

As prescribed in KRS 100.197(2)

“At least once every five (5) years, the commission shall amend or readopt the plan elements”

2025 Comprehensive Plan

- **2023-2027 Introduction**
(approved by the Planning Commission – May 21, 2024 – re-adopted June 17, 2025)
- **Base Element**
(approved by the Planning Commission - May 21, 2024 – readopted June 17, 2025)
- **Land Use Element**
(approved by the Planning Commission - September 19, 2023 – readopted June 17, 2025)
- **Transportation Element**
(approved by the Planning Commission – June 17, 2025)
- **Community Facilities Element**
(2020 Comprehensive Plan – readopted June 17, 2025)
- **Re-Stated Goals and Objectives**
(2020 Comprehensive Plan – readopted June 17, 2025)

COMPREHENSIVE PLAN

2023-2027 CITY OF MURRAY

COMPREHENSIVE PLAN UPDATE

INTRODUCTION

The City of Murray Planning Commission consists of seven members, with at least two-thirds of the members being citizen members and no more than one member residing outside the Murray city limits but within the county in which the planning commission is located. The mayor shall appoint, increase, or decrease the members of the commission with the approval of the legislative body. This number may be increased or decreased by the action of the Murray City Council. However, at no time shall the membership be fewer than five and no more than 10 members. Citizen members may be any citizen who is not an elected official, appointed official, or public employee of the city or county. The Calloway County Judge/Executive may appoint one member of the Murray Planning Commission when extraterritorial jurisdiction is exercised for subdivision or other regulations.

Kentucky Revised Statutes Chapter 100 Section 183 states that the planning commission shall prepare a comprehensive plan, which shall serve as a guide for public and private actions and decisions to assure the development of public and private property in the most appropriate relationships.

The comprehensive plan shall contain a statement of goals and objectives, a land use element, a transportation element, and a community facilities element. The plan may include additional elements which further serve the purposes of the comprehensive plan. The City of Murray Comprehensive Plan includes a base element consisting of an analysis of the demographics, economics, education, housing, transportation, and history of the city.

COMPREHENSIVE PLAN UPDATE SCHEDULE

The Murray Planning Commission established a policy to update the comprehensive plan, one element per year over a five-year period, beginning in 2022-2023 utilizing the following schedule.

Year 1 – 2022 – 2023 – Land Use Element

Year 2 – 2023 – 2024 – Base Element - Economic data, demographics, education, housing, transportation, and history

Year 3 – 2024 – 2025 – Transportation Element

Year 4 – 2025 – 2026 – Community Facilities Element

Year 5 – 2026 – 2027 – Housing Element and Comprehensive Review of Goals & Objectives

The comprehensive plan was previously updated in 2009 and 2020. These previous plans provide the foundation upon which the current update is being developed. The Murray Planning Commission contracted with the Kentucky League of Cities (KLC) for a five-year period to assist in updating each element of the plan and to review and update the goals and objectives.

COMPREHENSIVE PLAN UPDATE WORKING GROUP

The Murray Planning Commission established a Comprehensive Plan Working Group to collaborate with KLC in drafting and reviewing the comprehensive plan updates. The working group consists of 10 members comprised of two members of the Murray Planning Commission, two members of the Murray Board of Zoning Adjustments, a Murray City Council member, a citizen of the city, the Murray-Calloway Economic Development Corporation president, and three planning staff members. The working group meets periodically with the KLC team to provide feedback and guidance throughout the drafting process and conducts a final review of each element prior to submission of the update to the Murray Planning Commission.

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At the request of the working group, the data used throughout this comprehensive plan is consistent to the 2021 and 2022 data years. It is understood that ongoing projects in the city during the writing of this plan may have further impacts on Murray's future growth and development. These projects may be referenced in future updates.

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2024 HISTORY UPDATE

Calloway County became Kentucky's 72nd county in 1822. It was named in honor of Col. Richard Callaway who had a long history in Kentucky. He was part of Col. Boone's group in 1775 that began the First Road of Trace from Long Island on the Holston River to Boonesborough on the Kentucky River. His name appeared for Boonesborough in 1775 as a representative of the colony of Transylvania.

Wadesboro was established as the county seat and served in that capacity until 1842. This community flourished with more than 300 citizens. It became a center for land speculation. Many immigrants as well as the speculators came in search of property when the public lands were offered for sale by the legislature. Wadesboro was indeed a thriving town, but it soon lost its prominence when the lands were parceled and sold. The town fell into quick decline and many of the citizens moved away.

Marshall County separated from Calloway County in 1842 and a new county seat for Calloway County was needed. The county seat was moved in 1844 to Murray, a site located near the center of the county. The city was named for John L. Murray, a Kentuckian who served in the U.S. Congress.

The City of Murray experienced early development in the vicinity of the present Calloway County Courthouse. This development was supported by the courthouse activities and local streets in the vicinity were laid out in a typical grid pattern around the courthouse square. There were multiple attempts by a number of railroad companies to construct a line that would go through Murray in the mid-19th century, but most of them wouldn't come to fruition. Upon a successful vote to raise necessary funding for the line, the Paducah, Tennessee, and Alabama Railroad began constructing a north-south line that extended from Paducah through Murray and into Paris, Tennessee. The coming of the railroad in 1890 and the invention of the wireless telephone by native son Nathan B. Stubblefield put Murray on the map.

Farming has remained the county's primary industry since its founding. Growth in the community has tended to occur in a westerly and southwesterly direction from the initial

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location of the settlement, avoiding the flood hazard in the lower elevations along Clarks River east and south of the city.

Murray Normal School was established in 1922 in the northwest quadrant of the city, growing from an initial enrollment of 202 students to nearly 9,500 in 2021 during its evolution to Murray State University. The growth of Murray State University over the years has had a significant impact on overall development patterns in the city.

Following World War I, many residents moved north to Detroit to work in the burgeoning automotive industry. For those at home, the years of the Great Depression were difficult and made worse by the flood of 1937. The transformation of farming through federal programs of the New Deal brought hope to area farmers while the Tennessee Valley Authority (TVA) provided inexpensive electricity and flood control for all.

In 1944, TVA built Kentucky Dam, taking possession of the Tennessee River and creating Kentucky Lake. This largest manmade lake east of the Mississippi River necessitated people living in the area to be relocated. The removal was a terrible blow to the families who had settled there. Yet, improvements in the quality of life for everyone in Calloway County and the entire Jackson Purchase Area cannot be overlooked. Calloway County's population increased by 32% between 1960 and 1970 to 27,692 people as TVA employees, as well as some former LBL residents, relocated west of Kentucky Lake.

During and following World War II, local leaders worked to diversify the local economy. The teacher's college and a local hospital were critical to the economic growth as new manufacturing jobs were sought to provide work for returning veterans.

The community's growth has been in a westerly and southwesterly direction, increasing the distance between the original downtown center and the current distribution of population. With the onset of shopping centers, the commercial focus of the city shifted from downtown and South 12th Street as new, highway-oriented retailers and restaurants located along North

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12th Street near the university. Low density residential uses developed more recently in the southwestern portion of the city.

From the 1970s into the 1980s, efforts to recruit more manufacturing jobs accelerated. Grant funds were received to expand the wastewater treatment center and industrial and related commercial uses grew north and south along the railroad between the downtown area and the river. In the late 1980s and into the 1990s, the farming market changed, and farm labor shifted into manufacturing and other industries.

In the 1980s, a new four-lane highway opened between Murray and Benton, bringing the interstate highways even closer and allowing for greater increase of economic development. By the end of the decade, “the web” brought even more growth opportunities for the community. With the expansion of industries, the county’s population swelled by 11.2% from 1990 to 2000, reaching 34,177.

Four seismic shifts occurred in the 2000s which also altered the community. They were the First Congressional District changing party voting allegiances, the City of Murray voting to go “wet,” the federal government’s tobacco buyout program, and the four-lane highway from Mayfield to Murray. In 2005, more than 100 evacuees from the floods caused by Hurricane Katrina in New Orleans were resettled in the county and now claim Murray as their home.

With new residents and better roads, the county’s population took a leap of 8% from 2000 to 2010. With 37,177 total residents, Calloway County became one of the fastest-growing counties in the state. In 2010, the West Kentucky Rural Telephone Cooperative received \$123.8 million in grants and a loan to provide fiber to every household in their rural telephone exchange, increasing internet access for many in Calloway County.

Transportation was improved considerably with the 2016 Eggner’s Ferry bridge replacement. Tourism spending in Murray and Calloway County amounted to nearly \$58 million in 2017.

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Another new bridge over Lake Barkley opened in 2018, and that same year, federal funds were authorized to expand the highway from Murray to Paris, Tennessee, to four lanes.

In 2022, Calloway County celebrated the bicentennial of its founding. As local leaders continue to make investments in education, utilities, and transportation while offering a diversified labor market, – commercial, service, farming, and industry – Murray and Calloway County are poised for continued success.

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2024 DEMOGRAPHICS ANALYSIS

INTRODUCTION

Just seven miles north of the Tennessee border, the City of Murray is located at the geographic center of Calloway County in one of the westernmost parts of the state of Kentucky. The City of Murray is the county seat of Calloway County due to this centralized location. As of the 2020 United States Decennial Census, Murray is the 25th largest city in the state. This is a drop from its 19th largest city ranking in 2010. In the center of Murray lies Murray State University, also known as MSU. Murray State University is a four-year public university that was founded in 1922. MSU has almost 10,000 students enrolled and has become a central part of Murray's existence, transforming the community into a college town.

Most data within this demographic summary comes from the 2020 United States Decennial Census or the American Community Survey (ACS), particularly their five-year surveys running from 2016-2021. Any data used from different sources will be directly referenced within this summary.

POPULATION

According to the 2020 United States Decennial Census, Murray has a population of 17,307. This is a 2.4% decrease from the 2010 Decennial Census when it had a population of 17,741.

Analyzing the last 100 years of Murray's population, we can see that the city has had considerable and consistent growth from 1920 to 2010. Over this 90-year period, the population grew from 2,415 to 17,741. This was a growth of 734.6%, or 25.4% per decade.

Table 1 details this growth and the percentage of change from the previous decade.

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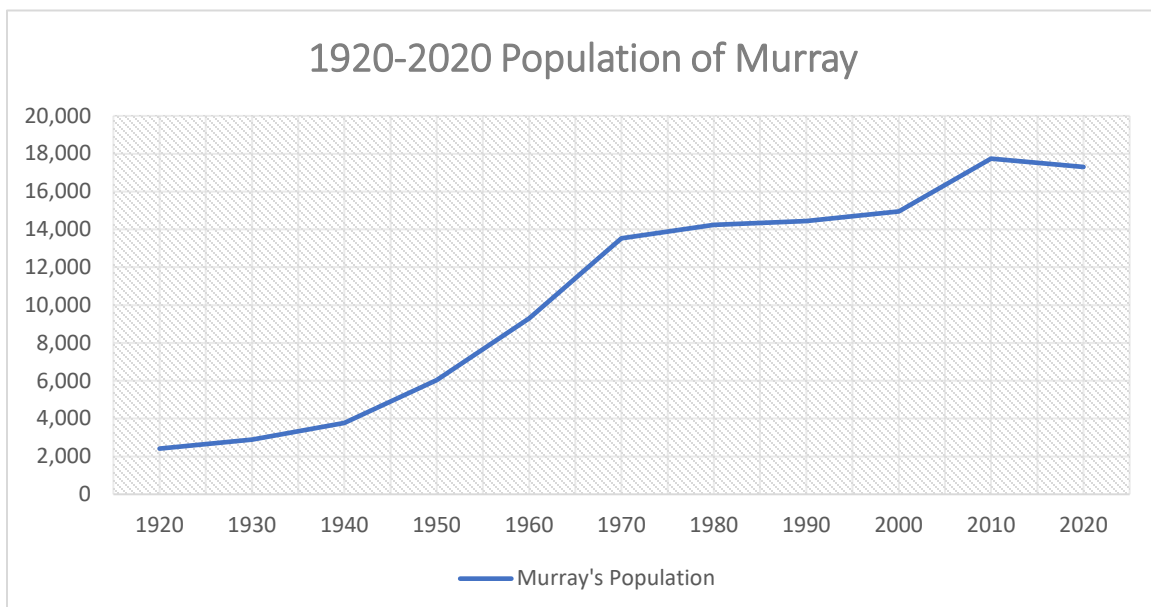
Table 1: Murray Population 1920-2020

Decennial Census	Population	Percent Change +/-
1920	2,415	15.6%
1930	2,891	19.7%
1940	3,773	30.5%
1950	6,035	60.0%
1960	9,303	54.2%
1970	13,537	45.5%
1980	14,248	5.3%
1990	14,439	1.3%
2000	14,950	3.5%
2010	17,741	18.7%
2020	17,307	-2.4%

Source: U.S. Census Bureau 2020 P1 Decennial Census

As Graph 1 demonstrates below, the population of Murray went from a modest 2,415 residents in 1920 to a substantial 13,537 residents in 1970. This was an increase of 11,122 residents in just 50 years. After 1970, the population gains were less substantive, only increasing by 1,413 over 30 years. However, after the turn of the century, another significant increase occurred between 2000 and 2010. The population jumped from 14,950 in 2000 to 17,741 in 2010, an 18.7% increase in one decade. 2020 was Murray's first census over the last 100 years where the population decreased, slightly dropping by approximately 434 people, or a decrease of 2.4%.

Figure 1: 1920-2020 Population of Murray



MURRAY STATE UNIVERSITY POPULATION ENROLLMENT FACTS

In the 2021-2022 school year, MSU had approximately 9,456 students enrolled as full-time and part-time students. Of these students, 7,939 were undergraduates, while the other 1,517 were graduate students. Of the 9,456 students enrolled at MSU, approximately 1,878 were enrolled exclusively in online classes and programs. MSU, like other universities, suffered retention issues due to the COVID-19 pandemic. MSU saw its retention rate of 81% in 2020 drop to 75% in 2021, a 6% decrease.

POPULATION DIVERSITY

According to the 2020 U.S. Census, of the 17,307 residents of Murray, around 15,681 are of one race and 828 are of two races or more. The one-race population makeup of Murray's 17,307 residents is as follow; 14,125 are white, 1,099 are black, 19 are American Indian and Alaska Native alone, 357 Asian alone, nine are Pacific Islander, and 72 are some other races alone. The ethnic diversity of Murray includes 798 residents who are Hispanic, while 16,507 are not Hispanic or Latino.

Table 2: Diversity of Murray in 2020

Murray, Kentucky	
<i>Hispanic</i>	798
<i>Not Hispanic or Latino</i>	16,509
<i>Population of one race (excluding Hispanic or Latino):</i>	15,681
<i>White alone</i>	14,125
<i>Black or African American alone</i>	1,099
<i>American Indian and Alaska Native alone</i>	19
<i>Asian alone</i>	357
<i>Native Hawaiian and Other Pacific Islander alone</i>	9
<i>Some Other Race alone</i>	72
<i>Population of Two or More races</i>	828
Total Population	17,307

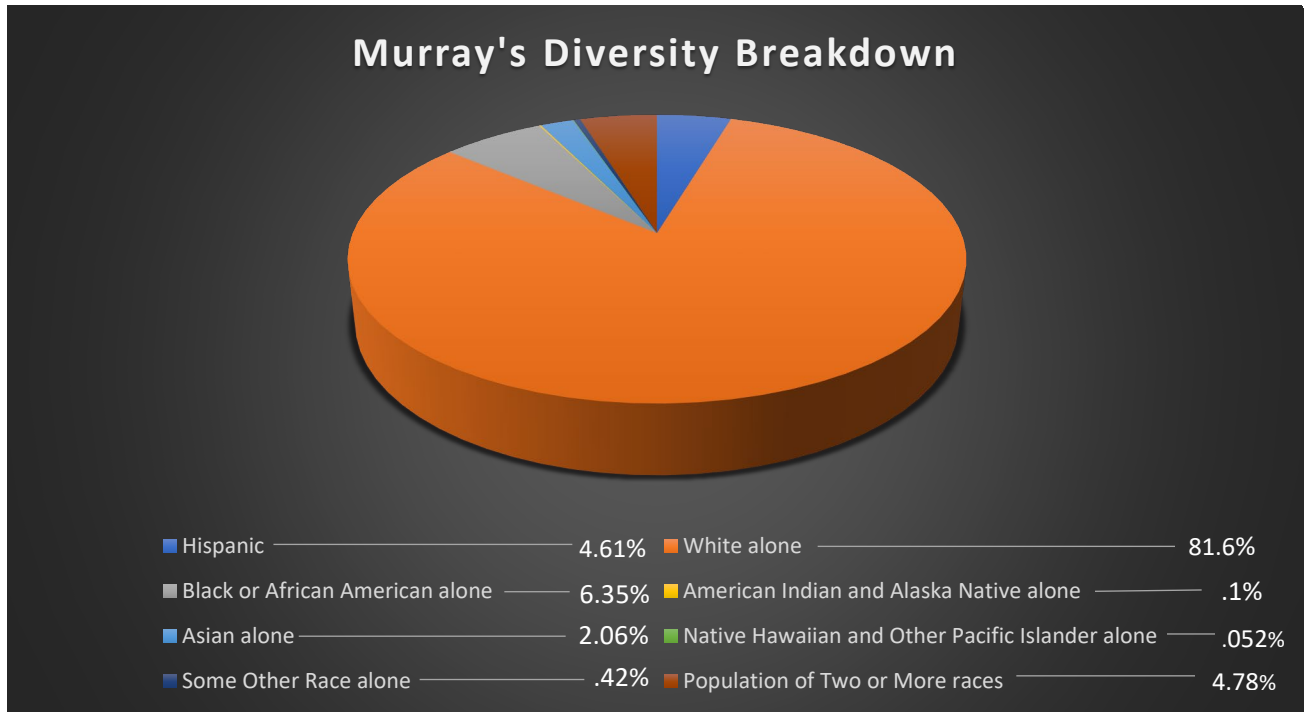
Source: U.S. Census Bureau 2020 P1 Decennial Census

Murray is 81.6% white, 6% Black, .1% American Indian, 2.1% Asian, 0.05% Pacific Islander, 0.4% some other race alone, and 4.8% two races or more. Calloway County is the 32nd most racially diverse county out of the 120 counties in Kentucky. This puts Calloway County in the 73rd

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percentile of diversity scores for Kentucky counties. Much of this diversity is driven by Murray State University. MSU has students from 48 states and 401 international students from 45 countries. These international students make up approximately 4.2% of the student body.

Figure 2: Diversity Percentages of Murray



AGE

According to the 2021 five-year ACS, the median age of Murray residents was 25.6 years old. This is likely due to 35.2% of residents being between the ages of 18 and 24 years, approximately 6,074 residents. Coupled with the 13.7% of residents, or 2,354, under the age of 18, nearly half of Murray residents were under the age of 25 in 2021. Only 35.4%, or 6,099, were between the ages of 25 and 60, and an even fewer 15.7%, 2,714, were over the age of 60. This median age is potentially influenced by the significant number of college-aged students attending MSU and simultaneously living within the city limits.

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Table 3: Age Category Breakdown of Murray

Selected Age Categories	Estimates	Percent of Population
<i>5 to 14 years</i>	1,321	7.7%
<i>15 to 17 years</i>	393	2.3%
<i>Under 18 years</i>	2,354	13.7%
<i>18 to 24 years</i>	6,074	35.2%
<i>15 to 44 years</i>	10,162	58.9%
<i>16 years and over</i>	15,166	88.0%
<i>18 years and over</i>	14,887	86.3%
<i>21 years and over</i>	11,405	66.2%
<i>60 years and over</i>	2,714	15.7%
<i>62 years and over</i>	2,506	14.5%
<i>65 years and over</i>	2,096	12.2%
<i>75 years and over</i>	1,052	6.1%

Source: U.S. Census Bureau 2021 ACS 5-year Estimates DP05 Demographic and Housing Estimates

GENDER

According to 2021 ACS estimates, the residents of Murray's gender makeup are almost split right down the middle, with 8,604 male residents, or 49.9%, and 8,637 female residents, or 50.1%, a difference of only 33 people, or 0.2%. This minute difference means statistically the City of Murray has an equal number of males to females.

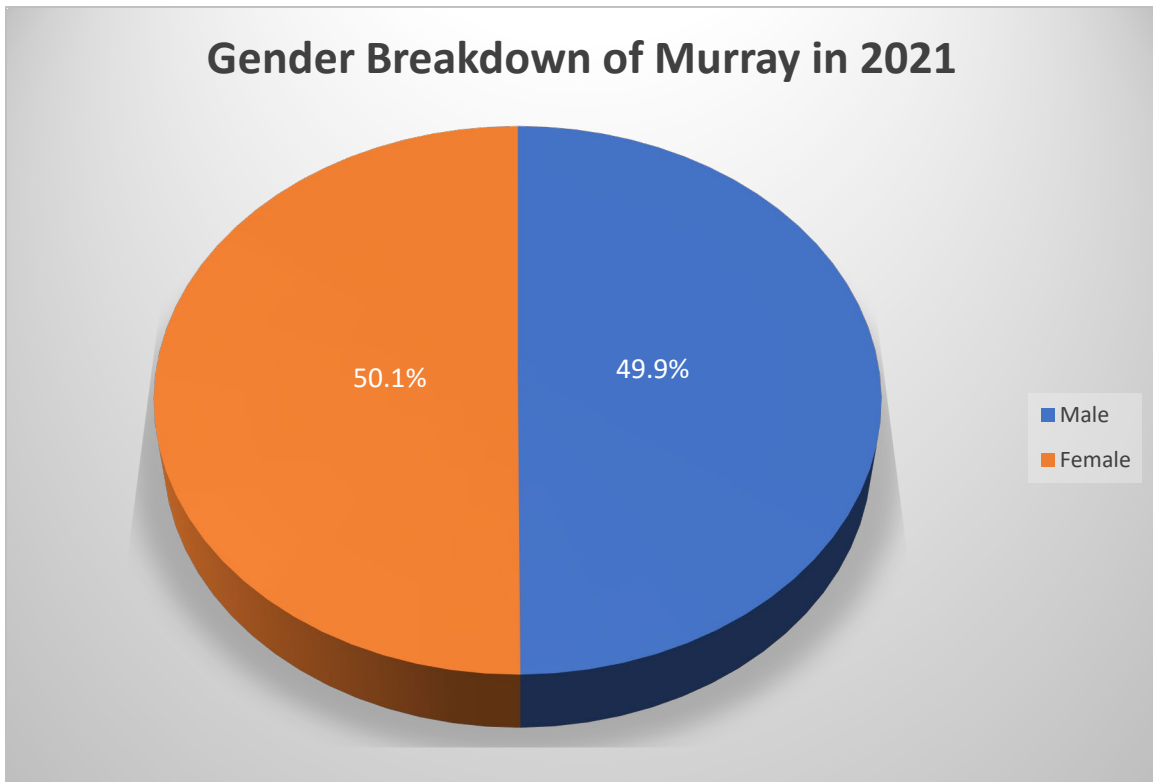
Table 4: Number of Males and Females in Murray

Gender	Number of People	Percent of People
<i>Male</i>	8,604	49.9%
<i>Female</i>	8,637	50.1%
Total	17,241	100%

Source: U.S. Census Bureau 2021 ACS 5-year Estimates DP05 Demographic and Housing Estimates

A significant portion of Murray's female population is driven by MSU's student body male-to-female ratio. MSU's student body is 62.95% female and 37.06% male. The significant gender ratio difference of MSU's student body likely plays a role in its slight advantage in local resident population.

Figure 3: Murray's Gender Breakdown in 2021



CONCLUSION

For many decades, the population of Murray grew at an average rate of approximately 25% per decade until the 2010 Decennial Census. The past decade has seen a drop in population of just under 3%. Subjectively, new economic activity on the north side of the city could portend a turnaround over the next decade. The Murray Planning Commission should follow these developments closely to determine if any changes to the basic elements of the Murray Comprehensive Land Use Plan may be required before the current five-year plan expires in 2026-2027.

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2024 EDUCATION ANALYSIS

INTRODUCTION

The City of Murray has many educational institutions within its boundaries that range throughout the educational spectrum, from early childhood learning through pre-kindergarten, all the way to the available master and doctoral degrees at Murray State University. With a growing community, it is critical to have educational resources available to current and prospective residents so they can fulfill their educational needs within one community. All data presented below will be from the American Community Survey, the National Center for Education Statistics, and Murray State University.

MURRAY INDEPENDENT SCHOOLS

In 2021, Murray Independent School District had a total enrollment of 1,670 students in K-12 and 105 preschool students. Students in grades 9-12 attend Murray High School, and students in grades four through eight attend Murray Middle School. Students in kindergarten through grade three attend Murray Elementary School. The Murray Independent School District has approximately 156 certified instructional personnel and 400 total employees. Figure 1 shows the boundary of the Murray Independent School District and the locations of the district's facilities, as well as the boundaries of the Murray Independent School District and the Calloway County School District that surround it.

Over the last 20 years, approximately 100 pieces of property have been taken from within the fixed district boundary by expansions of the Murray-Calloway County Hospital and Murray State University. The loss of students from these properties and the removal of these properties from the tax roll have significantly impacted the revenue of the Murray Independent School District. Due to its landlocked boundaries, enrollment within the Murray Independent School District has stabilized. The Murray High School facility was expanded to the east and south from 2017 to 2019. The front entrance was changed to Sycamore Street from Doran Road.

A district facilities plan for the Murray Independent School District was approved in January of 2024 that includes funding for renovation of all existing facilities as well as the construction of a

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new Murray Elementary School with a capacity for 750 students. This plan is slated to be in effect until 2028. The total funding needed for the district is a little more than \$52 million¹.

Table 1: Murray Independent Schools Enrollment

Murray High School	475
Murray Middle School	658
Murray Elementary School	537
Murray Pre School Head Start	105
Total Students	1,775

CALLOWAY COUNTY PUBLIC SCHOOLS

In 2021, the Calloway County School District had a total enrollment of 2,896 students in K-12, and 169 preschool students. Students in grades 9-12 attend Calloway County High School, and students in grades six through eight attend Calloway County Middle School. The Calloway County School District has a preschool and three elementary schools serving kindergarten through grade five. The three elementary schools are East Calloway Elementary, North Calloway Elementary, and Southwest Calloway Elementary. The Calloway County School District has approximately 230 certified instructional personnel and 575 total employees. Map CF-9 shows the locations of the Calloway County School District facilities. Enrollment at each of the Calloway County schools is as follows:

Table 2: Calloway County Public Schools Enrollment

Calloway County High School	862
Calloway County Middle School	677
East Calloway Elementary School	294
North Calloway Elementary School	549
Southwest Calloway Elementary School	441
Calloway County Alternative School	73
Calloway County Preschool	169
Total Students	3,065

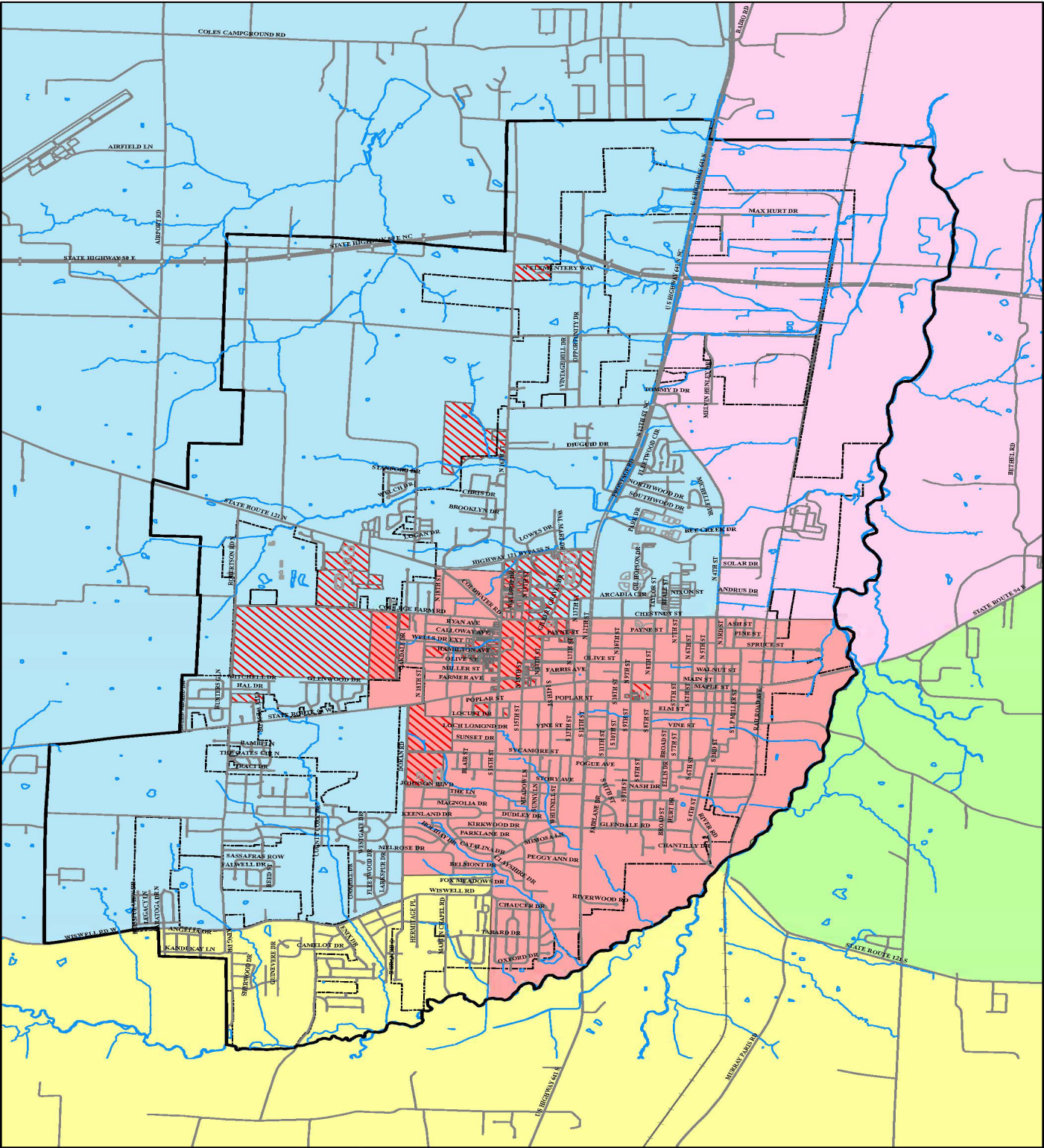
¹ <https://www.education.ky.gov/districts/fac/documents/murray%20ind%20dfp.pdf>


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Recent improvements within the Calloway County School District include renovations to the high school's gymnasium. There are no plans for future building renovations. Enrollment is stable and projected population growth in Calloway County does not indicate the need for additional school construction in the near future.

