

# COMPREHENSIVE PLAN

## 2025 TRANSPORTATION ELEMENT

### INTRODUCTION

The Kentucky Revised Statutes (KRS) 100.187 specifies the content of a Comprehensive Plan and requires that certain elements are included. These elements include a transportation plan element which shows proposals for the most desirable, appropriate, economic, and feasible pattern for the general location, character, and extent of the channels, routes, and terminals for transportation facilities for the circulation of persons and goods for specified times as far into the future as is reasonable to foresee. The channels, routes, and terminals may include, without being limited to, all classes of highways or streets, railways, airways, waterways, routings for mass transit trucks, and terminals for people, goods, or vehicles related to highways, airways, waterways, and railways.

The transportation network serving an area consists of roadways and other modes of transportation including air service, railways, riverports, bike trails, sidewalks and greenway trails. The roadway system is generally the primary mode of surface transportation and is comprised of a network ranging from regional roads to local streets. Regional roadways connect neighboring counties, the state and the nation. Local streets provide access to area collectors and arterials that link neighborhoods to opportunities for employment, the consumption of goods and services, recreation, religion, and education.

The Transportation Element of the comprehensive plan provides guidelines for maintaining and improving the transportation system to facilitate local and regional travel demands. The Transportation Element has been closely coordinated with the other plan update elements to provide for a viable system-wide transportation network which satisfies the need for the safe, efficient movement of goods and people.

As the county seat of Calloway County, the City of Murray is a bustling hub of activity and commerce. Sitting at the crossroads of US641 and KY80, Murray is one of the southernmost communities in southwestern Kentucky, close to the Kentucky-Tennessee border, and centrally

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located in Calloway County. This advantageous location and the growth of Murray State University present both challenges and opportunities for Murray’s transportation network.

### TIMELINE

Beginning in 2022, the City of Murray, in updating the 2020 iteration of its comprehensive plan, has decided to follow a 5-year timeline wherein individual sections of the comprehensive plan will be updated each year. Previous sections in order of completion include the Land Use Element in 2023 and the Base Element in 2024. The adoption of this Transportation Element in 2025 serves as the halfway point to completion as this element comes during the 3<sup>rd</sup> year of the timeline. The final two years of this update will see the completion of the Community Facilities Element and the Goals & Objectives. Thus, Murray will be able to present a finalized comprehensive plan for the city in 2027.

### FUNCTIONAL CLASSIFICATION OF MURRAY ROADWAYS

The Kentucky Transportation Cabinet (KYTC) utilizes a functional classification system for all roadways within the state to group streets and highways by the character of the travel service provided<sup>1</sup>. This classification system is designed with the understanding that roadway travel is a hierarchical system that progresses from short, local travel up to long, regional and statewide travel with the functionality of different roadways determining their class. This classification is important for a wide variety of items such as federal aid and funding, statistics gathering, traffic modeling, and roadway design. All public roadways fall into one of the seven following categories alongside further specification for rural and urban roadways. These categories follow the U.S. Department of Transportation’s Federal Highway Administration definitions and characteristics<sup>2</sup>.

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<sup>1</sup> <https://transportation.ky.gov/Planning/Pages/Functional-Classification.aspx>

<sup>2</sup>

[https://www.fhwa.dot.gov/planning/processes/statewide/related/highway\\_functional\\_classifications/section03.cfm#Toc336872981](https://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/section03.cfm#Toc336872981)

## **Interstates**

These are roadways that fall under the National System of Interstate and Defense Highways along with other Interstates as designated by the Secretary of Transportation. There are currently no roadways within the City of Murray under this classification and the nearest roadways within the region classified as Interstates are I-69 and I-24. I-69 can be accessed in Benton, some 15 miles from Murray city limits or in Mayfield around 20 miles from city limits. I-24 can be accessed in Calvert City around 25 miles from Murray city limits or in Cadiz just under 40 miles from Murray.

## **Other Freeways & Expressways**

These are roadways with access points limited to on-ramps and off-ramps with directional travel lanes separated by a physical barrier. Within Kentucky, these are generally represented by the parkway system. While no roadways exist within Murray under this classification, the nearest parkways are the Julian M. Carroll (Purchase) Parkway in Mayfield which is 20 miles from Murray city limits and the Edward T. Breathitt (Pennyrile) Parkway in Hopkinsville 55 miles from Murray.

## **Other Principal Arterials**

These roadways provide a high level of traffic mobility for substantial statewide travel or serve major activity centers while allowing for the demands of long trips within urban areas. According to the most recent KYTC mapping for functional classifications<sup>3</sup>, there are only two such roadways in Murray, US641 and KY80. Both roadways receive an urban designation while running within city limits and are shown as rural roadways otherwise. US641 is a 165-mile principal arterial that runs north-south through the center of Murray, stretching from Clifton, Tennessee, to Marion, Kentucky. The second principal arterial, KY80, is 484 miles long, running east-west from Elkhorn City in Pike County, Kentucky, to Columbus in Hickman County.

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<sup>3</sup> [https://transportation.ky.gov/Planning/Functional%20Classification/Murray\\_Func\\_city.pdf](https://transportation.ky.gov/Planning/Functional%20Classification/Murray_Func_city.pdf)

## Minor Arterials

Minor arterials serve travel of moderate length to smaller geographic areas with slightly lower traffic mobility needs than principal arterials. Roadways under this classification in Murray include:

- Glendale Road between South 4<sup>th</sup> Street and South 16<sup>th</sup> Street
- South 16<sup>th</sup> Street between Glendale Road and Main Street
- North 16<sup>th</sup> Street between Main Street and the five points intersection
- Chestnut Street between North 16<sup>th</sup> Street and North 4<sup>th</sup> Street
- North 4<sup>th</sup> Street between Chestnut Street and Main Street
- South 4<sup>th</sup> Street between Glendale Road and Main Street
- Main Street (KY94)
- KY121 from its connection to US641 on the north side of town and as it exits Murray to the west

Each of these roadways maintain an urban designation while within city limits. KY121 is an urban minor arterial within city limits, a rural minor arterial once it leaves the city on the west side of town, and a rural major collector when it leaves the city on the east side of town.

