS), bicycles are legal vehicles and, as such, are permitted on all roadways except where they are specifically prohibited (e.g., parkways and interstates). As vehicles, cyclists are required to comply with all roadway rules, including stopping for traffic signals and stop signs.

Roadways can be graded by a mathematical formula that considers traffic/truck volumes, speeds, Level of Service of Safety, shoulder widths or bike lane, and more to measure the **Bicycle Comfort Index** (BCI) on an A (best) to E (worst) scale. **Figure 9** presents some of the factors considered when grading cyclist comfort on a highway segment. BCI for state-maintained highway links are also mapped—with levels A and B shown in **Appendix A**.



By mileage, most of the state-maintained highway network scores in BCI category B, with just 3% rising to BCI A.

Figure 8: KY BCI Ratings

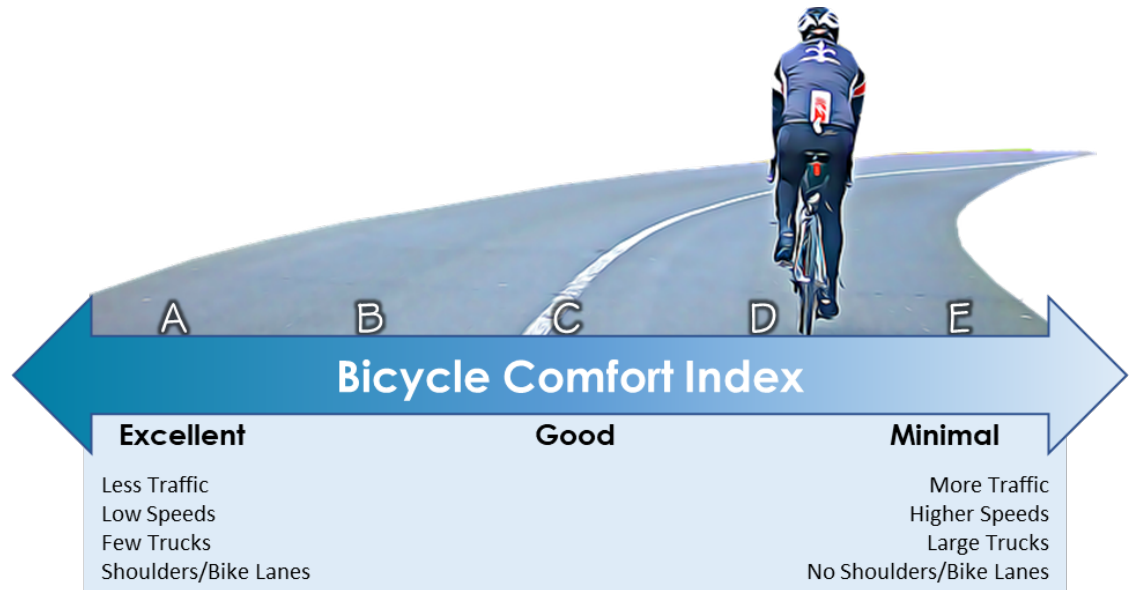


Figure 9: Measuring Comfort for On-Street Cyclists

Of course, there are many other recreational trail types—e.g., blueways, hiking trails, mountain bike paths, and bridle paths—crisscrossing Kentucky but these fall beyond the scope of this Master Plan.

2.3. ACTIVE TRANSPORTATION SYSTEMS AND DESIGNATIONS

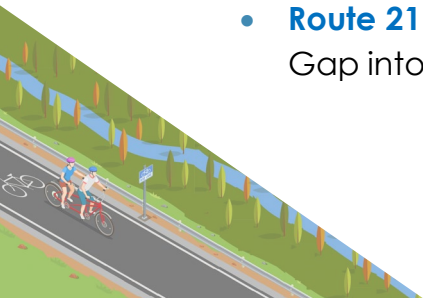
Many federal, state, and local groups have designated biking and hiking routes throughout the Commonwealth. These routes can range from a short loop around a local park up to a months-long journey across the country. Local bike clubs, charities, and others sponsor events, changing up routes for each occurrence. This section contains a brief overview of some of the most common, larger scale active transportation routes and systems crossing the Bluegrass State.



US BIKE ROUTE SYSTEM

The U.S. Bicycle Route System is a developing national network of bicycle routes connecting urban and rural communities via signed roads and paths. As of 2022, it covers over 18,000 miles and touches 33 states with new links added to the system annually. There are five AASHTO identified US Bike Routes within Kentucky (**Figure 10**), representing the fifth-most mileage nationally:

- **Route 76 (TransAmerica Trail)** runs over 4,200 miles from coast to coast—Oregon to Virginia. Within Kentucky, it stretches over 500 miles east-west, between the Ohio River at Crittenden County and the Appalachian Mountains of Pike County.
- **Route 21 (Daniel Boone Bike Tour)** stretches 265 miles and follows Boone's route through the Cumberland Gap into the heart of the Bluegrass. Eventually, the route will connect Cleveland, Ohio to Atlanta, Georgia.



- **Route 23 (Cave Country Bike Tour)** runs from the Tennessee border at Simpson County to join the TransAmerica Trail in LaRue County in south-central Kentucky. This region is known for its karst features—including Mammoth Cave, the longest known cave system in the world.
- AASHTO Identified Corridor **Route 25 (Underground Railroad Bike Tour)** honors the bravery of those who fled bondage and those who provided shelter, following paths taken by escaping slaves from Mobile, Alabama to Detroit, Michigan. Two sections of the identified route cross through Kentucky: from the Tennessee border at Trigg County, generally paralleling the Ohio River from Livingston to Meade counties before crossing into Indiana and east-west from Trimble County to Mason County into Ohio.
- AASHTO Identified Corridor **Route 35 (Ramblin' River Bike Tour)** runs from Sault Ste. Marie, Michigan to meet with the Mississippi River Trail to the Gulf. In Kentucky, it will run from Fulton County to Greenup County, generally following the Ohio River but dipping away to connect to three state parks, Lincoln's birthplace, and My Old Kentucky Home.

Two additional US Bike Routes are under consideration in Kentucky: the **Warrior Path Route** in the east and the **John Muir Route** in the west.

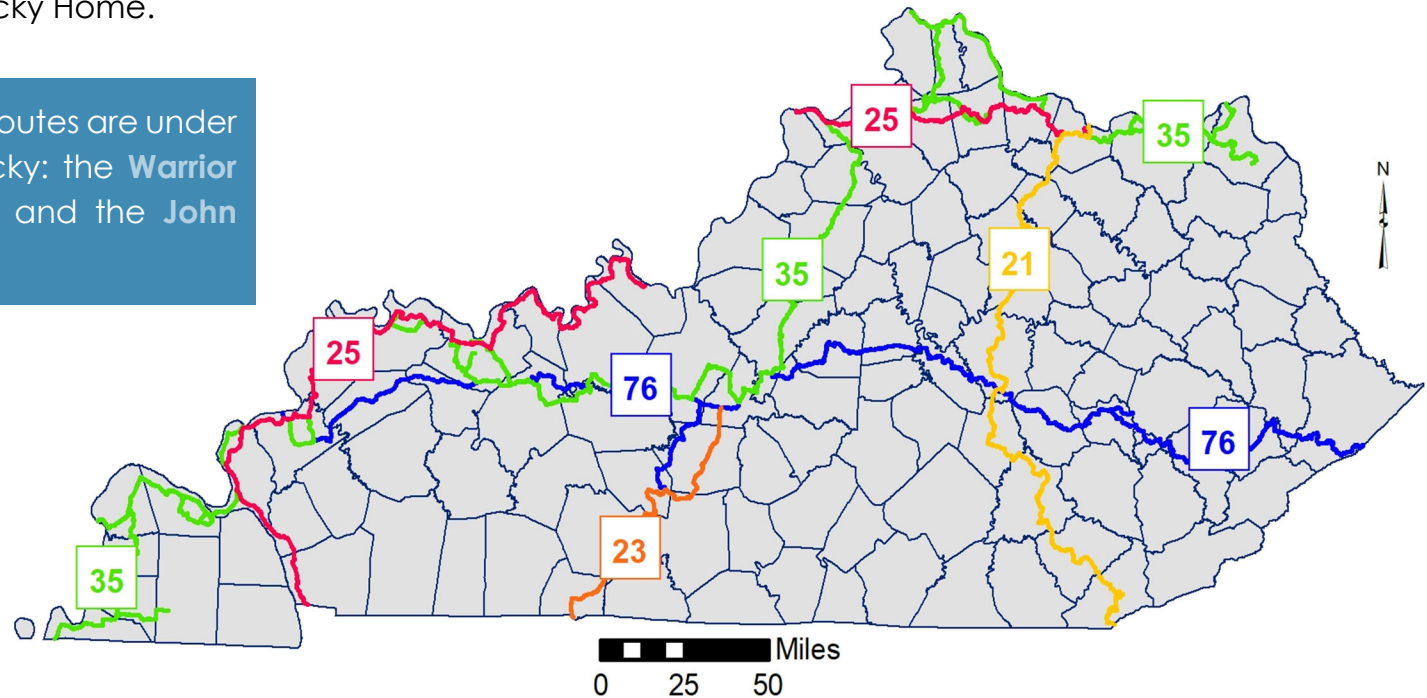


Figure 10: US Bike Routes

REGIONAL ROUTES

The National Park System administers the **National Trails System** that includes scenic, historic, and recreational paths. There are 16 National Recreational Trails currently listed in Kentucky, most less than 3 miles in length and contained within a single park or recreation area. Larger regional connections include **Sheltowee Trace**—269 miles through Daniel Boone National Forest—and **Jenny Wiley Trail**—213 miles through eastern Kentucky along the route of a kidnapped pioneer woman—though neither is formally maintained nor part of the transportation system. Two National Historic Trails also pass through Kentucky.

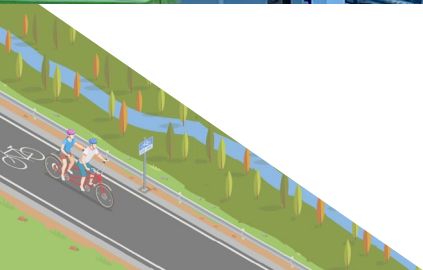


There are dozens of bike paths, shared use paths, and other active transportation routes maintained by the state and various counties, cities, and districts across Kentucky. The following is a list of these routes that are longer than 10 miles:



- ☑ Louisville Loop, Jefferson County (48 mi)
- ☑ Dawkins Line Rail-Trail, Eastern KY (36 mi)
- ☑ Adkisson Greenbelt, Owensboro (15 mi)
- ☑ Legacy Trail, Fayette County (12 mi)
- ☑ Lake Barkley Multi use Path, Marshall County (11 mi)

The Kentucky Department of Tourism certifies **Kentucky Trail Towns**: communities along trails, waterways, and outdoor adventure sites that serve as official gateways and offer supplies, guides, lodging, and food for visitors. Each of the 24 towns currently in the program showcase their outdoor recreation opportunities, culture, and history.



The culmination of decades of planning, the **Louisville Loop** will form a 100-mile-long shared use path around Jefferson County, linking parks, neighborhoods, other attractions, and surrounding counties. The Loop's mission is to connect people to a greener, healthier community. To date, 48 miles have been constructed including large sections along the Ohio River and through Floyds Fork. Find more information online at

<https://louisvilleky.gov/government/louisville-loop>



Part of the State Park System, **Dawkins Line Rail Trail** covers 36 miles in Breathitt, Magoffin, and Johnson counties. It is the largest rail-to-trail in the Commonwealth and features one tunnel, scenic vistas, and 24 trestles along a historic lumber rail line. The crushed stone path is open to hikers, bikers, and equestrians. Find more online at

<https://parks.ky.gov/swamp-branch/parks/recreation/dawkins-line-rail-trail>

2.4. KYTC POLICIES AND PROGRAMS

KYTC has the primary responsibility for the Commonwealth’s multimodal transportation system, including bicycle and pedestrian infrastructure. KRS 174.120 mandates that KYTC “shall develop and coordinate a statewide bicycle and bikeways program and shall coordinate plans for promotion of bicycling and promotion of bikeways with other state agencies, and units of local government in order to maximize the use of roads, streets, parks and other publicly owned lands, abandoned roadbeds, and other resources in the development of bikeways.”

To this end, a full-time KYTC Pedestrian and Bikeway Coordinator within the Division of Planning oversees policy and implementation, providing as-needed technical assistance to state and local health, transportation, tourism, and enforcement agencies. This assistance includes bike/ped project planning, design, construction, maintenance, and safety information, research, and program guidance—including coordination to enable compliance with Americans with Disabilities Act (ADA) requirements. Additionally, they act as the State Rail Trail Coordinator, maintaining the abandoned rail inventory. KYTC’s Bike Walk website¹¹ contains a wealth of information on laws, safety tips, available trails, and more.

IN PROJECT DEVELOPMENT.

KYTC has also established several touchpoints in its project development process (Figure 11) that represent intentional opportunities to incorporate bike/ped needs into larger transportation projects.