MURRAY/CALLOWAY COUNTY AREA TECHNOLOGY CENTER

The Murray-Calloway County Area Technology Center is located at 126 Robertson Road North on property owned by the Murray Independent School District and is operated by the Kentucky Education and Workforce Development Cabinet. The primary purpose of the area technology center is to serve high school students from Murray Independent Schools and Calloway County Schools by enhancing and expanding career options that lead to continuation of education at the postsecondary level and/or successful employment upon graduation from high school. Students receive instruction in sound academic principles, theory, laboratory, and clinical experiences to ensure they can compete successfully in today's changing workplace. The enrollment in 2021 was approximately 300 students. The programs available are automotive technology, carpentry, culinary arts, health sciences, machine tool technology, marketing education, and welding.



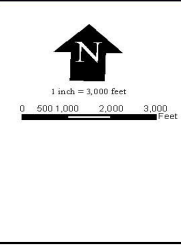


DEPARTMENT OF
PLANNING & ENGINEERING
**CITY OF
MURRAY**
CALLOWAY COUNTY
KENTUCKY
NOVEMBER, 2018

CF-9: Schools & District Boundaries

- Murray Independent School District
- Urban Services Area
- City Limits
- ▨ School Campuses
- ▨ Murray Independent

- Callaway School District 1
- Callaway School District 2
- Callaway School District 3
- Callaway School District 5



1 inch = 3,000 feet
0 500 1,000 2,000 3,000 Feet

MURRAY STATE UNIVERSITY

Founded in 1922 as Murray State Normal School, Murray State University has been in operation for 102 years. Established as the western normal school in conjunction with Morehead State as the eastern normal school, MSU has undergone several name changes throughout the years. Just eight years after MSU's founding, the name was changed to Murray State Teachers College in 1930 and then to Murray State College in 1948. Finally, in 1966, the name was changed to Murray State University. The main campus is 258.43 acres with 55 buildings, sports fields, and complexes.

MSU offers its students 11 associate programs, 64 bachelor's programs, 42 master's and specialist programs, and three doctoral programs. These degree programs are administered through MSU's four academic colleges, two schools, and 30 departments. In the 2021-2022 school year, there were almost 9,500 students enrolled at Murray State, with 7,939 undergraduates and 1,517 post-graduates. The student-to-teacher ratio at Murray State is 16 students to every teacher.

The college with the plurality of enrollees is the College of Business with 23% of undergraduate students. Below, Table 3 shows the breakdown of bachelor's degree concentrations at MSU in 2021 with business and healthcare being the top two concentrations. Education sits in third with approximately 1,656 students in the College of Education and Human Services (COEHS). The COEHS impact is seen regionally with 74.3% of teachers in the 18-county western Kentucky region being graduates of Murray State. In the 2021-2022 academic school year, there were 180 student teachers from MSU.

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Table 3: Top Fields for Bachelor's Degrees

Degree Field	Percent Enrolled
<i>Other Agriculture, Operations, & Related Sciences</i>	8.34%
<i>Registered Nursing</i>	8.07%
<i>General Studies</i>	6.46%
<i>General Business</i>	5.58%
<i>Elementary Education & Teaching</i>	4.37%
<i>General Biological Sciences</i>	3.77%
<i>Occupational Safety & Health Technology</i>	3.77%
<i>Social Work</i>	3.56%
<i>General Organizational Communication</i>	2.42%
<i>Other Research & Experimental Psychology</i>	2.29%
<i>Community Health & Preventative Medicine</i>	2.29%
<i>Accounting</i>	2.22%
<i>General Fine Studio Arts</i>	2.08%
<i>General Finance</i>	2.02%
<i>Civil Engineering Technology</i>	2.02%
<i>Audiology & Speech-Language Pathology</i>	2.02%

Source: https://datausa.io/profile/geo/murray-ky-31000US34660?enrolledOptions=admitted&trade-flow-domestic_trade=ExportDollar#majors

Master's degree concentrations vary somewhat from bachelor's degree concentrations at Murray State. The number one concentration for master's degrees in 2021 was in the education industry, with the healthcare industry ranking second. Business degrees went from number one in bachelor's degrees to fourth for master's degrees.

Table 4: Top Fields for Master's Degrees

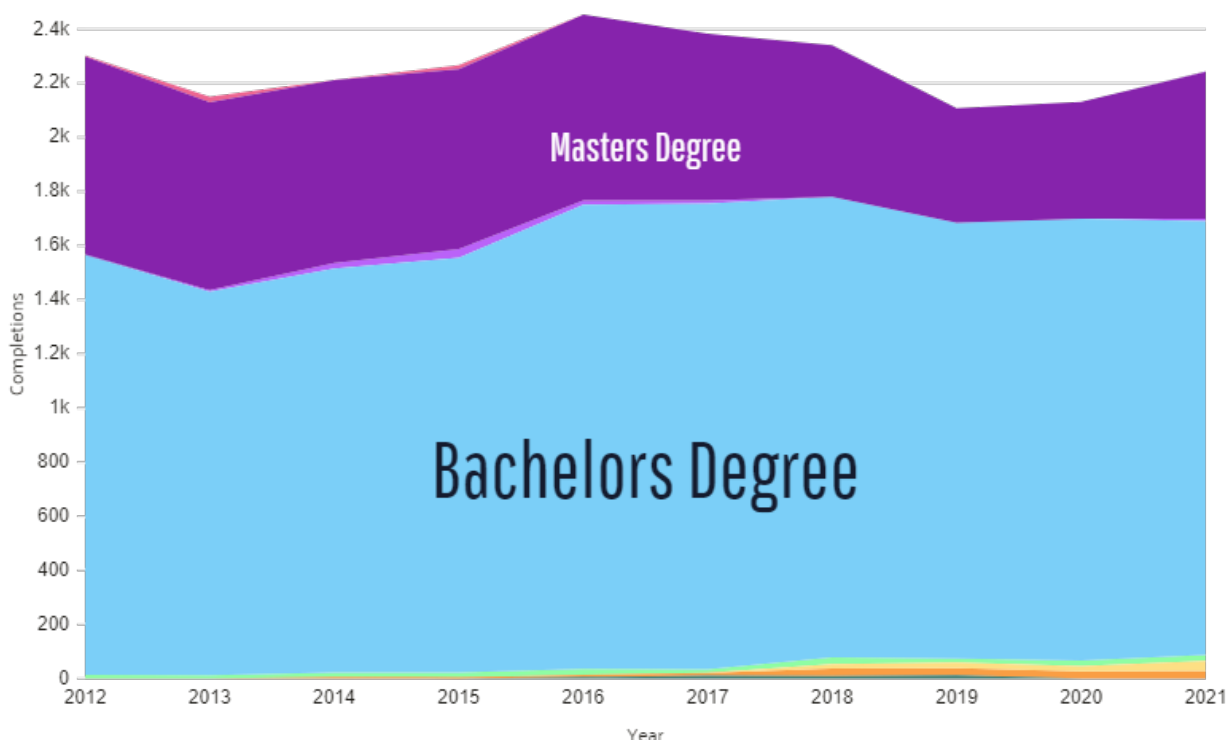
Degree Field	Percent Enrollment
<i>Other Agriculture, Operations, & Related Sciences</i>	14.70%
<i>General Business</i>	12.90%
<i>Audiology & Speech-Language Pathology</i>	8.82%
<i>Other Educational Administration & Supervision</i>	8.46%
<i>Dietetics</i>	5.88%
<i>Occupational Safety & Health Technology</i>	5.15%
<i>Community Organization & Advocacy</i>	4.96%
<i>Teacher Education</i>	4.04%
<i>Occupational Therapy</i>	3.13%
<i>General Organizational Communication</i>	3.13%

Source: https://datausa.io/profile/geo/murray-ky-31000US34660?enrolledOptions=admitted&trade-flow-domestic_trade=ExportDollar°ree-majors=degree7#majors

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As Figure 2 demonstrates below, the majority of degrees awarded from 2012 to 2021 were bachelor's degrees. Awarded bachelor's degrees slowly grew from 2013 to 2016, plateauing until 2018, then dipping in 2018 where they have remained stagnant. The second-most awarded degrees were master's degrees. These degrees fluctuated similarly to bachelor's degrees until 2017, where master's degrees decline significantly until 2019. However, awarded master's degrees did not remain stagnant, increasing in 2021.

Figure 2: Degrees Awarded Over Time



MURRAY STATE UNIVERSITY TUITION COSTS

For the academic year of 2023, the average undergraduate cost of attendance for Kentucky residents in direct expenses at Murray State is approximately \$23,659 in an academic year². These direct expenses included items such as tuition, housing, meal plans, campus maintenance fees, and course fees. Adding indirect expenses, the total cost for resident students increases to approximately \$28,009. These indirect fees were items like books, transportation costs, and

² <https://www.murraystate.edu/admissions/BursarsOffice/tuition/UndergraduateTuition.aspx>

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personal expenditures. The average total cost for Kentucky residents at a four-year public institution is \$22,317, which means Murray State University is around 25% more costly to attend³. Within the southern region of the U.S., however, Murray State was ranked ninth in best value by U.S. News and World Report⁴.

Residents of certain counties in Illinois, Indiana, and Tennessee can receive tuition rates similar to Kentucky residents. Residents of Tennessee not in Henry, Montgomery, Obion, Stewart, and Weakley counties receive a rate between the regional and in-state rates. Regional rates are available for residents of Alabama, Arkansas, Illinois, Missouri, and Mississippi. Regional rates for direct expenses come to approximately \$24,211 and the cost of direct expenses for non-regional students is \$28,693. Including indirect expenses, these totals rise to \$28,561 and \$33,043 respectively.

CONCLUSION

The City of Murray provides a wealth of knowledge for its citizens through the educational opportunities that play a major role in the city's operation. Murray Independent Schools and Calloway County Public Schools give locals ample opportunity to receive K-12 education alongside training for trade skills through a shared area technology center. In 2021, the Kentucky legislature passed a law to take effect at the beginning of the 2022 school year that requires school districts to create open enrollment policies to let students attend school districts outside of where they live without any financial obligations or penalties between the school districts for the gain/loss of a student. The impact on future enrollment in both districts remains to be seen.

Possibilities for higher education continue with the presence of Murray State University, a public four-year institution that offers a multitude of undergraduate and graduate programs at competitive costs for both in-state and out-of-state students. As the City of Murray continues

³ <https://educationdata.org/average-cost-of-college-by-state#kentucky>

⁴ <https://www.usnews.com/best-colleges/murray-state-university-1977>

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to grow, the school systems should be held in top priority as institutions to educate the next generation of prosperous residents.

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2024 ECONOMIC ANALYSIS

INTRODUCTION

The City of Murray is home to a diverse local economy that includes a wide variety of industries creating a broad base of jobs for the community, its residents, and visitors to enjoy. With a substantial college-aged population, there are a wide array of socio-economic opportunities in Murray particularly for younger residents. The following sections describe this dynamic using data from the U.S. Census Bureau, particularly five-year surveys and the Decennial Census. Anything not from these sources is specifically mentioned.

INCOME OF MURRAY RESIDENTS

Table 1: Median Household Income

Median Household Income	
<i>Overall</i>	\$35,966
<i>Owner-occupied</i>	\$65,391
<i>Renter-occupied</i>	\$25,727

Source: U.S. Census Bureau 2021 ACS 5-year Estimates DP03 Selected Economic Characteristics

According to the five-year reports of the 2021 American Community Survey, the median household income for the residents of Murray was \$35,966 a year. This median household income was significantly below Kentucky's median of \$55,454 and the national median of \$69,717. There is also a substantial disparity between the incomes of property owners and renters in the City of Murray. For owner-occupied houses, the median income for the household was \$65,391. Renter households only made \$25,727 a year. Owner households made \$39,664 more annually, or approximately \$3,305 a month more than renter households in the City of Murray.

The cause for this disparity is likely multifaceted; however, one substantial part of it is likely the high influx of college students and college-aged individuals within Murray from the university. As detailed in further sections, a sizable portion of these demographic groups fall below the

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poverty line. It is also important to note that the COVID-19 pandemic and its economic ramifications could have played a role in this disparity as well, regardless of whether the discrepancy is noteworthy.

MAJOR OCCUPATIONS AND WAGES

According to data from the 2021 ACS five-year study, the City of Murray has a diverse workforce employed across several different industries. These industries include a wide range of occupations which can be grouped into five key designations: Instruction, Service, Administrative, Production, and Construction. Three of these designations make up more than 80% of the jobs in Murray. The largest group was instruction, with occupations such as education, business, and management accounting for approximately 33% of jobs. The second-largest designation was service, which had occupations such as personal care, food service, and cleaning and maintenance, and employed nearly 25% of Murray's workforce. The third major occupation group was administrative, which mainly included the office and administrative support and sales occupations for a total employment just under 24% of the workforce. The last two groups of production and construction accounted for 7% and 6% of the workforce respectively.

Table 2: Major Occupations & Wages in Murray

<i>Designation</i>	Occupations	Percent of Workforce	Average Annual Wages
<i>Instruction</i>	Education, Instruction, & Library	8.50%	\$80,898
	Management	7.72%	\$67,344
<i>Service</i>	Personal Care & Service	9.87%	\$12,338
	Food Preparation & Serving	9.54%	\$23,444
<i>Administrative</i>	Office & Administrative Support	14.60%	\$29,323
	Sales	9.16%	\$76,052
<i>Production</i>	Production	5.90%	\$62,267
	Transportation	1.04%	\$10,347
<i>Construction</i>	Construction & Extraction	2.83%	\$24,417
	Installation, Maintenance, & Repair	2.53%	\$16,688

Source: <https://datausa.io/profile/geo/murray-ky#occupations>

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The wide array of occupations in the City of Murray also meant a diverse range of wages across the workforce. In terms of annual average wages, those within the health diagnosing and treating practitioner occupations earned \$137,571 in 2021. This was the only occupation field within Murray that earned an average wage above \$100,000, but these positions also only accounted for 2.13% of the total workforce. The next highest-earning occupation field was for education instruction and library occupations, which had an average annual wage of \$80,898. While these occupations only made up 8.50% of employees in Murray, the high figure for this field is likely due to the presence of MSU and the various professors and college heads employed by the university. In addition, these occupations impact Murray's economy more broadly due to the high concentration of such positions. The largest occupation field in Murray, office and administrative support with 14.60% of the workforce, had an average annual wage of \$29,323. The occupation field with the lowest wage was transportation, which only earned an average of \$10,347 in 2021.

INDUSTRIES

According to the 2021 American Community Survey's five-year estimates, more than one-third of Murray's employees were employed by either educational institutions, health care organizations, or social assistance services. These industries serve an important role for the employment and services they provide to Murray's community. There are significant portions of people in Murray employed in the arts, entertainment, food service, manufacturing, recreation, and retail trade industries. The majority of industries that have a significant number of people working in them are the administrative, construction, finance, transportation, utilities, and waste management industries.

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Table 3: Percentage of Murray Employees by Industry Category

Industry	% of Murray Employees
<i>Educational Services, Health Care, & Social Assistance</i>	37.5%
<i>Arts, Entertainment, Recreation, Accommodation, & Food Services</i>	14.8%
<i>Manufacturing</i>	6.1%
<i>Retail Trade</i>	14.1%
<i>Transportation, Utilities, & Warehousing</i>	2.3%
<i>Professional, Scientific, Management & Administrative, & Waste Management Services</i>	5.0%
<i>Construction</i>	3.9%
<i>Finance, Insurance, Real Estate, Rental & Leasing Services</i>	3.9%
<i>Other Services, except Public Administration</i>	4.8%
<i>Agricultural, Hunting, Fishing, & Mining</i>	1.4%
<i>Public Administration</i>	3.4%
<i>Wholesale Trade</i>	2.0%
<i>Information</i>	0.8%
Total Percentage	100%

Source: https://datausa.io/profile/geo/murray-ky/#employment_by_industries

The industries with the highest number of employees in Murray are the educational services, health care, and social assistance industries. This is likely due to the many educational institutions within Murray. According to the university's fall 2021 data, Murray State University had 1,196 employees, with 1,039 full-time, 157 part-time, and 104 graduate assistants. The next largest educational institution was Calloway County Public Schools, which encompasses a preschool, three elementary schools (East, North, and Southwest), a middle school, a high school, and an alternative school. Calloway County had approximately 230 certified instructional personnel in 2021 and a total of 575 employees. The Murray Independent School District, which includes Murray Elementary, Murray Middle, and Murray High School, employed approximately 156 certified instructors and 400 total employees in 2021.

The main health care employer in Murray is the Murray-Calloway County Hospital, which employs approximately 1,000 people. There are also various community assistance employers in Murray. These organizations include United Way, Murray-Calloway Needline, Center for Accessible Living, the Department of Community Based Services, and several others. The second-largest industry category is arts, entertainment, recreation, accommodation, and food

services, followed by manufacturing and retail trade as the third- and fourth -largest industries, respectively. Together, these four industries accounted for more than 65% of Murray's employed persons.

POVERTY AND INCOME DISPARITY ANALYSIS

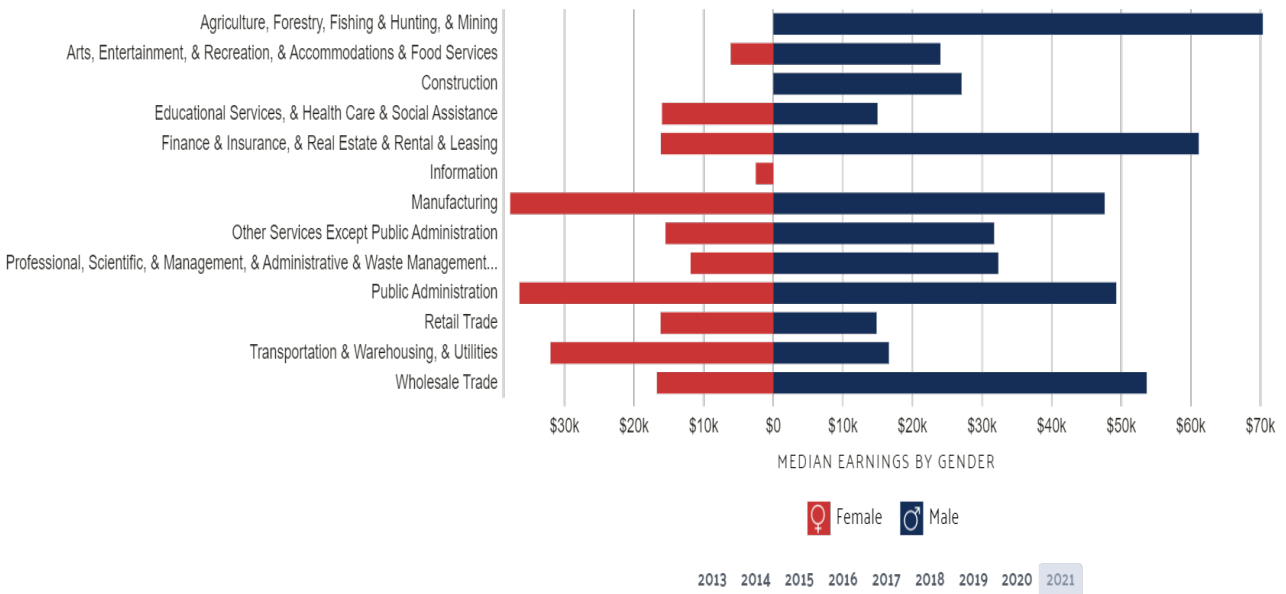
For the following section, the data used will be in reference to industries in the City of Murray and the median earnings for individuals employed by these industries.

Figure 1 below describes the income disparities between men and women in Murray's industries. For men, the highest-paying industries by a substantial margin were jobs in the agricultural, forestry, fishing, hunting, and mining industries. These jobs paid a median wage of \$70,000 per year, greatly surpassing the second-highest paying industry for men, which was manufacturing, paying about \$47,000 per year. The third-highest paying industry is public administration with median earnings of \$45,000 per year.

For women, the median yearly salaries were significantly below those of men. The highest-paying industry for women was manufacturing at a median wage of \$38,000 per year. The second-highest paying industry was public administration at \$36,500 per year. The third-highest were the transportation, warehousing, and utilities industries with a median salary of \$32,000. Overall, the median earnings for men across all industries in 2021 was \$26,757 a year, while women earned \$14,765. This meant that women, at the median, made \$11,922 less than men across all industries.

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Figure 1: Median Income of Industries by Gender

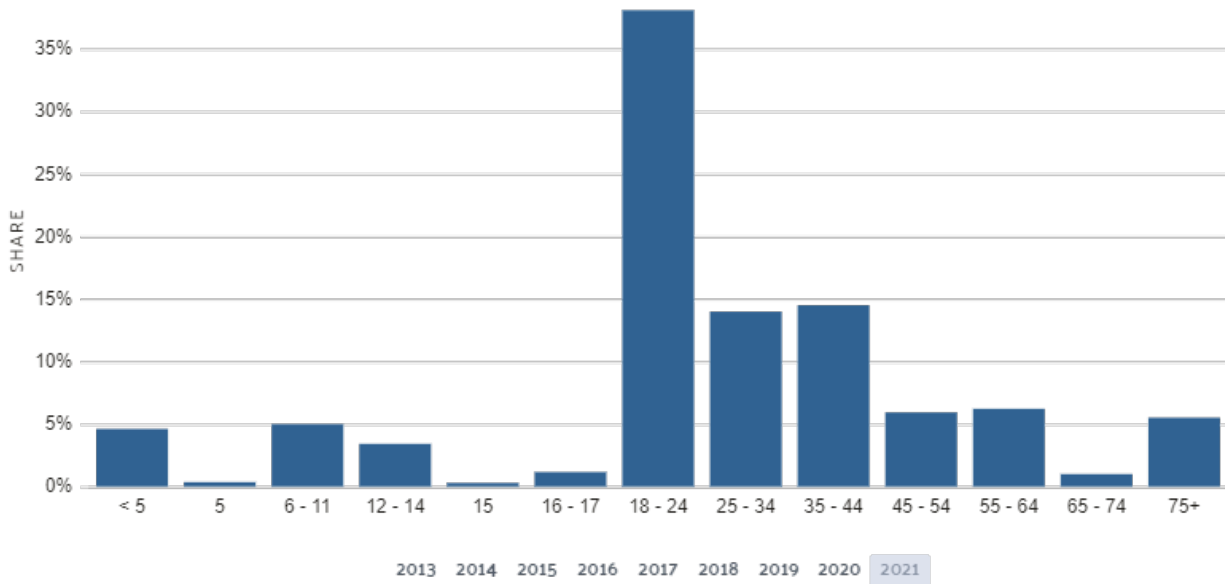


Source: https://datausa.io/profile/geo/murray-ky#median_earnings

According to the Office of the Assistant Secretary for Planning and Evaluation (ASPE), the 2021 federal poverty guideline listed the income level for an individual to be \$12,880. The ACS five-year estimate shows approximately 22.8% of Murray residents fell below this federal poverty line. This is substantially higher than the state, 16.5%, and national, 12.8%, 2021 numbers. The demographic racial groups that fall below the line are white, with black residents the second most affected, followed by those of two or more races. The age and gender groups with the highest levels of poverty were males and females 18-24 and males 25-34. These poverty statistics align with the student age population of the city.

Figure 2 details how much of each age category comprises a part of Murray's poverty rate. Those 18–24 years old comprise a substantial 38.1% of residents who fall below the poverty line. It is important to note that Figure 5 also reveals the 35-44 age category containing a larger share of the 2021 poverty rate population than the 25-34 category. It is worrisome that the early-to-mid career professionals are making up a more considerable portion of Murray's struggling residents. In 2013, the 35-44 age category only represented a 3.77% share of the impoverished population. In 2021, that number rose to 14.5%, an almost 11-point increase over eight years.

Figure 2: Poverty Rate Share by Age Group



Source: https://datausa.io/profile/geo/murray-ky#social_needs

CONCLUSION

The City of Murray has a diverse economy that is led mainly by its educational and health sectors. However, the broad job categories and industries within the community allow the city to have a diversified local economy. Older resident homeowners are making almost \$70,000 a year. Yet, there is a gap between these individuals and the median household income in Murray of \$35,966. Disparities are also present amongst different demographic groups, particularly between men and women, and young people. Due to its college-age population, there are substantial disparities economically. This is evident with the city's high poverty rate for this demographic group, yet a significant number of 35–44-year-olds are still at or below the poverty line, which has been growing since 2013.

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2024 HOUSING ANALYSIS

INTRODUCTION

The size and economic diversity of Murray means that there will be a significant number of housing units within its city limits. The characteristics of these housing structures and the individuals in them vary across housing type, number of occupants, type of occupants, and the income of the occupants. The main bulk of the data used for this analysis is from the 2017-2021 American Community Survey's five-year studies (ACS), the 2020 Decennial Census, or other data from the United States Census Bureau. Any data that is not from the U.S. Census Bureau will be specifically mentioned.

HOUSING OCCUPANCY

Of the approximately 7,770 housing units in the City of Murray, 82%, or 6,341 units, were occupied, while 18%, or 1,429, units were vacant. This is a lower occupancy rate than the average across the State of Kentucky, which has an occupancy rate of 87.9%, almost a 6 percent difference. According to data from the 2016 ACS, the occupancy rate in Murray saw a slight decrease falling from 83.6% to 82% in 2021, while the percentage of vacant housing units saw an increase from 16.4% in 2016 to 18% in 2021. While it is unclear what the cause of these changes was, it is likely that there has been widespread turnover in occupancy in the city during this time. This is evident by the slim 36% of homes in Murray becoming occupied between 1990 and 2014, while only 5% of residents have been in the community for more than 30 years.

HOUSEHOLD CHARACTERISTICS

The 2021 American Community Survey found that there are 6,341 occupied households within the City of Murray. Of those, 2,177 were married couple families and 876 were single spouse families meaning there was a total of 3,053 family households. The 48.1% of family households in Murray is a microcosm of larger national trends with household units containing non-family members or single occupants.

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There was a total of 3,288 non-family occupied households in Murray in 2021. Of this total, 2,568 contained single occupants, 494 contained cohabiting couples, and 226 contained non-family roommates. Due to Murray being a college town, it is reasonable to assume that a large portion of these non-family households are college students rooming together to save money on housing costs or students living by themselves or with their partner in low-cost housing. Either way, non-family households made up 51.9% of all occupied households.

Table 1: Number of Household Types

Household Category	# of Households
<i>Married-couple family</i>	2,177
<i>Single spouse family</i>	876
<u><i>Total Family Households</i></u>	3,053
<i>Cohabiting Couples</i>	494
<i>Non-family Roommates</i>	226
<i>Single Occupant</i>	2,568
<u><i>Total Non-family Households</i></u>	3,288
Total Households	6,341

Source: U.S. Census Bureau 2021 ACS 5-year Estimates DP02 Selected Social Characteristics in the United States

HOUSEHOLDS WITH CHILDREN

Of the 3,053 family households in Murray, 1,516 of them contained children under the age of 18. Furthermore, there was a significant disparity between the age groups of the children within these households. 62.7% of children within these households were only between the ages of six and 17 years old. Twenty-seven-and-a-half percent of children in these households were under six years of age, and a small portion of family households had two or more children under the age of six and between six and 17 years old.

The data in Table 2 reveals that there are not many households in Murray with young children, toddlers, and babies. This data is consistent with the broader trend of falling birth rates seen across the nation. The stratification of the ages is also in line with the average family size in Murray of 2.95.

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Table 2: Occupied Family Households with Children under the Age of 18

Age of Own Children	% of Households
<i>Under 6 years only</i>	27.5%
<i>Under 6 years and 6 to 17 years</i>	9.8%
<i>6 to 17 years only</i>	62.7%
Total	100%

Source: U.S. Census Bureau 2021 ACS 5-year Estimates B11003 Family Type by Presence and Age of Own Children Under 18 Years

HOUSEHOLD OCCUPANT CHARACTERISTICS

Forty-and-a-half percent of Murray's occupied housing units, a total of 2,568, contained residents who lived alone. It is important to note that college students from Murray State University probably increased this number. The substantial number of residents living alone is represented by the smaller average household size in Murray of only 2.15 residents. Also, 26.5% of Murray households, a total of 1,680, had children under the age of 18 living with them, meaning there was a smaller number of young families. The low number of children is close to the low number of older residents, with only 23.8% of residents being 65 or older, meaning nearly half of Murray residents were between 18 and 65.