## Major Collectors

This classification designates roadways that channel travel between the lower classes and the arterial system. Roadways considered major collectors in Murray are as follows:

- North 16<sup>th</sup> Street between the five-points intersection and Utterback Road. This roadway becomes Brinn Road once it exits city limits and remains a major collector until its intersection at KY80.
- Utterback Road between North 16<sup>th</sup> Street and US641
- North 4<sup>th</sup> Street between US641 and Chestnut Street
- Chestnut Street/Industrial Road between North 4<sup>th</sup> Street and KY 94, this segment is also known as KY2594

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- Sycamore Street between South 4<sup>th</sup> Street and South 16<sup>th</sup> Street
- Wiswell Road between South 16<sup>th</sup> Street and Chickory Drive
- Doran Road between Wiswell Road and Main Street
- North 18<sup>th</sup> Street
- College Farm Road
- Coldwater Road
- North Robertson Road between Main Street and KY121

All of these roadways are urban major collectors but KY94 (Main Street) becomes a rural major collector once it leaves city limits.

### **Minor Collectors**

Minor collectors distribute trips between local roads and the higher classifications at a lower level of traffic mobility than major collectors. The only minor collectors identified that feed into the roadways of Murray are KY1550 and KY783. KY1550 becomes Wiswell Road and a major collector once it enters Murray city limits. KY783, Airport Road, does not enter Murray city limits and both roadways are designated as rural.

### **Local Roads**

These roadways provide direct access to adjacent lands and are not designed for long-distance travel. All other roadways in the City of Murray are classified as local roads with an urban designation.



### COMPLETE STREETS

KYTC has identified Complete Streets as an effort to provide safe and efficient transit possibilities to all modes of transportation from the most common single-user motor vehicles to public transit, bikers, pedestrians, and everything in between. Complete Streets furthermore strives to make these modes of transit connected, comfortable, equitable, and accessible to allow residents of Kentucky the freedom to travel where they want while also allowing effective transport of goods and services<sup>4</sup>. The principles for Complete Streets come from the National Roadway Safety Strategy's (NRSS) Safe System<sup>5</sup> approach which has been adopted by the Federal Highway Administration as an effective approach to address roadway safety. These principles are:

1. Deaths and serious injuries are unacceptable
2. Humans make mistakes
3. Humans are vulnerable

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<sup>4</sup><https://transportation.ky.gov/BikeWalk/Documents/Complete%20Streets,%20Roads,%20and%20Highways%20Manual.pdf>

<sup>5</sup> <https://www.transportation.gov/safe-system-approach>

4. Responsibility is shared
5. Safety is proactive
6. Redundancy is crucial

In following these principles, it is KYTC's goal to reduce serious incidents on Kentucky roadways through a guided approach in partnership with local communities to implement safe designs and programmatic strategies. Guidelines within the KYTC Complete Streets Manual feature planning and design approaches for both urban and rural communities that best fit the needs of different localities in the state. Future iterations of the Transportation Element for the City of Murray may include these practices as the city looks to providing for the safe and integrated capacity of transportation for its residents.

### **AVERAGE DAILY TRAFFIC COUNTS**

Data taken from KYTC for traffic counts in the City of Murray comes from a range of years with the most recent recordings being taken in 2023 and the oldest recording coming from 2018<sup>6</sup>. This data also comes from a variety of recording stations. KYTC utilizes 4 different types of stations, but all record traffic counts in the same manner. Within Murray, only three types of recording stations are used: Volume Data Collection Station, Classification Data Collection Station, and Local Road Bridge. These stations are represented in Figure 1 with an orange dot for Volume Data Collection, a purple triangle for Classification Data Collection, and a green dot for Local Road Bridge. The majority of recorded traffic counts come between the years 2021 and 2023 and of the 46 recording stations within city limits, only one recording is from 2018 and one other is from 2019. In total, these recording stations saw 312,164 Average Annual Daily Traffic counts (AADT) on 19 roadways in the City of Murray. This AADT figure represents the average number of cars travelling on these roadways in Murray on any given day. It does not represent unique cars travelling within the city, so it is highly likely that some cars are being counted numerous times on different roadways. The higher AADT that a particular roadway had, the darker color that roadway appears in Figure 1. US641 was by far the most heavily utilized roadway in the city, seeing a range of AADT from 6,834 in 2022 travelling south of

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<sup>6</sup> <https://transportation.ky.gov/Planning/Pages/Traffic-Counts.aspx>

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Glendale Road up to 26,267 in 2023 along the section between KY121 and Main Street. US641 is locally designated as 12th Street within city limits and is further specified as N 12th Street when travelling north of Main Street and S 12th Street when travelling south of Main Street. AADT counts from recording stations in Murray are included below in Table 1.

**Table 1: Traffic Counts in Murray**

Recording Station ID	Roadway	Classification	AADT	Year
018B85	US641	Principal Arterial	14,146	2023
018620	US641	Principal Arterial	21,389	2023
018B60	US641	Principal Arterial	17,596	2021
018B32	US641	Principal Arterial	19,550	2022
018B12	US641	Principal Arterial	26,267	2023
018A55	US641	Principal Arterial	11,744	2023
018B33	US641	Principal Arterial	6,834	2022
018B23	KY121	Minor Arterial	6,438	2023
018B70	KY121	Minor Arterial	10,454	2022
018644	KY80	Principal Arterial	5,431	2018
018592	Brinn Road	Major Collector	2,052	2022
018B58	Utterback Road	Major Collector	1,713	2022
018B06	N 16th Street	Major Collector	4,794	2021
018B07	N 16th Street	Major Collector	5,810	2023
018A91	N 16th Street	Major Collector	5,062	2021
018A94	N 16th Street	Minor Arterial	6,861	2023
018A97	S 16th Street	Minor Arterial	5,139	2023
018A11	S 16th Street	Minor Arterial	5,002	2022
018A14	Wiswell Road	Major Collector	5,501	2022
018B30	Wiswell Road	Major Collector	3,177	2023
018B74	Wiswell Road	Major Collector	1,319	2022
018B25	Doran Road	Major Collector	3,255	2023
018558	N Robertson Road	Major Collector	4,591	2022
018702	Bailey Road	Local Road	1,467	2022
018B75	N 18th Street	Major Collector	2,855	2023
018A92	Coldwater Road	Major Collector	3,442	2023
018A93	College Farm Road	Major Collector	4,423	2023
018587	College Farm Road	Major Collector	2,425	2021
018B09	Chestnut Street	Minor Arterial	8,993	2022
018B11	Chestnut Street	Minor Arterial	7,739	2021
018A43	Chestnut Street/Industrial Road	Major Collector	3,514	2022
018B21	Main Street (KY94)	Minor Arterial	4,706	2021
018A06	Main Street (KY94)	Minor Arterial	7,472	2023