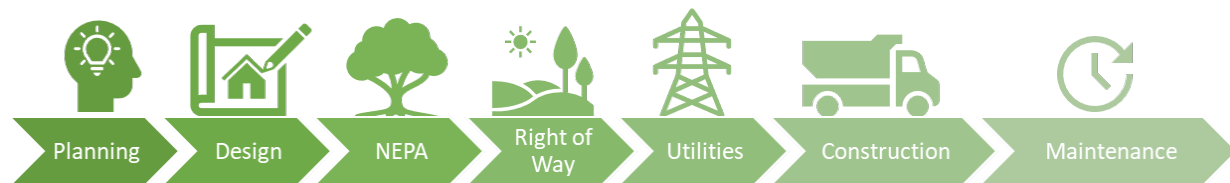


Figure 11: KYTC Project Development Process

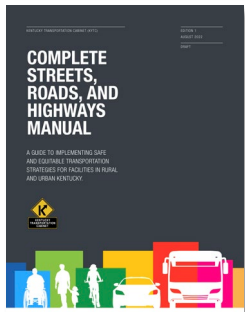
¹¹ Online at <https://transportation.ky.gov/BikeWalk/Pages/Home%20Page.aspx>



The **Planning Guidance Manual** provides information about how bicycle and pedestrian planning fit within larger multimodal planning efforts. It notes key partnerships, forms, steps in the process, and the ongoing nature of such activities.

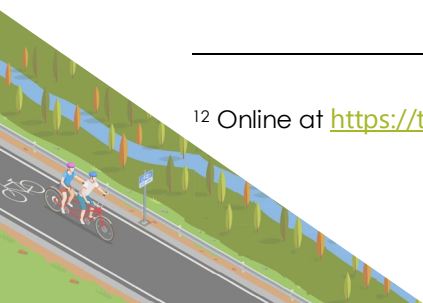


The **Highway Design Manual** requires each project team to consider the need to incorporate pedestrian and bicycle facilities on new roadway construction and reconstruction projects. It identifies common design practices and provides an overview of facility types that may be appropriate for rural and urban settings.



The **KY Complete Streets, Roads, and Highways Policy** defines guidelines for where pedestrian and bicycle elements should be considered on roadway projects. It also identifies maintenance responsibilities for different facility types. The brand new 2022 **Complete Streets, Roads, and Highways Manual**¹² represents a big step forward with more comprehensive policies informing the planning and design phases of the project development process.

¹² Online at <https://transportation.ky.gov/BikeWalk/Pages/Complete-Streets.aspx>

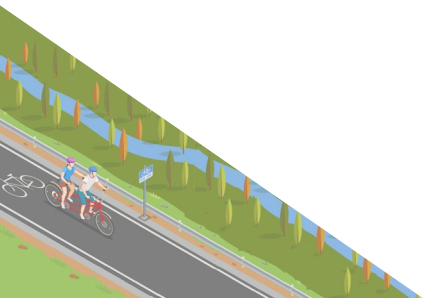


“Complete Streets” reconsider what roadways should do: a new, holistic approach that supports the needs of all users instead of just cars. The Manual states:

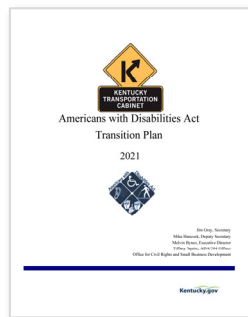
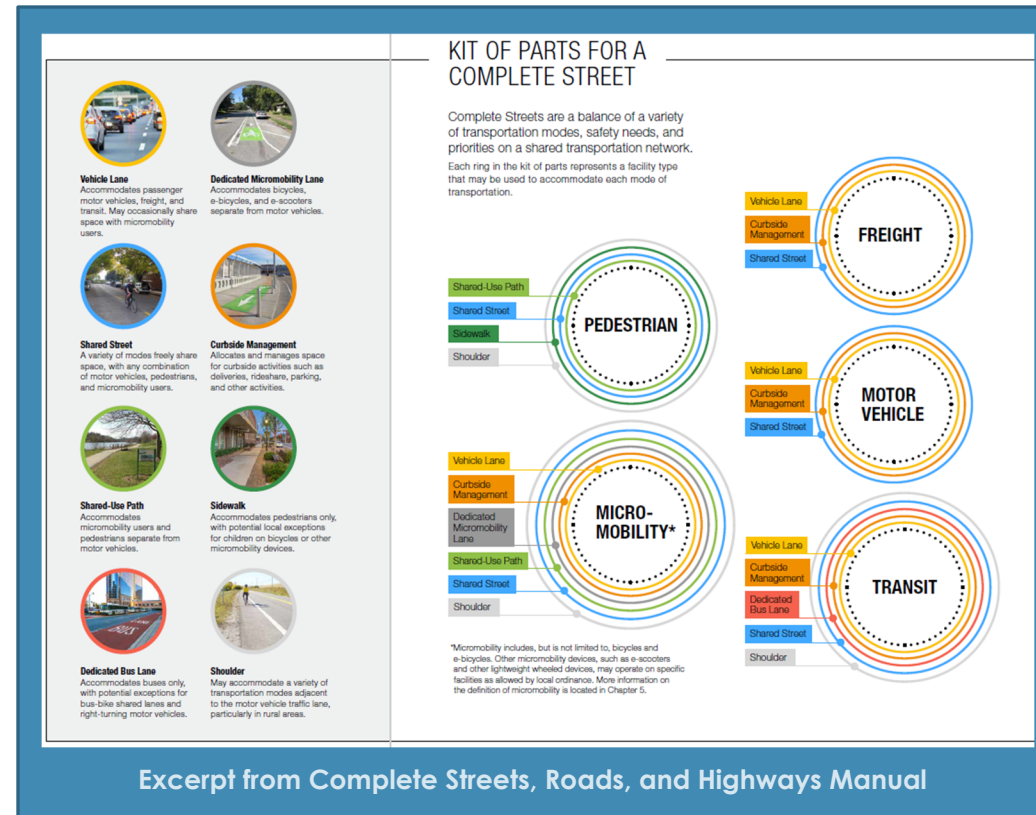
“ The intent of the Policy is to promote the inclusion of Complete Streets design and multimodal access in all transportation activities at the local, regional, and statewide levels, and to develop a comprehensive, integrated, and connected transportation network focused on the safety of all users. ...This Manual offers guidance, recommendations, and resources for the consideration of Complete Streets in all transportation projects as a tool to promote safety for all users as part of an equitable, accessible, and sustainable transportation network.”

Beyond previous policies that required practitioners to “consider” cyclists and pedestrians during project planning and design, the new manual states that they “shall include appropriate bicycle, pedestrian, and other Complete Streets facilities” when any of the following criteria apply:

- People are walking, biking, or rolling along the existing roadway or there's an existing bike or pedestrian facility on the roadway.
- A project is adjacent to an existing or planned development that is likely to generate bike/ped trips.
- There is public interest in or demand for a bike/ped facility.
- Previous plans/policies identify a bike/ped improvement in the area or it is a gap in the existing network.
- The roadway is used for transit or an identified freight corridor.
- The location is a designated Area of Persistent Poverty or Historically Disadvantaged Community.



The manual identifies current examples of Complete Streets in Kentucky, lists best practices and available guidance documents, and outlines design considerations for a wide variety of community settings. Different chapters provide guidance for building new roadway corridors, retrofitting existing highways, addressing intersections, and more.



Another related document, KYTC's 2021 **ADA Transition Plan** contains information on the condition of Kentucky's pedestrian network and steps that will be taken in to ensure all state-owned facilities are accessible to individuals with disabilities. It establishes a methodology to define, prioritize, schedule, and implement accessibility improvements. The inventory includes barriers to mobility like missing detectable warning beacons, narrow sidewalks or crosswalks, improper curb ramps, and hard-to-reach pedestrian push buttons.

Based on recommendation from the 2022 *Complete Streets, Roads, and Highways Manual*, during the construction and maintenance phases of projects, maintenance of traffic plans shall address the access and mobility of active transportation users through and around work zones. When existing pedestrian, bicycle, and other micromobility are disrupted, closed, or relocated in a temporary traffic control zone, the temporary facilities should be easily detectable and include accessibility features consistent with those of the existing facilities. Warning signs should be provided when an alternate circulation path or a barricade is constructed. Temporary signage must be compliant with the current edition of the *Manual on Uniform Traffic Control Devices* for temporary traffic control. The designer should consider the use of flaggers or spotters if pedestrian generators, such as schools, are in the work zone vicinity.

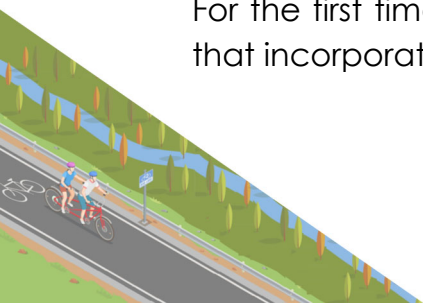
IN PROGRAMMING/FUNDING.

Every two years, the Kentucky General Assembly enacts a Six-Year Highway Plan that establishes transportation priorities and spending for the coming years.

To develop the recommendations that begin this process, KYTC developed a prioritization tool: the **Strategic Highway Investment Formula for Tomorrow (SHIFT)**. The SHIFT process is a data-driven, objective, and collaborative approach to developing a geographically sensitive, data-driven highway plan. Mathematical formulas award points for improvements that address safety, asset management, and congestion, that support economic growth, and result in positive benefit/cost ratios for many project types. It incorporates opportunities for ADDs, metropolitan planning organizations (MPOs), and other local officials to provide input and award bonus points.



For the first time, the 2024 SHIFT formulas will incorporate a bike/ped component—assigning points to projects that incorporate bicycle and/or pedestrian infrastructure.



2.5. KEY PARTNERS AND RESOURCES

Beyond KYTC’s role creating and maintaining the commonwealth’s highway system, other partner agencies—both public and private entities—play a key role in promoting active transportation. The transportation network is a massive network spanning many jurisdictions; partnerships between different groups are critical to define, implement, and promote a convenient, connected bike/ped network.

KEY IN-STATE PARTNERS.

Figure 12 shows a map of 80+ Individual counties, cities, ADDs, MPOs, and other local public agencies that have previously or are currently developing their own bicycle and/or pedestrian visions, priorities, and projects.

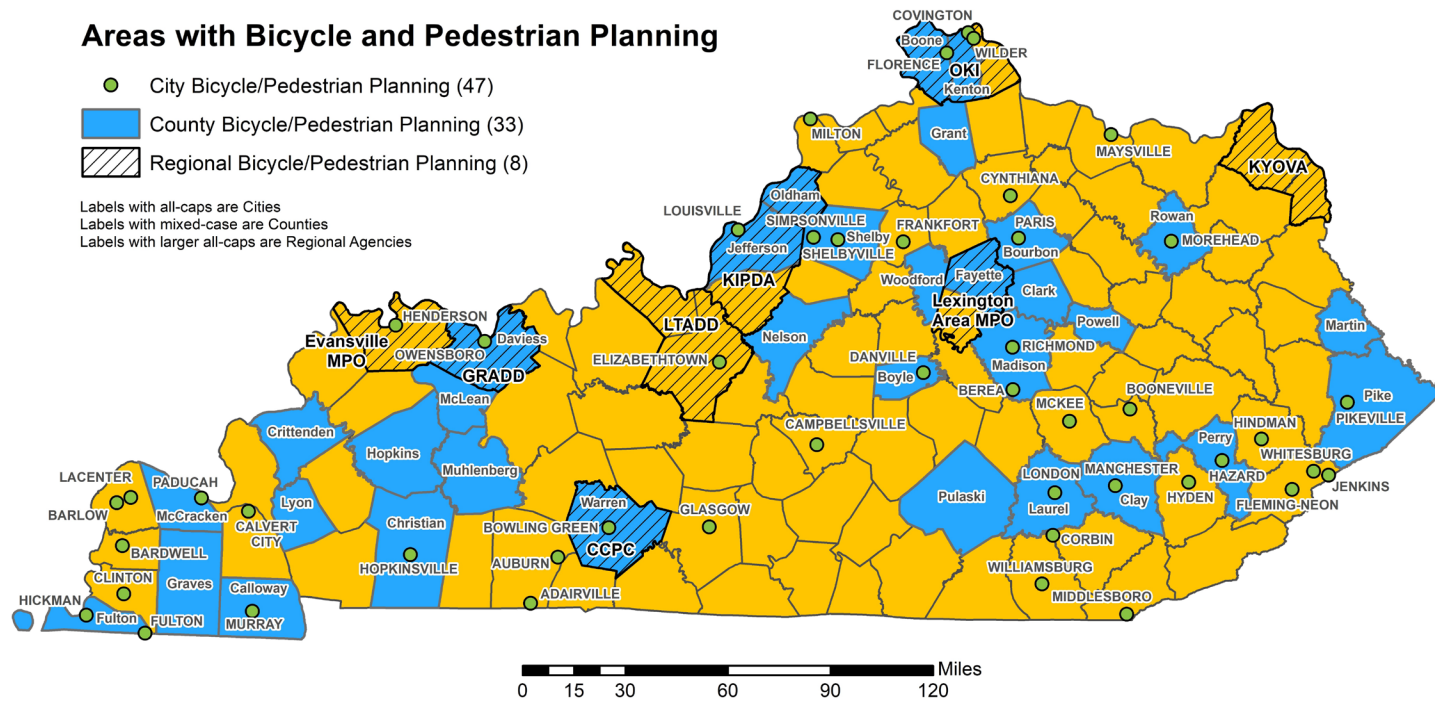
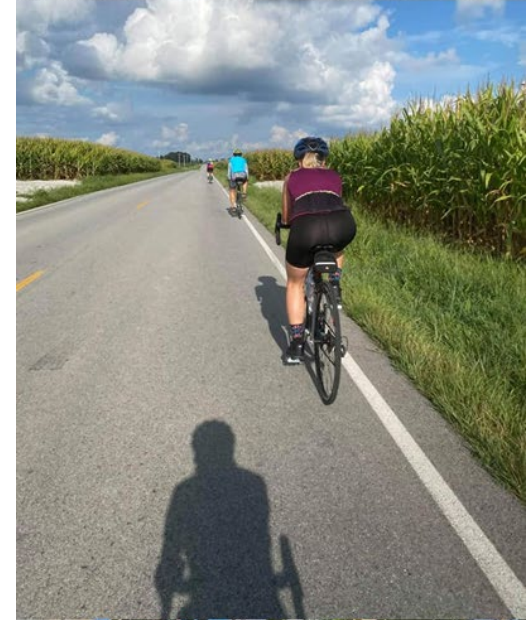


Figure 12: KY Bicycle and Pedestrian Plans

Non-profit organizations, advocacy groups, and local cycling clubs promote safe non-motorized mobility options, organize community events, and campaign for government support. From Paducah to Ashland, 23 local bike clubs and 11 local tours have been identified.