Table 3: Household Occupant Characteristics (By Age)

<i>Households with one or more people under 18 years</i>	26.5%
<i>Households with one or more people between 18 and 65 years</i>	49.7%
<i>Households with one or more people 65 years and over</i>	23.8%
Total	100%

Source: U.S. Census Bureau 2021 ACS 5-year Estimates DP02 Selected Social Characteristics in the United States

Table 4: Household Occupant Characteristics (By Occupants)

<i>Households with multiple occupants</i>	59.5%
<i>Households with singular occupants</i>	40.5%
Total	100%

Source: U.S. Census Bureau 2021 ACS 5-year Estimates DP02 Selected Social Characteristics in the United States

HOUSING TYPES

Murray, being a college town, has more duplexes, triplexes, apartment complexes, and more multi-family homes than typically seen in non-university communities. Of the 7,770 total

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housing units in Murray, 3,546, or 45.6% of them were two-or-more unit structures. Single-family units slightly outnumbered this figure representing 49.4% of the total units or 3,838 homes. There are not many other types of housing structures, such as mobile homes, in Murray. Only 5.0% of homes make up this category.

Table 5: Unit Size of Housing Structure

Housing Unit Structure	% of Structures
<i>1-unit structures</i>	49.4%
<i>2-or-more-unit structures</i>	45.6%
<i>Mobile homes and all other units</i>	5.0%
Total	100%

Source: U.S. Census Bureau 2021 ACS 5-year Estimates DP04 Selected Housing Characteristics

Table 6: Size of Murray Households

Household Size	# of Households	% of Households
<i>1-person household</i>	2,568	40.5%
<i>2-person household</i>	1,867	29.4%
<i>3-person household</i>	885	14.0%
<i>4-or-more-person household</i>	1,021	16.1%
Total Households	6,341	100%

Source: U.S. Census Bureau 2021 ACS 5-year Estimates B11016 Household Type by Household Size

SIZE OF HOUSEHOLDS

Putting together tables 3, 4, and 5, the data reveals that the significant percentage of multi-unit structures almost corresponds to the number of one-person households and the number of residents living alone. Forty-and-a-half percent of one-person households make up the plurality of all household size categories. This data is representative of Murray State's impact on the housing landscape in Murray. However, 59.5% of households have two or more people within them, pushing the average household size to 2.15 people per household since two-person households make up 29.4% of residences.

AGE OF MURRAY HOMEOWNERS

More than 87% of Murray homeowners were over the age of 35. Only 12.7% of Murray homeowners were 34 or under, another example of the age disparity of homeowners.

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According to the National Association of Realtors (NAR), the average age of first-home buyers rose from 33 in 2021 to 36 in 2022. This was the smallest group and oldest of first-time homebuyers that NAR has ever found. In 2022, the median age of a homeowner was 52.6 years old, putting the median homeowner in the 35 to 64 age bracket. A breakdown of homeowner ages is illustrated in Table 6.

Table 7: Age of Homeowners

	<i># of Households</i>	<i>% of Households</i>
<i>Homeowner 15 to 34 years:</i>	332	12.7%
<i>Homeowner 35 to 64 years:</i>	1,204	46%
<i>Homeowner 65 years and over:</i>	1,079	41.3%
Total	2,615	100%

Source: U.S. Census Bureau 2021 ACS 5-year Estimates B25015 Tenure by Age of Householder by Occupants per Room

COST OF HOUSING

According to the 2021 American Community Survey, there were 2,615 owner-occupied units in the City of Murray. From this, 1,377 units had a mortgage, leaving 1,238 without one. For those with a mortgage, the median monthly cost was \$1,215 and for those without it was \$439. The average of these two comes out to \$827. A number of factors contributed to these costs, including mortgages, utilities fees, property taxes, insurance payments, and other types of home loans.

Table 8: Owner-Occupied Monthly Housing Costs Breakdown

Cost per Month	# of Households
<i>Less than \$300</i>	205
<i>\$300 to \$499</i>	675
<i>\$500 to \$799</i>	383
<i>\$800 to \$999</i>	322
<i>\$1,000 to \$1,499</i>	627
<i>\$1,500 to \$1,999</i>	264
<i>\$2,000 to \$2,499</i>	128
<i>\$2,500 to \$2,999</i>	11
<i>\$3,000 or more</i>	0
Total	2,615

Source: U.S. Census Bureau 2021 ACS 5-year Estimates B25094 Selected Monthly Owner Costs

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Table 8 below details the monthly cost for these homeowners as a percentage of their monthly income.

Table 9: Monthly Housing Costs as a Percentage of Household Income in the Past 12 Months

	# of Households
<i>Less than 14.9 percent</i>	1,301
<i>15.0 to 24.9 percent</i>	588
<i>25.0 to 34.9 percent</i>	275
<i>35.0 to 49.9 percent</i>	204
<i>50.0 percent or more</i>	239
<i>Not computed</i>	8
Total	2,615

Source: U.S. Census Bureau 2021 ACS 5-year Estimates B25091 Mortgage Status by Selected Monthly Owner Costs as a Percentage of Household Income in the past 12 months

In 2021 there were 3,574 housing units where rent was being paid in the City of Murray. The majority of these units, 60.2%, paid between \$500 and \$1,000 per month, but the median gross rent across all of these units was \$724. There were 152 units in Murray that did not pay rent.

Table 10: Renter-Occupied Monthly Housing Cost Breakdown

Rent Cost per Month	# of Households
<i>Less than \$500</i>	522
<i>\$500 to \$999</i>	2,152
<i>\$1,000 to \$1,499</i>	835
<i>\$1,500 to \$1,999</i>	65
<i>\$2,000 to \$2,499</i>	0
<i>\$2,500 to \$2,999</i>	0
<i>\$3,000 or more</i>	0
<i>No rent paid</i>	152
Total	3,726

Source: U.S. Census Bureau 2021 ACS 5-year Estimates DP04 Selected Housing Characteristics

The National Center for Children in Poverty (NCCP) defines rent burden as occurring when a household spends more than 30% of its monthly income on rent. For the City of Murray, nearly 45% of households paying rent fell within this definition in 2021. This is a substantial figure that deserves attention to ensure that future residents of the city will be able to afford housing.

Table 11: Gross Rent as a Percentage of Household Income

Percentage of Household Income	# of Households
<i>Less than 15.0 percent</i>	284
<i>15.0 to 19.9 percent</i>	566
<i>20.0 to 24.9 percent</i>	414
<i>25.0 to 29.9 percent</i>	366
<i>30.0 to 34.9 percent</i>	304
<i>35.0 percent or more</i>	1,301
<i>Not computed</i>	491
Total	3,726

Source: U.S. Census Bureau 2021 ACS 5-year Estimates DP04 Selected Housing Characteristics

From this data, it is clearly cheaper to rent than to own in the City of Murray. It costs almost \$100 more per month to own a home than it does to rent one in Murray. That is more than \$1,100 annually. Although it might seem that renters are saving money, it is important to note that they likely are not because household income is usually lower for those renting. The impact of housing cost is usually felt more for renters than it is for homeowners. This is particularly the case for Murray renters, as a large portion of them are already burdened by their housing costs.

INCOME OF HOMEOWNERS

The income of homeowners was substantially concentrated in one income category. The plurality of the 2,615 homeowners in the City of Murray, 44.4%, made \$75,000 or more a year. However, the income of homeowners did not scale perfectly with a decrease in the number of homeowners. There is a significant drop-off once one's income falls below \$75,000. Regardless, a slim majority, 50.6%, of homeowners fall into these various categories. 10.8% of homeowners earn \$20,000 a year or less. This group of homeowners is likely to be older, retired, and possibly drawing social security. This group could also potentially fall into the various other categories, but there could be a likely concentration of them in the lower income brackets. Seventeen-and-a-half percent, or 457 homeowners, have an income of \$20,000 to \$34,999 annually. Lastly, 12.4% made \$35,000 to \$49,999 and 14.9% made \$50,000 to \$74,999 annually. Table 12 provides a breakdown of homeowner incomes.

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Table 12: Income of Homeowners

	# of Homeowners	% of Homeowners
<i>Zero or Negative Income</i>	8	0.3%
<i>Less than \$20,000:</i>	274	10.5%
<i>\$20,000 to \$34,999:</i>	457	17.5%
<i>\$35,000 to \$49,999:</i>	325	12.4%
<i>\$50,000 to \$74,999:</i>	389	14.9%
<i>\$75,000 or more:</i>	1,162	44.4%
Total	2,615	100%

Source: U.S. Census Bureau 2021 ACS 5-year Estimates B25118 Tenure by Household Income in the past 12 months

INCOME OF RENTERS

For renters in Murray, there was a more diverse range of household incomes. The largest income group of renters were those earning between \$20,000 and \$34,999, with 26.7% of renters making up this group. The second largest income group earned less, with 26.3% of residents making \$20,000 a year or less. Incorporating those with zero or negative income, 62% of Murray renters made \$34,999 a year or less. This means the majority of Murray renters earn less than \$35,000 a year. Around 33.9% of renters earned \$35,000 or more in 2021, with even some higher-income individuals renting instead of owning a residence within Murray. However, as table details below, as household income increases, the number of renters per category decreases.

Table 13: Income of Renters

	# of Households	% of Households
<i>Zero or negative income</i>	339	9%
<i>No cash rent</i>	152	4.1%
<i>Less than \$20,000:</i>	979	26.3%
<i>\$20,000 to \$34,999:</i>	993	26.7%
<i>\$35,000 to \$49,999:</i>	485	13%
<i>\$50,000 to \$74,999:</i>	422	11.3%
<i>\$75,000 or more:</i>	356	9.6%
Total	3,726	100%

Source: U.S. Census Bureau 2021 ACS 5-year Estimates B25118 Tenure by Household Income in the past 12 months

THE VALUE OF HOMES

According to the 2021 ACS five-year surveys, the median value of an owner-occupied home in Murray was around \$161,800 regardless of their mortgage status. There is almost a 50-50 split between Murray homeowners with a mortgage and those without a mortgage. Of the homes with a mortgage, 74% had a value between \$100,000 and \$299,999. Only 18.3% of homes with a mortgage had a value below \$100,000, and 7.7% had a value of \$300,000 or above. For homes without a mortgage there was much more stratification of home value. Still, the majority of homes, 64.1%, fell between \$100,000 and \$299,999. More homes fell below \$100,000, with 30.1% of homes in this category. Only 5.7% were worth \$300,000 or more.

Table 13: Home Value of Properties with and without a Mortgage

	# with a Mortgage	# without a Mortgage	# of Total Homes	% of Total Homes
<i>Less than \$50,000</i>	72	158	230	8.8%
<i>\$50,000 to \$99,999</i>	180	215	395	15.1%
<i>\$100,000 to \$299,999</i>	1,019	794	1,813	69.3%
<i>\$300,000 to \$499,999</i>	99	40	139	5.3%
<i>\$500,000 to \$749,999</i>	0	22	22	0.9%
<i>\$750,000 to \$999,999</i>	0	9	9	0.3%
<i>\$1,000,000 or more</i>	7	0	7	0.3%
Total	1,377	1,238	2,615	100%

Source: U.S. Census Bureau 2021 ACS 5-year Estimates B25096 Mortgage Status by Value

CONCLUSION

The City of Murray contains a multitude of housing options that meet the needs of the diverse population. With a substantial college-age population, there are numerous multi-family housing developments that support students through their time at Murray State University. The city still maintains a majority in single-family units, but many of these units are owned by the older population of Murray. Even fewer of these units contain children under the age of 18, meaning that the future generation of homeowners in Murray will likely need to be attracted from the greater region.

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This is further supported by the city's low rate of occupied housing compared to the rest of the state, although the presence of on-campus housing at Murray State University could be a plausible explanation. Another point to take note of is the increasing cost of homeownership in the city. While not an unfamiliar problem in the rest of the state and the nation, the prospect of owning a home for younger generations is growing increasingly stark as the disparity in cost-to-rent versus cost-to-own grows larger. Creating more options for future generations as Murray continues its housing development can help alleviate this challenge and ensure that current residents will see the city as a place to call home for the long term.

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2024 TRANSPORTATION ANALYSIS

INTRODUCTION

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

AVERAGE DAILY TRAFFIC COUNTS

According to data from the Kentucky Transportation Cabinet, in 2022 the total number of annual average daily traffic counts in Murray was 192,572 motor vehicles over 76 roadways. This comes out to an average of approximately 2,534 vehicles a day per road. The median between these 76 roadways was even lower at 833 vehicles a day. North 12th Street in Murray saw the most traffic in 2022. The section of this roadway between KY121 and KY94 saw an average of 28,677 motor vehicles a day, which means more than 10 million vehicles traveled it in 2022.

CURRENT ROADWAYS

There are currently two principal arterial roadways in the City of Murray. The first is US641, which is a 165-mile principal arterial that runs north-south through the center of Murray, stretching from Clifton, Tennessee, to Marion, Kentucky. US641 had an average daily traffic (ADT) ranging from 7,500 to 23,700 vehicles per day (VPD), but within the section between KY121 and KY94 this number peaked at 28,677. The second principal arterial is KY80, which is 484 miles long, running east-west from Elkhorn City in Pike County, Kentucky, to Columbus, Kentucky, in Hickman County.

COMMUTING

Table 1: 5-year 2021 ACS

Means of Transport	
Car, truck, or van – Drove Alone	69.4%
Car, truck, or van – Carpooled	8.1%
Public Transportation	0.0%
Walked	18.6%
Other Means	0.8%
Worked from Home	3.1%
Total Percentage	100%
Workers per car, truck, or van	1.06

Seventy-seven-and-a-half percent of Murray residents commuted via car, truck, or van. Almost 70% of residents commuted alone, while 8.1% carpooled to work. With this large percentage of workers driving alone, there was only an average of 1.06 people per vehicle on the road. This is supported by the fact that in 2022 there were 31,004 vehicles registered in Calloway County, representing the majority of residents commuting in these ways.¹

One noticeable way that some residents of Murray commute is the 18.6% who walk to work, which is substantially higher than the national average of 2.5% and the state average of 2.1%. 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. There were 3.1% of residents working from home, a noteworthy amount representative of the COVID-19 pandemic. To conclude, within the percent of commuters that chose other means of travel, 0.3% chose to use a taxicab or other similar service, and only 0.5% of residents bicycled to work, probably due to the lack of biking infrastructure in Murray.²

¹ <https://datamart.kytc.ky.gov/>

² <https://www.walkscore.com/KY/Murray>

CRASHES AND TRAFFIC ACCIDENTS**Table 2: Crashes in Calloway County in 2021**

Types of Crashes	# of Crashes
Crashes Involving Pedestrians	5
Crashes Involving Motorcycles	7
Crashes Involving Deer	47
Total Crashes	891

According to the Kentucky Department of Transportation, there were 891 total crashes in Calloway County in 2021. Of these crashes, five involved pedestrians, seven involved motorcycles and 47 involved deer. According to Murray Police Department's 2022 annual report, there were 2,327 traffic stops, 690 collisions with no injuries, 257 reckless driver incidents, 184 motorist assists, and 52 collisions with injuries. Putting these numbers together, we can find that 742 crashes occurred in Murray, while 149 occurred outside the city limits, meaning 83% of crashes occurred in the city limits.

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 Kentucky Transportation Cabinet (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 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 2022-2028 Highway Plan projects a total of nearly \$52 million in state funding to improve the transportation infrastructure in Murray. The 2017-2021 Highway Plan authorized more than \$113 million to go toward highway funds in Murray, but only \$82 million of that was actually spent as seen in Table 3 below. As demonstrated in Table 4, almost \$40 million of this was spent on the relocation of US641 Stateline Road (KY893) in 2020.

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Table 3: 2017-2021 Highway Plan

Fiscal Year	Amount Authorized	Amount Spent
2017	\$7,739,852.00	\$15,871,608.20
2018	\$8,951,535.00	\$9,495,593.07
2019	\$8,911,656.00	\$12,404,234.78
2020	\$31,688,601.00	\$22,557,665.95
2021	\$55,774,556.68	\$21,893,392.16
Total	\$113,066,200.68	\$82,222,494.16

Table 4: Current Active Roadway Contracts in Murray

Award Date	Description	Contract Amount	% of Contract Amount Spent
11/2/2020	Relocate US641 Stateline Road (KY893)	\$39,222,529.04	94%
2/8/2022	Murray Highway (US641)	\$367,417.53	91%
12/16/2022	Murray to Faxon Road (KY80 westbound only)	\$917,573.65	90%
9/1/2023	North 4 th Street (KY2075)	\$384,435.00	0%

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. These routes include Community Route 1 (CR-1), Community Route 2 (CR-2), Gold Route, Alternative 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 9:58 p.m. All of these routes are free. The Gold Route runs from 7:00 a.m. to 5:06 p.m. and is free for students and staff of Murray State University. MCTA also provides on-demand scheduled rides that are provided on a first-come, first-served basis with current rates of \$1 dollar in the city or \$3 in the county. Any same-day rides come at increased rates of \$5 in the city or \$7 in the county.

MURRAY SMALL URBAN AREA STUDY

The KYTC initiated the Murray Small Urban Area (SUA) in 2023 to examine and identify transportation issues regarding safety and congestion in the City of Murray and the surrounding area. The SUA study 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 usually include lower-cost improvements that can be accomplished in the near future due to little or no requirements surrounding right-of-way construction.

Table 5: Short-Term Improvement Concepts

<i>ID</i>	Location	Description	Total Cost Estimate	Priority
<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 th 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

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.

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Table 6: Long-Term Improvement Concepts

<i>ID</i>	<i>Location</i>	<i>Description</i>	<i>Total Cost Estimate</i>	<i>Priority</i>
<i>G</i>	East Bypass	Construct a new route from the Murray Business Loop to KY94	\$19.9 Million	High
<i>H</i>	Main Street (KY94)	Construct a TWLTL and multi-use path on Main Street (KY94)	\$6.2 Million	High
<i>I</i>	KY94 at KY1660	Convert the KY94/KY1660 intersection to a roundabout	\$1.4 Million	Medium
<i>J</i>	KY121 at KY1660	Convert the KY121/KY1660 intersection to a roundabout	\$1.6 Million	Medium
<i>K</i>	West Bypass	Construct a new route between US641 and KY80 west of Murray	\$64.1 Million	Low

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.

Table 7: 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 Hobson 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

CONCLUSION

The City of Murray enjoys a well-connected map of roadways with US641, KY121, KY80, and KY94 serving as the major arteries 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. With the help of the Murray-Calloway Transit Authority, all residents of Murray and the surrounding region have access to affordable transportation options. Furthermore, the limited number of incidents with pedestrians involved in crashes means the existing infrastructure does well to protect them from harm. 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.

2023 LAND USE ELEMENT UPDATE

INTRODUCTION

The City of Murray Planning Commission engaged the Kentucky League of Cities (KLC) to update the Murray Comprehensive Land Use Plan – Land Use Element. The planning commission appointed the Comprehensive Plan Work Group to work with KLC through the process. Over a period of several months, the Work Group and KLC reviewed the current comprehensive land use plan and the existing land use element to evaluate, analyze, and project the future needs of the city.

The Comprehensive Plan Work Group and KLC recommend that the following changes be incorporated into the existing land use element and that the remainder be readopted as is. This update includes existing land uses and allocations, and future projections and maps to guide growth over the next five years. Of particular note, the Work Group and KLC recommend that new medium density residential areas be designated to reflect changing development trends and an updated Future Land Use map be adopted to reflect these trends.

Kentucky Revised Statutes (KRS) Chapter 100.187 specifies that a comprehensive land use plan shall include a land use plan element, which shall show proposals for the most appropriate, economic, desirable, and feasible patterns for the general location, character, extent, and interrelationship of the manner in which the community should use its public and private land at specified times as far into the future as is reasonable to foresee. Such land uses may cover, without being limited to, public and private, residential, commercial, industrial, agricultural, and recreational land uses.

KRS 100.187 (6) states that the comprehensive plan may include any additional elements such as, without being limited to, community renewal, housing, flood control, pollution, conservation, natural resources, regional impact, historic preservation, and other programs which in the judgment of the planning commission will further serve the purposes of the comprehensive plan.

This Land Use Element has been prepared as part of the City of Murray Comprehensive Plan. The Land Use Element is divided into two sections: Existing Land Use and Future Land Use. The ultimate purpose of the Land Use Element is to create a future land use plan that guides the Murray Planning Commission in its decisions related to the use of land in its area of jurisdiction. The Community Facilities and Transportation Elements of the Comprehensive Plan provide input related to the needs for lands and facilities to support the growth resulting from land use changes. A guiding principle was for the final land use plan to be in alignment with the goals and objectives established within the Comprehensive Plan.

The Murray Comprehensive Plan and this Land Use Element were developed for the Murray Urban Services Area. This area is sometimes referred to as the Murray Planning Area or the Murray Comprehensive Plan Area.

LAND USE GOALS AND OBJECTIVES

The general Future Land Use Goal for Murray is to achieve a balanced pattern of land use that meets the needs of the population, stimulates physical, social, and economic development, and protects the environmental well-being of the community. The desire is for the City of Murray to be seen as a place where people can:

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- Provide shelter and meet the basic needs for themselves and their families.
- Provide equal opportunity to all people.
- Enjoy the beauty, safety, and security of the community,
- Become responsible citizens.
- Promote a community which is aesthetically attractive for residents, visitors, and potential investors.
- Create happier, healthier, and smarter children by promoting community wide efforts that improve the well-being of the youth.

More specific land use goals and objectives adopted by Murray for the Comprehensive Plan are:

(1) Economy – in accordance with the zoning ordinance and boundaries, establish more neighborhood businesses along the periphery of residential zoning districts (within buffer zones) that are of a lower impact and limited to neighborhood convenience needs such as groceries, barber and beauty shops, and similar uses that contribute limited traffic into the area, while minimizing resident trips out of the neighborhood for purchases.

(2) Economy – consider incentives and other programs that would promote infill, redevelopment, and community improvement.

(3) Public Facilities and Services – identify land in the Future Land Use Element of the Comprehensive Plan for expansion of the City Park System and designate land as either public or semi-public.

(4) Housing – protect natural resources that enhance the quality and character of development.

(5) Housing – upgrade the city's landscaping requirements for buffer areas between residential and commercial uses.

(6) Housing – inventory older homes and neighborhoods that need revitalization. Seek TIF, CDBG grants, or other funding mechanisms for neighborhood revitalization.

(7) Housing – encourage renovation of older neighborhoods.

(8) Housing – support stricter enforcement of the Property Maintenance Code to help preserve neighborhood aesthetics.

(9) Housing – encourage a greater sense of community within the City's residential neighborhoods through the organization of neighborhood associations or similar groups, with emphasis on safety, beauty, and overall pride.

(10) Housing – allow for a wide range of residential types and densities throughout the city while continuing to support programs that provide more affordable housing opportunities for single and multi-family homes,

(11) Commercial, Industrial, and Agricultural Areas – improve the landscaping standards for site development.

(12) Commercial, Industrial, and Agricultural Areas – adopt minimum standards for building design that will sustain and enhance community character.

(13) Commercial, Industrial, and Agricultural Areas – avoid conditions and patterns that would create hazards in vehicular circulation.

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(14) Commercial, Industrial, and Agricultural Areas – as urban expansion continues, secure additional agricultural lands and increase production accordingly, to offset the growing demands of food, raw materials, and other necessities of life.

(15) Historic Preservation – sites and structures shall adhere to Historic Preservation Design Guidelines as administered by the architectural review board.

(16) Historic Preservation – support the Murray Main Street Master Plan by encouraging revitalization through rehabilitation of substandard buildings, removal of unattractive poles, wires, and signs that will make buildings, sidewalks, and other facilities in the downtown area more attractive, efficient, and convenient.

(17) Historic Preservation – continue to seek state and federal funding for historical preservation.

(18) Environment – encourage the use of green space for both residential and non-residential developments.

(19) Environment - continuously review stormwater management practices so that site developments are designed to minimize the volume of runoff by requiring the use of porous pavement, detention facilities, and other dissipating mechanisms.

EXISTING LAND USE

These land use goals and objectives are further discussed in the Future Land Use section. Appendix A contains the Statement of Goals and Objectives adopted for the Comprehensive Plan.

The existing land use section describes the history of land use classification in Murray. It also describes the methodology used to conduct a land use inventory in October 2008. In addition, this section describes and analyzes the land use in the Murray Planning Area as it existed in October 2008. A new inventory was conducted in September, 2022 for a comparison to the October, 2008 inventory.

Land Use Classification

The classification of land use is an important aspect of the Land Use Element of the Murray Comprehensive Plan. The land use classes were changed in the 2002 Land Use Element from those used in the 1990 Comprehensive Plan. The land use classes in the 1990 plan were the same as those used for land use inventories in 1961, 1972, 1976, and 1978. Table LU-1 shows the changes in the land use classes made in the 2002 plan and also used in the land use inventory conducted in 2008 and 2022.

As shown in Table LU-1, residential class was divided into 5 separate classes, single family, two-family, multi-family, congregate living, and manufactured housing. The commercial category stayed the same. The industrial class was divided into two classes, warehousing and manufacturing. The public, semi-public class was divided into four classes, public use, semi-public use, education, and utilities. The agriculture and streets classes stayed the same, except streets was renamed to transportation.

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Table LU-1 Murray Land Use Classification Changes	
2002 to present	1990 and prior
Single Family Residential Two-Family Residential Multi-Family Residential Group Quarters Manufactured Housing	Residential
Commercial (Office/Retail/Business/Medical/Lodging)	Commercial
Warehousing Industrial	Industrial
Public Use Semi Public Use (Institutional) Education Utilities	Public, Semi-Public
Agriculture	Agriculture
Transportation	Streets
Source: City of Murray Planning Department	

The Murray 2008 Land Use Element was based on an inventory of existing land uses within the city limits based on the 2002 land use classes shown in Table LU-1. The same land use categories were used for developing the existing land use for this Land Use Element. Using the same land use classes and a similar inventory procedure allowed a direct comparison of the changes that have occurred over the fourteen-year period within the Murray city limits.

Inventory Methodology

The first step in developing the land use plan was to conduct an inventory of the existing land uses in the planning area. The inventory was used to compare the amount of land in each land use category with the last inventory conducted in 2008. Comparison of the two inventories gave an indication of the major trends of land use change in the fourteen-year period. From these trends, areas were designated as appropriate for various land uses in the Future Land Use section.

The land use map that resulted from the 2008 inventory, provided by the Murray planning staff, was used as the base map for the 2022 inventory. Windshield surveys were conducted by driving the Murray streets and noting changes that had occurred within the city limits since 2008. In an area bounded on the north and south by Olive and Maple Streets and on the east and west by First and Eighth Streets, sidewalk surveys were conducted. Sidewalk surveys were also conducted along Main Street from Twelfth Street to Fourth Street. In addition, to documenting obvious changes in the land use since the last inventory, the sidewalk surveys were designed to detect the conversion of single-family residences to two family and multi-family residences that might not be detected from windshield surveys.

Areas outside the Murray city limits but within the Comprehensive Plan area were windshield surveyed by driving the county roads and were included in the 2022 inventory.

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Summary of Existing Land Use

The summary of existing land uses within the Murray city limits and the Urban Services Area, as determined from the land use inventory, are shown in Table LU-2. Map LU-1 shows a summary of the land uses in the Murray Comprehensive Plan area.

For the developed land use within the Murray city limits, residential uses comprised 2,354 acres or approximately 44 percent of the total. Commercial uses comprised 637 acres or 12 percent of the total developed land, while industrial and warehousing comprised 322 acres or 6 percent of the total developed land. Public and semi-public uses including roads, education, and utilities comprised 2,032 acres or 38 percent of the total developed land. Agricultural land comprised 1,325 acres or 18 percent of the total land within the Murray city limits. For the developed land use within the Urban Services Area, residential uses comprised 3,172 acres or 44 percent of the total developed land. Commercial uses comprised 823 acres or 11 percent of the total developed land, while industrial and warehousing comprised 618 acres or 9 percent of the total developed land. Public and semi-public uses including roads, education, and utilities comprised 2,619 acres or 37 percent of the total developed land. Agricultural lands comprised 6,382 acres or 44 percent of the total land within the planning area.

Table LU-2 Existing Land Use Summary – 2022 Inventory					
City Limits	Acres	% of Total Land	Urban Services Area	Acres	% of Total Land
Single Family Residential	1819	24	Single Family Residential	2564	18
Two Family Residential	138	2	Two Family Residential	171	1
Multi-Family Residential	262	4	Multi-Family Residential	272	2
Manufactured Housing	93	<1	Manufactured Housing	116	<1
Congregate Living Facilities	42	<1	Congregate Living Facilities	49	<1
Commercial	637	9	Commercial	823	6
Warehousing	61	<1	Warehousing	145	1
Industrial	261	3	Industrial	473	3
Public	433	6	Public	452	3
Semi-Public (Institutional)	265	4	Semi-Public (Institutional)	314	2
Education	648	9	Education	800	6
Utilities	50	<1	Utilities	61	<1
Roads, Rights-of-Way	636	9	Roads, Rights-of-Way	922	7
Total Developed Land	5345	72	Total Developed Land	7162	49
Agriculture	1325	18	Agriculture	6383	44
Vacant	801	11	Vacant	887	7
Total Land	7471	100	Total Land	14431	100
Source: City of Murray Planning & Engineering, 2022					

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Table LU-3 shows the existing land uses within the Murray city limits in 2008 and 2022.