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018B00	Main Street (KY94)	Minor Arterial	10,902	2021
018A99	Main Street (KY94)	Minor Arterial	5,712	2021
018A80	Main Street (KY94)	Minor Arterial	5,703	2023
018315	Main Street (KY94)	Minor Arterial	7,679	2019
018A10	Sycamore Street	Major Collector	3,924	2021
018A16	Sycamore Street	Major Collector	4,376	2022
018A70	Sycamore Street	Major Collector	4,640	2021
018A15	Glendale Road	Minor Arterial	3,037	2021
018B71	Glendale Road	Minor Arterial	4,873	2023
018A46	N 4th Street	Major Collector	6,416	2023
018A44	N 4th Street	Minor Arterial	5,947	2023
018B64	S 4th Street	Minor Arterial	7,106	2022
018A64	S 6th Street	Local Road	688	2021
<b>Total</b>		-	312,164	-

## COMMUTING

**Table 2: Murray Commuting Numbers**

Means of Transport	
Car, truck, or van – Drove Alone	68.3%
Car, truck, or van – Carpooled	9.3%
Public Transportation	0.1%
Walked	15.1%
Other Means	1.5%
Worked from Home	5.7%
<b>Total Percentage</b>	<b>100%</b>

Table 2 contains commuting information from the United States Census Bureau’s American Community Survey (ACS)<sup>7</sup>. The ACS is an ongoing survey that provides yearly information on the nation’s population and is critical in informing how to disseminate trillions of dollars of federal funding<sup>8</sup>. The ACS comes in 3 different estimations that collect data from different population areas and periods of time and each estimation receives an annual update. These include the 1-year estimate which looks at areas of population with 65,000 or greater across 12

<sup>7</sup><https://data.census.gov/table/ACSST5Y2023.S0801?q=S0801:%20Commuting%20Characteristics%20by%20Sex&g=160XX00US2154642>

<sup>8</sup> <https://www.census.gov/programs-surveys/acs/about.html>

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months, the 1-year supplemental estimate which looks at populations of 20,000 or greater across 12 months, and the 5-year estimate which looks at all populations across 60 months<sup>9</sup>. The 5-year estimate not only covers the largest sample size, but it is also considered the most reliable estimate despite being the least current. Due to the City of Murray having a population under 20,000 and to maintain the highest reliability of information, we will use the 5-year estimate for ACS data throughout this element.

According to Table 2, over 77% of Murray residents commuted via car, truck, or van. Almost 70% of residents commuted alone, while 9.3% carpooled to work. With this large percentage of workers driving alone, there was only an average of 1.07 people per vehicle on the road. This is supported by the fact that in 2023 there were 31,671 vehicles registered in Calloway County, representing the majority of residents commuting in these ways.<sup>10</sup>

One noticeable way that some residents of Murray commute is the 15.1% who walk to work, which is substantially higher than the national figure of 2.4% and the state figure of 2.0%. This high percentage of walking commuters could be due to the presence of Murray State University and the ease of travel for faculty and staff that live near the institution. In looking at other cities in Kentucky with similar public universities, Murray's 15.1% of walking commuters was second only to the City of Morehead, home to Morehead State University, which saw 23.2% of its population walk to work. The City of Richmond, Eastern Kentucky University's home, had 4.7% of commuters walking and the City of Highland Heights, home to Northern Kentucky University, had a percentage of 7.1%. Closer public institutions to Murray include Southern Illinois University-Carbondale in Carbondale, Illinois and the University of Tennessee at Martin in Martin, Tennessee. These cities had walking commuters of 10.2% and 7.0% respectively. With such a substantial portion of Murray's residents commuting via walking, the necessity of a pleasant and conveniently connected pedestrian network cannot be understated. In 2023, 5.7% of residents worked from home, a noteworthy amount representative of the COVID-19 pandemic and its impact on remote work. Within the percentage of commuters that chose

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<sup>9</sup> <https://www.census.gov/programs-surveys/acs/guidance/estimates.html>

<sup>10</sup> <https://datamart.kytc.ky.gov/>

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other means of travel, 1.0% chose to use a taxicab or other similar service, and only 0.5% of residents biked to work, which may be due to the lack of biking infrastructure in Murray<sup>11</sup>.



### CRASHES AND TRAFFIC ACCIDENTS

**Table 3: Crashes in Calloway County in 2023**

Types of Crashes	# of Crashes
Crashes Involving Pedestrians*	5
Crashes Involving Motorcycles	8
Crashes Involving Deer	57
Single & Multi. Auto Crashes	819
Total Crashes	889

\*2021 figure

Included in Table 3 are reported crashes in Calloway County in 2023 by KYTC<sup>12</sup>. There were 889 total vehicular crashes including 8 with motorcycles and 57 with deer. The most recent figure for collisions involving pedestrians is 5 and comes from 2021.

<sup>11</sup> <https://www.walkscore.com/KY/Murray>

<sup>12</sup> <https://datamart.kytc.ky.gov/>

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According to Murray Police Department's 2024 annual report, there were 3,364 traffic stops, 711 collisions with no injuries, 50 collisions with injuries, 239 reckless driver calls, and 217 motorist assists<sup>13</sup>. Despite there being a total of 761 reported collisions by the department, there were no reported fatalities. Nearly half of vehicle collisions in Murray, 336, occurred along 12<sup>th</sup> Street in 2024. The total of 761 collisions is consistent with previous years collision numbers with a 5-year high of 780 in 2021 and a 5-year low of 626 in 2020.

The Kentucky State Police (KSP) reported 1,227 total vehicle collisions between December 31, 2023, and January 1, 2025, in Calloway County<sup>14</sup>. This data is inclusive of responses to collisions by KSP, Calloway County Sheriff's Department, Murray Police Department, and Murray State University Police. Only a small portion of these collisions, 120, resulted in injuries with a total of 176 individuals being injured. There were 4 reported fatalities as a result of these collisions.