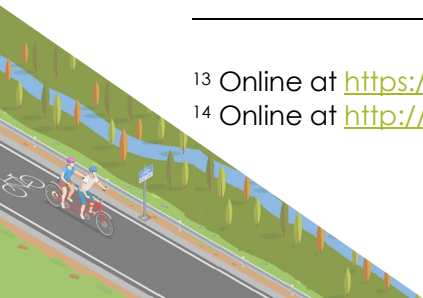
While this list is by no means exhaustive, it highlights a few of the KYTC's key planning partners:

- The **Kentucky Bicycle and Bikeway Commission**¹³ was formed by the legislature in 1992. They are tasked with advising the KYTC Secretary on all matters pertaining to the use, extent, and location of bicycles and bikeways, assisting the bicycle and bikeway program within KYTC, and promoting the best interests of the bicycling public within the context of the total transportation system. The commission also oversees the Paula Nye Memorial Bicyclist and Pedestrian Education Grant, funded through purchases of specialty "Share the Road" license plates.
- **Bike Walk Kentucky**¹⁴ promotes safe bicycling and walking through education, outreach, and events. They partner with local activists, governments, and advocacy organizations to promote a "healthy and active Kentucky in which cycling and walking are safe, accessible and welcoming to all, without regard to ability or income through development of bicycle facilities, multi-use paths, and trails." The website's Resources page contains a host of helpful information on safety, state laws, regional clubs, routes, and other beneficial links.
- The **Department for Public Health** within Kentucky's Cabinet for Health and Family Resources established a formal partnership through the execution of a



¹³ Online at [https://transportation.ky.gov/BikeWalk/Pages/KY-Bicycle-and-Bikeways-Commission-\(KBBC\)-.aspx](https://transportation.ky.gov/BikeWalk/Pages/KY-Bicycle-and-Bikeways-Commission-(KBBC)-.aspx)

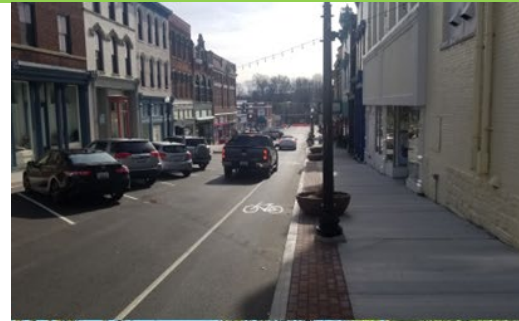
¹⁴ Online at <http://bikewalk.ky/>



Memorandum of Understanding (MOU) with KYTC to ensure coordination and communication on initiatives and programs that promote and support active transportation infrastructure. Elements of the partnership cover coordinated infrastructure initiatives/outreach, promoting safety, shared data, engaging local health departments as stakeholders in transportation planning, and seeking opportunities to leverage joint funding.

Through the State Physical Activity and Nutrition Program, a five-year grant opportunity for Kentucky is available through the health department to support community efforts to support safe and accessible physical activity. Grant funding is available for municipalities to create local Bike/Ped Master Plans and for corridor-level feasibility studies to incorporate bike/ped facilities.

- The **Kentucky Transportation Center** at the University of Kentucky is a multidisciplinary research and education team, regularly partnering with KYTC, FHWA, and other national and global stakeholders.
- The **Kentucky Department of Tourism** Office for Adventure Tourism oversees the Trail Towns program discussed above. In 2020, they partnered with Bluegrass ADD to publish the **Cross Kentucky Master Trail Plan**,¹⁵ a how-to guide for trail development. The vision for Cross Kentucky Trails routes is “to provide interconnection between existing long-distance trails, state and national park trails, forest trails, and Kentucky towns” strategically located to serve longer trips. It identifies 11 trail corridors plus lays out practical guidance to help local groups advance trail projects through visioning, land acquisition, and construction.



¹⁵ Online at <https://www.kentuckytourism.com/sites/default/files/2020-02/statewide-master-trail-plan.pdf>



- Another national program through the **Rails to Trails Conservancy** advocates for trails (active transportation paths) and promotes converting abandoned railroad lines to active transportation trails. There are currently 25 recognized rail-trails in Kentucky, combining to form 93 miles of in-place paths.
- The **Kentucky Regional Trail Authority** came from the demand of Kentuckians and visitors alike for a place to ride, hike, and recreate in the Bluegrass State. The Board works diligently to fulfill its charge by focusing on increasing land access for recreational trails, promoting trail education, and promoting the trail opportunities that Kentucky offers.



OTHER NATIONAL RESOURCES.

Beyond Kentucky, a host of other active transportation planning and promotion resources are available. Many are listed in Chapter 10 of KYTC’s *Complete Streets, Roads Highways Manual*.

Other sources include:

- **The Federal Highway Administration (FHWA)** has amassed decades of online resources that can be utilized for active transportation planning, design, and implementation, organized into a few key clearinghouses:

Bicycle & Pedestrian Program



www.fhwa.dot.gov/environment/bicycle_pedestrian/

Pedestrian and Bicycle Safety Program



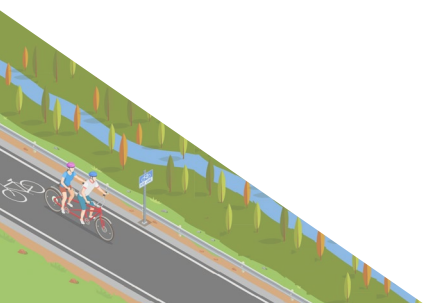
safety.fhwa.dot.gov/ped_bike/



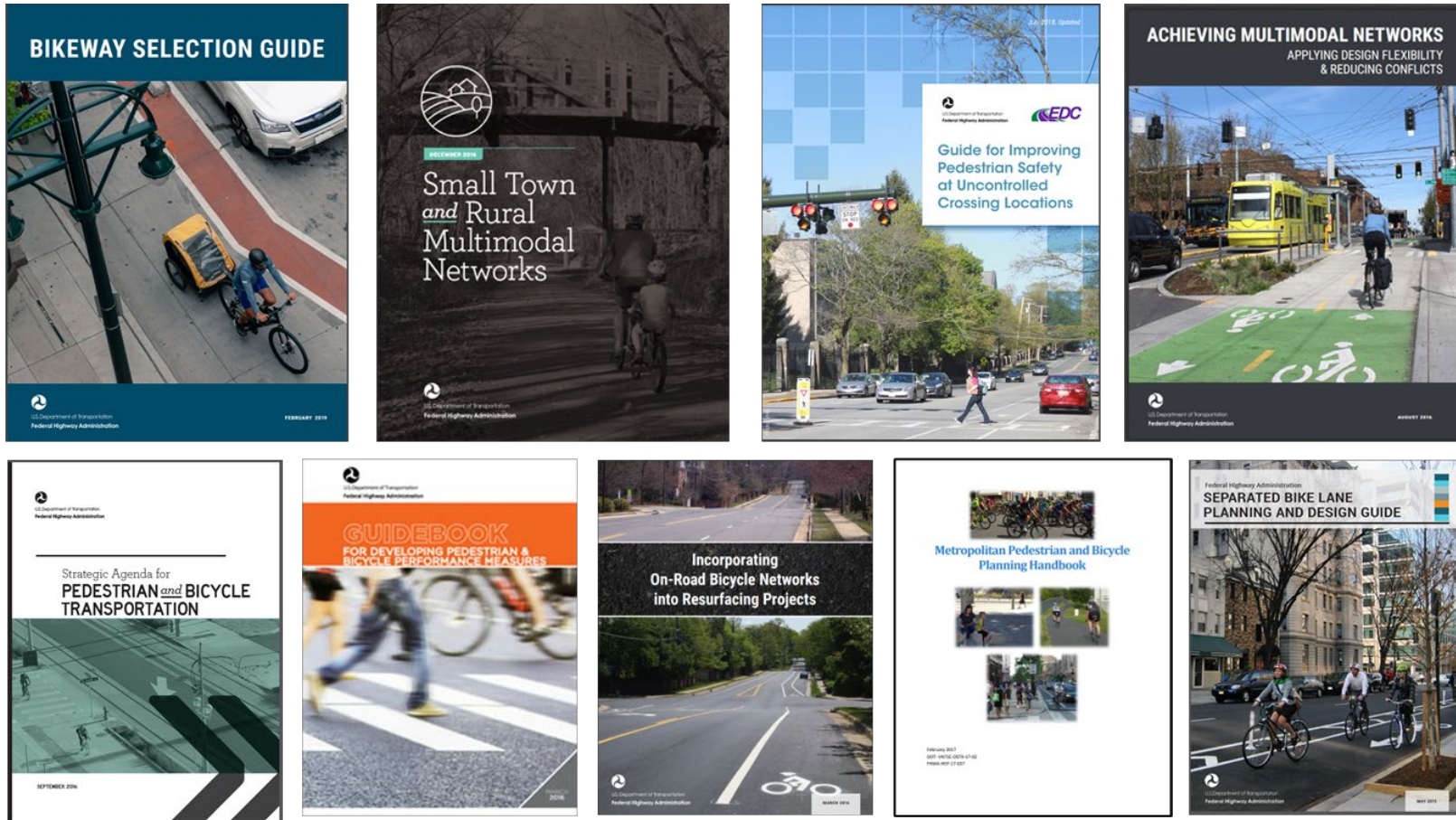
www.pedbikeinfo.org/



pedbikesafe.org/



Covers from a selection of recent reports are shown below, accessible from the sites above.



- **National Association of City Transportation Officials** (NACTO) provides many free online design guides, research reports, and policy papers on their website,¹⁶ including the *Urban Bikeway Design Guide* and

¹⁶ Online at <https://nacto.org/publications/>

Guidelines for Regulating Shared Micromobility. Available resources are updated regularly and cover a broad range of current topics facing urban planners.

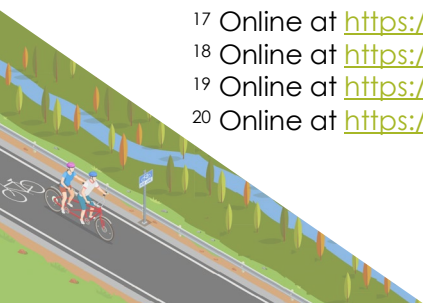
- **Smart Growth America** partners with local communities to provide technical assistance, advocacy and thought leadership to create livable places, healthy people, and shared prosperity. Their website¹⁷ contains an extensive library of resources on topics facing today's cities: like climate change, economic development, complete streets, place-making, transportation, and more.
- A host of research reports and guides are produced by the Transportation Research Board's **National Cooperative Highway Research Program** (NCHRP), many available for free online.¹⁸ Examples include the *Guidance to Improve Pedestrian and Bicyclist Safety at Intersections and Traffic Signal Control Strategies for Pedestrians and Bicyclists*.
- The **Americans with Disabilities Act (ADA) Accessibility Standards**¹⁹ gives guidelines for transportation networks to accommodate pedestrians with disabilities. Other accessibility guidelines published by the Access Board include the *Public Rights-of-Way Accessibility Guidelines (PROWAG)*²⁰ with supplements.
- **American Association of State Highway and Transportation Officials** (AASHTO) publishes design guides that can be utilized for active transportation planning, design, and operations—some of which are only available for purchase:
 - *A Policy on Geometric Design of Highways and Streets*, also commonly called the “Green Book,” focuses mainly on streets and highways.