Between 2008 and 2022, the total area within the Murray city limits increased by 281 acres or less than 1 percent. Residential lands increased by 175 acres or 8 percent while commercial and industrial/warehousing land increased by 97 acres in total or 11 percent.

Table LU-3 Comparison of Existing Land Uses within the Murray City Limits 2008 - 2022							
	2008			2022			
Land Use	Acres	% of Total Land	% of Developed Land	Acres	% of Total Land	% of Developed Land	CHANGE Acres, 2008 - 2022
Single Family Residential	1744	24	34	1819	24	34	75
Two-Family Residential	134	2	3	138	2	2	4
Multi-Family Residential	202	3	4	262	4	5	60
Manufactured	63	1	1	93	1	2	30
Congregate Living	36	1	1	42	1	1	6
Commercial	556	8	11	637	8	12	81
Warehousing	66	1	1	61	1	1	-5
Industrial	240	3	5	261	3	5	21
Public	428	6	8	433	6	8	5
Semi-Public	238	3	5	265	4	5	27
Educational	633	9	13	648	9	12	15
Utilities	48	1	1	50	1	1	2
Roads, Right of Way	666	9	13	636	8	12	-30
Developed Land	5054	70	100	5345	72	100	291
Agriculture	1421	20		1325	18		-96
Vacant	715	10		801	10		86
Total	7190	100		7471	100		281

Public and semi-public lands, including streets, increased by 2 acres or less than 1 percent. Developed land increased by 291 acres or 6 percent.

The following sections discuss each of the existing land use categories. Each section includes a description of the uses included in the category and the amount of land existing in that category within the Murray Planning Area and the Murray city limits. Each section also includes a generalized projection of future land use based on this existing information.

Existing Residential Land Use

Five residential land use categories were recorded during the land use inventory. These five categories are Single Family Residential (detached unit), Two Family Residential (duplex), Multi-Family Residential (three or more units in structure), Manufactured Housing (unit manufactured off-site on chassis, or mobile home), and Congregate Living Facilities (Group Quarters). Map LU-2 shows the lands in the planning area currently used for residential purposes.



There are 3,172 acres or 22 percent of the land within the planning area used for residential purposes. The 2,354 acres of residential lands within the Murray city limits represents 32 percent of the total land. Residential land within the Murray city limits increased by 175 acres or 8 percent from 2008-2022. Residential lands comprise the largest percentage of land within the planning area. Residential uses are likely to continue to be the largest user of land in Murray as the city supports the housing needs for the faculty and staff at Murray State University and the local industries.

The southwestern portion of the planning area should continue to experience the development of single-family residential housing. A majority of the vacant residential land lies in this area. The majority of the development will most likely be building on the large number of existing lots in this area. However, as these lots are used, new subdivisions may be developed. Based on past trends approximately 50-60 new single family residential units would be anticipated in the planning area each year.

Multi-family housing units have been developed in the northeast and northwest portions of the planning area. These units are located in close proximity to Murray State University and primarily serve the student population there. A considerable number of new multi-family units have been added in recent years and it is anticipated that because the growth of Murray State University has stabilized, fewer new units will be built in the near future.

The presence of the Clarks River and industrial areas on the east side of the planning area will most likely continue to limit an expansion of the urban services area and the planning area. The proximity to Murray State University and the other primary and secondary educational facilities should continue to direct residential development in the foreseeable future to the western portion of the planning area.

Existing Commercial Land Use

The commercial land use designates all land used for professional offices; wholesale and retail trade; personal and business services; repair services; contract construction services; recreation and amusement services, other than public parks; parking; commercial transportation services; and motels and transient lodgings. Commercial areas are used for retail and service purposes, and for both professional business and medical office space. Commercial businesses may be on a single lot or in various types of shopping centers. Map LU-3 shows the lands in the planning area currently used for commercial activities.



Commercial activity in the planning area is primarily directed along the major thoroughfares and in downtown Murray. Some limited neighborhood commercial areas exist off the major roadways.

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Commercial lands in the planning area constitute 823 acres or 6 percent of the planning area. Commercial land within the Murray city limits increased 81 acres or 15 percent from 2008-2022. A small amount of commercial land lies outside the Murray city limits.



Commercial development in the planning area has typically been strip centers along both sides of the major arterial roadways. These strip centers, with individual entrances and parking lots for each business or center, promote congestion and tend to degrade the character of the neighborhoods where they are located. The development of small business centers scattered in the various neighborhoods should be encouraged.

The Central Business District (CBD) is a 9-block area in Murray centered on the Calloway County Courthouse. Recent improvements have been made to enhance the visual appeal and the viability of the CBD as a commercial center. These efforts to promote commercial activities in the CBD should be continued.

Existing Industrial and Warehousing/Distribution Land Uses

The Industrial and Warehousing land use categories denote development such as manufacturing, warehousing, distribution, service, and research-oriented enterprises. Map LU-4 shows the lands in the planning area currently used for industrial and warehousing/distribution activities.

The Murray Planning Area consists of 618 acres of land used for industrial and warehousing activities. This acreage is 4 percent of the total acreage in the planning area. The amount of industrial/warehouse



land in the Murray city

limits increased by 16 acres or 5 percent from 2008-2022. Industrial land is generally concentrated on the north and east portions of the planning area. A new industrial park along US HWY 641 North at Robert Young Blvd has been developed with several new buildings, two are occupied. The remaining land has been readied for future development.

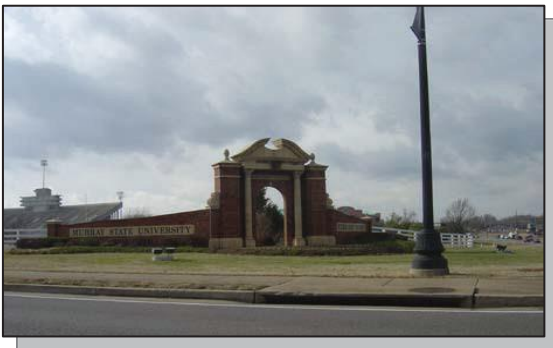


Existing Public, Semi-Public, Education, and Utilities Land Use

Public land use includes lands used for governmental services such as police and fire stations, community centers, libraries, parks, cemeteries, public parking facilities, and government administration offices and related facilities. Semi-public land use supports institutional and organizational facilities, including hospitals, religious institutions and nonprofit organizations. Education land use includes Murray State University, and the city and county school system facilities. Utilities land use includes facilities used for providing water, wastewater, stormwater, electric, natural gas, and telecommunication services.



Map LU-5 shows the lands in the planning area currently used for public, semi-public, education, and utilities purposes without consideration of land ownership or zoning. For this inventory, the Murray State University farms located within the planning area were classified as educational.



Existing Public, Semi-Public, Educational and Utility land uses are grouped for this discussion because they all relate in some form to the use of property by the general public. These land uses comprise 1,627 acres or 11 percent of the total land in the planning area. Lands used for these four purposes within the Murray city limits increased by 49 acres (3%) between the 2008 and 2022 inventories. These land uses are discussed in more detail in the Community Facilities Element of this Comprehensive Plan.

Education is the largest segment of these four land uses, constituting 800 acres or 6 percent of the planning area. Educational land uses increased by 15 acres from the 2008 to the 2022 inventories. Public and Semi-Public land are about the same as the educational lands. Lands used for Utilities constitute a relatively small fraction of these combined land uses.

The City of Murray and Calloway County government offices are generally located in the downtown area, including the Police Department. The Judicial Center is located on the downtown fringe. The Fire Department, previously located in downtown Murray, has moved to a new Fire Department located at the site of the Fire Station on 16th Street.



Existing Transportation Land Use

Transportation land use includes roadways and road rights-of-way; railroads; public walkways; and bikeways. The lands in the planning area currently used for transportation and related activities are shown on each of the land use maps. Transportation makes up 992 acres or 7 percent of the Murray Planning Area. The area of land consumed by roads and road rights-of-way in the Murray city limits decreased by 30 acres or -5 percent for 2008-2022. The Transportation Element of this Comprehensive Plan discusses the transportation land use in more detail.

Existing Agriculture Land Use

Agricultural land use includes land in an agricultural zoning district and land in zoning districts other than agricultural that is presently in crops or pastures and supporting farming activities.



Map LU-6 shows the agricultural lands in the planning area.

Agriculture lands constitute 6,382 acres or 44 percent of the Murray Planning Area. In the Murray city limits, the amount of agricultural land decreased from 2008-2022. A large portion of the other agricultural land may have been rezoned for other uses, but it was not developed and remained in agricultural production.

Existing Vacant Land

Vacant Land is a subcategory of each of the other land uses. The procedure for determining the existing land use category assigned to a vacant parcel of land was generally as follows:

Vacant Single Family Residential – land parcels without residential structures in areas zoned for single family residential use and the portion of larger agricultural parcels along major thoroughfares that have full urban services, single family zoning, and no residential structures.

Vacant Two Family Residential – land parcels without residential structures in single family zoned areas where the predominant buildings are two family structures, or the development plan showed predominantly two-family structures.

Vacant Multi-Family Residential – land parcels without residential structures in areas zoned for a multi-family land use.

Vacant Commercial – land parcels without a building that could be used for providing a commercial service in areas with commercial zoning and the portion of a larger agricultural parcel that contains a commercial use, like a radio station tower.

Vacant Industrial/Warehousing – land parcels in industrial zones that are not being actively used for agricultural production.

Table LU-4 shows a summary of the existing vacant land in the City of Murray and in the Urban Services Area. Map LU-7 shows the vacant land in the planning area by its parent land use. Vacant land within the Murray city limits comprised 801 acres or 13 percent of the developable (vacant plus developed) area and 11 percent of the total area. Vacant land within the planning area comprised 887 acres or 11 percent of the developable (vacant plus developed) area and 7 percent of the total area. Vacant land within the city limits increased by 86 acres or 12 percent from 2008-2022.

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Table LU-4 Existing Land Use Summary – 2022 Vacant Land

City Limits	Acres	% of Vacant Land	Urban Services Area	Acres	% of Vacant Land
Single Family Residential	360	45	Single Family Residential	444	50
Two Family Residential	5	1	Two Family Residential	6	1
Multi-Family Residential	19	2	Multi-Family Residential	19	2
Commercial	200	25	Commercial	200	23
Industrial/Warehousing	217	27	Industrial/Warehousing	218	24
Vacant Land Area	801	100	Vacant Land Area	887	100

For the vacant lands within the Murray city limits, residential uses comprised 384 acres or 48 percent of the total. Commercial uses comprised 200 acres or 25 percent of the total, while industrial and warehousing comprised 217 acres or 27 percent of the total. For the vacant land within the Urban Services Area, residential uses comprised 469 acres or 53 percent of the total. Commercial uses comprised 200 acres or 23 percent of the total, while industrial and warehousing comprised 218 acres or 24 percent of the total.

Table LU-5 shows the changes in vacant land between 2008 and 2022 within the Murray city limits. The most significant change was the net addition of 160 acres of industrial/warehousing land. Another significant change was the reduction of vacant residential land by 104 acres. The total amount of vacant land increased by 86 acres. The amount of vacant industrial land reported in the inventory is not a direct reflection of the amount of industrial land available in the Murray Planning Area. Because the 2008 inventory classified land as it was being used, there were several parcels with industrial zoning that were being farmed and were classified as agriculture rather than industrial. When considering future land use, these vacant parcels will be classified as industrial land.

Table LU-5 Comparison of Existing Vacant Land Uses Within the Murray City Limits – 2008-2022

	2008			2022			
Vacant Land Use	Acres	% of Total Land	% of Vacant Land	Acres	% of Total Land	% of Vacant Land	CHANGE Acres, 2008-2022
SF Residential	436	6	61	360	5	45	-76
2F Residential	4	<1	1	5	<1	1	1
MF Residential	48	1	7	19	<1	2	-29
Commercial	170	2	24	200	3	25	30
Industrial/Warehousing	57	1	8	217	3	27	160
Total Vacant Land	715	10	100	801	11	100	86

Annexation

The annexations of property into the City of Murray are listed in Table LU-6. The table shows the date and ordinance number of the annexation, a description of the property, and the number of acres included in the annexation. The same ordinance number for two separate entries indicates that there were two pieces of property referenced separately in the ordinance. Generally, the two tracts were a tract of developable land and a tract of road right-of-way. Since the 2008 Land Use

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Element was prepared, a total of sixteen annexations were conducted annexing approximately 274 acres into the City of Murray.

Table LU-6 Murray Annexations 2008-2023

2011-1541	7-28-11	Tract of land on US HWY 641 North, Murray Industrial Park	132.3
2012-1582	4-12-12	Tract of land at 190 Utterback Road	.5
2013-1599	2-8-13	Tract of land at 1620 Martin Chapel Road and right-of-way along Martin Chapel Road	2.6
2013-1601	2-8-13	Tract of land on north side of College Farm Road	2.6
2013-1609	7-25-13	Tract of land east of the intersection of HWY 94 West and Robertson Road North	6.8
2014-1634	5-22-14	Tract of land on the east side of Robertson Road South	14.9
2014-1639	6-26-14	Tract of land owned by City West and City of Murray on the east side or Robertson Road North	9.3
2014-1640	7-10-14	Tract of land on the east side of Bambi Lane	5.2
2014-1651	1-22-15	Tract of land located at Westside Baptist Church	14.2
2014-1654	2-12-15	Tract of land east of Falwell Estates	27.7
2015-1663	5-14-15	Tract of land at the intersection of US HWY 641 North and North 4 th Street and Robert O. Miller	21.1
2015-1664	5-14-15	Tract of land located at 126 Robertson Road North	7.2
2015-1673	10-8-15	Tract of land located at 170 Utterback Road	.7
2017-1727	5-11-17	Tract of land located at 255 King Richard Drive	.5
2019-1771	3-14-19	Tract of land located on the east side of Brinn Road	20.0
2022-1818	02-25-22	Paschall Truck Lines Lot 3 at 3200 US Highway 641	8.2
Total Annexed Land			273.8

Of the sixteen annexations, one was greater than 100 acres. The largest annexation was a 132-acre tract in the Industrial Park on US HWY 641 N. Of the annexations, ten were less than 10 acres and 5 were between 10 and 30 acres.

Construction Activity

Table LU-7 gives a summary of the residential construction activity in the City of Murray for the period 2014-2022 as indicated by issued building permits. The year 2014 saw the greatest amount of single-family residential building activity during the study period. The building activity in the two-family segment was considerably higher in 2016 and 2018 during the study period. Multi-Family construction, indicating three or more families per building, was considerably greater in 2016 and 2017 than in previous years.

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Table LU-7 Murray Construction Activity from Building Permits – 2014-2022

Year	Single Family		Two-Family		Multi-Family	
	Units	Project Cost	Units	Project Cost	Units	Project Cost
2014	40	5,053,605	4	292,000	173	13,785,992
2015	15	2,721,101	8	599,000	74	3,729,500
2016	27	4,618,710	23	2,013,00	68	4,056,000
2017	18	3,662,755	6	415,000	68	4,089,095
2018	14	2,421,250	12	1,352,000	29	1,818,750
2019	14	3,289,792	2	184,000	24	1,021,965
2020	19	3,453,400	6	615,000	26	1,317,000
2021	23	5,279,914	0	0	24	3,986,000
2022	16	4,458,200	2	585,000	17	2,961,000

Table LU-8 compares residential and non-residential construction activity for building permits during the years 2014-2020. The total project costs for non-residential construction for the seven years were significantly greater than for residential construction. When looking at all residential construction, Murray has had a significant decline after 2017.

Table LU-8 Murray Residential and Non-Residential Construction – 2014-2020

Year	All Residential		Non-Residential	
	Units	Project Cost	Units	Project Cost
2014	217	19,131,596	17	9,089,095
2015	97	7,052,601	74	23,547,257
2016	118	10,687,710	13	11,175,257
2017	92	8,166,850	12	3,692,407
2018	55	4,955,000	12	34,524,148
2019	40	4,495,757	6	1,289,777
2020	51	5,385,400	10	9,262,942
TOTAL	670	59,874,914	144	92,580,883

FUTURE LAND USE

The Future Land Use section describes the expected land use the planning area into the future. The future land uses were developed based on the goals and objectives established for the plan and sound planning principles. The Murray community contains a unique blend of agricultural, industrial, business, and academic lifestyles. The future land use portion of the plan builds on this unique blend of lifestyles with the goal of enhancing the quality of life in the Murray Planning Area through the integration of modern

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growth policies and environmental enhancement. The integration of the environmental enhancements will increase the visual appearance of Murray so that it complements the unique lifestyle and thereby enhances the overall quality of life in Murray.

Future Land Use Principles

The five future land use principals and resulting goals defined in this section are a restatement of the land use goals and objectives adopted by Murray for the Comprehensive Plan and listed at the beginning of this Land Use Element. Each principle is defined along with a related goal and several strategies to achieve that goal. The strategies form the basis for the development of the future land use map for the Murray Planning Area. The strategies outline actions that can be taken to work toward the attaining of the goal. The full list of goals and objectives adopted by Murray for the Comprehensive Plan is contained in Appendix A.

1. Preserve Compact Nature

A compact nature taken from a broad perspective, rather than a site-by-site perspective, describes the overall organization of an area in terms of the relative location of the various land uses. A compact area is one in which trip distances are minimized to the extent possible. Compactness is the opposite of sprawl where there are discontinuous residential growth and strip commercial developments. Some examples of the advantages of a compact area include more efficient water and sewer service because lines are shorter, fewer, and smaller roads are required, and school bus routes are shorter.

The Murray Planning Area is bounded on the south and east by Clarks River, which creates a natural deterrent to the expansion of urban services. Even though limited residential development has already occurred east of the Clarks River and the city's natural gas system has been expanded to serve that area, large scale new development is not envisioned within the 10-year planning period. Similar geographical or topographical deterrents to development do not exist to the north and west.

A compact nature for the planning area must be achieved through sound growth management policies. Strategies generally include limiting the outward growth of the area while enhancing development activities within the planning area. New commercial developments should generally not be allowed on the periphery of the planning area but should be directed toward existing commercially compatible properties within the core of the planning area. The farther residential development occurs from the Murray downtown area, the more the "sense of place" for Murray becomes diluted.

A compact nature does not imply static population growth; rather it means smart, efficient growth directed to those portions of the planning area most able to sustain it in the best interest of the local citizens. Within the existing urban services area, Murray could accommodate growth in residential and commercial activity within the foreseeable future. However, the challenge is to mold and direct that growth to enhance the overall quality of life of the area.

A compact nature does not imply the intrusion of undesirable land uses into other land uses or the construction of high density or high-rise developments not in keeping with the character of Murray. Developing a compact nature should never be accomplished at the

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expense of open area, green space, or environmental protection and enhancement.

Compact Nature Goal: Create a land use development pattern that efficiently provides delivery of governmental, commercial, and professional services; utilizes existing infrastructure resources; and maximizes return on infrastructure expenditures while maintaining the small-town nature of Murray.

Strategy 1: Limit Expansion of the Urban Services Area

Murray is planning a small expansion of sewer service on the southwestern edge of the current Urban Services Area (USA). When this expansion is completed and the urban services boundary is revised to include this area, new expansion will be limited, and the focus will be on development inside the urban services boundary. The Urban Services Area contains enough land to accommodate all the projected growth in Murray for the 10-year planning horizon. Since all other utilities are available except sewer service, limiting the expansion of sewer service will effectively limit expansion of the Urban Services Area.

Strategy 2: Keep New Residential Development in the Urban Services Area

Development within the USA must be encouraged to ease the pressure for development outside that area. To provide an incentive for development within the USA, the Planning Staff and the Planning Commission will adopt development alternatives that tend to reduce the cost of the infrastructure for residential development. One method for accomplishing this is conservation developments that maintain gross densities on a tract of land but allow smaller lots and larger amounts of green space. Since developments are generally more compact, the costs of utilities and roadways are reduced.

Other alternatives for reducing development costs and providing development incentives will be explored by the Planning Staff and the Planning Commission. In addition, the Planning Commission will discourage multi-family housing that supports Murray State University in areas that are not near the University.

Strategy 3: Encourage Neighborhood Commercial Activity

The location of commercial development has a direct impact on the traffic generated as residents travel to procure goods and services. In Murray, commercial development is generally concentrated along the major arterial roadways, resulting in significant traffic on these roadways. Some of the congestion could be relieved if goods and services could be procured closer to home. To encourage neighborhood commercial activity, the Future Land Use Map shows designated areas of commercial activity in neighborhoods. The areas will be called Neighborhood Activity Centers (NAC).

The NAC is a mixture of commercial uses that serve the needs of the neighborhood. The NAC must be designed so that it does not attract significant traffic from outside the neighborhood. The NAC must be designed and located to be easily accessible by pedestrians by walking, bicycling, or with low impact type vehicles; thereby minimizing traffic to the extent possible.

The NAC will contain small scale commercial uses that serve the neighborhood and might include commercial services like small groceries, small cafes, barber shops, beauty shops. The main focus of the NAC is commercial activity, but it might also include limited office, semi-public, and residential uses when they can be integrated with a minimum of traffic generation.

The Planning Staff and the Planning Commission will develop standards for the NAC's,

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including design standards. Design standards should be developed to minimize asphalt areas and enhance, rather than detract from the beauty of the surrounding neighborhood. Landscaping and green space generation will be an important part of the design standards. Where possible, integrating a neighborhood park into the NAC would be desirable.

2. Enhance Small Town Community Character

Murray is a unique town with a progressive regional university that has won numerous awards for its educational value. Murray has also been recognized as a top retirement destination. Murray is in the center of an agricultural area and has the small town feel generally associated with agriculture. This blend of economies supports services and activities not generally associated with similar sized towns in Kentucky. The blends of these different cultures and the lifestyle they support give the residents of Murray a distinct pride in their community and its character. The character of Murray will be enhanced through land use practices and through the enhancement of the downtown area.

Community Character Goal: Enhance Murray's unique community character by protecting and enhancing core neighborhoods, the downtown, and historic areas, while providing for the efficient flow of people and goods throughout.

Strategy 1: Protect and Enhance Core Neighborhoods

A large part of the historical character of Murray is defined by its downtown area and the core residential areas that developed nearby. These neighborhoods are a resource that cannot be replaced and will be preserved to the extent possible. The Planning Staff and the Planning Commission will establish the boundaries of this core area and establish measures to maintain its integrity. In general, new developments in the core area will be of an architecture that resembles that area. Subdivision of lots into smaller residential lots will be allowed when development can maintain or improve the architectural quality of the neighborhood. The Planning Commission discourages the conversion of single-family residences in the core area to multi-family or commercial uses, except where Neighborhood Activity Centers can be developed.

In addition to the downtown core neighborhoods, the Planning Staff and the Planning Commission will prepare neighborhood plans for the neighborhoods that agree to form active neighborhood associations. The neighborhood plans will serve as guides for implementing public improvement projects and steering public and private investment in a specific neighborhood. The neighborhood association will be the vehicle for locating people in the neighborhood with leadership skills and relationships with the other neighbors. The implementation of the neighborhood plans will strengthen the neighborhood through an association with the public and private sectors.

Strategy 2: Protect and Enhance Downtown Gateways

Downtown as a destination is somewhat defined by the visual appearance of the major gateways leading there. For Murray these major gateways are Main Street and 4th Street. The Main Street gateway generally consists of older stately single-family homes, a library, and a school.

The Planning Commission will maintain the nature of this area by limiting the conversion of single-family residences to multi-family and commercial uses.

The 4th Street north and south gateways consist of mixed commercial uses and the

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Calloway County Judicial Center. The Planning Staff and the Planning Commission desires that the appearance of these gateways be improved. Future Land Use Maps indicate that certain areas along the gateways should be converted from commercial uses to residential uses. In addition, architectural standards for new commercial activities will be developed by the Planning Staff and the Planning Commission to improve the appearance of the 4th Street gateway.

Strategy 3: Expand Downtown and Improve Downtown Vitality

Murray has completed improvements to its downtown area as a result of its Downtown Master Plan. The improvements center around the Courthouse Square, the area mostly associated with downtown Murray. The momentum needs to be continued in adjacent properties through rehabilitation and expansion of existing structures, the construction of new structures on vacant lots, and redevelopment of underutilized lots. As Murray continues to grow in the future, a downtown expansion could result from this focus. Where possible, the City of Murray will partner with the private sector to continue to enhance the downtown. Examples of partnering might include purchasing lots and buildings for redevelopment, development incentives, design assistance for innovative design, tax abatement, and the development of “spec” commercial buildings downtown. The Planning Staff and the Planning Commission will designate a downtown area and adopt development procedures and architectural and landscaping standards appropriate to downtown.

Strategy 4: Encourage Neighborhood Renovation and Revitalization

Murray has some older neighborhoods that need a focus for revitalization. In addition, several older neighborhoods not yet to the revitalization stage are candidates for some renovation efforts. Older homes and neighborhoods need to be inventoried to develop projects where grants or other funding mechanisms can be sought for renovation or revitalization. Where grant funding is not possible, incentive programs with the private sector should be developed to accomplish better housing for all citizens of Murray.

Strategy 5: Maintain Murray’s Historic Character

Historic preservation is a key element in enhancing the character of Murray. Many different architectural styles exist that represent different eras in the development of Murray. Preservation efforts relate to the maintenance or expansion of a particular property. Historic preservation efforts in Murray currently are in the form of an overlay that creates a historic district where renovation and new construction techniques apply. Continued efforts for historic preservation will be coordinated with downtown revitalization, core neighborhood preservation, and downtown gateway protection.

Strategy 6: Strengthen Murray State University-City Planning Interaction

Murray State University is a major force in the development of Murray. Decisions by MSU are primarily to advance the mission of the institution; however, in many instances they have a major impact on Murray as a community, particularly with regard to the generation of traffic and traffic patterns. MSU has recently revised its Campus Master Plan. Land use decisions by the Planning Commission impact MSU particularly through the location of housing utilized by students. A good working relationship currently exists between the City of Murray and MSU and this relationship should be enhanced where possible. The relationship will be particularly beneficial when dealing with traffic issues as defined in the Transportation Element of the Murray Area Comprehensive Plan.

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Strategy 7: Develop Progressive Zoning Ordinance and Land Development Standards

Zoning procedures and the standards by which land is developed are very important in shaping the future character of the Murray area. Different sections of this Land Use Element include items that should be considered in a new zoning ordinance and land development standards. Examples of changes to be considered by the Planning Staff and the Planning Commission include zoning land to match the planned future land use and land “set- asides” to create open space.

3. Enhance, Preserve and Protect the Environment

Murray is a very environmentally aware community. The environmental programs at Murray State University and the ever-increasing awareness of environmental impacts from human activity have fostered this environmental awareness. This principle recognizes the desire of the area’s citizens that the development of land occur in an environmentally friendly manner and that the resulting developed land contains significant environmentally friendly green space. Streams, their associated floodplains, and forested areas are the most significant environmentally sensitive features in the Murray area. The common trend in environmentally friendly communities is to recognize that protection of environmentally sensitive areas and the provision of green space are important public facilities like utilities and roadways and not just desirable amenities.

Development in Murray should not compromise environmental integrity. Environmentally sensitive development recognizes that preservation is more important than mitigation of impacts. Sensitive environmental areas should be identified in advance of development and alternative uses of land planned accordingly. Conservation development and best management practices should be used as key measures to protect developing areas. Environmental standards must continually be reviewed and updated to keep pace with changing trends in environmental protection.

Environmental Goal: Maintain a natural environment by protecting, preserving, and enhancing natural resources and promoting design, development and construction practices that create green space, neighborhood connectivity, and a visually pleasing environment.

Strategy 1: Protect Trees and Create Green Space During Development

Trees provide a visual enhancement to the environment as well as provide needed shade. Many of the areas that will eventually be developed in Murray are agricultural areas that have very few trees. To provide the needed preservation of trees during development and the planting of trees after development, the Planning Staff and the Planning Commission will adopt tree preservation, tree replacement, and tree planting measures. These measures will protect high quality vegetation, protect natural corridors, and preserve and enhance community tree crown coverage.

A key element in the development and preservation of trees and green space is the identification of existing high- quality areas. The Planning Staff and the Planning Commission will inventory the developable land within the Murray Planning Area so that plans can be made to protect already existing high-quality areas.

The combination of trees and open/green space will provide an environmentally friendly enhancement to the Murray environment. The Planning Staff and the Planning

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Commission will adopt measures for the provision of open/green space in new developments. These measures may take the form of development techniques that create open/green space, conservation easements, dedication of land by developers, or purchase of land during the development process.

The Planning Staff and the Planning Commission will also review and revise, where appropriate, the current landscaping requirements for new developments. A primary focus should be on the creation of green space buffers between developments of differing land use and density and improving the appearance of commercial and industrial properties. In addition, the Planning Staff and the Planning Commission will adopt measures to create vegetative corridors connecting developments and neighborhoods.

A key strategy in maintaining the visual appearance of an area is the installation of underground utilities. Murray currently requires the installation of underground utilities in new developments. This practice should be continued, and opportunities taken to bury existing above ground utilities when they are presented.