It is important to note that both the Murray Police Department and KSP reports are inclusive of all vehicle collisions whether it is collisions with other vehicles, objects, buildings, or other roadway impediments. KYTC reports include only single and multi-vehicle collisions, motorcycle collisions, and pedestrian/animal collisions.

### MURRAY-CALLOWAY TRANSIT AUTHORITY

The main public transit service in Murray is the Murray-Calloway Transit Authority (MCTA). MCTA's purpose is the provision of safe public transportation services for the residents of Calloway County and the City of Murray. MCTA offers five main routes through the use of 31 vehicles. These routes include Community Route 1 (CR-1), Community Route 2 (CR-2), Gold Route, an Alternate Routes, and an Evening Route (CR-Evening). CR-1 runs Monday through Friday and provides service from 7:00 a.m. to 4:15 p.m. CR-2 runs Monday through Friday and provides service from 8:30 a.m. to 4:41 p.m. CR-Evening provides service Monday through Thursday from 4:45 p.m. to 9:55 p.m. CR-2 and CR-Evening routes are free for riders. The Gold Route, which only operates when Murray State University is in class, runs from 7:00 a.m. to 5:14 p.m. and is free for students and staff of the University. MCTA also provides on-demand

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<sup>13</sup> [2024 Murray PD AnnualReport.pdf](#)

<sup>14</sup> <http://crashinformationky.org/AdvancedSearch>

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scheduled rides that are provided on a first-come, first-served basis with current rates of \$2 in the city or \$4 in the county. Any same-day rides come at increased rates of \$5 in the city or \$7 in the county. There is also an ability to get passes for city, county, and CR routes as well as options for deviations from fixed routes for fees that can be found on MCTA's website<sup>15</sup>.

Weekend services are available on Saturdays and vehicles run from 9:00 a.m. to 9:00 p.m.

Ridership has decreased significantly on the MCTA through a number of factors including limited vehicle capacity, increased unemployment, and an increase in long-term riders, limiting the number of total riders that can utilize the service. All of these factors were ultimately a result of the COVID-19 pandemic. In 2019, total ridership was at 107,391, but this number fell to 81,432 in 2020 and bottomed out at 38,343 in 2021. Ridership began to bounce back in 2022 with 65,586 total riders, but lingering aftereffects of the pandemic led to a slow climb in ridership over the next two years with 72,054 riders in 2023 and 85,346 in 2024.



### MURRAY-CALLOWAY COUNTY AIRPORT

Murray-Calloway County Airport, also known as Kyle-Oakley Field (CEY), acts as the sole airport currently operating in Calloway County. This public airport serves the City of Murray as well as

<sup>15</sup> <https://www.murraytransit.com/services-and-pricing/>

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surrounding cities and counties. CEY has no active control tower, so the airport corresponds with the control tower at Memphis International Airport. Kyle-Oakley Field primarily operates for personally owned and small-venture-based aircraft. The available fuel at CEY has options for most small-medium sized aircraft regardless of propulsion (100LL & JET-A+). The airport provides a single runway, acting as a hybrid solution for incoming and outgoing traffic measuring in at 6202x100 feet.<sup>16</sup> As of 2022, CEY acted as the takeoff or landing point for 941 flights to and from 38 states, averaging roughly 2-3 flights per day<sup>17</sup>. Table 4 below details the five most frequent flight origins/destinations to and from CEY in 2022:

**Table 4: CEY Most Frequent Flight Origins/Destinations**

Flight Origin/Destination	# of Flights
Florida	126
Kentucky	125
Iowa	117
Tennessee	89
Alabama	80



## RIVERPORTS

While the City of Murray has no direct access to a major waterway, it is conveniently located in a central location between three existing riverports. This gives Murray indirect access to both the Ohio River and Mississippi River via the Paducah-McCracken County Riverport Authority and the Hickman-Fulton County Riverport Authority respectively. Smaller waterways such as the Cumberland River and Tennessee River can be accessed via the Eddyville Riverport and Industrial Development Authority. All existing nearby riverports are approximately 50 miles or less from the urban core of Murray, allowing for an effective mixed-transportation method of river-based logistics.

<sup>16</sup> <https://www.airnav.com>

<sup>17</sup> <https://ags.coverlab.org>

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Outside of the three established in-state riverports nearby, one additional location is under development in Wickliffe, Kentucky. Originally established in 2016 by community leaders, the West Kentucky Regional Riverport Authority (WKRRA) would provide additional river-based solutions to the Western Kentucky Region. A feasibility study was conducted in 2021, with semi-positive results. With an estimated cost of \$16.9 million, WKRRA is currently seeking a developer, investor, and operator. Ground has yet to be broken on the project, thus a concrete location for the riverport is not yet established. The future timeline for the project is unclear<sup>18</sup>.

**Table 5: Nearby Riverports & Access Location**

Riverport Location	Waterway Access	*Road Mileage from Murray
Eddyville, KY	Cumberland River	47 mi.
Paducah, KY	Ohio River	47 mi.
Hickman, KY	Mississippi River	51 mi.
**Wickliffe, KY	Mississippi River	55 mi.

\*Approximate

\*\*Proposed Location

## RAILWAYS

The City of Murray and Calloway County primarily have access to railways designated for freight and commercial use. The city's primary rail connection is through the KWT Railway, owned and operated by Genesee & Wyoming (G&W) since 2005. This line holds a maximum in-state capacity of 363,000 railcars, and an out-of-state capacity of 268,000 (located in Tennessee). The railway has one interchange in Bruceton, Tennessee to the CSX mainline, allowing access to Nashville and Memphis<sup>19</sup>. There are currently no passenger railways through the City of Murray nor Calloway County, however, in nearby Fulton, Amtrak operates a station that is a stop along the "City of New Orleans" route<sup>20</sup>. This route traverses 5 different states (Illinois, Kentucky, Tennessee, Mississippi, and Louisiana) across 20 stations with endpoints in Chicago, Illinois and New Orleans, Louisiana.