¹⁷ Online at <https://smartgrowthamerica.org/resources/>

¹⁸ Online at <https://nap.nationalacademies.org/topic/429/transportation-and-infrastructure/pedestrians-and-bicyclists>

¹⁹ Online at <https://www.access-board.gov/ada/>

²⁰ Online at <https://www.access-board.gov/prowag/>



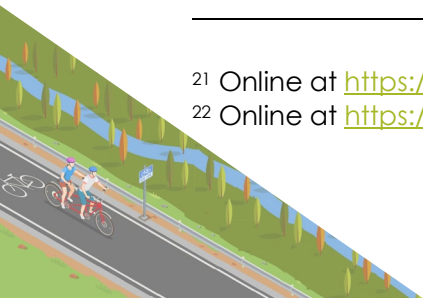
- *The Guide for the Development of Bicycle Facilities*²¹ includes shared-use path recommendations and accessibility requirements for pedestrians, bicyclists, and other micromobility users.
- *The Guide for the Planning, Design, and Operation of Pedestrian Facilities* discusses design recommendations and accessibility requirements for pedestrians on or adjacent to streets, roads, and highways.
- Design considerations for accommodating pedestrians, bicyclists, and potentially other micromobility users from the **Institute of Transportation Engineers** (ITE), including:
 - *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*²²
 - *Recommended Design Guidelines to Accommodate Pedestrians and Bicyclists at Interchanges: A Recommended Practice*

POTENTIAL FUNDING OPPORTUNITIES.

A wide range of funding sources exist for active transportation facilities, linked to transportation outcomes, health benefits, outdoor recreation, or other program areas. Many represent federal funding streams, although state, local, and private sources exist as well. Available opportunities are continually changing; **Chapter 3** touches on some recent trends arising from the 2022 *Infrastructure Investment and Jobs Act* (IIJA). The list below is a starting point, of a few common sources to consider:

²¹ Online at <https://njdotlocalaidrc.com/perch/resources/aashto-gbf-4-2012-bicycle.pdf>

²² Online at https://nacto.org/docs/usdg/designing_walkable_urban_thoroughfares.pdf



Within Kentucky, KYTC'S **Office of Local Programs** oversees federal CMAQ and Transportation Alternatives Set-Asides funds that pass through to local governments.

HSIP funds are administered by KYTC'S **Division of Traffic Operations**, with 4% of the Commonwealth's annual HSIP budget allocated to target vulnerable road users per the 2022 Investment Plan.

CDBG and LWCF funds in Kentucky are overseen by the **Department for Local Government**.

Federal funding opportunities include National Highway Performance Program (NHPP), Highway Safety Improvement Program (HSIP), Congestion Mitigation and Air Quality (CMAQ), the Surface Transportation Block Grant (STBG) Program, and competitive discretionary grants—most of which can be further subdivided into smaller programs with tailored emphasis areas. For example, the STBG program includes the Transportation Alternatives Set-Aside that combined the Transportation Enhancements, Safe Routes to School, and Recreational Trails program funding streams. FHWA maintains a website of **USDOT Bike/Ped Funding Opportunities**²³ with a matrix aligning different funding programs versus eligible activities/project types, included as **Appendix B**.

Another federal source, **Community Development Block Grants** (CDBG) from the Department of Housing and Urban Development (HUD) aid municipalities in revitalizing neighborhoods, expanding affordable housing and economic opportunities, providing infrastructure, and improving community facilities and services. Ashland, Bowling Green, Covington, Elizabethtown, Henderson, Hopkinsville, Lexington-Fayette County, Louisville/Jefferson County Metro Government, and Owensboro receive CDBG funds directly from HUD while other cities and counties are pooled then distributed.

The **Land and Water Conservation Fund** (LWCF) overseen by the National Park Service provides federal grant funds to protect important natural areas for outdoor recreation, including parks, trails, and similar amenities.

²³ Online at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.cfm



Mentioned above, Kentucky is one of 16 state recipients of the five-year **State Physical Activity and Nutrition (SPAN) Grant** administered by the Centers for Disease Control and Prevention. Additional information is available through Kentucky's Cabinet for Health and Family Resources.

The Kentucky Bicycle and Bikeway Commission oversees the **Paula Nye Memorial Education Grant Program**, funded through purchases of Kentucky's "Share the Road" specialty license plates.

Appalachian Regional Commission funds are available in a 54-county area of eastern and south-central portions of the state for projects that support the economic, physical, and social development of the Appalachian region including physical infrastructure projects, education, workforce development, and more. The goals for these funds focus heavily on economic development in the Application region which can be strengthened by projects that include and promote active transportation.

Private funding sources provide another mechanism to consider—like the PeopleForBikes Industry Community Grant Program.²⁴ For larger projects, debt financing models (e.g., bonds, loans, etc.) and public private partnerships are an option to explore.

²⁴ Online at <https://www.peopleforbikes.org/grants>



3 FUTURE FRAMEWORK: WHERE DO WE WANT BE TOMORROW?

Delivering high quality transportation infrastructure and services depends on strong partnerships between federal, state, regional, and local agencies, and with the communities and individuals they serve. While KYTC has primary responsibility for 78,000+ miles of its highway system, the larger multimodal transportation network is administered by a host of different public and private entities.

With so many people working together, we need to agree what we're working towards.

ACTIVE TRANSPORTATION VISION STATEMENT

People of all ages, abilities, and incomes will have access to convenient and comfortable active transportation facilities, safely and reliably connecting them to all Kentucky has to offer.



This Plan's vision statement and supporting goals were developed through input from the steering committee, comprised of bike/ped advocates and stakeholders from around Kentucky. The vision statement declares the core priorities for Kentucky active transportation. It is supported by five goals, discussed further in **Section 3.2**.

Successfully fulfilling our vision for tomorrow will take cooperation and effort from key partners at all levels.

3.1. EMERGING TRENDS INFLUENCING OUR FUTURE

Beyond our intent for the system, a host of external factors influence our transportation choices—influencing the demands placed on our multimodal network in the coming years.



CHANGING DEMOGRAPHICS.

As discussed in **Chapter 1**, Kentucky's population is growing rapidly. Kentucky's 2022 population is estimated at 4.5 million. The Kentucky State Data Center projects the population to hit 4.7 million by 2030 and surpass 5 million by 2050.²⁵ Kentucky's current population density is nearly 115 people per square mile compared to 110 per square mile in 2010.²⁶ This makes Kentucky the 22nd most densely populated state in the US.

Since 2000, more than one-third of the growth in the state has occurred in the Louisville area; Kentucky's other urban zones are seeing substantial increases in population as well. Kentucky's urban population has grown from approximately 2.25 million to 2.65 million since 2000—growing faster than their rural counterparts.²⁷

While Kentucky's population is growing, the number of people choosing or able to drive is decreasing. This decline is influenced by many factors: the COVID-19 pandemic, an aging population, fewer teenagers choosing to drive, etc. The Census Bureau estimates that as of 2020, 7% of Kentucky households do not have a vehicle. Another 32% represent single car households.

²⁵ Online at <http://ksdc.louisville.edu/data-downloads/projections/>

²⁶ Online at <https://www.census.gov/quickfacts/KY>

²⁷ Online at <https://data.ers.usda.gov/reports.aspx?ID=17854>

In addition to shifting population patterns, recent travel cost and income trends also illustrate a need for active transportation facilities. The average cost to own and operate an automobile reached an all-time high in 2020 at \$9,561 per 15,000 miles,²⁸ up 30% since 2000. **Figure 13** shows how the average costs to own/operate a vehicle have increased over time.

These increasing travels costs are especially problematic in Kentucky where the poverty rate has remained at 15% or above since 2000.²⁹ The Census Bureau estimates the median household income in Kentucky was \$52,238 in 2020; vehicle ownership costs represent 18% of the average household income.

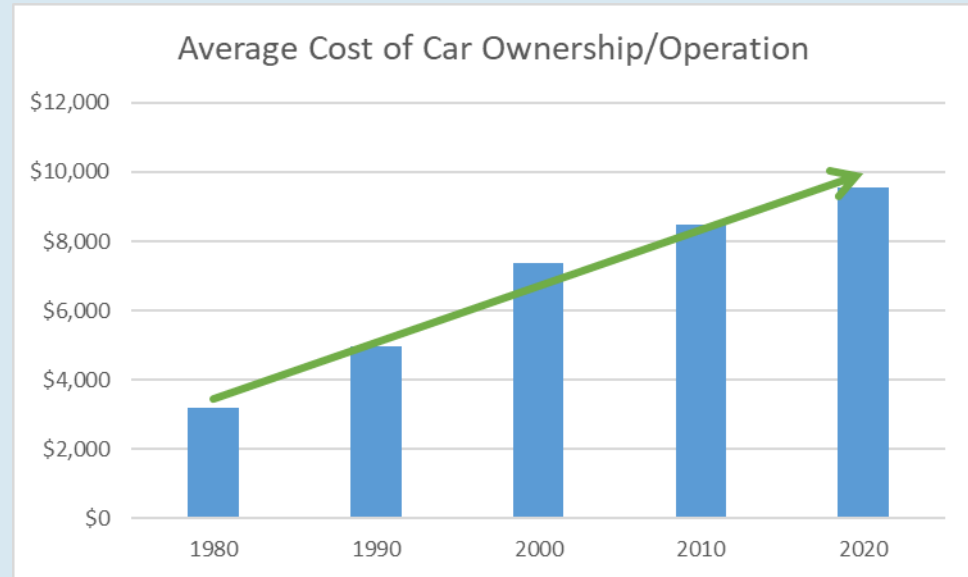
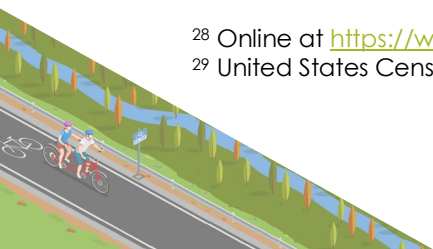


Figure 13: Car Ownership Costs per 15,000 annual miles

These demographic and income trends showcase the increasing pressures on Kentuckians to walk, bike, or roll rather than drive. To best serve these demographics Kentucky needs to invest in convenient and inclusive active transportation facilities.

²⁸ Online at <https://www.bts.gov/content/average-cost-owning-and-operating-automobilea-assuming-15000-vehicle-miles-year>

²⁹ United States Census Bureau





EVOLVING TECHNOLOGY.

In recent years the US has seen a surge in the use of **micromobility**—small, low-speed, human- or electric-powered transportation devices weighing less than 500 pounds, including bicycles, scooters, electric-assist bicycles, electric scooters (e-scooters), and other small, lightweight, wheeled conveyances. New **shared mobility** models influence accessibility of these vehicles, moving from traditional ownership to on-demand and subscription fleets.

As of August 2020, there were more than 260 shared micromobility systems, including docked and dockless bikeshare and e-scooter systems, in the United States. A recent NACTO report shows usage of these devices grew by 60% from 2018 to a record 136 million trips taken in 2019.³⁰

Usage of these micromobility modes is expected to continue to grow; FHWA and the Pedestrian and Bicycle Information Center have been working together to track micromobility trends, gather data, and support safe micromobility. Summarized in **Table 1**,³¹ they've identified six key challenges facing highway safety practitioners as a result.

“When automobiles first appeared on city streets more than a century ago, they added even more chaos to a mix of pedestrians, bicyclists, children at play, horses, and streetcars. The U.S. is now experiencing another transformative moment in transportation. Today, a new micro mode—electric and motorized bicycles, scooters and other personal transportation devices, that some consider a god send and others a menace—have joined the mix. Regardless, **micromobility is here and likely to stay**. The mode’s tremendous growth over the past couple of years—fueled by people seeking a more efficient, less costly and, in some cases, fun transportation alternative—cannot be ignored.”

from Understanding and Tackling Micromobility, 2020

³⁰ Online at <https://nacto.org/shared-micromobility-2019>

³¹ Understanding and Tackling Micromobility (2020) Online at https://www.ghsa.org/sites/default/files/2020-08/GHSA_MicromobilityReport_Aug31Update.pdf

Table 1: Micromobility Safety Challenges

Theme	Challenge
Oversight	The statutes and regulations governing personal transportation devices vary from state to state and/or locality to locality, making it difficult for riders and other road users to know what is allowed and for law enforcement officials to address unsafe behaviors.
Funding	Then-current U.S. surface transportation funding law—the FAST Act—did not include dedicated funding for micromobility, despite a decade of steady growth.
Data	Micromobility-involved crashes and injuries are likely underreported due to the lack of a universal reporting standard.
Infrastructure	Separating transportation modes is the most effective way to reduce crashes. If separate infrastructure does not exist, micromobility riders will go where they feel safe and innovate based on what is available.
Enforcement	Most cities require providers to inform riders about safe operating rules, but enforcement of those rules is the responsibility of local law enforcement officials. That effort, however, may be hampered by the lack of a state micromobility statute and/or local ordinance and little or no officer training.
Education	Education is essential for ensuring micromobility users operate devices safely and respectfully and other road and sidewalk users are accepting of this mode. But public outreach is resource intensive and cannot be the sole responsibility of cities and/or providers. Other partners must be tapped to help foster widespread public engagement.