Strategy 2: Protect Floodplains and Water Quality

The Murray Planning Area contains the Clarks River and several of its tributaries. The quality of water in the Clarks River is dependent on the quality of water in these tributaries, especially during rainfall events. The sediment and nutrient trapping ability needed to protect the Clarks River and its tributaries lies in the headwater drainage system in the Murray Planning Area that consists of intermittent and ephemeral streams. Another issue is the loss of water storage capacity due to landscape alteration during development. Landscape alteration can lead to downstream flooding. Often, channel erosion and instability result from actions taken to control flooding.

The Planning Commission recognizes the importance of protecting the water resources in the Planning Area and, when evaluating developments, will look toward the protection and preservation of the existing stream network, including intermittent, ephemeral, and perennial streams. The Planning Staff and the Planning Commission will also inventory all streams in the Planning Area to identify all perennial, intermittent and significant ephemeral waterways, and natural drainage features.

Murray has a stormwater program that includes requirements used by the Planning Commission in the evaluation of new developments. These requirements will be reviewed by staff to incorporate the latest watershed protection measures to control the quality of runoff. Measures include watershed protection best management practices like bio-filtration; drainage buffer zones; the mitigation of channel degradation, particularly downstream of drainage structures; and prohibiting or limiting development in sensitive streamside zones.

Strategy 3: Promote Environmentally Sensitive Development

This strategy somewhat overlaps Strategies 1 and 2; however, the intent is to encourage the incorporation of environmentally sensitive measures into a development site plan throughout the site design process. Identifying and mapping sensitive areas and integrating environmental and more conservation-oriented design measures into site design can result in the creation of significant amount of valuable open/green space in the majority of new developments. The Planning Staff and the Planning Commission will incorporate into the review process the identification of sensitive areas during site design

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and the use of open space generation techniques, like clustering, to facilitate the goal of attaining environmentally sensitive development in the Murray Planning Area. Land development standards will also be revised to incorporate safety and visual aesthetics in the physical design of developments.

Strategy 4: Promote the Use of Green Building Standards

Buildings are some of the largest consumers of energy and thereby have a large long-term impact on the environment. Ideally, structures shall produce more energy than they consume. This is done through a host of practices such as green roofs, solar panels, use of natural light, and utilizing environmentally safe construction materials. The ideas behind the design practices are for structures to be as energy efficient and environmentally friendly as possible.

The City of Murray will develop a new initiative to look for builders, of both residential and commercial structures, to adopt U.S. Building Council LEED design practices. As a part of this strategy, the city will consider the adoption of an incentive package for anyone that can build a structure that is LEED Certified. There are many state and federal funds that can possibly assist with this LEED construction initiative.

4. Develop and Enhance Quality of Life Measures

Quality of life is a key component for Murray to keep its current residents, attract new residents including retirees, and attract new commercial and industrial investment to the community. Murray currently has a high quality of life, but there are measures that can be taken to increase its attractiveness. There are many things that contribute to a high quality of life and some of these measures have already been addressed in Principles 1-3. Additional measures are discussed in this section.

Quality of Life Goal: Develop new programs, events, and other quality of life measures while enhancing existing cultural and recreational opportunities and where possible integrate these quality-of-life measures into all aspects of life in Murray.

Strategy 1: Enhance and Expand the Park System

The Community Facilities Element of this Comprehensive Plan discusses in detail the Parks and Recreation System in the Murray area. The Parks and Recreation Master Plan identified a need for the development of additional parks and recreational programs. The development of new park sites can be integrated into the development process by the use of conservation easements, land dedication, and in some cases the purchase of land. In many instances the open/green space created by conservation development practices may be suitable for parks.

The addition of park land is important to the citizens of Murray. The Planning Staff and the Planning Commission will evaluate new developments with an eye toward the acquisition of land suitable for parks. This will be facilitated by the revisions to review procedures described in Principles 1-3.

Strategy 2: Develop System of Recreational Walking and Bicycle Trails

Like parks, recreational walking and bicycle trails are an important component of the quality of life. When incorporated with open/green space, they present an area that is not only visually pleasing but also contributes to a healthy lifestyle for the citizens using them. Recreational trails can also be used to provide neighborhood connectivity. The Parks and

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Recreation Master Plan identified a greenway connecting many of the neighborhoods in the southern and western portion of the Planning Area. In many instances land for this greenway trail and other recreational trails can be acquired during the land development process using techniques previously described for open/green space.

The development of recreational trails has been discussed for a number of years in the Murray area. A few trails have already been developed, particularly in the Clarks River area. Bicycle use was integrated into the rights-of-way of US Highways 641 and 80 but trails do not exist within the city to access these major highway trails.

The development of new recreational trails is an important aspect of Murray's growth in the quality of life. The Planning Staff and the Planning Commission will evaluate new developments looking toward neighborhood connectivity and the acquisition of land suitable for new recreational trails. Like the acquisition of park land, the revisions to review procedures described in Principles 1-3 will facilitate the process.

Strategy 3: Enhance the Use of Sidewalks

Sidewalks are a form of recreational trail and facilitate the opportunity of residents to move within and between neighborhoods without the use of automobiles. Sidewalks on both sides of the street in residential neighborhoods also contribute to a friendly atmosphere giving residents the opportunity to interact more freely than if sidewalks were limited to only one side of the street. The existing subdivision regulations require sidewalks within the street right-of-way on each side of arterial and collector streets in all subdivisions that are developed inside the corporate city limits, those lying in whole or in part inside the city limits, and those lying one-half mile from outside the corporate city limits. In certain instances, the Planning Commission may waive the use of sidewalks.

As part of the revision of the zoning ordinance, the subdivision regulations will be reviewed, and consideration will be given to extending the requirement for sidewalks to the entire Urban Services Area. In addition, the sidewalk waiver provision in the subdivision regulations will be reviewed. Changes in the subdivision regulations will also be considered to increase the width of sidewalks on one side of the street in appropriate situations to facilitate inter-neighbor and intra-neighborhood connectivity through the accommodation of alternative means of transportation.

5. Maintain Economic Opportunity

Approximately 29 percent of jobs and 32 percent of income result from jobs in education, health care and social assistance, giving a stable employment base. Approximately 11 percent of the jobs and 17 percent of the income come from manufacturing. Despite current challenges in the manufacturing sector due to the national downturn, future economic potential for the Murray area appears good. The completion of the industrial park on US HWY 641 North gives the area excellent future potential for attracting new industrial investment and the resulting jobs. The continued growth of the Murray Calloway County Hospital and the completion of the expansion there also bode well for the future of the Murray area. Agriculture will also continue to play an important role in Murray's economic future.

The quality of life is high in Murray and the actions taken as a result of this Comprehensive Plan should ultimately make it even better. The quality of life and proximity to Kentucky Lake and the Land Between the Lakes National Recreational Area should prove to be positive and important factors for the Murray area in recruiting new businesses, new

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residents and including retirees, and developing income from tourism.

Economic Goal: Build upon Murray's quality of life assets and location to encourage new capital investment and the creation of quality jobs to enhance Murray's strong economic base.

Strategy 1: Designate Lands for Quality Employment Opportunities

Land use planning and zoning efforts in Murray should make sure that there is an adequate amount of appropriately planned or zoned land available for investment to create employment opportunities. Designation of lands for future economic activity will be used in this plan to avoid the conversion of agricultural land to other uses that are not compatible with economic development goals.

Strategy 2: Redevelop Appropriate Sites

An important strategy for Murray is to redevelop sites that are currently vacant or underutilized to create employment opportunities. In many cases these sites can be developed for specific uses at costs less than new sites on vacant land. There are several sites along arterial roadways as well as the area east of 4th Street in the proximity of downtown that could be redeveloped to provide employment opportunities. The City of Murray will investigate strategies that might be used to partner with the private sector in redeveloping appropriate properties. Examples of strategies include tax abatements, brownfields redevelopment, the revision of building codes, and the development of "spec" buildings.

Strategy 3: Develop New Opportunities

Cultural and sports tourism represent excellent opportunities for the Murray area to increase economic activity. Murray currently has several excellent festivals promoted by the Convention and Visitors Bureau. In addition, Murray State University facilities like the West Kentucky Livestock and Exposition Center and the Murray State CFSB Center support a number of sporting and cultural events. An opportunity currently being pursued by Murray is the development of a sports complex to host youth baseball tournaments.

With the facilities available for hosting cultural and sports tourism in the Murray area, the area is uniquely positioned to capitalize on new economic and employment opportunities in this area. Like for other economic development activities, the City of Murray should, where necessary, use its resources and possibly incentives to the private sector to develop new events and new facilities for these events.

Strategy 4: Use Public Capital to Foster Private Investment

The marginal profitability of a private venture may sometimes prevent the realization of a job-creating opportunity. Government entities generally have access to capital markets at rates not available to private entities. Often deals can be made for governments to leverage their resources and create incentives to assist private entities in job creation ventures. A limited program for this exists at the Purchase Area Development District. In conducting its capital planning each year, the City of Murray should, not only look to plan and implement public capital investment to maintain and enhance existing public facilities, but also look at capital expenditures to stimulate private investment in the community.

Future Land Use Map

General

The Future Land Use described in this section of the plan is shown on Map LU-8 and depicts the generalized land use categories that will guide development and redevelopment throughout the planning period. Each land use category shown on the map permits a range of land uses, densities, functional uses, and intensities as set forth in the zoning ordinance. The Future Land Use Map; the future land use principals, goals, and strategies in this plan; and the zoning ordinance are all key criteria in establishing the boundaries of the land use categories depicted on the Future Land Use Map and will determine the exact type of land use and the density and intensity appropriate at any one location.

In developing the land use boundaries shown on the map, areas were identified based on their primary anticipated future land use. For example, in several residential areas there was an existing mix of predominantly single-family detached structures and a small number of multi-family units. Since these areas were desired as future low density residential areas, the entire area was shown as low density.

The boundaries between different land use categories depicted on the map generally follow existing or proposed geographic features such as roadways, rail and utility rights-of-ways, the edges of natural and manmade watercourses, or property lines. In some instances, the boundaries may be offsets from these features, like 100 feet off the road right-of-way. Where the location of the boundary between contiguous land uses cannot be clearly determined from the map, the Planning Staff and the Planning Commission will establish the boundary.

The boundaries shown on the map for the commercial areas specified as Neighborhood Activity Centers (NAC) are not fixed. These areas are shown in generalized locations where it was believed this use would be appropriate. The Planning Staff and the Planning Commission will establish the actual boundaries of these areas as development plans are reviewed.

Summary of Future Land Use

Table LU-9 shows the distribution of future land uses inside the Murray city limits as compared to the existing land use determined from the land use inventory. The total area within the incorporated Murray city boundary is 7,471 acres or approximately 52 percent of the Murray Planning Area. The three largest changes from existing land use to future land use are in the agriculture, commercial, and industrial land uses. Agriculture land use is decreased by 1,079 acres and is indicative of the industrial and commercial expansion occurring in the city. Commercial land use is increased by 285 acres indicative of the expansion of future commercial lands. Industrial land use increased by 453 acres. The industrial land use change was primarily due to the completion of the Industrial Park on US HWY 641 North. The City Limits Future Land Use Summary is shown in Table LU-9.

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Compared to the future land use acreages in the 2008 Land Use Element; future residential land uses decreased by 134 acres, future commercial land uses increased by 192 acres, and future industrial land uses increased by 146 acres. The total of future public, semi-public, education, utilities, and transportation land uses increased by 42 acres.

Table LU-9 Murray City Limits Future Land Use Summary -2022				
Land Use	2008 FUTURE (Total Acres)	2022 EXISTING (Total Acres)	2022 FUTURE (Total Acres)	2022 Difference between existing and future (Acres)
Residential	3064	2738	2930	192
Commercial	930	837	1122	285
Industrial	846	539	992	453
Public	438	433	446	13
Semi-Public	231	265	258	-7
Education	666	648	669	21
Utilities	49	50	50	0
Transportation	755	636	758	110
Agriculture	211	1325	246	-1079
Total	7190	7471	7471	0
Source: City of Murray Planning Department				

Table LU-10 summarizes the future land uses in the planning (urban services) area as compared with the existing land use. There are 14,431 acres within the Murray Planning Area boundary. When considering the entire planning area, considerable changes are evident in the residential and industrial land uses. The large increase in future residential land use results from the conversion of large areas of existing agriculture in the southwestern portions of the planning area, currently outside the city limits, to low density residential land use. The large increase in future industrial land use results from the conversion of large areas of agricultural land use in the northern portion of the planning area, currently outside the city limits, to industrial land use. The corresponding decrease in agricultural land use is evident in the table.

Compared to the future land use acreages in the 2008 Land Use Element, residential land uses in the planning area decreased by 257 acres, commercial land uses increased by 181 acres, and industrial land uses increased by 239 acres. The total public, semi-public, education, utilities, and transportation land uses increased by 51 acres.

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Table LU-10 Murray Planning Area Future Land Use Summary - 2022				
Land Use	2008 FUTURE (Total Acres)	2022 EXISTING (Total Acres)	2022 FUTURE (Total Acres)	2022 Difference between existing and future (Acres)
Residential	5448	3,641	5,191	1,550
Commercial	1283	1,023	1,464	441
Industrial	1512	836	1,751	915
Public	459	452	467	15
Semi-Public	288	314	306	-8
Education	823	800	822	22
Utilities	61	61	61	0
Transportation	1134	922	1,160	238
Agriculture	3423	6,382	3,209	-3,173
Total	14,431	14,431	14,431	0
Source: City of Murray Planning Department				

The following sections describe the Future Land Use by individual land use categories. Descriptions are provided for the Murray incorporated area and the Murray Planning Area (Urban Services Area).

Future Residential Land Use

Residential land use generally allows for the non- transient population and includes single family dwellings, multi-family dwellings, congregate living facilities, and manufactured home parks. MSU student dormitories are not included in this category but are considered educational land use. Residential land use is divided into three categories; Low Density Residential, Medium Density Residential, and High Density Residential and each are discussed below.



These classifications are used instead of the classifications used in the land use inventory as they better reflect the development densities contained in the zoning ordinance. Mobile home parks were included in the Medium Density Residential category and congregate living facilities were included in the High-Density Residential category. By

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making many types of housing compatible to an area, the city can accommodate a wide variety of residential preferences, responsive to changing market demands.

Some land uses other than residential living quarters are allowed in all residential areas. These other land uses support and complement the residential category by allowing essential services to be located near living quarters. Churches and related activities are generally allowed in low density residential areas. In medium- and high-density residential areas, churches and other non-profit public or private facilities like schools, parks, and recreational facilities may be allowed. Also, supporting commercial activities like small animal clinics, coin laundries, barbershops, beauty shops, fraternity and sorority houses, nursing homes, rest homes, retirement homes, convalescent homes, day care nursing schools, and similar activities may be allowed in medium-density residential areas. In high density residential areas, coin laundries, barber shops, beauty shops, drug stores neighborhood groceries, restaurants, and similar activities may be allowed.

When locating other land uses in close proximity to residential uses, land compatibility must be considered to avoid the introduction of urban activities that might have a detrimental effect on residential activities. Where residential and commercial uses are allowed in close proximity, landscaping and screening standards should provide an adequate separation of the two uses.



One of the guiding principles of this plan is environmental enhancement. Site development standards for all residential developments will be revised to promote the environmental enhancement “green” initiative for Murray. This includes the planting of trees, preservation of green space, walking trails, and building construction. In addition, the Planning Staff and the Planning Commission will consider ways to monitor developments to ensure that the “green” initiatives undertaken are preserved throughout the development and post-development period.

Another guiding principle of this plan is enhanced quality of life through access to public parks. Also, in conjunction with the Transportation Element of this Comprehensive Plan, land development standards will be revised to require the connection of all existing and future residential developments through a system of non-vehicular means of transportation like sidewalks, bike lanes, walking trails, etc.

The lands designated for the three future residential categories are shown on Map LU-11. Tables LU-11 and LU-12 compare the future residential land uses inside the Murray city limits and the Murray Planning Area with the existing land use from the 2022 inventory. The inventory’s categorization of residential land use as single family, two family, multi-family, manufactured housing, and congregate living was consolidated to match the future land use categorization by calling existing single family residential comparable to low density residential; existing two- family, three family, four family residential, and manufactured housing comparable to medium density residential; and existing multi-family residential and congregate living comparable to high density residential.

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Table LU-11 Murray City Limits Future Residential Land Use Summary			
Land Use	EXISTING (Total Acres)	FUTURE (Total Acres)	Difference (Acres)
Low Density Residential	2179	2157	-22
Medium Density Residential	236	553	317
High Density Residential	323	220	-103
Total	2738	2930	192

Table LU-12 Murray Planning Area Future Residential Land Use Summary			
Land Use	EXISTING (Total Acres)	FUTURE (Total Acres)	Difference (Acres)
Low Density Residential	3008	4357	1349
Medium Density Residential	291	601	310
High Density Residential	350	233	-117
Total	3649	5191	

In general, lower density residential land use is primarily concentrated in the southern and southwestern portions of the planning area. Lower density residential development trends in recent years have been toward the southwestern part of the planning area. The future land use map shows the trend for residential development to continue to increase to the southwestern portion of the planning area. An expansion of the urban services area is planned in the southwestern portion of the planning area to support this development trend.

Higher density residential developments are generally located in the northwestern portion of the planning area. The future land use map envisions that future high-density residential developments would continue to be located primarily in this area. Medium density residential development is generally scattered throughout the planning area, providing a mix of available housing. The future land use map envisions the continuation of medium density residential development mixed with high- and low-density developments throughout the area.

Low Density Residential: Generally, single family detached housing will be the predominant land use in the low-density residential category, although manufactured homes, patio homes, and two-family dwellings may also be permitted in appropriate locations. Low density residential areas are for housing developments with gross densities up to 4.3 dwelling units per acre. The intent of this land use category is not to allow the maximum density to be attained throughout an entire area designated for a low- density residential land use. Rather, the intent is that in each area there be a mix of developments

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of various densities to achieve an average density that is less than the maximum density. In addition to the other types of uses allowed in all residential categories, home occupations may be allowed in this category where it is incidental to the principal use.

Map LU-9 shows that in the Murray Planning Area and within the Murray city limits, low density residential land use occupies the largest single land use category. The existing low-density residential land use determined from the inventory within the Murray city limits was 2179 acres. The future land use map shows a low-density residential land use of 2157 acres for a decrease of - 22 acres. This decrease is primarily the conversion of low-density residential portions of the planning area to medium-density residential uses. The existing low-density residential land use determined from the inventory for the Murray Planning Area was 3008 acres.

The future land use map shows low-density residential land use in the planning area of 4,357 acres for an increase of 1,349 acres. This additional acreage is mostly in the southwestern and west central portions of the planning area where agricultural land use is converted to low density residential land use.



The following criteria provide guidance to the Planning Staff and the Planning Commission for the evaluation of Low-Density Residential development:

- Vacant tracts shall generally be predominantly developed for single-family residential uses.
- Residential planned development projects with mixed residential densities and varied housing types and limited non-residential uses, where supported by adjacent land use patterns may be considered.
- All new developments in low density residential areas should be supported by an adequate level of street connectivity and other public services.
- Existing core single family residential neighborhoods near downtown and in the Murray State University area may be protected by discouraging the conversion of single-family dwellings to multi-family or commercial uses.
- Revitalization of older, single family residential neighborhoods will be encouraged to help promote growth in surrounding neighborhood businesses, schools, and existing infrastructure.
- Small lot subdivisions with high densities may be allowed in infill and redevelopment areas in existing neighborhoods where they fit in with the character of the neighborhood.
- Office and commercial uses that serve the neighborhoods may be allowed where appropriate at the edge of these residential areas that front arterial roadways.
- Maximum allowable densities are defined in the zoning ordinance; however,

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any low- density residential area depicted on the Final Land Use Map should be developed so that the average density is less than the maximum density.

Medium Density Residential: The medium density residential category is intended to be used for the development of neighborhoods of one- and two-family detached structures or lower density developments with structures containing no more than four units per structure. Mobile home parks are generally included in specified areas in this category. Medium density residential areas are for single or small unit multiple family housing developments with gross densities up to 12.9 dwelling units per acre. The intent of this land use category is not to allow the maximum densities to be attained throughout an entire area designated for medium density residential land use. Rather, the intent is that in each area there be a mix of developments of various densities to achieve an average density that is less than the maximum density. Developments should be designed to provide a wide variety of housing types. If the design of each development is coordinated with the surrounding area, single-family homes, duplexes, and larger apartment buildings could co-exist in one neighborhood.



Table LU-11 shows that medium density residential future land use comprises 553 acres, indicating an increase of 317 acres from the existing land use of 236 acres. This increase is primarily from the recommended conversion of three formerly planned low-density residential areas at these locations.

1. West and south of the Murray State University campus.
2. In the southern part of the city adjacent to Doran and Wiswell Roads.
3. In the eastern part of the city between Chestnut and Olive Streets and 5th and 7th Streets.

These changes are illustrated in Map LU-8, Map LU-8.1 and Map LU-8.2. Increasing possible density in these areas is consistent with currently adopted overall Goals and Objectives and the Land Use Goals and Objectives. These areas of increased density are consistent and compatible with both existing zoned properties and proposed future land uses. These areas also meet the land use criteria for providing guidance to the planning commission in evaluating Medium Density Residential Development. There are no anticipated detrimental impacts to transportation or community facilities and services with these proposed changes.

Rationale for Conversion of Low-Density Residential Usage to Medium-Density Residential Usage

1. West and south of the MSU campus

The rationale for increasing allowable density around the MSU campus is straightforward. This will allow for more student accommodations near campus, helping to maintain a campus that is walkable/bikeable for much of the student population. This will also help to reduce traffic congestion and parking issues on campus.

2. In the southern part of the city adjacent to Doran and Wiswell Roads

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The rationale for increasing allowable density for the area adjacent to Doran and Wiswell Roads is that the proposed area already abuts an area of R-3A zoning and that increasing density in this area will enable the city to better meet increasing demand for higher density housing. Special design considerations such as increased setbacks from adjacent single-family homes, increased buffering, and tree preservation may be needed to ensure harmony between residential uses of varying densities.

3. In the eastern part of the city between Chestnut and Olive Streets and 5th and 7th Streets

The rationale for increasing allowable density in the eastern part of the city between Chestnut and Olive Streets and 5th and 7th Streets is that much of the area is already zoned R-3 thus the Future Land Use Map should reflect that. This would also allow single family Planned Development Projects through the conditional use process.

Increasing possible density in these areas is consistent with currently adopted overall Goals and Objectives and the Land Use Goals and Objectives. These areas of increased density are consistent and compatible with both existing zoned properties and proposed future land uses. These areas also meet the land use criteria for providing guidance to the Planning Commission in evaluating Medium Density Residential Development. There are no anticipated detrimental impacts to transportation or community facilities and services with these proposed changes.

The following criteria provide guidance to the Planning Staff and the Planning Commission for the evaluation of Medium Density Residential development:

- Vacant tracts shall generally be predominantly developed for single-family and multi-family residential uses to facilitate development of a compact nature in locations with high levels of public infrastructure capacity.
- Residential planned development projects with mixed residential densities and varied housing types and non-residential uses where supported by adjacent land use patterns may be considered.
- Mobile home parks may be considered where ready access exists to public services, including transportation and social services.
- All new developments in medium density residential areas should be supported by an adequate level of street connectivity and other public services.
- Office and commercial uses that serve the neighborhoods may be allowed where appropriate at the edge of these residential areas that front arterial roadways.
- Maximum allowable densities are defined in the zoning ordinance; however, any medium density residential area depicted on the Final Land Use Map should be developed so that the average density is less than the maximum density.
- New medium density developments may be appropriate as buffers between low density areas and high density residential or commercial areas.

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High Density Residential: The high-density residential category is intended to be used for the development of neighborhoods at the higher densities allowed by the zoning ordinance. Congregate living facilities are generally included in this classification. High density residential areas are for large, dense multiple family housing developments with gross densities up to 15.8 dwelling units per acre. The intent of this land use category is not to allow the maximum densities to be attained throughout an entire area designated for high-density residential land use. Rather, the intent is that in each area there be a mix of developments of various densities to achieve an average density that is less than the maximum density. The existing high-density residential land use determined from the inventory within the Murray city limits was 323 acres. Map LU-9 shows for the Murray city limits the high density residential future land use is 220 acres indicating a decrease of 103 acres. This decrease is primarily the conversion of land with lower density multi-family developments in the city to medium-density residential land use. The existing high-density residential land use determined from the inventory for the Murray Planning Area was 350 acres. The future land use map shows in the Murray Planning Area the high density residential future land use is 233 acres for a decrease of 117 acres.



Future demand for high density residential areas will continue to increase in the Northwest planning area, near the university, and nearby high-volume commercial areas. Future development sites should be large enough for proper site design. The future land use map shows two new significant areas of high-density residential development. They are an area west of 12th Street in the Stadium View Drive area adjacent to the TVA power line easement and an area east of 12th Street and south of Glendale Road.

The following criteria provide guidance to the Planning Staff and the Planning Commission for the evaluation of High- Density Residential development:

- Vacant tracts shall generally be predominantly developed for multi-family residential uses to facilitate development of a compact nature in locations with high levels of public infrastructure capacity.
- Residential planned development projects with mixed residential densities and varied housing types and non-residential uses where supported by adjacent land use patterns may be considered.

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- Suitable accessibility to commercial areas should be available in high density residential developments not only by street connectivity but also by encouraging the use of sidewalks, bike lanes, walking trails, etc.
- All new developments in high density residential areas should be supported by an adequate level of street connectivity and other public services.
- Developments on two-lane roads that are at, or near capacity during peak travel times and that are not suitable for widening should not be approved.
- Housing oriented to students shall be discouraged at locations distant from the Murray State University campus but shall be encouraged at suitable locations near the campus.
- Office and commercial uses that serve the neighborhoods may be allowed where appropriate at the edge of these residential areas that front arterial roadways.
- Access to public transportation shall be a consideration for new developments.
- Maximum allowable densities are defined in the zoning ordinance; however, any high-density residential area depicted on the Final Land Use Map should be developed so that the average density is less than the maximum density.
- New high-density developments may be appropriate between medium density areas and commercial areas.

Future Commercial Land Use

Commercial land use generally allows for the activity necessary to provide goods and services. The commercial activity includes businesses of all types and professional and business office space. Commercial ventures create jobs that provide an essential part of the Murray and Calloway County economy. These ventures may be located in free-standing buildings or in various types of shopping centers. Shopping centers generally contain on-site and off-street parking and are owned and operated by a single entity. Shopping centers are broadly classified on the basis of size and service radius. A neighborhood shopping center is small, serving the immediate needs of the surrounding neighborhood while a community shopping center is larger, serving the needs of several neighborhoods. A regional shopping center serves several communities and generally includes a large area and several shopping locations. Murray can be classified as a regional shopping location containing several businesses that cater to residents and businesses in the surrounding counties.

Commercial areas in Murray provide for all types of wholesale and retail enterprises, including grocery stores, restaurants, fruit markets, drugstores, barber shops, beauty shops, shoe repair shops, laundry and dry-cleaning shops, movie theaters and drive-in's, offices, hotels and motels, auto sales, bakeries, antique shops, clothing stores, and electronic sales and repair shops. Churches are permitted in commercial areas in Murray. Land uses other than commercial activities are allowed in commercial areas. Examples of these uses include libraries, parks, recreational facilities, utilities, and public protection facilities.

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In the development of commercial areas, it is important that the uses accommodated should not have a detrimental effect on residential and other non-residential neighbors. In most instances, transitional businesses, commonly in the form of professional office facilities, offer a buffer that can help provide protection of residential uses from the undesirable external effects of other more intensive commercial uses. In all cases, landscaping and screening standards between residential and commercial developments should be designed to provide adequate separation. In addition, site development standards for commercial developments should be revised to promote the environmental enhancement “green” initiative for Murray that is one of the basic principles of this plan. This includes the planting of trees, preservation of green space, walking trails, and building construction. In addition, the Planning Staff and the Planning Commission will consider ways to monitor developments to ensure that the “green” initiatives undertaken are preserved throughout the development and post-development period.

Map LU-9 shows the future commercial land use in the Murray city limits and within the Murray Planning Area. The existing commercial land use determined from the inventory within the Murray city limits was 837 acres. The future land use map shows 1,122 acres of commercial land use in the Murray city limits, an increase of 285 acres. This increase is primarily the result of the conversion of agricultural and residential land to commercial land. The existing commercial land for the Murray Planning Area was 1,023 acres. The future land use map shows 1,464 acres of commercial land in the Murray Planning Area, an increase of 441 acres. The increase in commercial land within the planning area, but outside the city limits, results from conversion of agricultural land to commercial land.

The major commercial areas in Murray are generally concentrated along and adjacent to US HWY 641. The downtown central business district is also a major commercial area for Murray. The primary expansions of commercial activity in this Land Use Element include an area on the north side of Chestnut Street near the intersection of 4th Street and Chestnut Street and areas along Opportunity Drive. Commercial expansion is also included in the area between North 12th Street and north 16th Street in the vicinity of the TVA Electrical Transmission Line. Development of limited commercial Neighborhood Activity Centers is also projected for residential neighborhoods in the southwest portion of the planning area.