<sup>18</sup> <https://wkrra.com>

<sup>19</sup> <https://www.gwrr.com>

<sup>20</sup> <https://www.amtrak.com/city-of-new-orleans-train>

## PEDESTRIAN AND BIKING

In and around the Murray-Calloway County region, there are currently six community-mapped cycle-friendly routes spanning over 47 miles. These recommended on-street bike routes encompass most areas of the city, allowing ease of access to most urban hubs. While there is presently no designated biking infrastructure, there is an extensive public sidewalk network within city limits stretching just over 40 miles. This sidewalk network currently includes 212,453 feet of existing sidewalks and a further 93,063 feet of sidewalks are proposed for future development as represented in Figure 2.

For recreational biking, as well as hiking paths, the city and surrounding regions provide several options. Within or just outside city limits, approximately nine hiking and/or biking trails, covering a total of 32 miles, are publicly available<sup>21</sup>. Nearby parks and recreation areas offer larger scale hiking and biking trails from beginner to advanced difficulty. Notably, the Land Between the Lakes National Recreation Area offers over 500 miles of trails (some restricted to hiking only) and 200 cycle-friendly scenic roadways<sup>22</sup>.



<sup>21</sup> <https://www.trailink.com/city/murray-ky-trails>

<sup>22</sup> <https://www.explorekentuckylake.com/lbl/biking/>



### EMERGING TRANSPORTATION TECHNOLOGIES

The landscape of modern transportation has seen the emergence of new technological advances not only in vehicle types but also the infrastructure that supports them. The leading change in this field is far and away the increased acceptance of electric vehicles (EV). Companies such as Tesla and Rivian are becoming leaders in this industry while well-known companies like Ford and Toyota are quickly adding EV battery manufacturing to their portfolios. This has led, in part, to state<sup>23</sup> and federal<sup>24</sup> legislation promoting the development of infrastructure to support these vehicles; namely EV charging stations. While the City of Murray has not yet introduced plans for the implementation of these stations on public properties, private businesses have established five of them within the city<sup>25</sup>. For now, it remains uncertain what the full extent of this emerging technology will be, not only on a local level, but statewide and nationwide. The City of Murray should seek to stay informed about these technologies, their differences from existing methods, and what their future impact may be on transportation planning.

### MURRAY SMALL URBAN AREA STUDY

The KYTC initiated the Murray Small Urban Area Study (SUA) in 2023 to examine and identify transportation issues regarding safety and congestion in the City of Murray and the surrounding area. The SUA included previous planning documents, analyzing existing conditions, soliciting input from the public and local officials, developing traffic forecasts, and developing and evaluating improvement concepts.

The following improvement concepts were developed through the combination of existing conditions, input from the project team, advisory committee, and public, analyzing current traffic patterns and safety concerns, and additional field reconnaissance. Short-term concepts

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<sup>23</sup> <https://kyevcharging.com/>

<sup>24</sup> <https://www.transportation.gov/rural/ev/toolkit/ev-infrastructure-funding-and-financing/federal-funding-programs>

<sup>25</sup> <https://www.plugshare.com/directory/us/kentucky/murray>

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usually include lower-cost improvements that can be accomplished soon due to little or no requirements surrounding right-of-way construction.

**Table 6: Short-Term Improvement Concepts**

<i>ID</i>	<b>Location</b>	<b>Description</b>	<b>Total Cost Estimate</b>	<b>Priority</b>
<i>A</i>	US641	Perform a detailed traffic analysis on US641	\$250,000	High
<i>B</i>	Courthouse Square	Convert 5th Street to pedestrian area and convert on-street parking to back-in parking	\$240,000	Medium
<i>C</i>	KY94 at 8 <sup>th</sup> Street	Install a four-way stop and curb bump out at the KY94/8th Street intersection	\$60,000	Medium
<i>D</i>	US641X at Sycamore Street	Remove the channelized right-turn lane from US641X to Sycamore Street	\$60,000	Low
<i>E</i>	KY121 at Lowes Drive	Terminate the westbound KY121 through lane at Lowes Drive	\$20,000	Maintenance
<i>F</i>	KY1550 at Oxford Drive	Enhance striping and signing at the KY1550 horizontal curve at Oxford Drive	\$15,000	Maintenance
<i>G</i>	CCHS	Create an alternate turn lane on St. Rt. KY121 N from Calloway County High School	N/A	-

The long-term concepts are typically higher-cost improvements that require the commitment of more significant resources during implementation. They generally require additional right-of-way construction with funding required through a future Kentucky Highway Plan.

**Table 7: Long-Term Improvement Concepts**

<i>ID</i>	<b>Location</b>	<b>Description</b>	<b>Total Cost Estimate</b>	<b>Priority</b>
<i>H</i>	East Bypass	Construct a new route from the Murray Business Loop to KY94	\$19.9 Million	High
<i>I</i>	Main Street (KY94)	Construct a TWLTL and multi-use path on Main Street (KY94)	\$6.2 Million	High
<i>J</i>	KY94 at KY1660	Convert the KY94/KY1660 intersection into a roundabout	\$1.4 Million	Medium
<i>K</i>	KY121 at KY1660	Convert the KY121/KY1660 intersection to a roundabout	\$1.6 Million	Medium
<i>L</i>	West Bypass	Construct a new route between US641 and KY80 west of Murray	\$64.1 Million	Low
<i>M</i>	Doran Road	Extend Doran Rd. from KY94 W to College Farm Rd.	N/A	-
<i>N</i>	4 <sup>th</sup> Street	Remove channelized right-turn lane from 4 <sup>th</sup> Street to Sycamore St.	N/A	-

## COMPREHENSIVE PLAN

The bicycle and pedestrian concepts include stand-alone projects or projects that can be added to short- and long-term concepts. Any standalone bike-ped projects require funding that does not utilize Kentucky Road Fund dollars. Planned road improvements for the City of Murray can be found in Figure 3 and ongoing and planned bicycle/pedestrian improvements can be found in Figure 4.