So far, Kentucky is obtaining these technologies mostly in its largest cities. These systems allow residents and visitors to easily utilize active transportation modes, making multimodal travel more convenient and accessible.



- Louvello, Louisville's bike share program with 307 bikes at 27 stations
- Lextran, providing dockless bike share in Lexington
- Privately owned rentable bikes and scooters in Louisville, Lexington, Bowling Green, and other areas



On the planning front, we must anticipate how these vehicles and changing user choices will influence the system. Then collectively we must plan accordingly to promote safety and provide the best user experience possible as these personal mobility technologies grow and evolve.



GROWING FEDERAL SUPPORT.

FHWA established its Bicycle and Pedestrian Program³² to promote safe, comfortable, and convenient walking and bicycling for people of all ages and abilities. They provide support through funding, policy guidance, program management, and resource development. A separate but related Pedestrian and Bicycle Safety Program³³ focuses on projects, programs, and materials for use in reducing pedestrian and bicyclist fatalities. Many resources are available through these two federal websites.

Further, in a 2022 report to Congress,³⁴ FHWA recommended making Complete Streets FHWA's default approach for non-access-controlled roadways, reaffirming federal support for safe, accessible transportation for all users.



³² Online at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/

³³ Online at https://safety.fhwa.dot.gov/ped_bike/

³⁴ Online at <https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-03/Complete%20Streets%20Report%20to%20Congress.pdf>



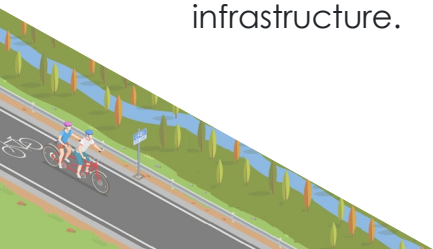
In 2022 the White House announced the **Infrastructure Investment and Jobs Act** (IIJA), the largest long-term investment in US infrastructure and economy. It provides \$550 billion over fiscal years 2022-2026 in new federal infrastructure investments. Active transportation modes will see benefits from several new and expanded funding opportunities:



- **Transportation Alternatives Set-Asides** increase by 70% to an average \$1.4 billion annually. The program covers a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, and other community improvements.
- The Congestion Mitigation and Air Quality or “**CMAQ**” Program provides flexible funding for a variety of projects to reduce emissions in urban areas. Alongside traditional CMAQ project types like bike lanes and bike/ped master plans, new policies under the IIJA make micromobility projects eligible as well.
- The new **Safe Streets and Roads for All** Grants provide up to \$1 billion annually for initiatives that reduce deaths and serious injuries for all roadway users: pedestrians, bicyclists, transit riders, micromobility users, and motorists.
- While not focused on active transportation investments, several **other discretionary grants** add considerations for bicycle/pedestrian benefits as selection criteria.

Beyond funding, language in the Act illustrates a growing commitment to active transportation modes. It places a significant emphasis on safety, focusing on vulnerable roadway users (VRU); states where more than 15% of fatalities represent VRU must spend at least 15% of their funding on bicycle and pedestrian improvements. Annually, bike/ped crashes represent 5-11% of fatalities on Kentucky roadways. The IIJA also mandates all States develop Complete Streets standards and requires States and MPOs use 2.5% of their planning and research funds for Complete Streets activities.

These increased funds and new guidance show the Federal commitment to the future of active transportation and offer increased opportunities for Kentucky to complete existing and implement new multimodal infrastructure.



As FHWA Acting Administrator Pollack said:³⁵

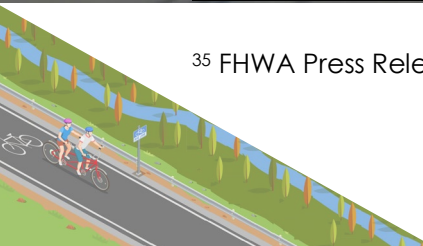
“ With this new guidance ... states and localities have one more tool to advance critically important projects that improve safety and accessibility for all and use a Complete Streets approach to create safe, connected, and equitable street and trail networks...These projects give people more affordable options to get from Point A to Point B while also reducing emissions from the transportation sector.”

So we're considering our people, looking at new personal mobility options, and finding national support.

What's next for Kentucky? How do we get to where we want to be?



³⁵ FHWA Press Release FHWA 10-22: March 30, 2022. Online at <https://highways.dot.gov/newsroom>



3.2. GOALS SUPPORTING THE MISSION

The following Master Plan vision and goals were developed in coordination with the steering committee:

The Vision
 People of all ages, abilities, and incomes will have access to convenient and comfortable active transportation facilities, safely and reliably connecting them to all Kentucky has to offer.



SAFETY: Reduce bicyclist/pedestrian fatalities and injuries on existing and new facilities by implementing evidence-based solutions and designs to protect vulnerable road users and ensuring facilities have appropriate lighting, signing, and striping to promote user safety and comfort.



CONNECTIVITY: Enhance geographic and modal connectivity, with active transportation networks linking to key destinations—neighborhoods, goods/services, schools, places of recreation, and places of employment—and integrating these networks with Kentucky’s multimodal transportation system.



EQUITY: Provide users of all ages, abilities, and incomes in urban, suburban, and rural areas of Kentucky with opportunities to benefit from accessible active transportation facilities.



HEALTH/ENVIRONMENT: Strengthen the health of individuals and reduce our dependence on non-eco-friendly single occupancy vehicles by promoting active transportation options.



THRIVING COMMUNITIES: Partner with local governments and other agencies to attract visitors and jobs to Kentucky by fostering thriving walkable and bikeable communities.

Chapter 4 continues the discussion, identifying specific action items, performance measures, and responsible parties. The remainder of this chapter takes a closer look at why these five goals are so important.





SAFETY: Reduce bicyclist/pedestrian fatalities and injuries on existing and new facilities by implementing evidence-based solutions and designs to protect vulnerable road users and ensuring facilities have adequate lighting, signing, and striping to promote user safety and comfort.

In the past four years, 193 pedestrians and 19 bicyclists were killed in collisions with motor vehicles in Kentucky. In addition, 2,030 pedestrians and 659 cyclists were injured in crashes. **Table 2** contains a breakdown by mode, severity, and year while maps in **Figure 14** show the geographic distribution of fatalities (top) and all bike/ped crashes by county (bottom). Of the 5,096 reported crashes, over 35% occurred in Jefferson County.

Table 2: 2018-2021 Crashes Involving Cyclists or Pedestrians

Crash Type	2018	2019	2020	2021	Total
Bike (Fatal)	6	3	3	7	19
Ped (Fatal)	46	51	50	46	193
Bike (Serious Injury)	19	16	17	30	82
Ped (Serious Injury)	112	110	112	111	445
Bike (Minor Injury)	82	87	93	97	359
Ped (Minor Injury)	233	263	199	232	927
Bike (Possible Injury)	59	51	53	55	218
Ped (Possible Injury)	212	195	133	118	658
Bike (Property Damage)	167	177	175	131	650
Ped (Property Damage)	406	404	368	367	1,545
Total	1,342	1,357	1,203	1,194	5,096

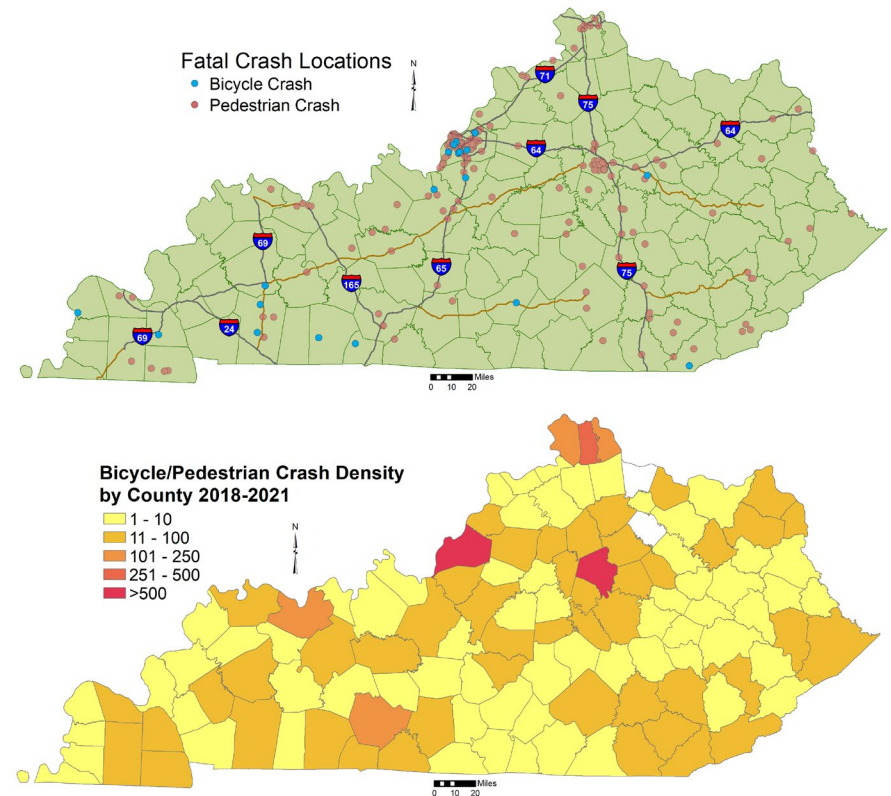
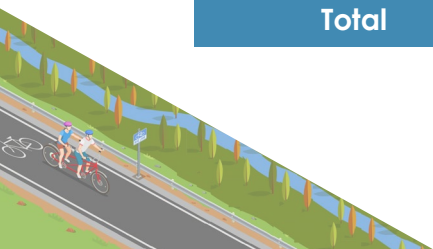


Figure 14: 2018-2021 Bike/Ped Crash Distributions





Decades of research highlight the importance of dedicated spaces for bike/ped safety.

In fact, an entire category within FHWA's Proven Safety Countermeasures is dedicated to cyclists and pedestrians.

Table 3³⁶ provides examples of common pedestrian design treatments and their resulting collision rate reductions.

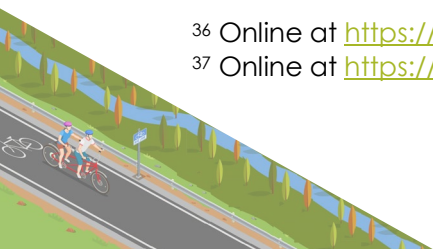
In 2022, the US Department of Transportation launched its innovative, comprehensive **Safe Systems Approach**,³⁷ with the long-term goal of zero roadway fatalities. The approach's foundation acknowledges six principles: death and serious injuries are unacceptable, humans make mistakes, humans are vulnerable, responsibility is shared, safety is proactive, and redundancy is crucial. The elements of a safe system are safer roads, safer speeds, safer people, safer vehicles, and post-crash care.

Table 3: Design Treatment Crash Rate Reductions

DESIGN TREATMENT	CRASH REDUCTION RATE
Provide minimum 4 ft paved shoulder to avoid walking along roadway	71% (pedestrian crashes)
Increase enforcement to reduce speed	70% (pedestrian crashes)
Install sidewalk to avoid walking along roadway	65-89% (pedestrian crashes)
Install pedestrian refuge islands	56% (pedestrian crashes)
Install raised median + crosswalk	46% (pedestrian crashes)
Improve lighting at intersections	42% (pedestrian injury crashes)
Provide bike lanes	36% (bicycle crashes)
Provide a bicycle box	35% (bicycle crashes)
Add exclusive pedestrian signal phasing	34% (pedestrian crashes)
Restrict parking near intersections	30% (pedestrian crashes)
Convert unsignalized intersection to roundabout	27% (pedestrian crashes)
Improve/install pedestrian crossing	25% (pedestrian crashes)
Install pedestrian countdown signal heads	25% (pedestrian fatal/injury crashes)
Increase enforcement related to motorist yielding in marked crosswalks + education campaign	23% (pedestrian crashes)
Install pedestrian overpass/underpass at unsignalized intersection	13% (pedestrian crashes)

³⁶ Online at https://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwasa09028/resources/CRF%20Desktop%20Reference.pdf

³⁷ Online at <https://www.transportation.gov/NRSS>





Shown in **Figure 15**,³⁷ the accompanying Safe Systems report highlights dire national trends for fatalities and bike/ped fatalities in particular.

Per Kentucky's Bicycle Friendly Report Card,³⁸ nearly 82% of cyclists killed in Kentucky were killed on state-owned roadways since 2015 despite the state owning only 35% of roadways.