General guidance for future commercial uses includes avoiding strip commercial uses as discussed in earlier sections of this element. In addition, new commercial developments should be created so there is suitable accessibility. Also, they should complement existing commercial developments, should not be a detriment to other land uses, particularly residential uses, and should not greatly diminish the level of service on roadways. Developments on two-lane roads that are at or near capacity during peak travel times and are not suitable for widening will not be approved. Consideration will be given to all developments as to the most



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efficient way of transporting customers by public transportation or by non-vehicular means.

Commercial land use in Murray is divided into five categories: Neighborhood Businesses, Highway Businesses, Central Business District, Medium Density Businesses, and Professional Office. A brief, general description, and Planning Staff and the Planning Commission guidance for each of these uses is given below.

Neighborhood Businesses: Businesses that meet the needs of the immediate neighborhood by providing a narrow range of retail services and convenience goods and services.

The following criteria provide guidance to the Planning Staff and the Planning Commission for the evaluation of Neighborhood Business development:

- Planned development projects and other non-commercial uses may be considered where supported by adjacent land use patterns.
- All new developments in neighborhood commercial areas should be supported by a high level of street connectivity and other public services.
- Neighborhood Activity Centers, a mixture of commercial uses that serve the needs of the neighborhood in residential areas, are desirable and should be encouraged. They should not attract significant traffic from outside the neighborhood and be easily accessible by walking, bicycling, or with low impact motorized vehicles, thereby minimizing parking areas and traffic to the extent possible.
- Neighborhood business commercial areas are for the regular convenience of adjacent residential neighborhoods and shall be in environmentally well planned and visually appealing developments that are quiet and well buffered from adjacent residential areas.
- Safety and visual aesthetics should be incorporated in the physical design based on new land development regulations to be adopted.
- Existing commercial businesses serving neighborhoods should be preserved and enhanced instead of creating undesirable larger commercial developments.
- Office uses in neighborhood centers shall be at a scale that serves the adjacent neighborhood.

Highway Businesses: Businesses that provide for a broad range of general retail including areas where commercial activities have replaced or are replacing residential areas.

The following criteria provide guidance to the Planning Staff and the Planning Commission for the evaluation of Highway Business development:

- Planned development projects and other non-commercial uses may be considered



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where supported by adjacent land use patterns.

- All new developments in highway commercial areas should be supported by an adequate level of street connectivity and other public services.
- Highway commercial areas shall be in environmentally well planned and visually appealing developments that are well buffered from adjacent residential areas.
- Strip commercial areas are discouraged in favor of larger concentrations of general commercial areas.
- New developments and redevelopment activity shall have a balanced mix of activities permitted by the zoning ordinance.
- Redevelopment and expansion, especially in marginal and deteriorating commercial areas, shall take advantage of the opportunity to improve signage, access, and landscaping.
- Access should be provided for all modes of transportation.
- Street cuts should be minimized to improve access management and allow more area for landscaping.

Central Business District: The area that forms the center for commercial, financial, professional, governmental, and cultural activities.

The following criteria provide guidance to the Planning Staff and the Planning Commission for the evaluation of development in the Central Business District:

- Planned development projects and other non-commercial uses may be considered where supported by adjacent land use patterns.



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- All new developments in downtown commercial areas should be supported by a high level of street connectivity and other public services.
- The central business district with its many unique and historic structures should be protected and improved.
- Development of mixed uses with storefront retail, professional office, and residential dwelling uses should be promoted.
- Access to public transportation should be encouraged.
- Priority should be given to the development of vacant or under-utilized buildings and lots.
- All new projects should improve the overall appearance of the area by removing or enhancing unsightly utilities, signs, and other outdated physical features.



Medium Density Businesses: Businesses that provide limited retail and services and professional offices in areas adjacent to residential neighborhoods.

The following criteria provide guidance to the Planning Staff and the Planning Commission for the evaluation of Medium Density Business development:

- Planned development projects and other non-commercial uses may be considered where supported by adjacent land use patterns.
- All new developments in medium density commercial areas should be supported by a high level of street connectivity and other public services.
- Medium density commercial areas shall be in environmentally well planned and visually appealing developments that are quiet and well buffered from adjacent residential areas and have transit accessibility and reduced parking.
- Existing commercial businesses serving neighborhoods should be preserved instead of creating undesirable larger commercial developments.

Professional Offices: Areas generally serving as transitional space between residential and commercial uses and providing for a mixture of office related activities.

The following criteria provide guidance to the Planning Staff and the Planning Commission for the evaluation of Professional Office development:

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- Planned development projects and other non-commercial uses may be considered where supported by adjacent land use patterns.
- All new developments in commercial areas should be supported by an adequate level of street connectivity and other public services.
- New developments should strive for a campus-like design with well landscaped common space.
- Commercial services, subject to the zoning ordinance, should be only at a scale to serve the needs of the office development.
- Buildings and sites that have access to multiple road frontages should be designed and landscaped to be equally visually pleasing from all viewpoints.



Future Industrial Land Use



The industrial category is intended to be used for the development of industrial, manufacturing, warehousing, distribution, and other related uses. Industrial and warehousing uses are generally considered to be those that might cause the most undesirable impacts on other land uses. Traditionally, noise, odors, toxic chemicals, and transportation impacts from large trucks and workers are associated with industrial activity. Typical industrial and warehousing activities include manufacturing, packaging, mini-warehouses, commercial warehousing, and distribution centers. Other industrial activities include construction yards, machine repair shops, bulk storage of liquids, scrap storage and processing yards, and research facilities.

In Murray, industrial activity is described as either light or heavy. Heavy industry includes those industries where the processing of products results in emission of any atmospheric pollutant, light flashes or glare, noise, or vibration that may be heard and/or felt off the premises. Heavy industry also includes those operations that constitute a fire or explosion hazard. Industries where the processing of products cause none of these impacts are considered light industry.

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Permitted accessory uses in the industrial areas include off street parking areas and structures, dwelling units for caretakers, fenced outdoor storage areas, internal areas serving food to employees, offices, and recreational areas for employees. Permitted conditional uses include outdoor storage and processing areas, retail sales and consumer services, non-residential planned development projects, churches and related activities, and adult oriented businesses.

The location of additional new industrial areas must take into consideration the traffic generated by the industrial activity as well as potential noise, odors, and the other potential negative aspects of industrial activity. However, locating new industrial areas in the planning area has the positive effect of locating jobs near the population center and decreasing commuting times and distances for those employed in the industrial areas. Locating new industrial land in the planning area also takes advantage of the infrastructure that exists in the form of roads, water, wastewater, and electricity.

Newly developed industrial areas should be encouraged to provide attractive building facades and the integration of stormwater runoff controls into site landscaping to limit the negative impacts of industrial activity in terms of visual appearance and stormwater runoff. In many cases the use of landscaped screens would be of benefit to improve the acceptability of industrial areas.



Map LU-9 shows the future industrial land use in the Murray city limits and within the Murray Planning Area. The existing industrial land use determined from the inventory within the Murray city limits was 539 acres. The future industrial land use map shows 992 acres of industrial land use in the Murray city limits indicating an increase of 453 acres. This increase is primarily the result of the conversion of agricultural lands in the industrial areas of Murray to industrial land use. The existing industrial land use determined

from the inventory for the Murray Planning Area was 836 acres. The future land use map shows 1,751 acres of industrial land use in the Murray Planning Area, an increase of 915 acres.

The increase in industrial land use within the planning area, but outside the city limits, resulted from the conversion of agricultural land use to industrial land use near the new industrial park on US HWY 641 North.

Industrial and warehousing land use is generally located in the north and northeast portion of Murray, east of 12th Street and US HWY 641 North. A new industrial park has been

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completed west of US HWY 641 North in the northern portion of the planning area. Future industrial growth is expected to occur in these areas with the expansion in the area of the new industrial park west of US HWY 641 North.

The following criteria provide guidance to the Planning Staff and the Planning Commission for the evaluation of Industrial development:

- Non-residential planned development projects and other non-industrial uses may be considered where supported by adjacent land use patterns.
- All new developments in industrial areas should be supported by an adequate level of connectivity to arterial streets and other public services.
- New developments and buildings should be well landscaped to provide a visually pleasing buffer between sites and adjacent land uses.
- Approved industrial uses should monitor the negative effects of vibration, noise, air quality, water quality, and outdoor storage on surrounding properties.
- New industrial land uses should not be located adjoining residential land uses.
- Lot sizes, setbacks, buffering, and storage/loading areas should maintain compatibility with adjacent properties.



Future Public, Utilities and Educational Land Use

The future public and utilities category is intended to be used for lands owned by county, municipal, state, and federal governments, by government owned public corporations and agencies, or by public utilities. The Education category is used for lands owned by public agencies



for primary and secondary schools, vocational and technical schools, and colleges and universities licensed by the Kentucky Education Cabinet. The Murray State University farms are classified as Education rather than Agriculture. Since government and public educational can locate in any land use, no attempt was made to designate additional future lands for these uses. Publicly owned land used for public housing was classified as future residential land use rather than public land use and was included in the residential land use portion of the plan.

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Map LU-12 shows the future public, educational, and utilities land use in the Murray city limits and within the Murray Planning Area. For the Murray city limits the land currently in public and utilities ownership is 1,423 acres; in the Murray Planning Area the land use includes 1,656 acres. Potential future needs for new government lands include the addition of park land and new general government offices. Future needs can be accommodated by the purchase of sites in other land uses or on existing government properties.



Land currently in educational facility ownership comprises 648 acres within the city limits and 800 acres within the planning area. The only known expansion of Education land being considered is to the Murray State University farms. Since this expansion will be on Agricultural lands no attempt has to made to specify a location of this land use change on the future land use maps. Other appropriate locations for future development of educational facilities can be accommodated on sites that are compatible with adjacent areas and where appropriate accessibility exists. Future educational sites are subject to the zoning ordinance and the principles in this plan.



The following are appropriate concerns when considering public sector developments for general government, utilities, and educational facilities.

- Government, Utility, and Education lands and their uses are not subject to regulation through the Comprehensive Plan and Zoning Ordinance; however, government facilities should be compatible with respect to the surrounding area and make every effort to comply with restrictions for the area.
- The expression of public concern may be used to direct the location and use of government lands in accordance with the principles detailed for similar uses in other land use categories.
- Buildings and structures of government agencies, public utilities, and public educational institutions shall be well landscaped to provide a visually pleasing buffer between sites and adjacent land uses and shall take measures to mitigate the negative effects of vibration, noise, air quality, water quality, and outdoor storage on surrounding properties.
- All new educational developments should be supported by an adequate level of street connectivity and other public services.



Future Semi-Public Land Use

The semi-public category is used for lands that are owned by non-profit corporations, organizations, and agencies that have services available to the public. The most common example is land owned by a church. Other examples might include meeting facilities, fraternal lodges, and recreational areas or facilities on land owned by a non-profit agency that allowed public use of the area or access to the facility. Membership owned golf courses, like country clubs, were included as semi-public facilities.



Map LU-13 shows the semi-public land use in the Murray city limits and within the Murray Planning Area. Land currently in semi-public uses comprises 265 acres within the city limits and 314 acres in the planning area. There are no known planned new developments resulting in the addition of Semi-Public lands. Future development of Semi-Public lands can be accommodated on sites where semi-public uses are a permitted or conditional use, subject to the zoning ordinance and the principles in this plan.

The following are appropriate concerns when considering developments for semi-public facilities.

- Separate zoning does not exist for semi-public uses which are often allowed as conditional uses within other land uses.
- All new semi-public developments should be supported by a high level of street connectivity, when necessary due to traffic demands, and other public services.
- New developments and buildings shall be well landscaped to provide a visually pleasing buffer between sites and adjacent land uses and shall take measures to monitor the effects of vibration, noise, air quality, water quality, and outdoor storage on surrounding properties.

Future Agriculture Land Use

The agriculture category is for lands that are used for the cultivation of crops, the raising of animals, or for lands that are being preserved in their natural state. Map LU-14 shows the future agriculture land use in the Murray city limits and within the Murray Planning Area. Land currently in agriculture uses comprises 1,325a acres, or 18 percent of the land in the city limits. Future agricultural land use in the city limits is expected to decrease to 246 acres or 3 percent of the total area. Existing agricultural land use in the planning area is 6,382 acres or 44 percent of the area. The future agricultural land use shown on Map LU-14 for the planning area is 3,209 acres or 22 percent of the total area.

The following criteria provide guidance to the Planning Staff and the Planning Commission for the evaluation of developments in agricultural areas:

- Prime farmland should be retained for agricultural uses when other suitable sites in non- prime farmland areas are available.

COMPREHENSIVE PLAN

- Agricultural Development Districts should be taken into consideration when considering annexation plans.
- Planned development projects and other non-agriculture uses may be considered where supported by adjacent land use patterns.
- The construction of single-family dwellings or placement of mobile homes shall be limited in a manner to maintain the agricultural nature and appearance of the land and not at such density and location to create the appearance of a single-family residential subdivision or mobile home park.
- Uses attracting spin-off urban type development should not be allowed.

Future Transportation Land Use

Future transportation land use is illustrated on Map LU-15. The Transportation category is used for transportation facilities including roads, road rights-of-way, airports, and other ancillary facilities. The Transportation Element of this Comprehensive Plan discusses present and future transportation facilities in considerable detail.

Land currently in transportation uses within the city limits comprises 636 acres. Future transportation land use in the city limits is expected to increase to 758 acres. Existing transportation land use in the planning area is 922 acres. The future transportation land use shown on Map LU-15 for the planning area is 1,160 acres.

COMPREHENSIVE PLAN

Acknowledgements

The 2023 Murray Land Use Update has been a collaborative effort of city council members, planning commissioners, planning staff and citizens. KLC gratefully acknowledges their wisdom, commitment and contributions to this work.

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We also acknowledge the former planning staff whose previous work has been incorporated into the 2023 Land Use Update.

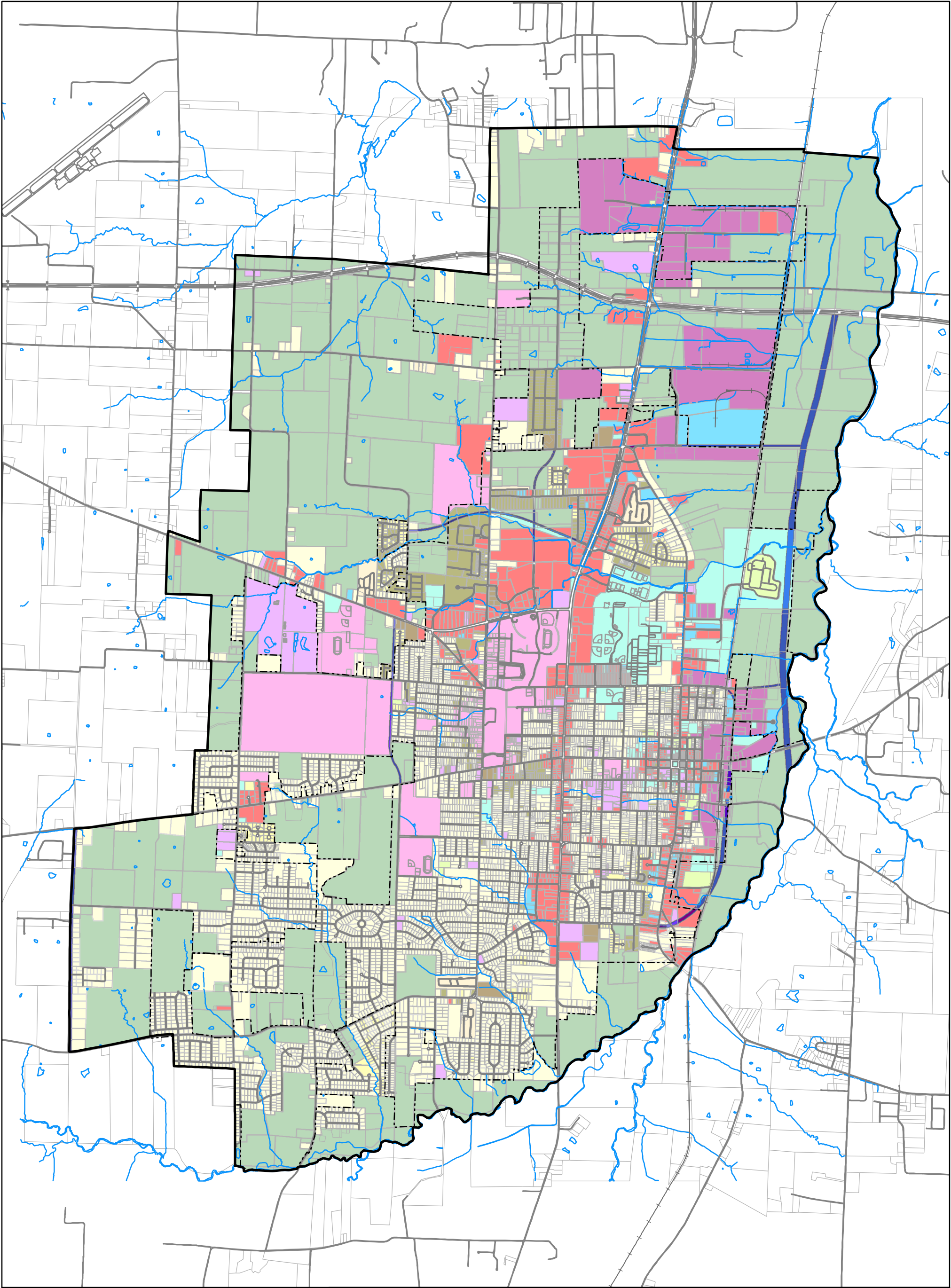
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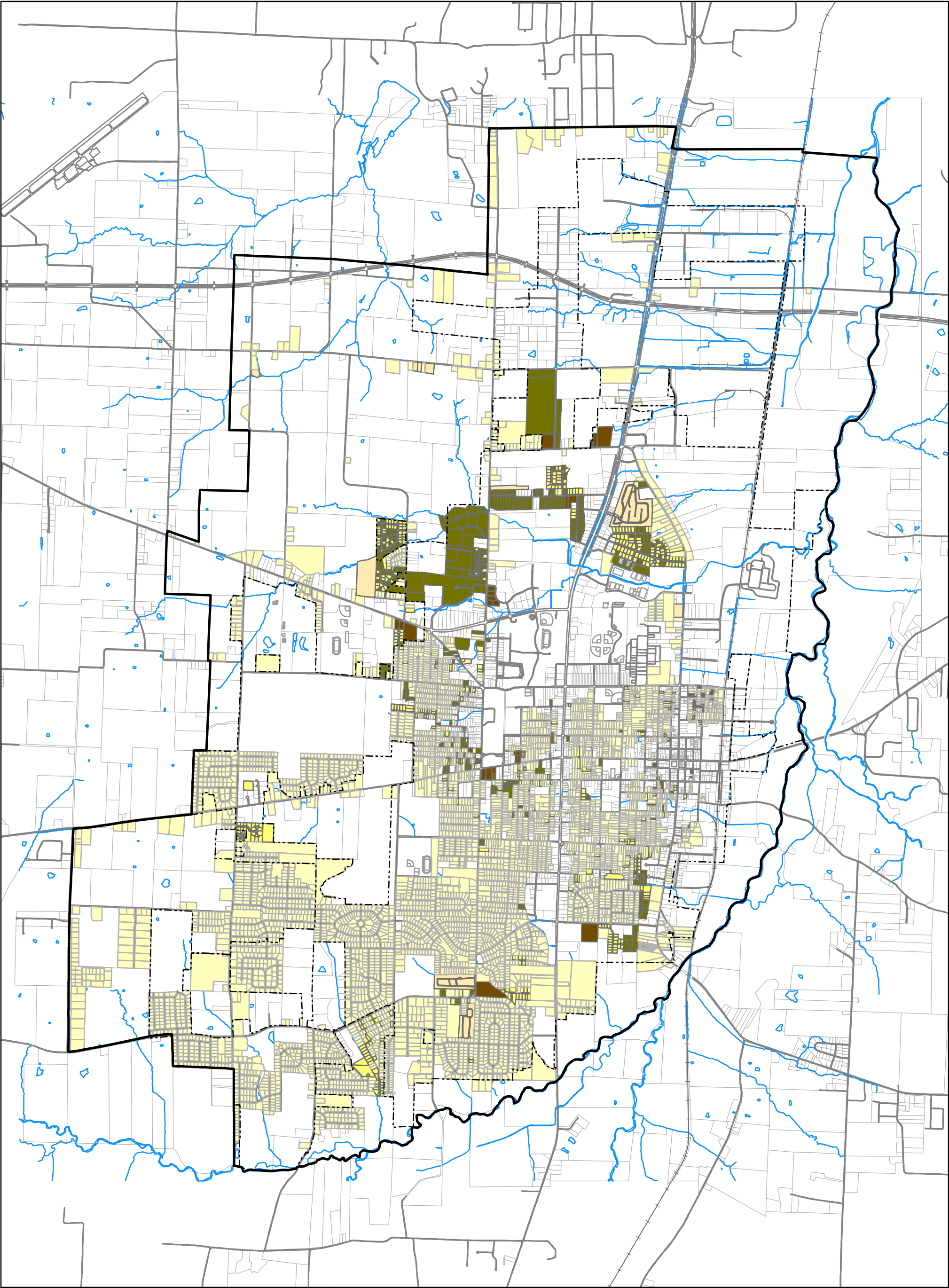
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LU-1: Existing Land Use

— Urban Services Area	Manufactured Housing
- - - City Limits	Education
Agriculture	Public Use
Commercial	Semi-Public Use
Single Family	Industrial
Two Family	Warehousing
Multi Family	Utilities
Group Quarters	



1 inch = 3,000 feet
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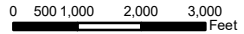
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LU-2: Existing Residential Land Use

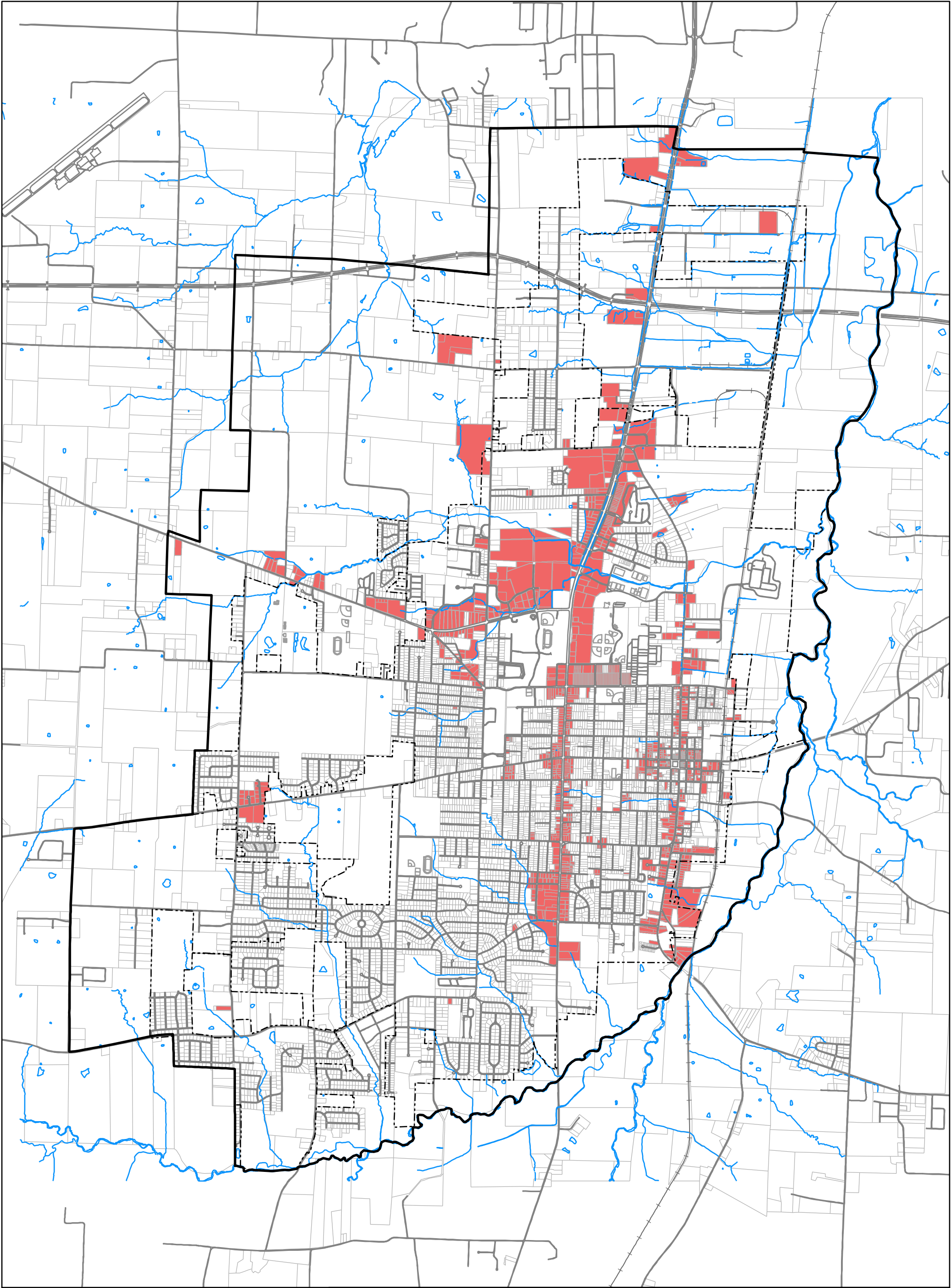
- Urban Services Area
- City Limits
- Single Family
- Two Family
- Multi Family
- Group Quarters
- Manufactured Housing



1 inch = 3,000 feet



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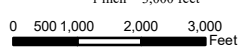
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KENTUCKY
SEPTEMBER, 2022

LU-3: Existing Commercial Land Use

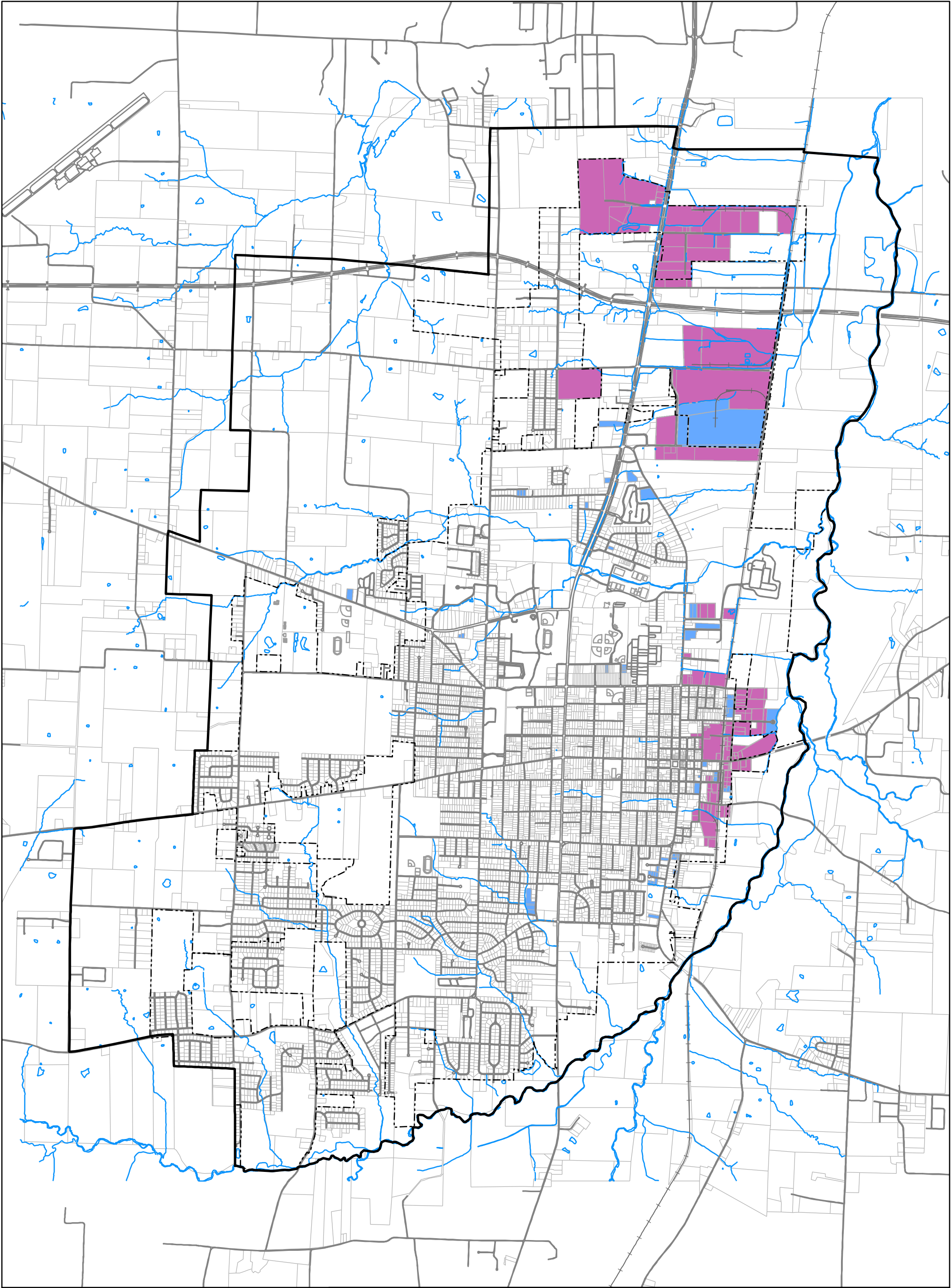
- Urban Services Area
- City Limits
- Commercial