**Table 8: Bicycle/Pedestrian Improvement Concepts**

<i>ID</i>	<i>Location</i>	<i>Description</i>	<i>Priority</i>
2	Main Street (KY94)	Construct a shared-use path on Main Street (KY94)	High
4	Doran Road/ Sycamore Street	Construct sidewalks on Doran Road and buffered on-street bike lane on Sycamore Street	High
5	US641 North of KY121	Construct a shared-use path on US641 with crosswalks at Lowes Drive and Center Drive	High
10	KY121	Construct a shared-use path on KY121	High
13	U B Bailey Road / Coldwater Road	Construct sharrows on U B Bailey Road and a shared-use path on KY121 and Coldwater Road	High
1	KY1327	Construct a shared-use path on KY1327	Medium
3	KY1660	Construct a shared-use path on KY1660	Medium
6	KY1550	Construct a shared-use path on KY1550, shared-use paths on 16th Street and Glendale Road, and sidewalks on Doran Road	Medium
12	US641 South of KY121	Construct a shared-use path on US641 and a buffered on-street bike lane/sidewalk on Arcadia Circle and Hopson Drive	Medium
7	US641X / KY2075	Construct a buffered on-street bike lane and sidewalk on KY2075/US641X	Low
8	8th Street	Construct a buffered on-street bike lane and sidewalk on 8th Street	Low
9	Poplar Street	Construct a buffered on-street bike lane and sidewalk on Poplar Street	Low
11	KY94 to Land Between the Lakes	Construct a buffered on-street bike lane on KY94	Low

### ACTIVE AND FUTURE CONSTRUCTION PROJECTS

Every two years, the Kentucky General Assembly approves a Six-Year Highway Plan (6YP). This plan is subject to the availability of state and federal highway dollars. On an on-going basis, the KYTC works with the Area Development Districts (ADDs), metropolitan planning organizations (MPOs), and highway district offices to identify and prioritize projects for future 6YPs. KYTC

## COMPREHENSIVE PLAN

submits the recommended plan to the legislature which then reviews, modifies, and approves the plan as part of the biennial budget process.

The Enacted Fiscal Year 2024-2030 Highway Plan projects a total of over \$44 million in state funding to improve the transportation infrastructure in Calloway County. This includes over \$30 million in projects for roadways in the City of Murray<sup>26</sup>. Updated figures from the 2019-2023 Highway Plan enactment show that although more than \$105 million was authorized to go toward highway funds in Calloway County, over \$110 million was spent as seen in Table 9 below<sup>27</sup>. This was further demonstrated in Table 10, as over \$40 million was committed to the relocation of US641 Stateline Road (KY893) in 2020.

**Table 9: 2019-2023 Highway Plan**

Fiscal Year	Amount Authorized	Amount Spent
2019	\$8,911,656.00	\$12,404,234.78
2020	\$31,688,601.00	\$22,557,665.95
2021	\$55,774,556.00	\$21,893,392.16
2022	\$3,935,074.00	\$29,872,846.15
2023	\$4,776,239.00	\$23,619,764.32
Total	\$105,086,126.00	\$110,347,903.36

**Table 10: Current Active Roadway Contracts in Murray**

Award Date	Description	Contract Amount	% of Contract Amount Spent
11/2/2020	Relocate US641 Stateline Road (KY893)	\$40,964,495.50	98%
11/29/2024	Murray to Farmington Road (KY121)	\$1,039,425.60	98%
2/6/2024	Various Routes in District 1	\$4,342,726.51	48%
5/7/2024	KY1346	\$1,467,379.61	85%
7/3/2024	Various Routes in District 1	\$10,657,593.66	8%
12/18/2024	S 12 <sup>th</sup> Street (US641)	\$1,381,823.79	0%

<sup>26</sup> <https://transportation.ky.gov/Program-Management/Pages/2024-Enacted-Highway-Plan.aspx>

<sup>27</sup> <https://datamart.kytc.ky.gov/>

## COMPREHENSIVE PLAN

The City of Murray has also undertaken its own planning around city street improvements and repairs. The long-range plan is to take place from 2023-2026 and will include the paving of 20 miles of city streets as well as identifying and repairing safety issues on city sidewalks. In the first two years (2023 and 2024) of the plan's implementation, the following have been achieved:

- Total linear footage of roadways paved: 48,481 LF
- Total miles paved: 9.18 miles
- Total funds spent on paving: \$1,165,795.52
- Completed identification and repair of sidewalk issues at a cost of \$235,000

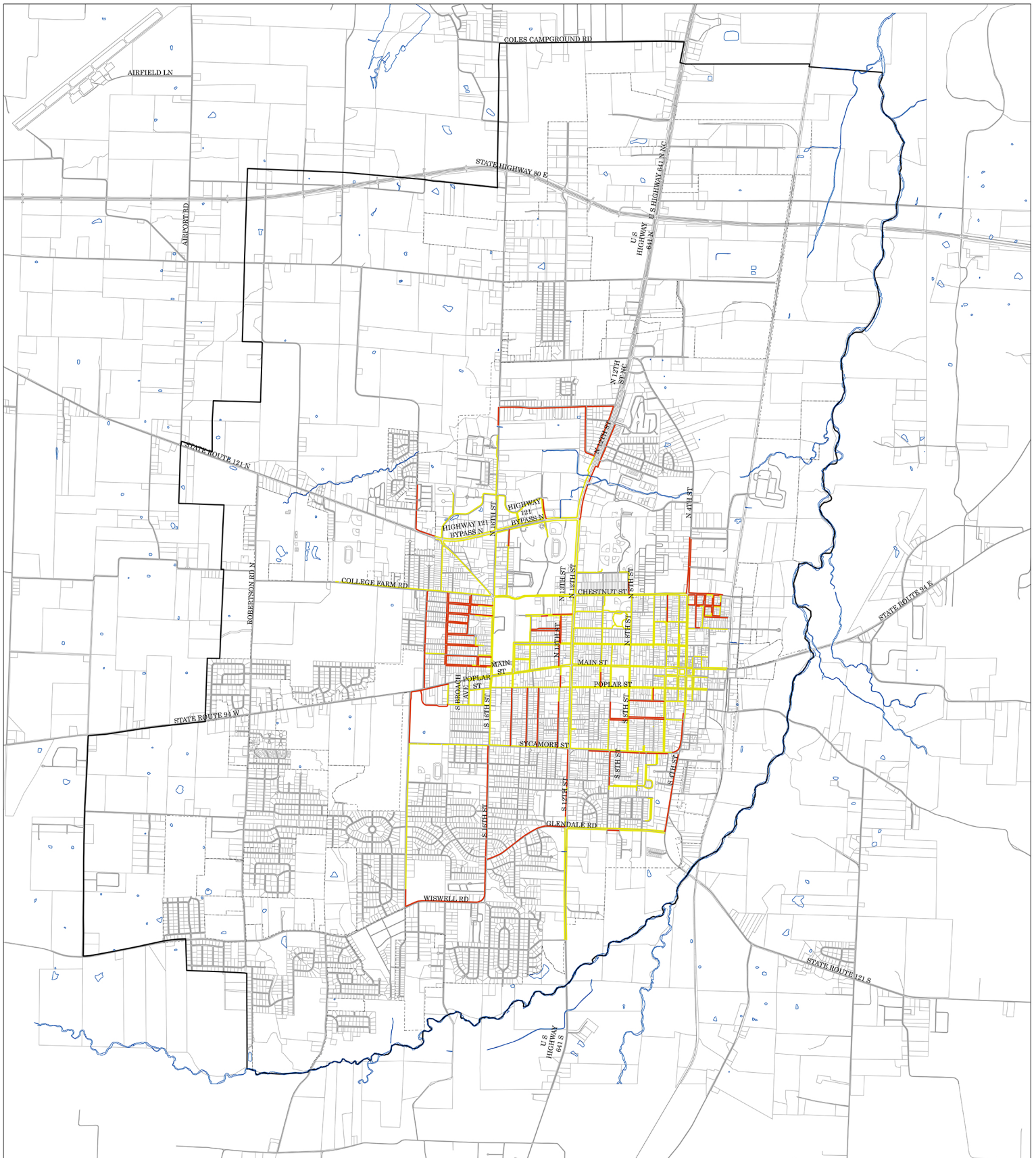
Improvements planned for 2025 include paving 5.69 miles of city roadway across 13 streets at a cost of \$560,000. This will increase the total mileage of completed roadways to 14.87 miles of the 20 miles proposed in the plan, leaving only 5.13 miles to be paved in 2026.