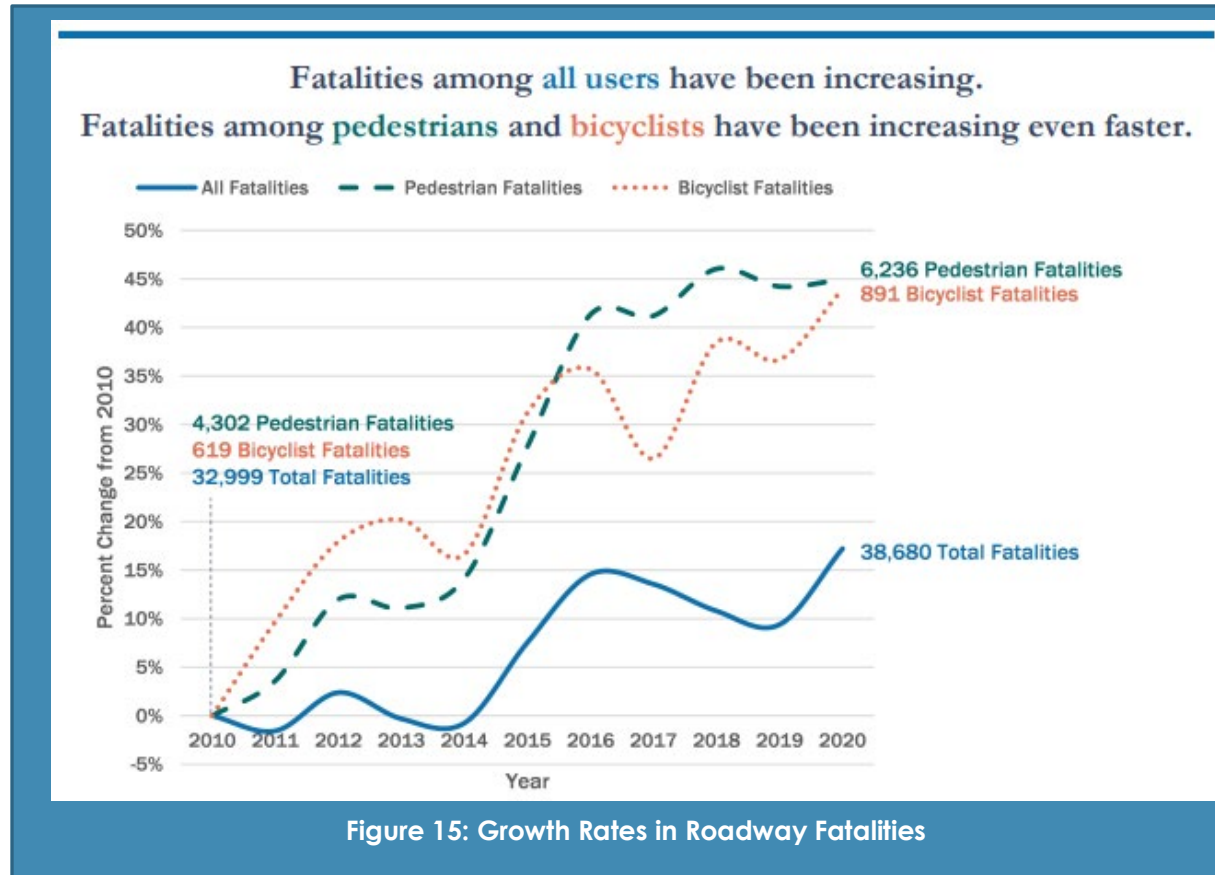
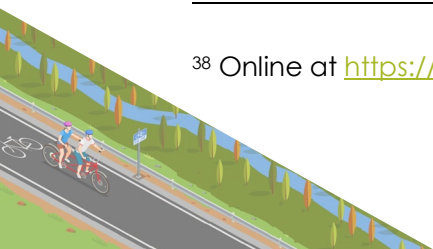


Figure 15: Growth Rates in Roadway Fatalities

³⁸ Online at https://bikeleague.org/sites/default/files/BFS_Report_Card_2022_Kentucky.pdf



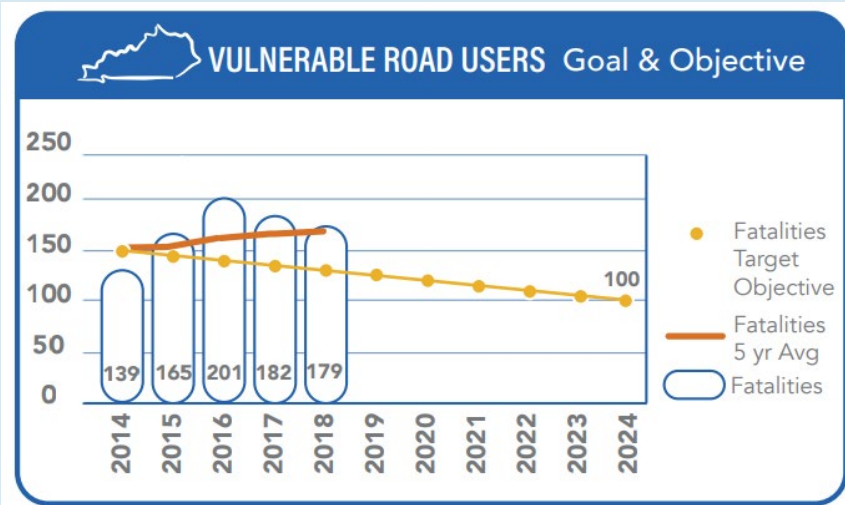


Figure 16: Strategic Highway Safety Plan Goal to Reduce Fatalities

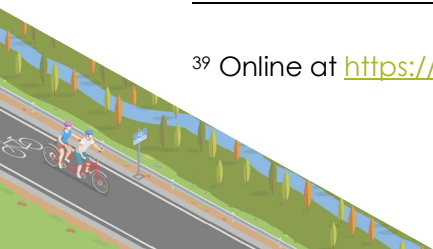
At the state level, Kentucky's 2020-2024 *Strategic Highway Safety Plan*³⁹ identifies VRU as one of its six emphasis areas. The plan notes that these travelers—which include motorcyclists in addition to pedestrians and bicyclists—are **“at a significantly heightened risk of severe injury or death** in the event of a collision with a motor vehicle” representing 23% of all fatalities during the 2014-2018 analysis period.

The Plan establishes a goal to work towards fewer fatalities through various strategies, summarized in **Table 4**. While several are beyond the scope of this plan, safer highways lead to safer cyclists and peds.

Table 4: Strategic Highway Safety Plan Strategies

Education	Engineering	Enforcement	Legislative
Publicize victim impacts High school drivers ed Speed-management programs Mothers against Drunk Driving (MADD) facilitator training Buckle Up, Phone Down Campaign Partnerships Ped safety programs Memo board messaging License renewal rules Motorcycle safety campaign Community traffic safety programs	HSIP rural corridor improvements Pedestrian refuge islands Turn lane improvements Innovative intersection designs Marking/device visibility Road diets Rectangular rapid flashing beacons Bike/Ped Plan Leading ped intervals at signal Separate bike/ped facilities Street lighting Radar speed enforcement signs	Increase enforcement in high crash areas Support recruitment/retention	Retesting for mature drivers Crash rating for helmets Legislate micromobility devices

³⁹ Online at <https://transportation.ky.gov/HighwaySafety/Pages/default.aspx>

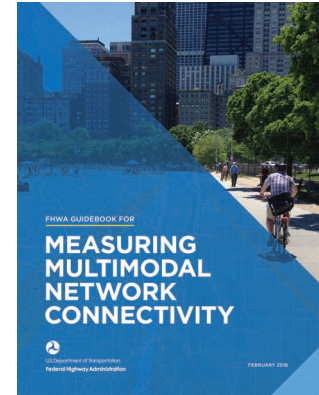




CONNECTIVITY: Enhance geographic and modal connectivity, with active transportation networks linking to key destinations—neighborhoods, goods/services, schools, places of recreation, and places of employment—and integrating these networks with Kentucky’s multimodal transportation system.

Connectivity describes how easily people can travel within the transportation system. FHWA’s 2018 *Guidebook for Measuring Multimodal Network Connectivity*⁴⁰ frames discussions around five core components:

- Network completeness: How much of the transportation network is available to bicyclists and pedestrians? How can gaps in the current network be addressed?
- Network density: How dense are the available links and nodes of the bicycle and pedestrian network?
- Route directness: How far out of their way do users have to travel to find a facility they can or want to use?
- Access to destinations: What destinations can be reached using the transportation network?
- Network quality: How does the network support users of varying levels of experience, ages, abilities, and comfort with bicycling or walking?

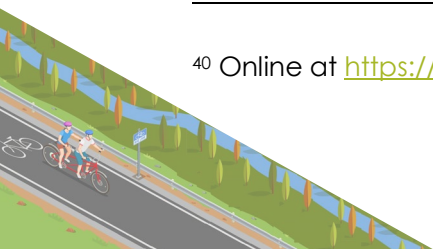


Within the context of this Master Plan, the connectivity goal covers two distinct elements:

Connecting to more places (geographic)

Having more choices how to get there (modal)

⁴⁰ Online at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_connectivity/fhwahep18032.pdf





Physical barriers and gaps in the network (**Figure 17**) limit its usability or leave individuals stranded to decide the best/safest way to complete their trip: hopping guardrails, jaywalking through traffic, etc. This unpredictability leads to increased crash risks and does not satisfy ADA requirements for equitable access.

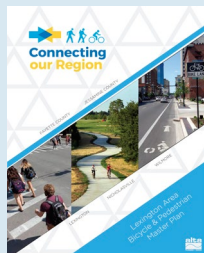
Connected, complete bike/ped networks can play an important role in reducing traffic congestion on major highways, enabling short trips to shift from car-based to non-motorized modes. Accordingly, projects that improve existing conditions and address connectivity gaps in the network are an important part of FHWA's and KYTC's developing Complete Streets initiatives.



Figure 17: Gaps in Network Connectivity

Both components of the connectivity goal underscore the importance of **partnerships**.

Enhancing geographic connectivity within congested urban areas is becoming increasingly important as Kentucky's urban populations continue to grow and expand into the suburbs and surround areas. Expanding urban land uses blur boundaries between separate jurisdictions—for example, as seen along the US 27 between Lexington and Nicholasville. Trips from A to B should be seamlessly convenient for the user, regardless of the borders crossed.



The Lexington Area MPO proactively addressed this geographic connectivity by combining both Fayette and Jessamine Counties into a single *Bicycle/Pedestrian Master Plan*.

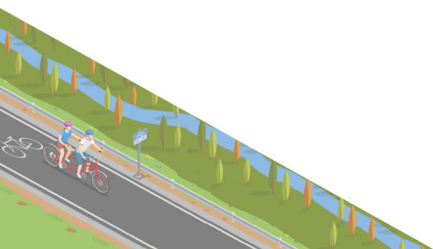




Public roadway projects provide opportunities for incorporating multimodal connections. Roadway projects at the state or local level can advance safe, adequate, and quality connections for bicycle and pedestrian uses—whether building new roads, reconstructing existing roads, or repurposing existing road footprints. The recent road reconfiguration along US 60 (East Main Street) in Frankfort is a good example of this repurposing: as part of a recent KYTC pavement rehabilitation project, striping was modified to create a three-lane section with bike lanes. The new bike lanes connect the university to businesses and neighborhoods.



Figure 18: US 60 Road Reconfiguration Before (Left) and After (Right)





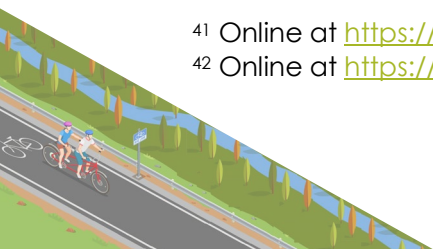
New private developments also represent opportunities to incorporate multimodal facilities and connections. Local governments can require grid-style networks with multiple connections to public roads over single-entry cul-de-sacs or require developers to connect to adjacent bicycle/pedestrian facilities. Numerous model ordinance and plans are available to support such programs and goals, such as those found at the Active Transportation Alliance.⁴¹ Louisville Metro has developed both bike and pedestrian master plans, including local ordinances and resources to aid in infrastructure investment decision-making.⁴²



Modal connectivity is also important as nearly every trip has an active transportation component—even if it's just getting through a parking lot or to a bus station. Practically, modal connectivity manifests in different ways: bike racks on buses, cycle/scooter parking at popular attractions, adequate sidewalks, etc. KYTC's new *Complete Streets, Roads, and Highways Manual* provides policy guidance for best practices to plan for and design such facilities within a variety of land use contexts.

⁴¹ Online at <https://atpolicy.org/active-transportation-plans-index/>

⁴² Online at <https://louisvilleky.gov/government/bike-louisville>





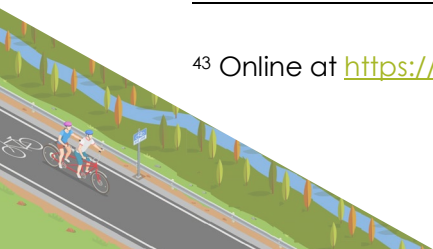
EQUITY: Provide users of all ages, abilities, and incomes in urban, suburban, and rural areas of Kentucky with opportunities to benefit from accessible active transportation facilities.