1 inch = 3,000 feet



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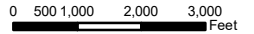
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KENTUCKY
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LU-4: Existing Industrial and Warehousing Land Use

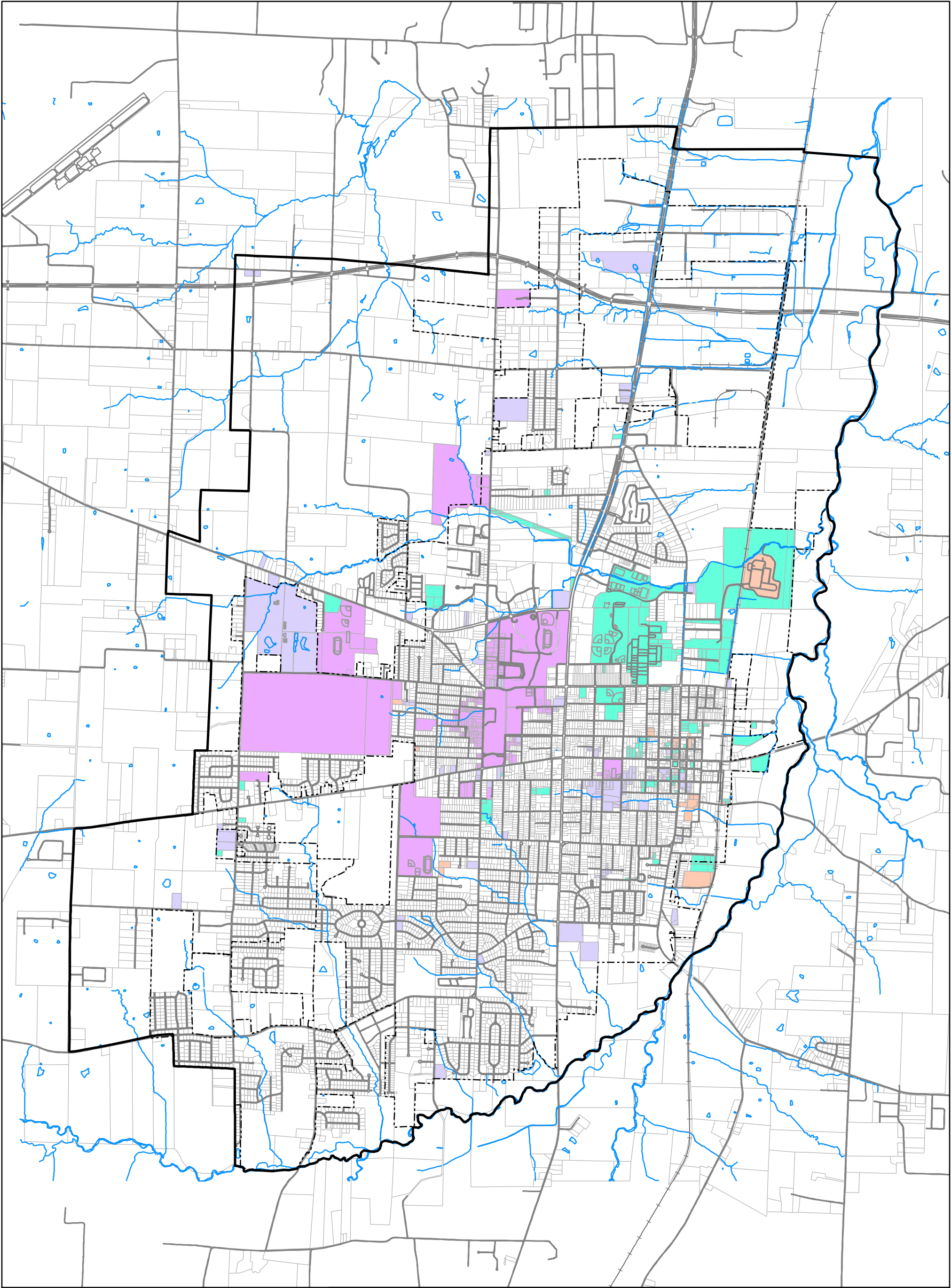
	Urban Services Area
	City Limits
	Warehousing
	Industrial



1 inch = 3,000 feet



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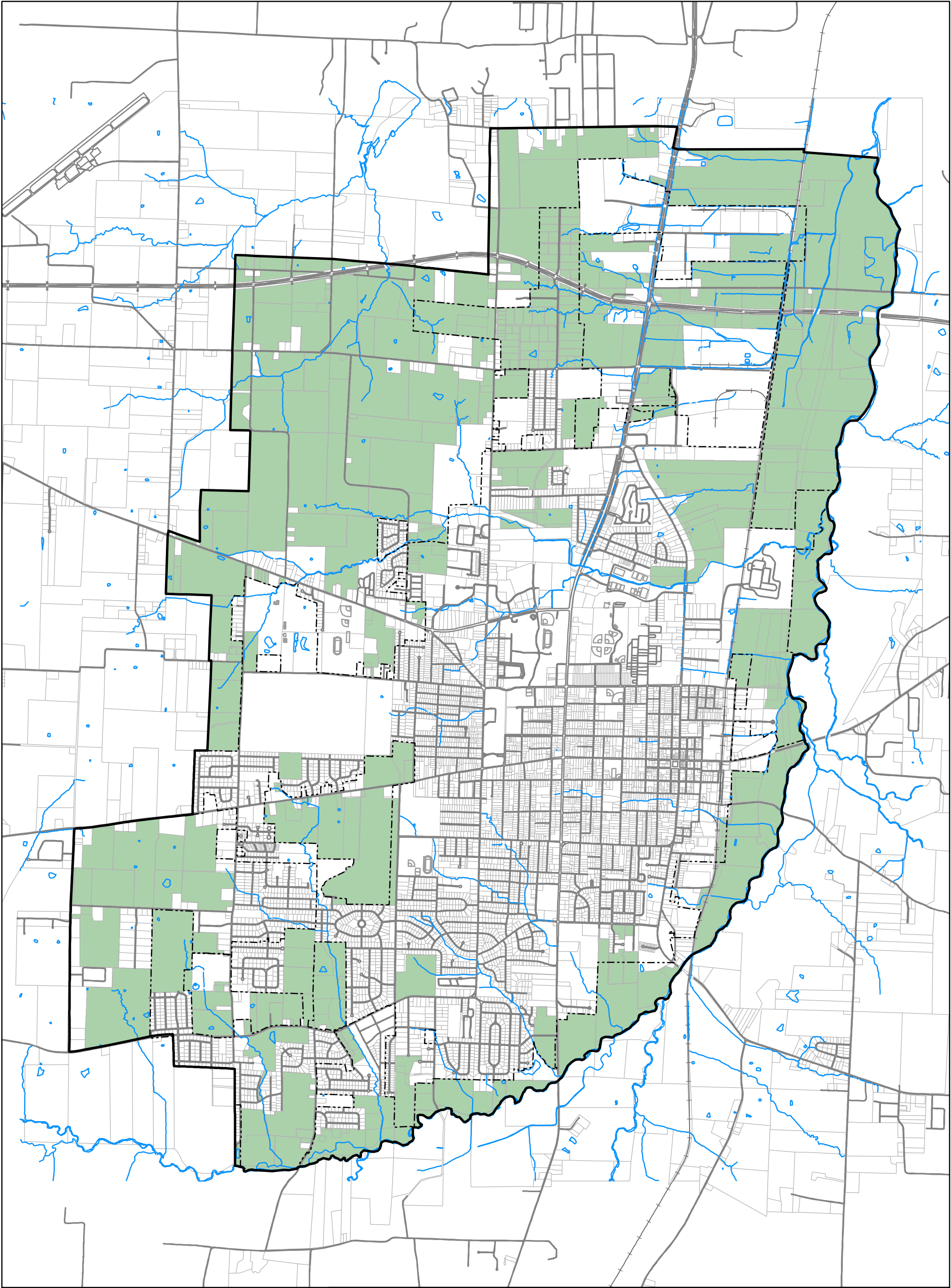
LU-5: Existing Public/ Education/ Utilities Land Use

- Urban Services Area
- City Limits
- Public Use
- Semi-Public Use
- Education
- Utilities



1 inch = 3,000 feet

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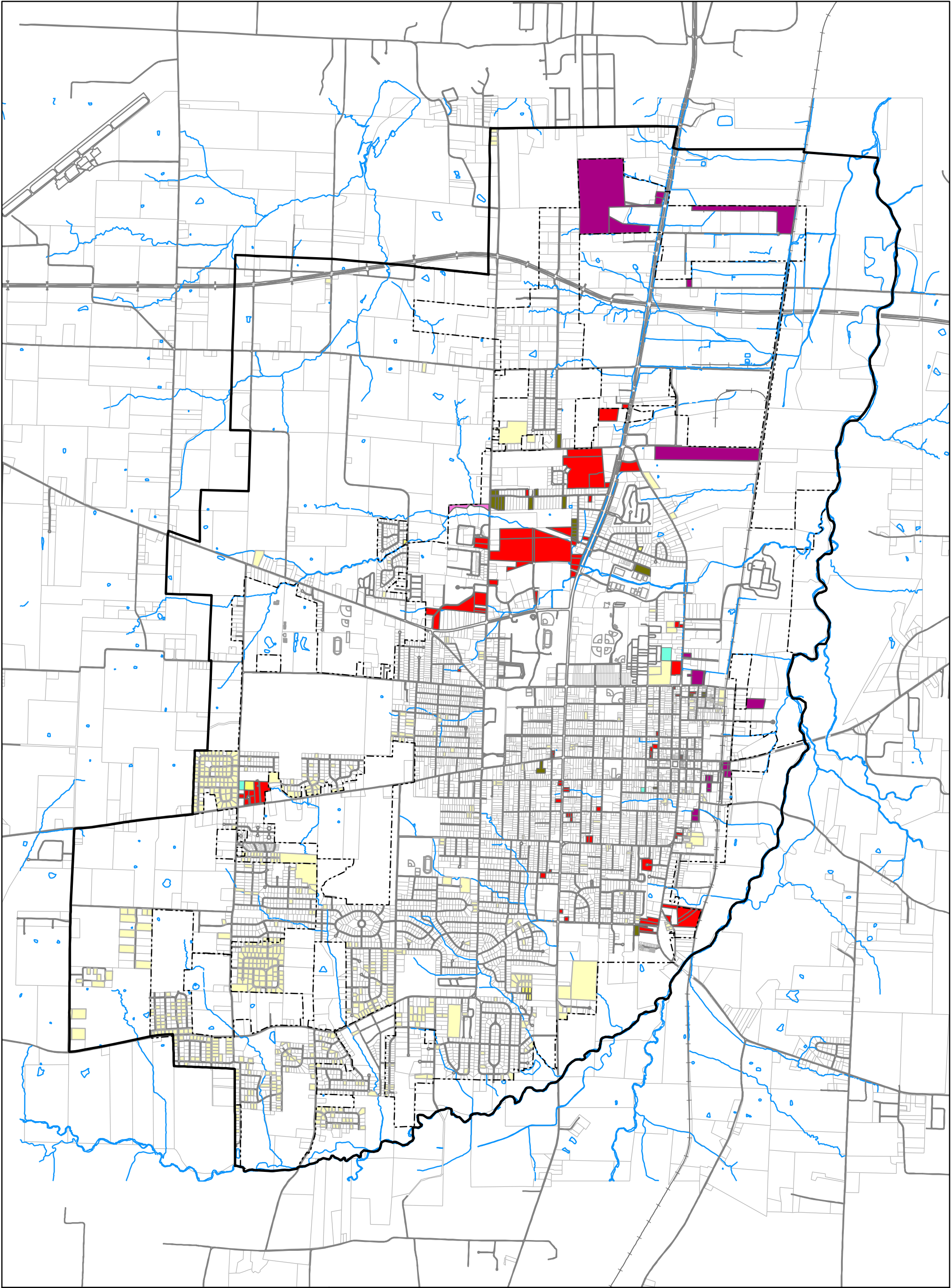
LU-6: Existing Agricultural Land Use

- Urban Services Area
- City Limits
- Agriculture



1 inch = 3,000 feet

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LU-7: Vacant Land

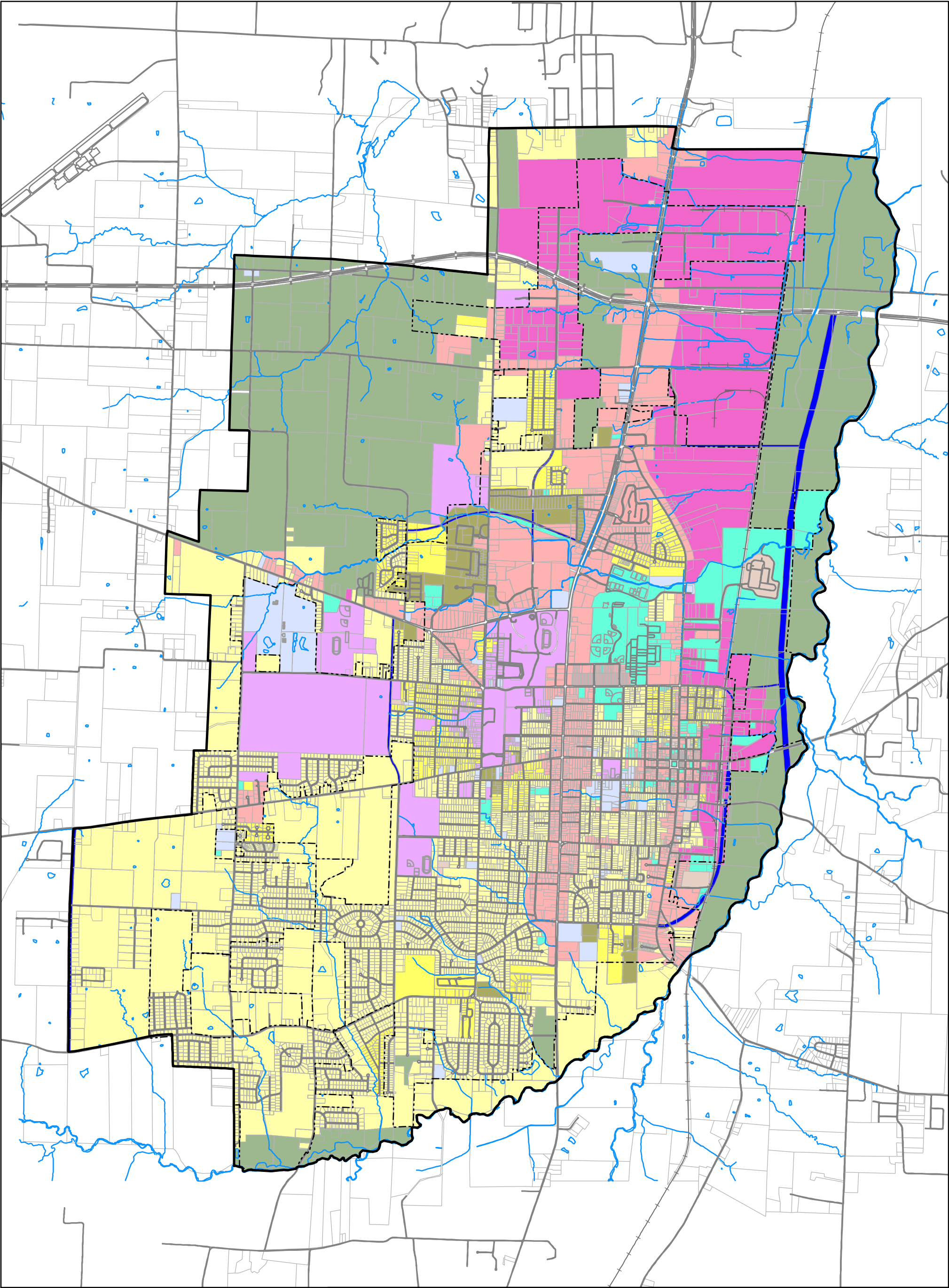
 Urban Services Area	 Manufactured Housing
 City Limits	 Education
 Agriculture	 Public Use
 Commercial	 Semi-Public Use
 Single Family	 Industrial
 Two Family	 Warehousing
 Multi Family	 Utilities
 Group Quarters	




1 inch = 3,000 feet



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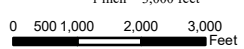
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LU-8: Future Land Use

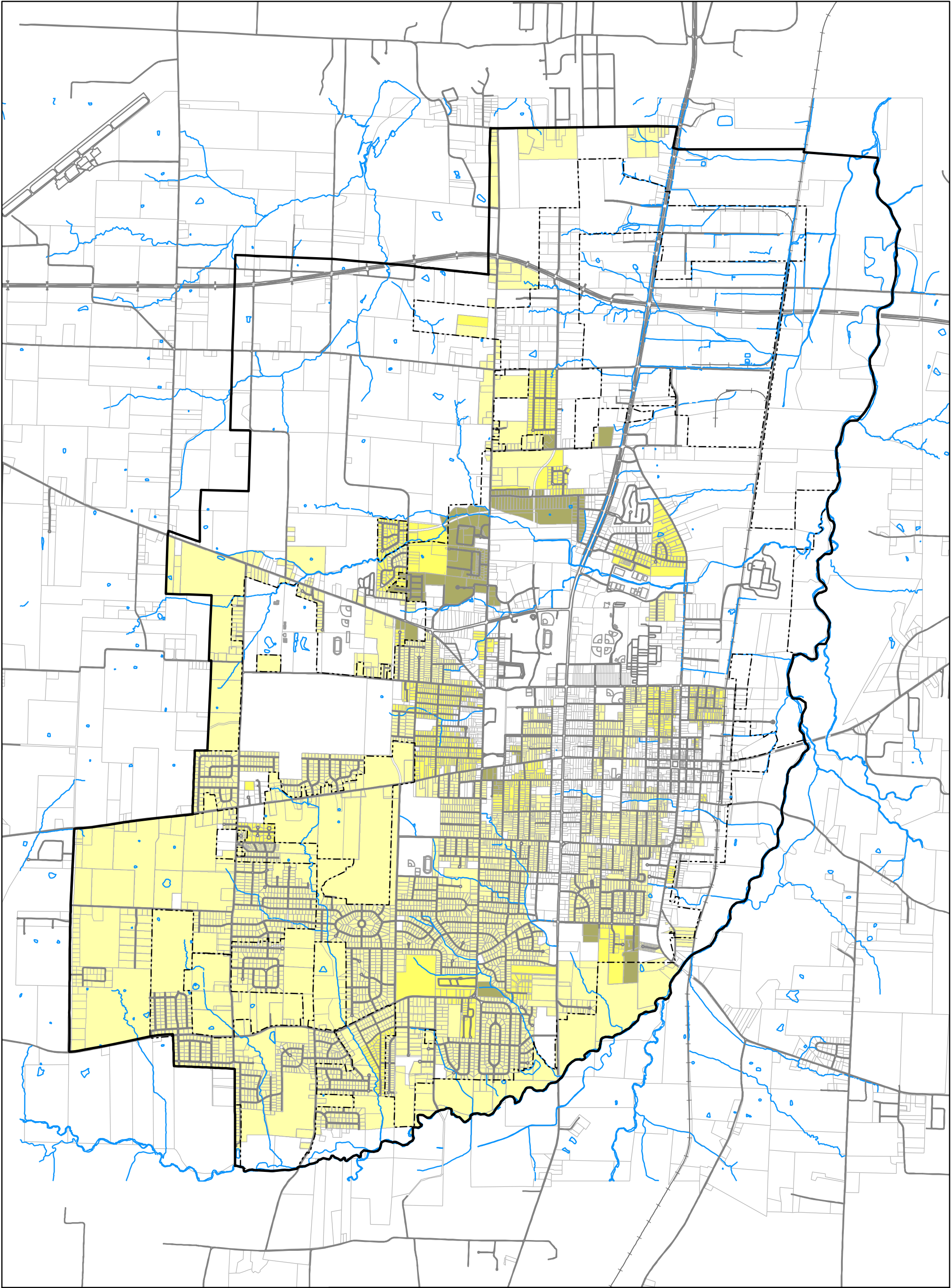
Urban Services Area	Education
City Limits	Public Use (Governmental)
Agriculture	Semi-Public Use (Institutional)
Commercial	Industrial
Low Density Residential	Transportation
Medium Density Residential	Utilities
High Density Residential	



1 inch = 3,000 feet








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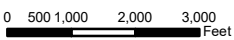
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LU-9: Future Residential Land Use

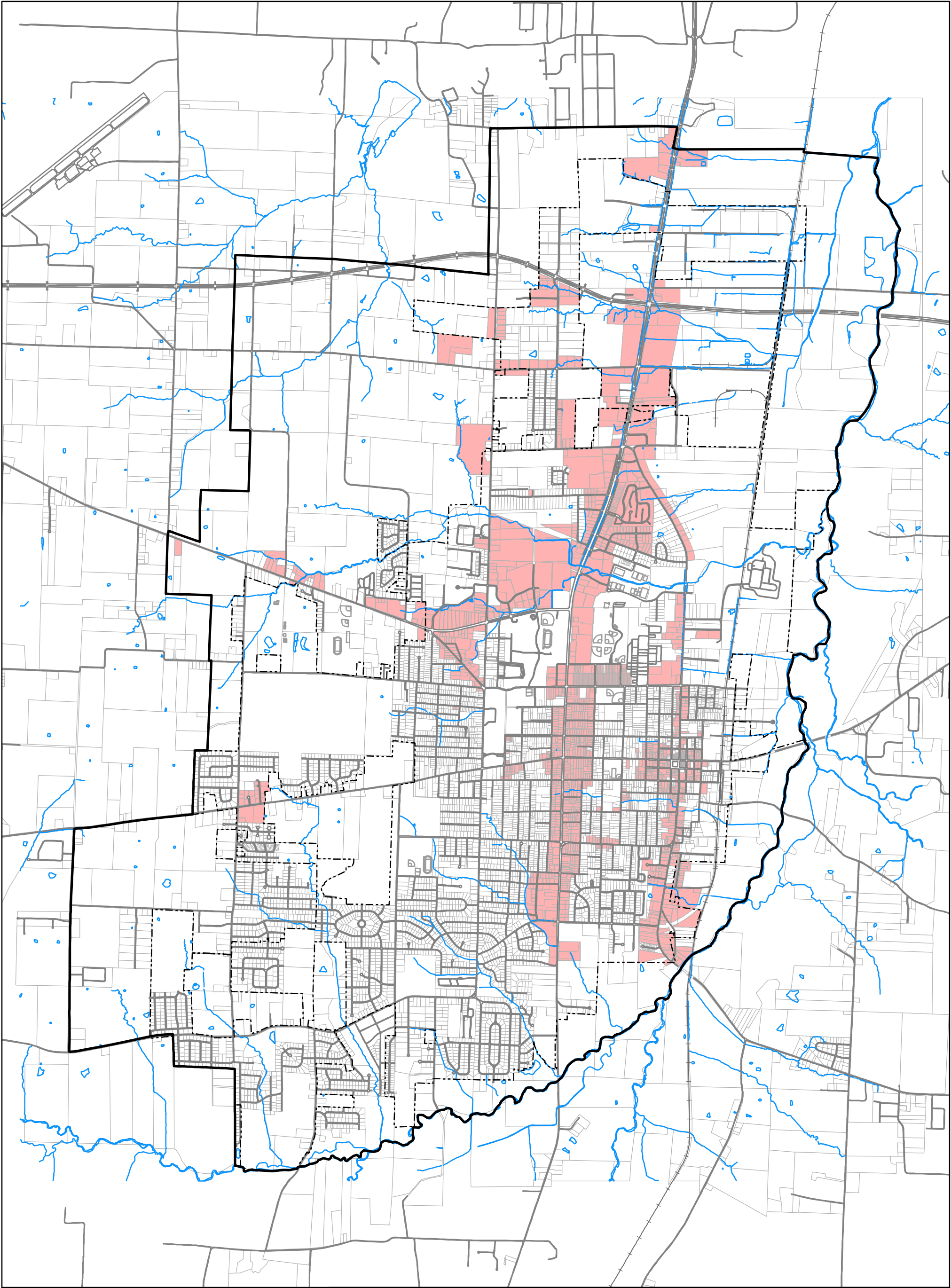
 Urban Services Area	 Medium Density Residential
 City Limits	 High Density Residential
 Low Density Residential	



1 inch = 3,000 feet



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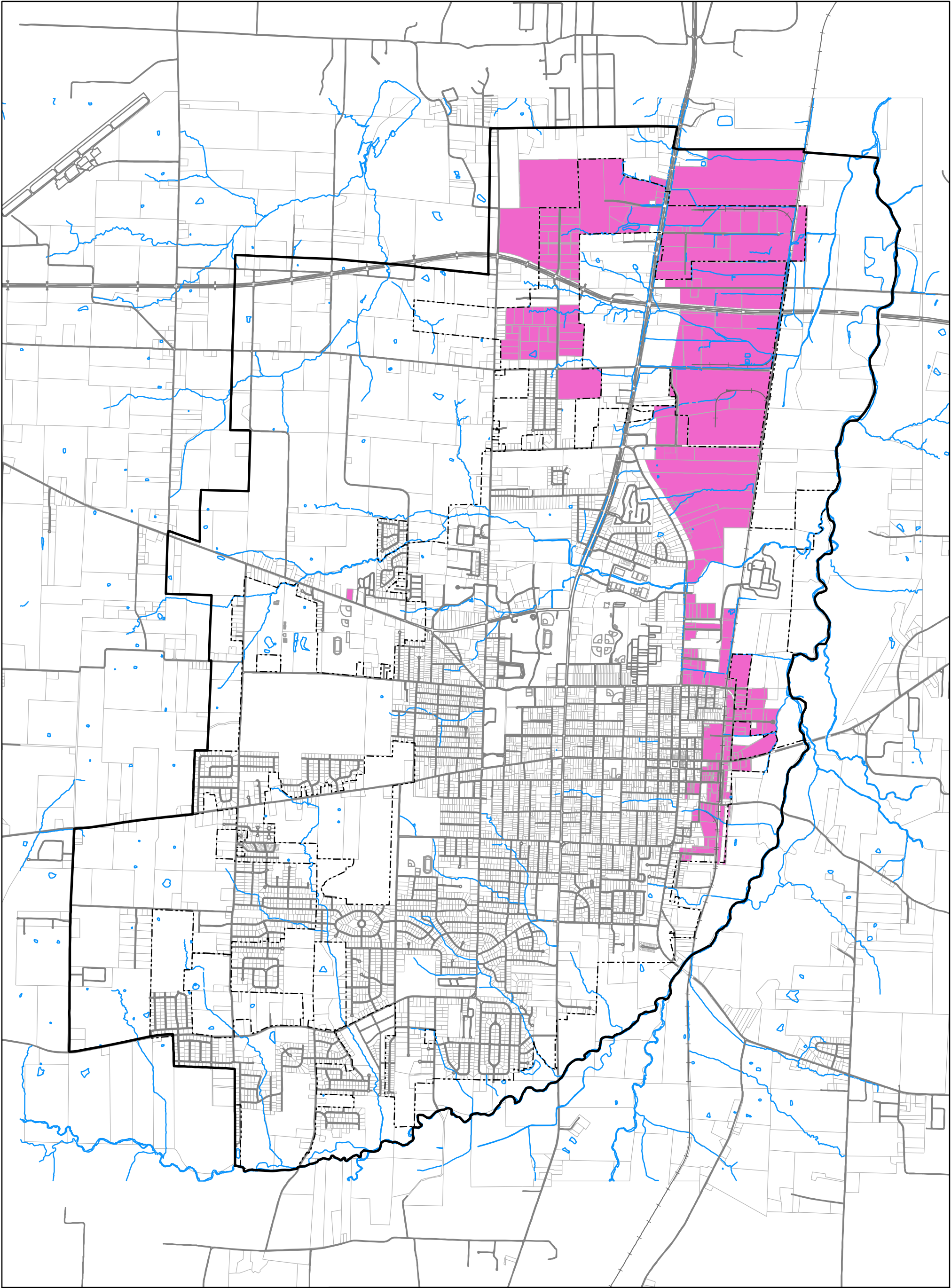
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LU-10: Future Commercial Land Use

- Urban Services Area
- City Limits
- Commercial




1 inch = 3,000 feet
0 500 1,000 2,000 3,000 Feet






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LU-11: Future Industrial Land Use