### CONCLUSION

The City of Murray enjoys a well-connected map of roadways with US641, KY121, KY80, and KY94 serving as the major roads of the city. These roadways see a vast number of travelers daily for both residents and visitors alike. While this has been advantageous for the vehicle commuters of Murray, the city must look toward improvements in infrastructure for pedestrians on foot or on bike as these travelers make up nearly one-fifth of total commuters. One approach would be to consider multimodal improvement projects that incorporate multiple modes of transportation into one project. Additionally, the prospective need for roadway infrastructure for emerging technologies such as electric and autonomous vehicles should be evaluated. The City of Murray also has increased potential for river and rail travel through the availability of these modes in the region. Rarely does a city have access to reliable rail service and three different riverports within close proximity. Furthermore, with the help of the Murray-Calloway Transit Authority, all residents of Murray and the surrounding region have access to affordable transportation options. While vehicle collisions have been consistent for the past five years, the number of injuries and fatalities from these collisions remain small and are reflective of increased safety measures within the city. Further improvements for Murray's transportation needs are easily achievable thanks, in part, to the city's Small Urban Area Study, and as projects within the Kentucky Highway Plan continue to move forward, transportation capabilities in Murray will only continue to grow.





STREET MAP  
 DEPARTMENT OF  
 PLANNING & ENGINEERING  
**CITY OF  
 MURRAY**  
 CALLOWAY COUNTY  
 KENTUCKY  
 FEBRUARY, 2025

**City of Murray Sidewalk Plan**

- Existing
- Proposed
- Murray City Limits
- Urban Service Area

Scale: 1" = 1000'



Original base map produced by photogrammetric methods from photography dated 01 April, 1998 and updated from digital orthophotography dated 02 March, 2017. This mapping conforms to National Map Accuracy Standards. Control based on 1983 N.A.D. All utility system data has been transferred from existing source documents and field notes and has not been precision located using photogrammetry or other surveying methods.