Equity is about providing affordable and reliable transportation access to fairly meet the needs of all community members, particularly traditionally underserved populations—such as low-income, minority, elderly, disabled, or limited English proficiency communities. An equitable transportation system aims to share access to social and economic opportunities; providing more travel choices to all helps to increase access to opportunities for traditionally underserved populations.

FHWA's March 2022 report to Congress⁴³ explains the importance of this emerging emphasis area:

“Safety, accessibility, and connectivity are closely linked to transportation equity. Equitable transportation provides access and options for all users regardless of race, gender, age, disability status, or class. Disparities in access to transportation for all users persist and affect many Americans, including 41.8 million American adults with disabilities, 40 million people over age 65, and 32 million Americans who live below the poverty line. People walking in lower income areas are struck and killed by motor vehicles at much higher rates than those walking in higher-income neighborhoods. Of the top 30 pedestrian crash hot spot locations in the US, 75% are bordered by low-income communities...[Executive Order 13985] directed agencies to engage with underserved communities and take other actions to allocate Federal resources to advance fairness and opportunity.”

⁴³ Online at <https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-03/Complete%20Streets%20Report%20to%20Congress.pdf>





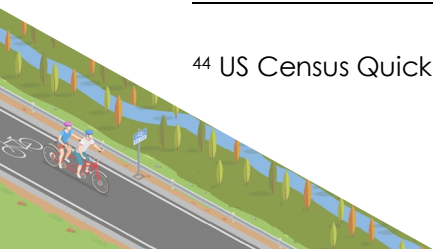
In Kentucky, approximately 15% of the population lives in poverty, 16% are minorities, and approximately 13% are living with a disability.⁴⁴ These underserved populations are in both urban and rural areas. For these populations, walking and biking may be the only option to access employment opportunities and necessary goods and services such as food, health care, education, and transit.

As the vision states, Kentucky's transportation system should provide access to convenient and comfortable transportation options for everyone. Active transportation is key to accomplishing this vision, especially for historically underserved populations who face long-standing structural and institutional barriers to opportunity.

Beyond access to infrastructure, **having your voice heard is another significant component of equity**. Traditionally underserved communities must be able to meaningfully participate in the transportation planning processes and have their needs heard. Public involvement is a critical component to gathering information on transportation needs—and often lays the foundation for which priorities advance for project development and implementation. To encourage participation, KYTC deploys a host of project-specific tools:

- Publishing meeting notices and other opportunities for engagement in many print media, broadcast, and social media venues—including targeted ads to boost engagement with specific demographics or geographies.
- Translating key deliverables into different languages.
- Engaging with local elected officials and other community liaisons to identify stakeholders and spread news at project milestones.
- Piggybacking with local community events to meet people where they are.
- Comparing feedback against community demographics to assess if responses are representative then adjusting outreach strategies accordingly.

⁴⁴ US Census QuickFacts, 2021 Estimates





HEALTH/ENVIRONMENT: Strengthen the health of individuals and reduce our dependence on non-eco-friendly single occupancy vehicles by promoting active transportation options.

Increasing active transportation is an effective way to promote healthier lifestyle choices and promote environmental sustainability.

Active transportation allows people to be physically active in everyday life by enabling them to walk or bike to their destinations. Even a moderate amount of daily exercise can **improve both physical and mental health**. Important benefits include lowering the risk of heart disease, reducing high blood pressure, and relieving stress. As discussed in **Chapter 1**, Kentucky’s health concerns are ranked among the worst in the nation.

The social interaction of biking and walking also promotes positive mental health through interpersonal interaction and community development, rather than the isolation single occupancy vehicles most often promote. Promoting active transportation to access work, school, places of recreation, and more is one of the easiest ways Kentucky can improve these outcomes and create healthier individuals and healthier communities.

Active transportation promotes **environmental sustainability** through reduced air pollution and greenhouse gas emissions, energy savings, less noise pollution, less stormwater runoff, etc.



Figure 19: Green Sidewalk Infrastructure along US 60 (Story Ave) in Louisville



THRIVING COMMUNITIES: Partner with local governments and other agencies to attract visitors and jobs to Kentucky by fostering thriving walkable and bikeable communities.

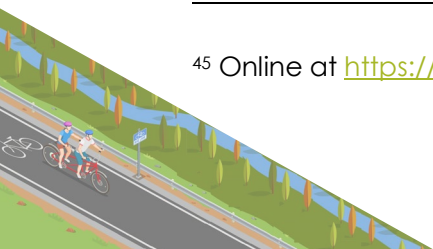
Active transportation projects deliver an array of positive economic benefits—tourism, increased property values, commercial activity, and infrastructure savings. Robust bicycling networks and safe walking environments have the potential to generate millions of dollars in state and local economic benefits, including contributions to tax revenue.

Livable communities that support bicycling and walking are a high priority of the US Department of Transportation. A livable community is one that provides safe and convenient transportation choices to all citizens, whether it's by walking, bicycling, transit, or driving.

In June 2022, the US Departments of Transportation and Housing/Urban Development initiated a new **Thriving Communities Program** to formalize technical assistance for local communities to foster thriving communities through transportation improvements. While specifics are still being developed, the Thriving Communities Program “recognizes the power of local communities to drive innovation if they have the tools to succeed. This program provides hands-on planning support and access to a diverse set of technical assistance providers available to work directly with communities as they build upon local assets to co-design and advance infrastructure projects that address critical social, economic, environmental and mobility needs. As a result of the Thriving Communities Program, a pipeline of diverse and transformative community-driven infrastructure projects will be advanced across the country to drive inclusive economic growth, build resiliency, and ensure that every place has a chance to thrive.”⁴⁵

Kentucky's Trail Town program—discussed further in **Chapter 2**—provides an example of one way the Commonwealth is leveraging bike/ped infrastructure to bolster tourism and economic development.

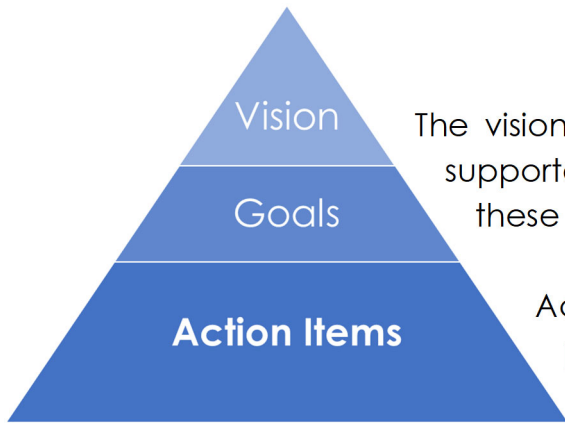
⁴⁵ Online at <https://www.transportation.gov/grants/thriving-communities>



4 RECOMMENDATIONS: HOW DO WE GET THERE?



We know where we want to go ... now how do we get there?



The vision statement declares the core priorities for active transportation in Kentucky. It is supported by five goals, discussed in **Section 3.2**. Action items describe how we will achieve these goals.

Accomplishing these action items will take cooperation and collaboration among the partners discussed in **Section 2.5** and strategic utilization of available resources and funding.



The Vision

People of all ages, abilities, and incomes will have access to convenient and comfortable active transportation facilities, safely and reliably connecting them to all Kentucky has to offer.



SAFETY



CONNECTIVITY



EQUITY



HEALTH/
ENVIRONMENT



THRIVING
COMMUNITIES

4.1. SAFETY TECHNICAL ASSESSMENT

During early 2022, KYTC's Office of Highway Safety partnered with the National Highway Traffic Safety Administration and other stakeholders to prepare a *Pedestrian and Bicyclist Safety Program Technical Assessment* (**Appendix C**) for Kentucky. The analysis focused on five topics: program management, education, enforcement, engineering, and emergency medical services. Over 65 recommendations are identified between the five topic areas, a few of which are incorporated into the Bike Ped Master Plan action items below.

One of the first recommendations from the assessment involves creation of a *Pedestrian and Bicycle Strategic Safety Plan*, which will serve as an action plan for VRU, uniting complementary emphasis areas under the *Strategic Highway Safety Plan*, the *Highway Safety Plan*, and the Highway Safety Improvement Program (HSIP).

4.2. MASTER PLAN ACTION ITEMS BY TOPIC

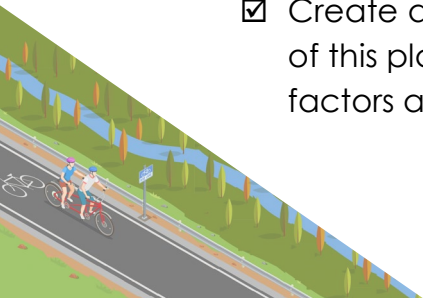
The following action items are recommended for implementation:

Action Item 1: Implement KYTC's new Complete Streets Policy.

- ☑ Publish and promote the *Complete Streets, Roads, and Highways Manual*.
- ☑ Offer complete streets training opportunities for KYTC staff, partner agencies, and consultants.
- ☑ Periodically update the 2022 Manual to reflect current best practices.
- ☑ Publish and promote this *Bike/Ped Master Plan*.

Action Item 2: Consider active transportation in project development/prioritization decisions.

- ☑ Define formal decision points during project development for reviewing multimodal infrastructure options and engaging the public/stakeholders early in the scoping process. The *Complete Streets, Roads, and Highways Manual* presents technical content for consideration, including improved network connectivity or “closing the gaps” in the existing system. A process and form to document the steps are currently under development by KYTC Planning.
- ☑ Create a *Pedestrian and Bicycle Strategic Safety Plan*. Per the 2022 Technical Assessment, “development of this plan should start with a comprehensive data analysis to identify crash types and contributing factors and target audiences. This information should be used to identify specific goals and objectives

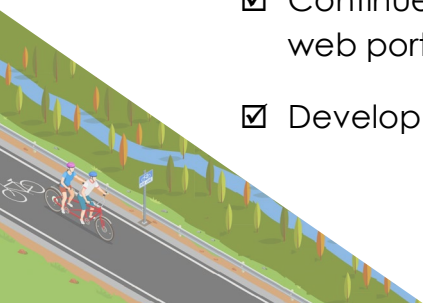


that integrate engineering, education, enforcement, and emergency medical services (EMS) in a coordinated, comprehensive approach to problem resolution. The plan should be developed in collaboration with state, regional, and local partners, stakeholders, and safety advocates, which can be formed into a statewide coalition or council that is charged with implementation.”

- ☑ Appoint a Vulnerable Road User Program Manager within KYTC’s Office of Highway Safety to oversee the new VRU program and co-chair the VRU task force.
- ☑ Prioritize bike/ped projects by awarding points within the SHIFT project prioritization process.
- ☑ Define a network screening approach to allocate HSIP VRU funding among candidate projects/sites. As of fiscal year 2022, HSIP allocates 4% of its funding to VRU, an increase over previous budget cycle assignments. A data-driven approach to divide funding between rural/urban areas, bike/ped users, different project types, etc. would help establish objective investment priorities to ensure available funding is applied strategically.
- ☑ Enhance protocols that ensure safe access for pedestrians and cyclists during the construction phase of infrastructure projects.

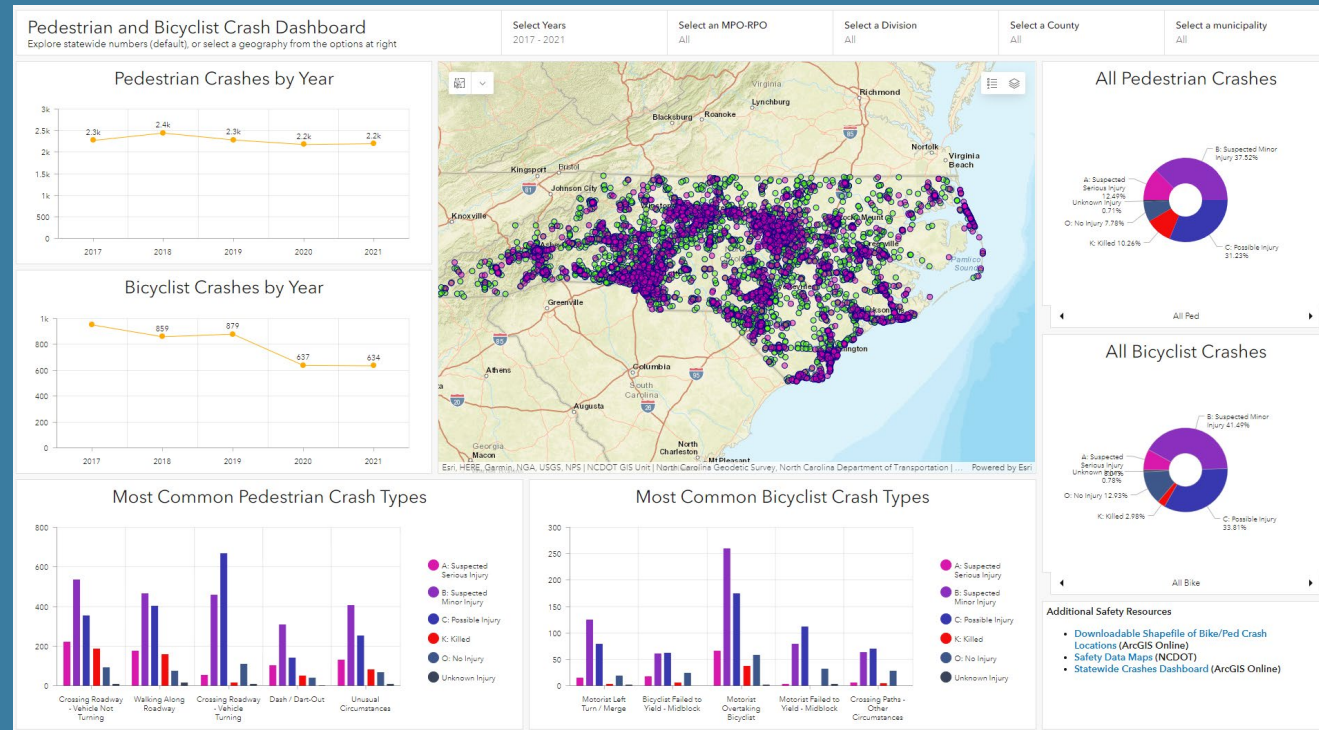
Action Item 3: Improve data collection.