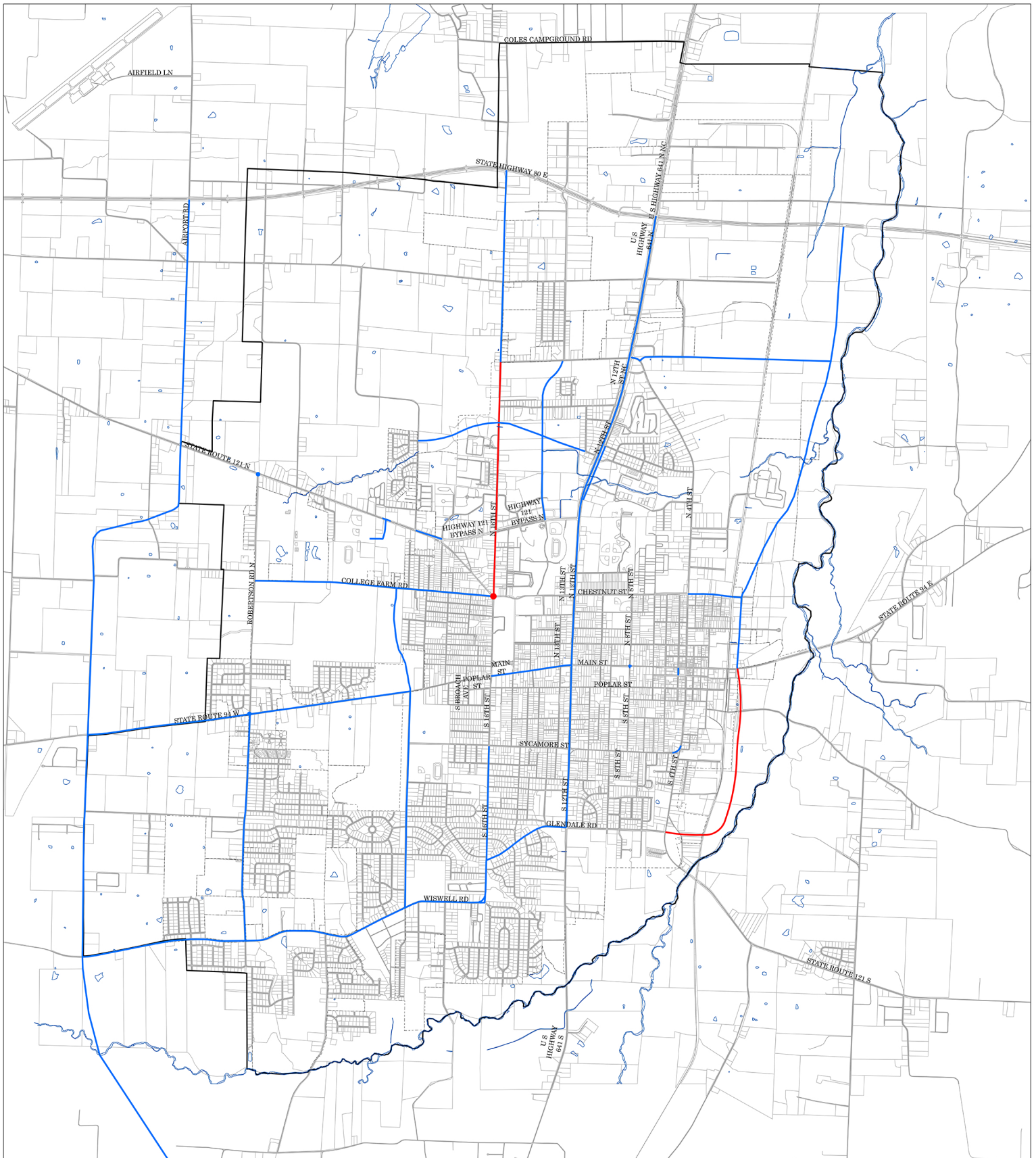
MAPPING BY THE CITY OF MURRAY

This map or mapping system has been prepared for the use of the City of Murray ONLY. The City of Murray, its agents or assigns, make no representations as to its accuracy. It should not be relied upon by any other person, organization, or entity.

Filename: SidewalkPlan2025-4.pdf

**Figure 2**





STREET MAP  
 DEPARTMENT OF  
 PLANNING & ENGINEERING  
**CITY OF  
 MURRAY**  
 CALLOWAY COUNTY  
 KENTUCKY  
 FEBRUARY, 2025

**Planned Roadway Improvements  
 in the Murray Planning Area**

- Current Improvement
- Future Improvement
- Murray City Limits
- Urban Service Area

Scale: 1" = 1000'



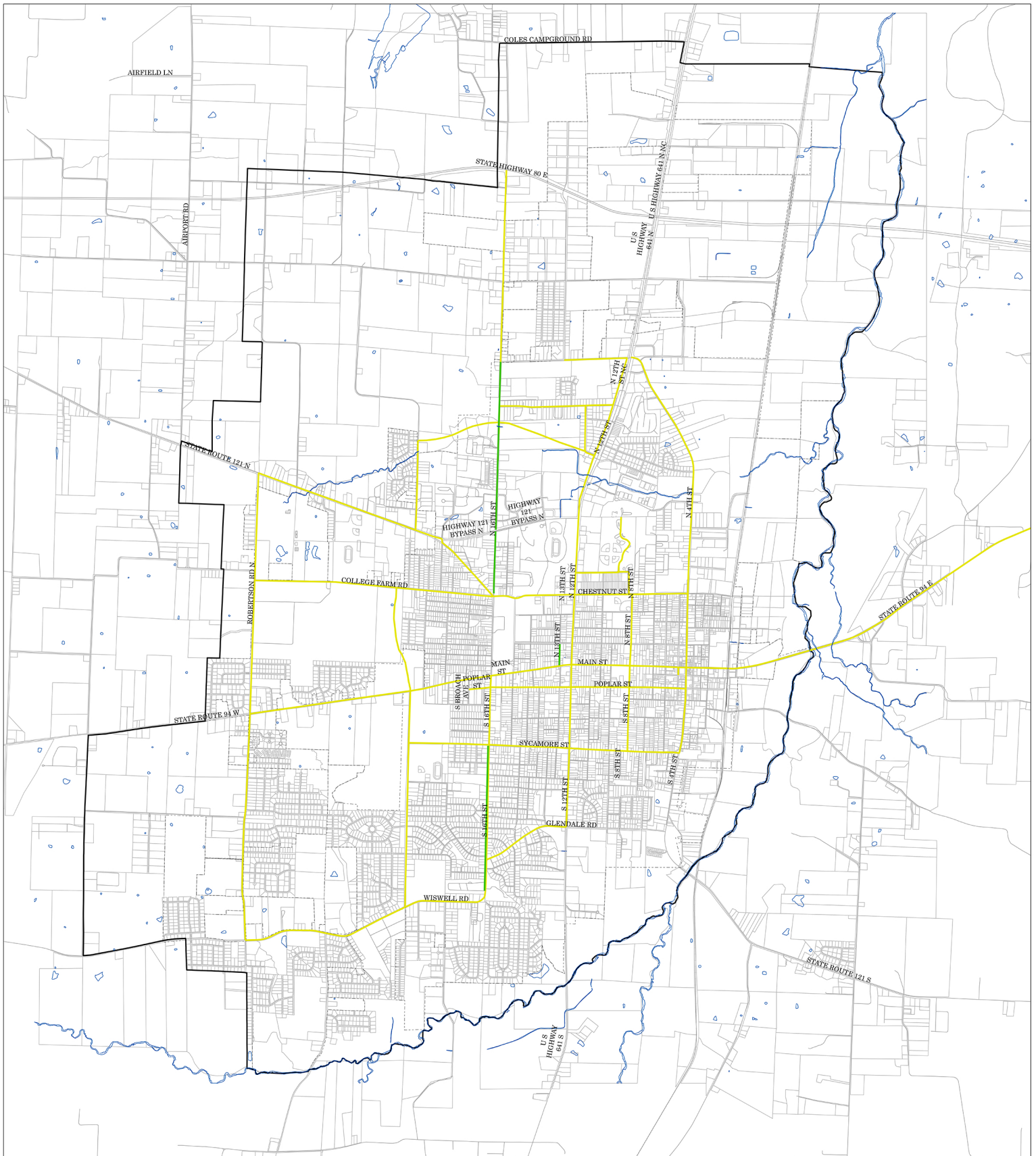
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Filename: PlannctTransportationImprovements2025V5.pdf

**Figure 3**



STREET MAP  
 DEPARTMENT OF  
 PLANNING & ENGINEERING  
**CITY OF  
 MURRAY**  
 CALLOWAY COUNTY  
 KENTUCKY  
 FEBRUARY, 2025

**Planned Pedestrian/Bicycle Improvements  
 in the Murray Planning Area**

- Current Improvement
- Future Improvement
- Murray City Limits
- Urban Service Area

Scale: 1" = 1000'



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**Figure 4**