- ☑ Continue to maintain the standardized GIS framework and develop additional strategies to streamline data collection and promote asset management—with an updated user guide for collaboration among ADDs, MPOs, KYTC Districts, and others. Develop strategies to increase engagement in some geographic areas.
- ☑ Continue to update the interactive mapping application showing bike/ped facilities on KYTC Planning web portal. For newly constructed facilities, this could include field collection of GPS coordinates.
- ☑ Develop an interactive dashboard of bike/ped performance metrics.



One example of a Pedestrian and Bicyclist Crash Dashboard, developed by the North Carolina Department of Transportation, lets users track safety statistics by geography, date range, severity, and more.

Available online at <https://www.arcgis.com/apps/dashboards/78046d11cabd4658a4d45b88c52ab8af>



- ☑ Improve the existing bike/ped count program. Data should provide additional insights about demand, exposure, and other factors that support project-level decision-making. While some localities and/or project-specific analyses collect counts, KYTC currently relies on third-party data subscriptions for bicycle/pedestrian volumes.

Action Item 4: Support Local Public Agency (LPA) efforts to implement bike/ped projects.

As discussed in **Chapter 2**, the Commonwealth's multimodal transportation network is managed and maintained by a host of different agencies and local governments. The intent of this action item is to position KYTC as an effective partner and resource for LPAs as they pursue their own transportation projects and programs.

- ☑ Encourage LPAs to adopt a local Complete Streets policy. To assist in this effort each KYTC District should identify a clear point person for LPAs to contact with Complete Streets policy questions and training requests—likely the District LPA Coordinator. It is important that this point of contact should be familiar with the policy/manual and latest guidance.
- ☑ Assist LPA efforts to prepare federal grant applications and utilize awarded funds.
- ☑ Promote and provide LPA training opportunities and share best practices from recent case studies. For example, Safe Kids Fayette County¹ conducts classroom presentations and participates in Bike-to-School Day and Walk-to-School Day activities. A week-long summer camp in Paducah joins leadership, cycling, and civic skills for teens to discover off-the-beaten-path sites while making new friends and becoming confident, capable bicyclists.

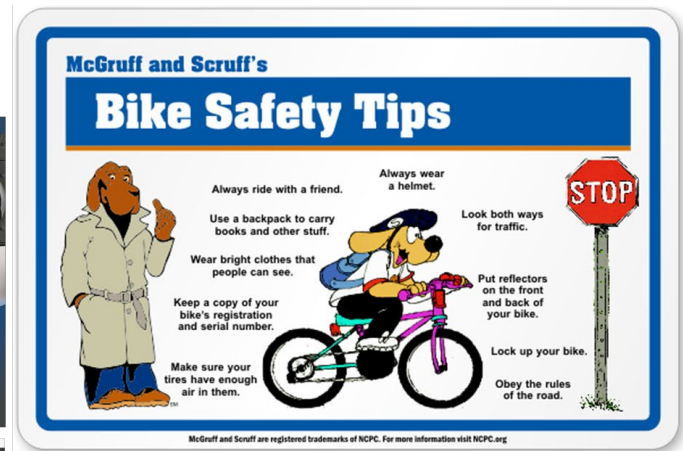
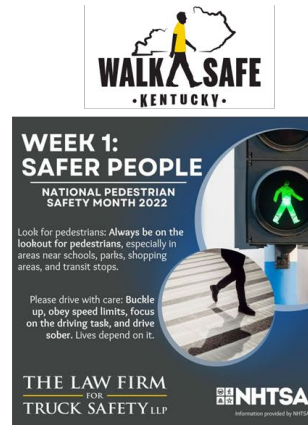
Action Item 5: Educate Public to Increase Modal Share and Promote Safety.

As discussed in **Chapter 2**, current Census estimates show approximately 2% of the state's population commuting on foot and 0.2% commuting by bike. The intent of this action item is to increase these numbers to 3% and 0.3% respectively over the next five years while reducing the number of VRU fatalities.

¹ Online at <https://www.safekids.org/coalition/safe-kids-fayette-county-ky>



- ☑ Promote, prepare, and share educational materials/campaigns in partnership with other advocacy groups, LPAs, and KYTC Office of Highway Safety.²
- ☑ Promote and attend community-sponsored bike/ped events.
- ☑ Raise awareness for Bike Month (May), Bike to Work Day/Week, Pedestrian Safety Month (October), and Walk/Bike/Roll to School Day



² Examples online at <https://www.nhtsa.gov/sites/nhtsa.gov/files/6124-a-v2-getting.pdf> <https://www.lexingtonky.gov/safeststreets>
<https://louisville.edu/sustainability/operations/bicycling-for-transportation>

- ☑ Incorporate active transportation safety considerations into drivers licensing program, and/or driver’s education classes. Collaboration between the Office of Highway Safety and State police will be vital.
- ☑ Incorporate active transportation safety considerations into law enforcement officer training—potentially in cooperation with classwork in the criminal justice program at Eastern Kentucky University.

Action Item 6: Update the KRS affecting Railtrail and Abandoned Rail

Former railroad lines represent potentially viable mobility corridors for bicycles and pedestrians; a few legislative changes are proposed to streamline the process.

- ☑ Shift the Railtrail Development Office from the Department of Local Government to KYTC's Modal Branch within the Division of Planning³
- ☑ Revise KRS 277.400 to notify KYTC of any rail abandonment or discontinued service.
- ☑ Revise KRS 277.402 to state that KYTC will seek to “railbank” corridors—that is, to allow a trail sponsor to use an out-of-service rail corridor as a trail while the railroad preserves the underlying property rights.

³ See KRS 147A.250

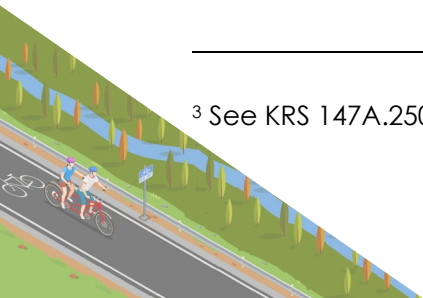
Education efforts are already well underway with new bicyclist and pedestrian safety campaigns developed by the KYTC Office of Highway Safety. These paid advertising campaigns are supported by state funds and incorporate a well-rounded variety of channels that reflect the digital nature of today's communications landscape. Many LPAs and advocacy groups also produce their own active transportation educational content that could be shared and utilized across the state.



YOU ARE WORTH IT.

- + Always look left, right and behind before crossing the street.
- + Cross at crosswalks.
- + Wear bright clothing.
- + Make eye contact with drivers when crossing streets and driveways.


 @LiveGreenLex
 #SafeStreetsLex
 LexingtonKY.gov/SafeStreets



4.3. RESPONSIBILITIES AND TIMELINES

For each of the Action Items listed in **Section 4.2, Table 5** lists the intended timeframe, the organization responsible to champion the effort, the corresponding goals addressed. Goals correspond to the icons below, discussed further in **Section 3.2**.



















Table 5: Action Item Responsibilities, Timelines, and Relevancy

ID	Action Item	Champion	Timeframe	Corresponding Goals
1. Implement KYTC's new Complete Streets Policy.				
1.1	Publish and promote the <i>Complete Streets, Roads, and Highways Manual</i>	KYTC Planning	Complete ⁴	
1.2	Offer complete streets training opportunities to KYTC staff, MPOs, ADDs, LPAs, and other interested parties	KYTC Planning	<1 year	















⁴ Online at <https://transportation.ky.gov/BikeWalk/Pages/Complete-Streets.aspx>

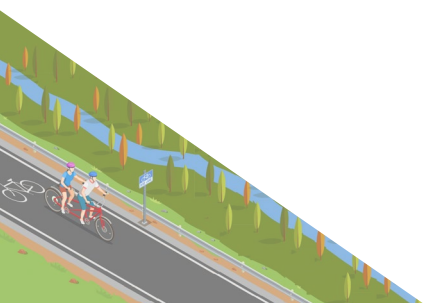
















ID	Action Item	Champion	Timeframe	Corresponding Goals
1.3	Update Manual to reflect current best practices	KYTC Planning	1-5 years	  
1.4	Publish and promote this Bike/Ped Master Plan	KYTC Planning	Complete	  
2. Consider active transportation in project development/prioritization decisions				
2.1	Define decision points for reviewing multimodal infrastructure options and engaging the public/stakeholders in scoping	KYTC Planning & Design	1-5 years	  
2.2	Create a <i>Pedestrian and Bicycle Strategic Safety Plan</i>	KYTC with Agency Partners	1-5 years	  
2.3	Designate a Program Manager to oversee VRU program	KYTC Office of Highway Safety	<1 year	
2.4	Prioritize bike/ped projects by awarding points within the SHIFT project prioritization process	KYTC Planning	<1 year ⁵	  

⁵ Included in 2024 SHIFT scoring criteria. More information online at <https://transportation.ky.gov/SHIFT/Pages/default.aspx>

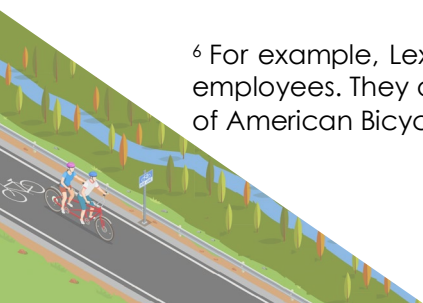











ID	Action Item	Champion	Timeframe	Corresponding Goals
2.5	Define network screening approach for HSIP VRU funding	KYTC HSIP	1-5 years	
2.6	Enhance construction protocols for safe bike/ped access	KYTC Design & KY Dept of Public Health	1-5 years	 
3. Improve Data Collection				
3.1	Continue to maintain standardized GIS of statewide bike/ped facility inventory	KYTC Planning /ADDs	Ongoing	  
3.2	Continue to update the interactive bike/ped mapping	KYTC Planning	Recurring	  
3.3	Develop interactive dashboard of bike/ped performance metrics	KYTC Planning	1-5 years	  
3.4	Improve bike/ped count program	KYTC Planning	1-5 years	 



4. Support LPA efforts to implement bike/ped projects						
4.1	Encourage and assist in LPA adoption of Complete Streets policy	KYTC Planning	1-5 years	  		
4.2	Assist LPA efforts to prepare federal grant applications and utilize awarded funds	KYTC Planning & Local Programs	Recurring	  		
4.3	Promote and provide LPA training opportunities and share best practices from recent case studies ⁶	KYTC Planning & Local Programs	1-5 years	  		
5: Educate Public to Increase Modal Share and Promote Safety						
5.1	Promote, prepare, and share educational materials/campaigns	KYTC Office of Highway Safety & KBBC	Recurring	  		
5.2	Promote/attend community-sponsored bike/ped events	KYTC Planning & KBBC	Recurring	 		

⁶ For example, Lexington Area MPO is currently working with area businesses to provide bicyclist safety education programs to their employees. They offer Traffic Safety 101 classes as part of efforts to promote the Bicycle Friendly Business program through the League of American Bicyclists. This initiative could be used as a model for other MPOs.



5.3	Raise awareness during Bike Safety Month (May) and Pedestrian Safety Month (October)	KYTC Planning & Highway Safety & KBBC	Recurring	  
5.4	Incorporate active transportation safety considerations into drivers licensing/education program	KYTC & KY State Police	5-10 years	 
5.5	Incorporate active transportation into officer training programs	KYTC & KY State Police	5-10 years	
6: Update KRS affecting Railtrail and Abandoned Rail				
6.1	Shift the Railtrail Development Office to the KYTC Division of Planning Modal Branch	Legislative Research Commission (LRC)	1-5 years	
6.2	Revise KRS 277.400 to notify KYTC of any rail abandonment or discontinued service.	KYTC & KY LRC	1-5 years	 
6.3	Revise KRS 277.402 to state that the KYTC will seek to railbank unused corridors.	KYTC & KY LRC	1-5 years	