Urban Services Area



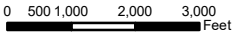
City Limits



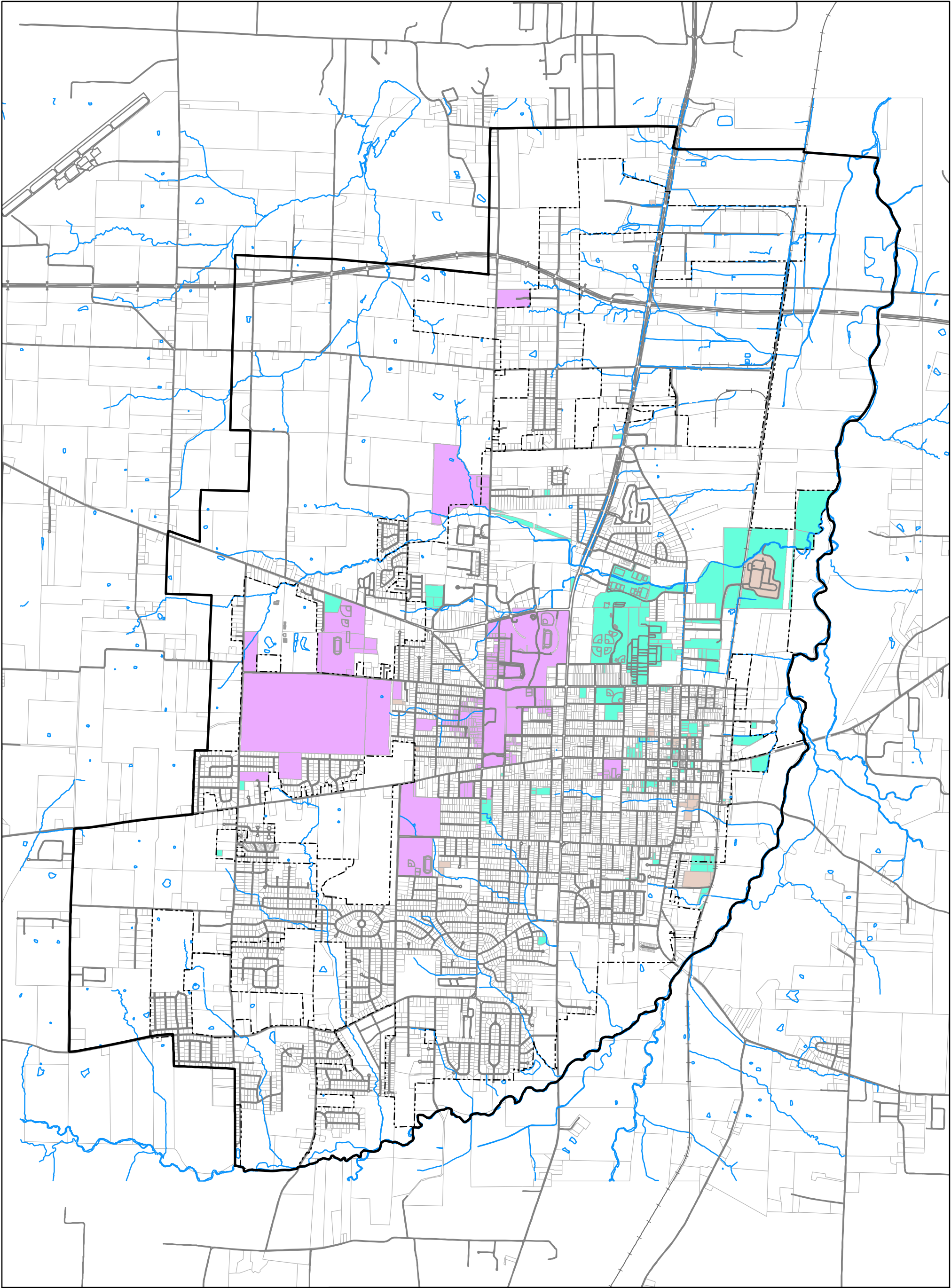
Industrial



1 inch = 3,000 feet








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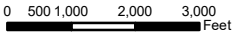
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LU-12: Future Public / Education / Utilities Land Use

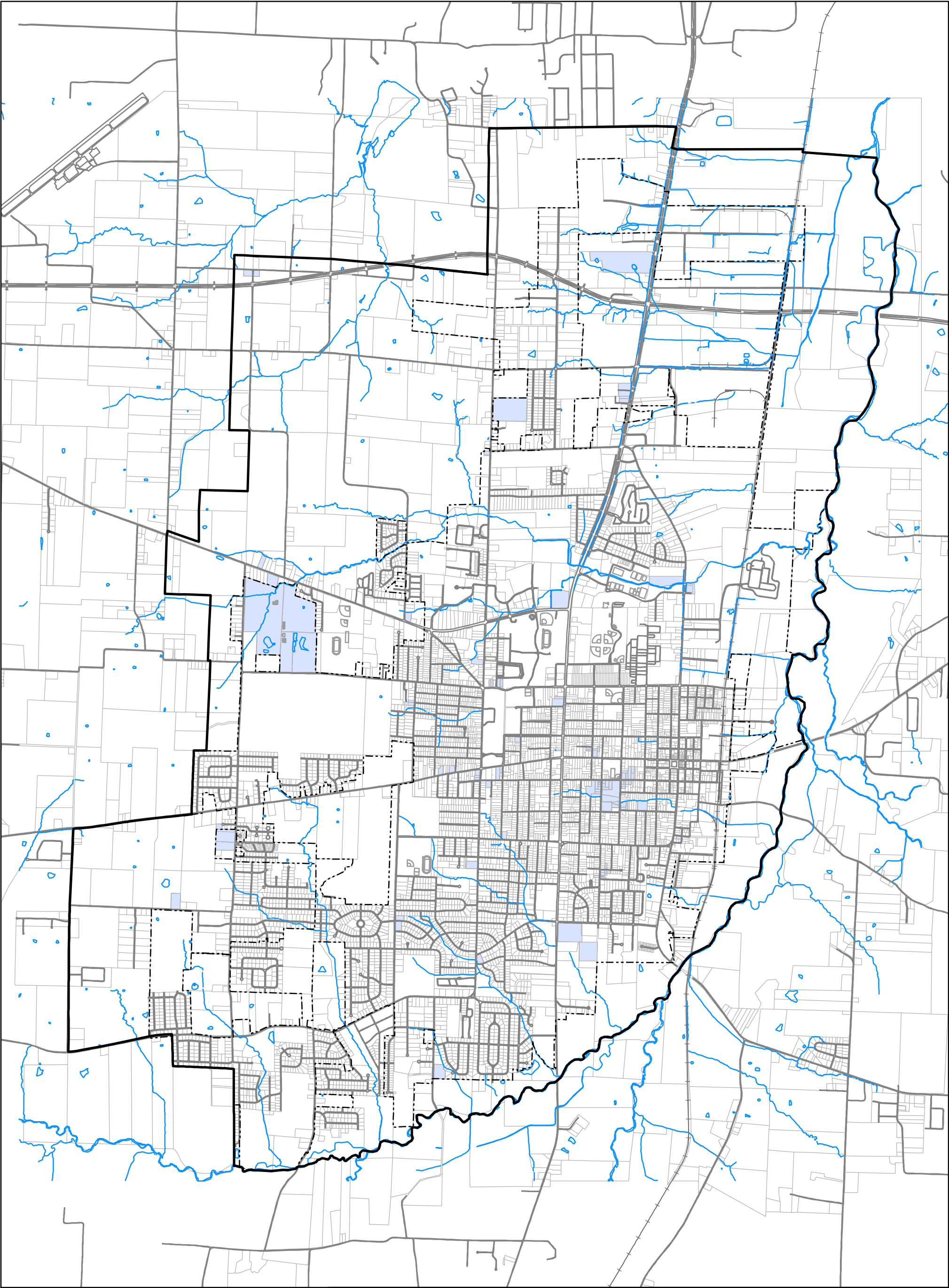
 Urban Services Area	 Education
 City Limits	 Utilities
 Public Use (Governmental)	



1 inch = 3,000 feet



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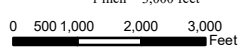
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LU-13: Future Semi-Public Land Use

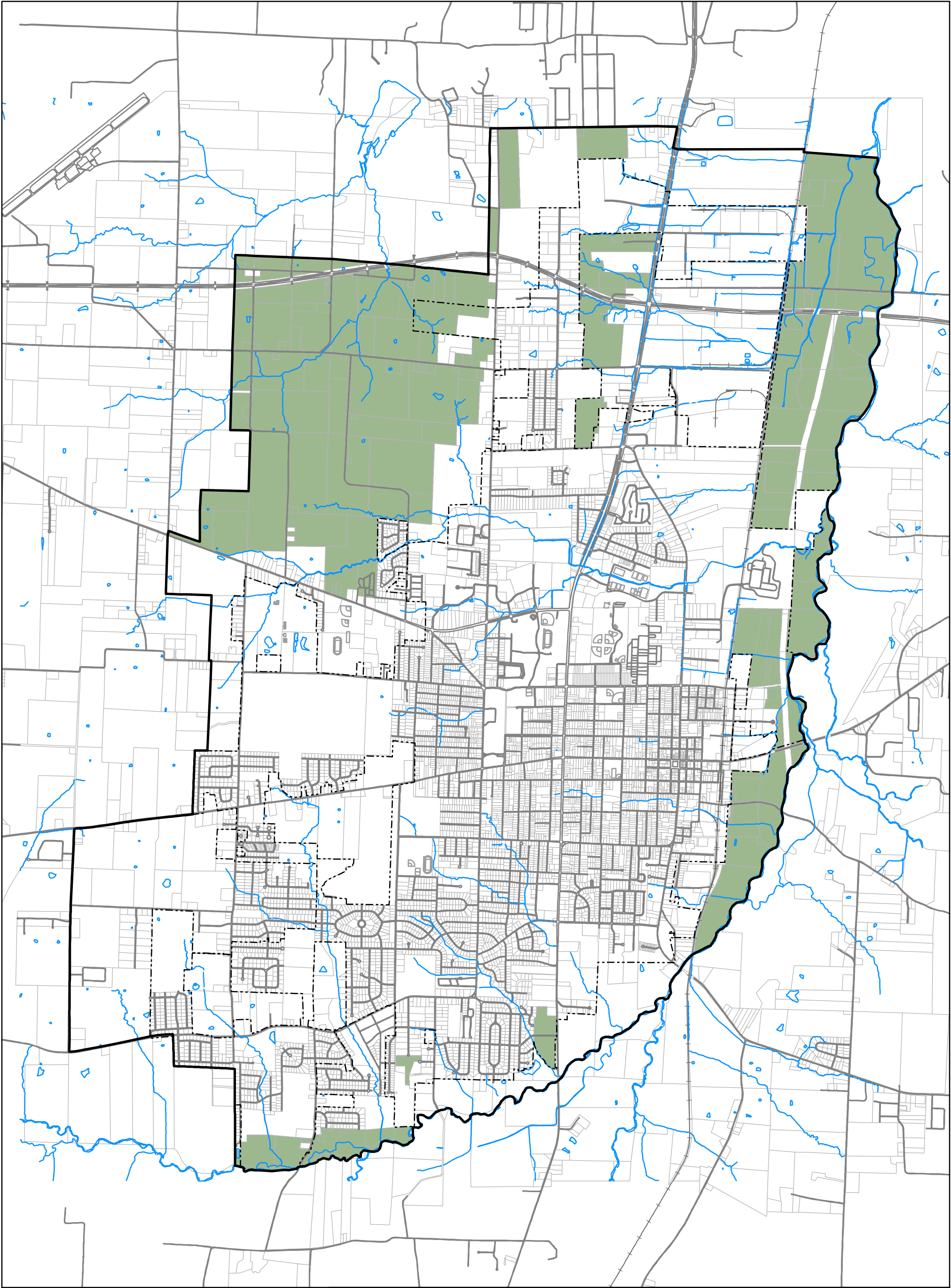
- Urban Services Area
- City Limits
- Semi-Public Use (Institutional)



1 inch = 3,000 feet



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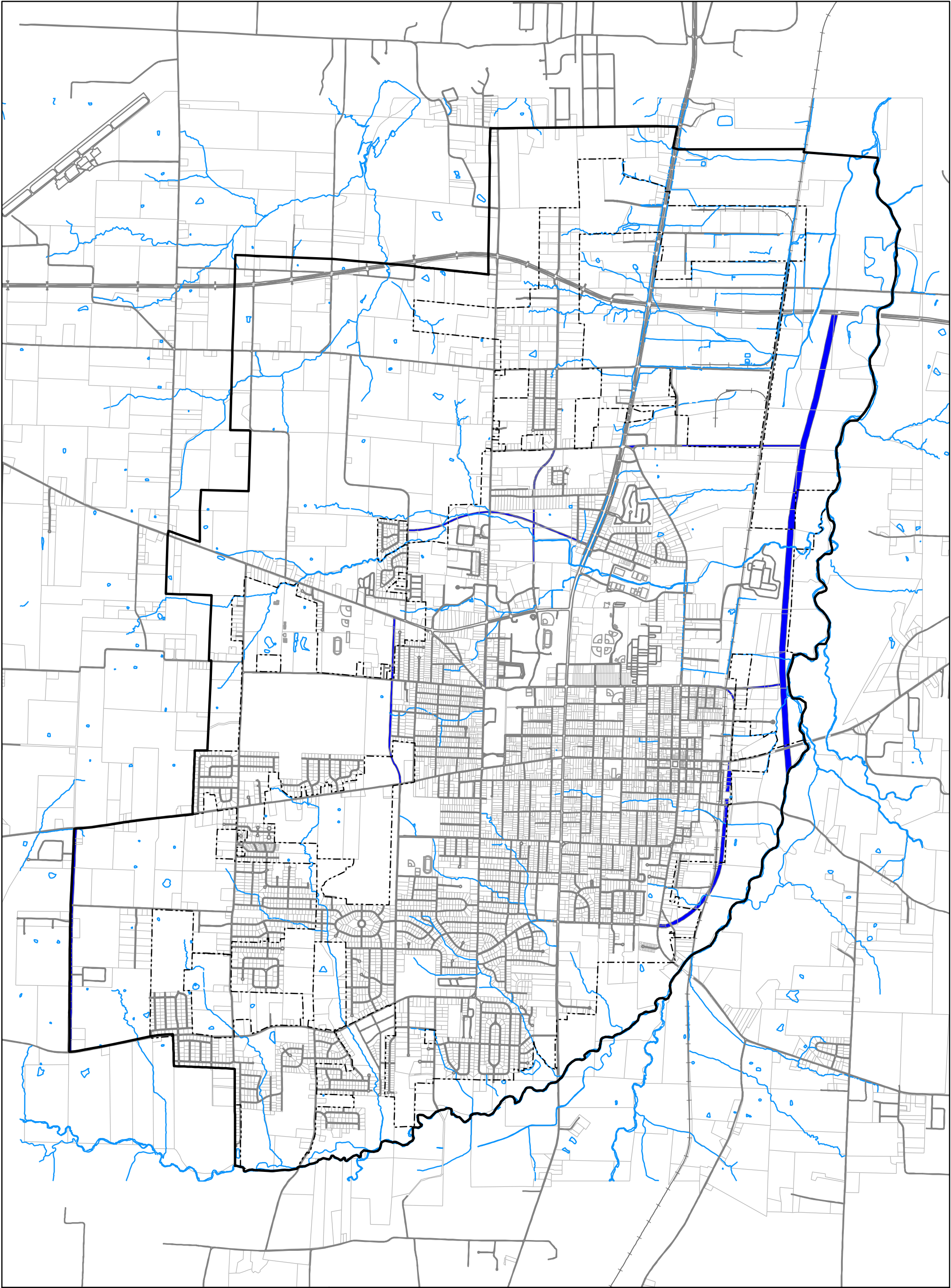
LU-14: Future Agricultural Land Use

- Urban Services Area
- City Limits
- Agriculture



1 inch = 3,000 feet

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LU-15: Future Transportation Land Use

- Urban Services Area
- City Limits
- Transportation



1 inch = 3,000 feet

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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

COMPREHENSIVE PLAN

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 3rd 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 provided¹. 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 characteristics².

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

²

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 classifications³, 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.

³ 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 4th Street and South 16th Street
- South 16th Street between Glendale Road and Main Street
- North 16th Street between Main Street and the five points intersection
- Chestnut Street between North 16th Street and North 4th Street
- North 4th Street between Chestnut Street and Main Street
- South 4th 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 16th 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 16th Street and US641
- North 4th Street between US641 and Chestnut Street
- Chestnut Street/Industrial Road between North 4th Street and KY 94, this segment is also known as KY2594

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- Sycamore Street between South 4th Street and South 16th Street
- Wiswell Road between South 16th Street and Chickory Drive
- Doran Road between Wiswell Road and Main Street
- North 18th 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 services⁴. The principles for Complete Streets come from the National Roadway Safety Strategy's (NRSS) Safe System⁵ 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

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

⁵ <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 2018⁶. 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

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

COMPREHENSIVE PLAN

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
Total	-	-	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%
Total Percentage	100%

Table 2 contains commuting information from the United States Census Bureau’s American Community Survey (ACS) ⁷. 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 funding⁸. 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

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

⁸ <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 months⁹. 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.¹⁰

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

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

¹⁰ <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 Murray¹¹.



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 KYTC¹². 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.

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

¹² <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 assists¹³. 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 12th 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 County¹⁴. 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

¹³ [2024 Murray PD AnnualReport.pdf](#)

¹⁴ <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 website¹⁵.

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

¹⁵ <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.¹⁶ 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 day¹⁷. 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.

¹⁶ <https://www.airnav.com>

¹⁷ <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 unclear¹⁸.

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 Memphis¹⁹. 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" route²⁰. This route traverses 5 different states (Illinois, Kentucky, Tennessee, Mississippi, and Louisiana) across 20 stations with endpoints in Chicago, Illinois and New Orleans, Louisiana.

¹⁸ <https://wkrra.com>

¹⁹ <https://www.gwrr.com>

²⁰ <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 available²¹. 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 roadways²².



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

²² <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 state²³ and federal²⁴ 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 city²⁵. 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

²³ <https://kyevcharging.com/>

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

²⁵ <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>	Location	Description	Total Cost Estimate	Priority
<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 th 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>	Location	Description	Total Cost Estimate	Priority
<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 th Street	Remove channelized right-turn lane from 4 th Street to Sycamore St.	N/A	-

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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

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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 Murray²⁶. 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 below²⁷. 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 th Street (US641)	\$1,381,823.79	0%

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

²⁷ <https://datamart.kytc.ky.gov/>

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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.

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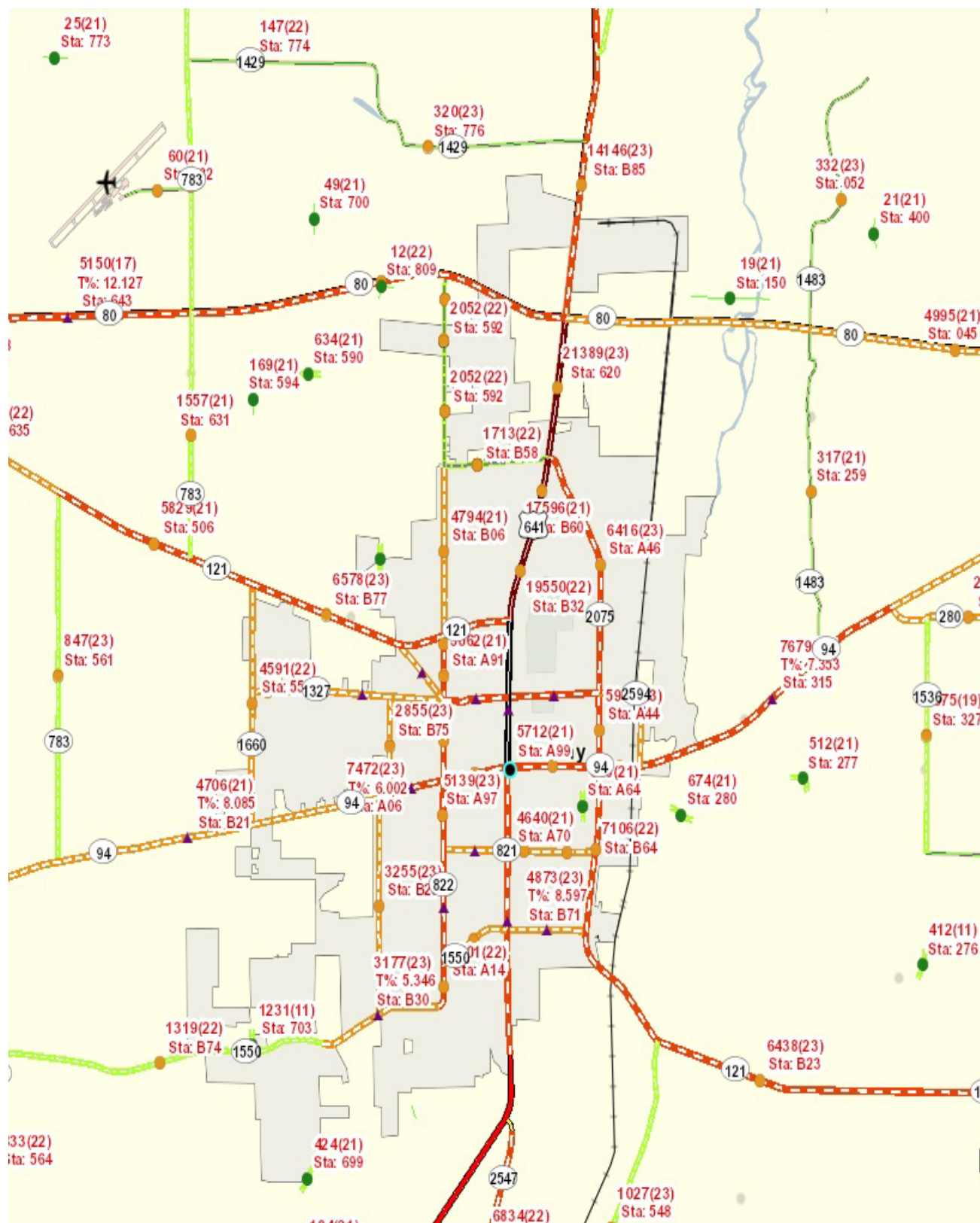
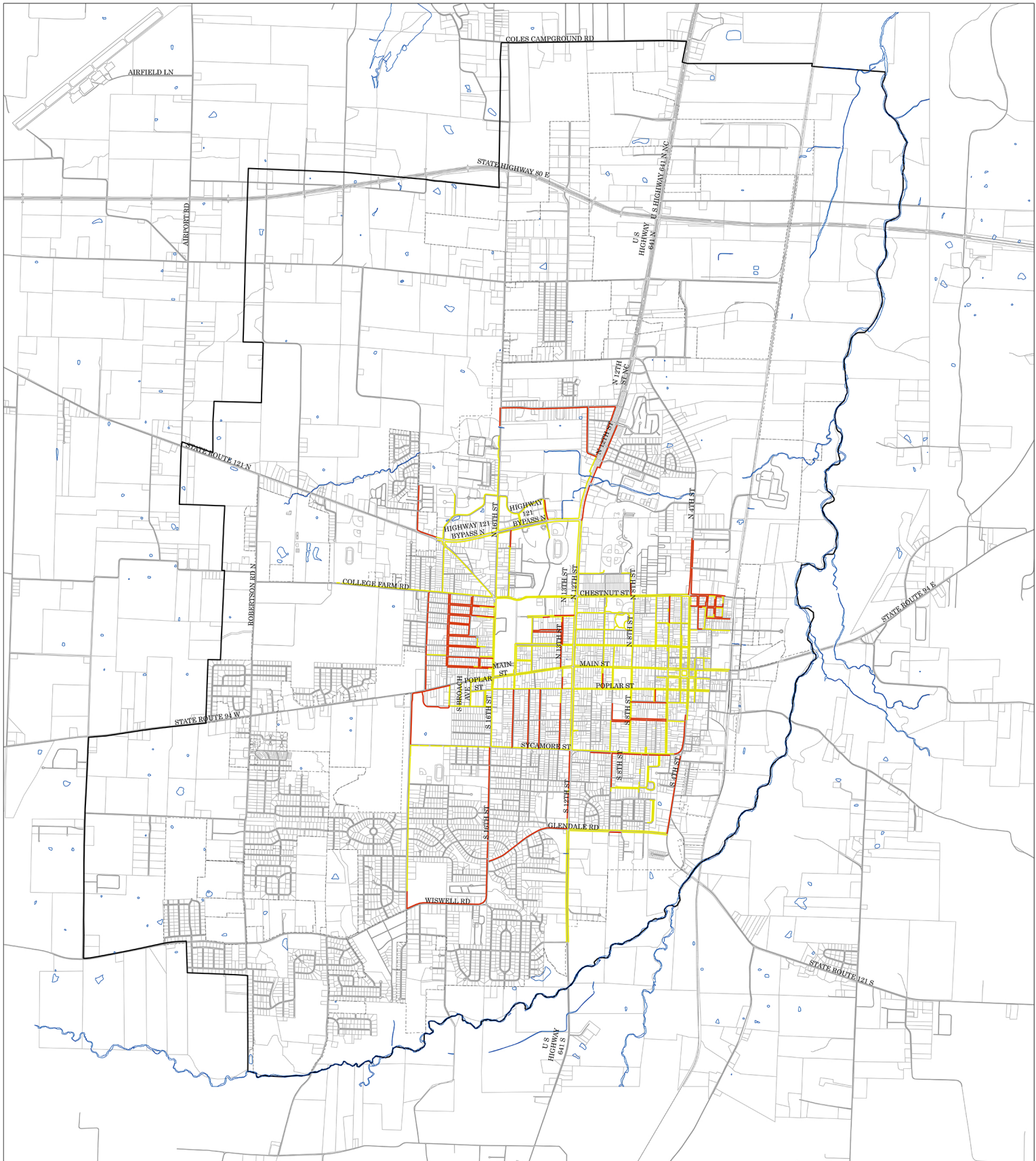



Figure 1






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

Figure 2

Scale: 1" = 1000'

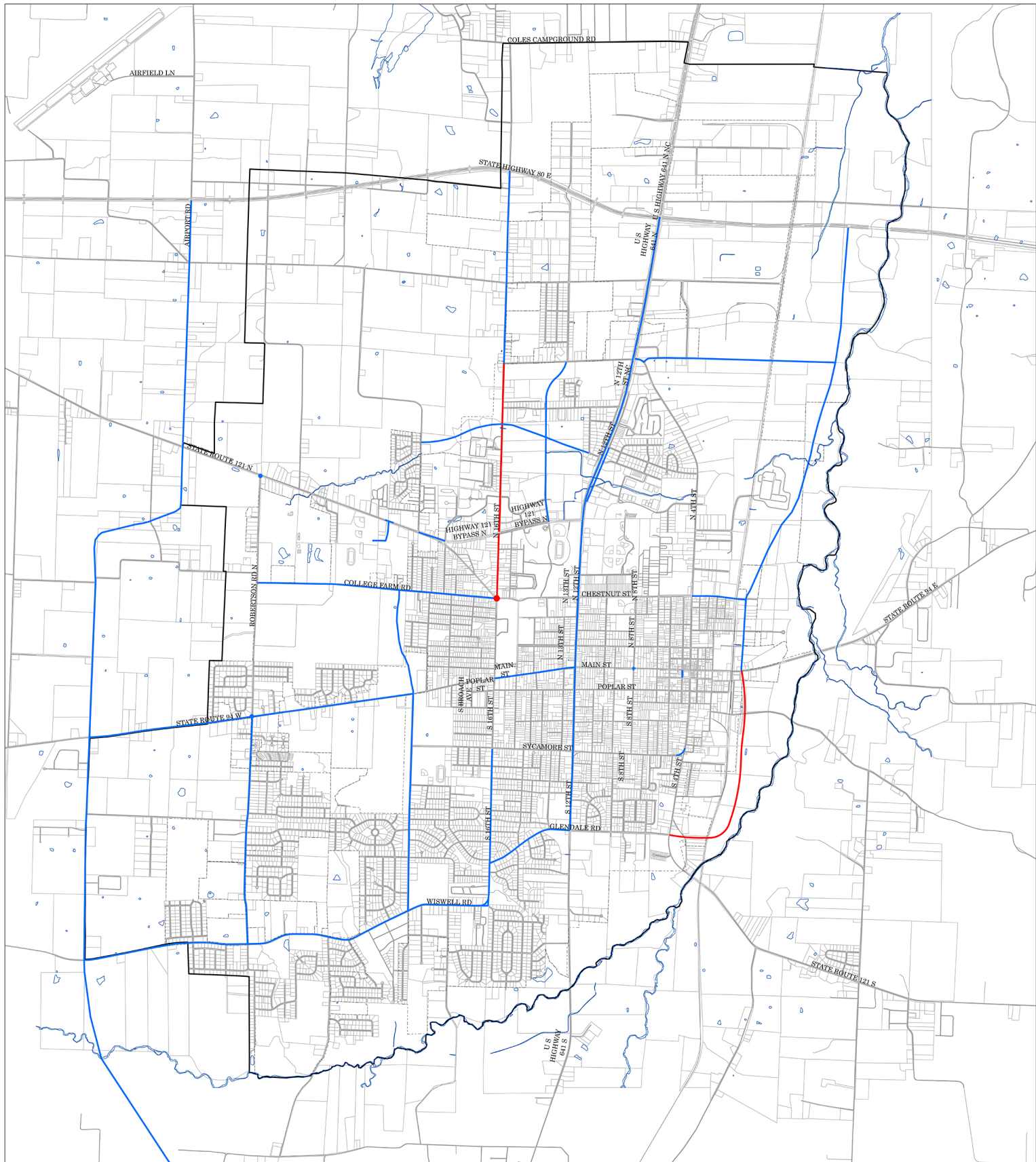


Original base map produced by photogrammetric methods from photography dated 01 April, 1998 and updated from digital orthophotography dated 02 March, 2017. This mapping conforms to National Map Accuracy Standards. Control based on 1983 N.A.D. All utility system data has been transferred from existing 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: SidewalkPlan2025v4.pdf



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

Figure 3

Scale: 1" = 1000'

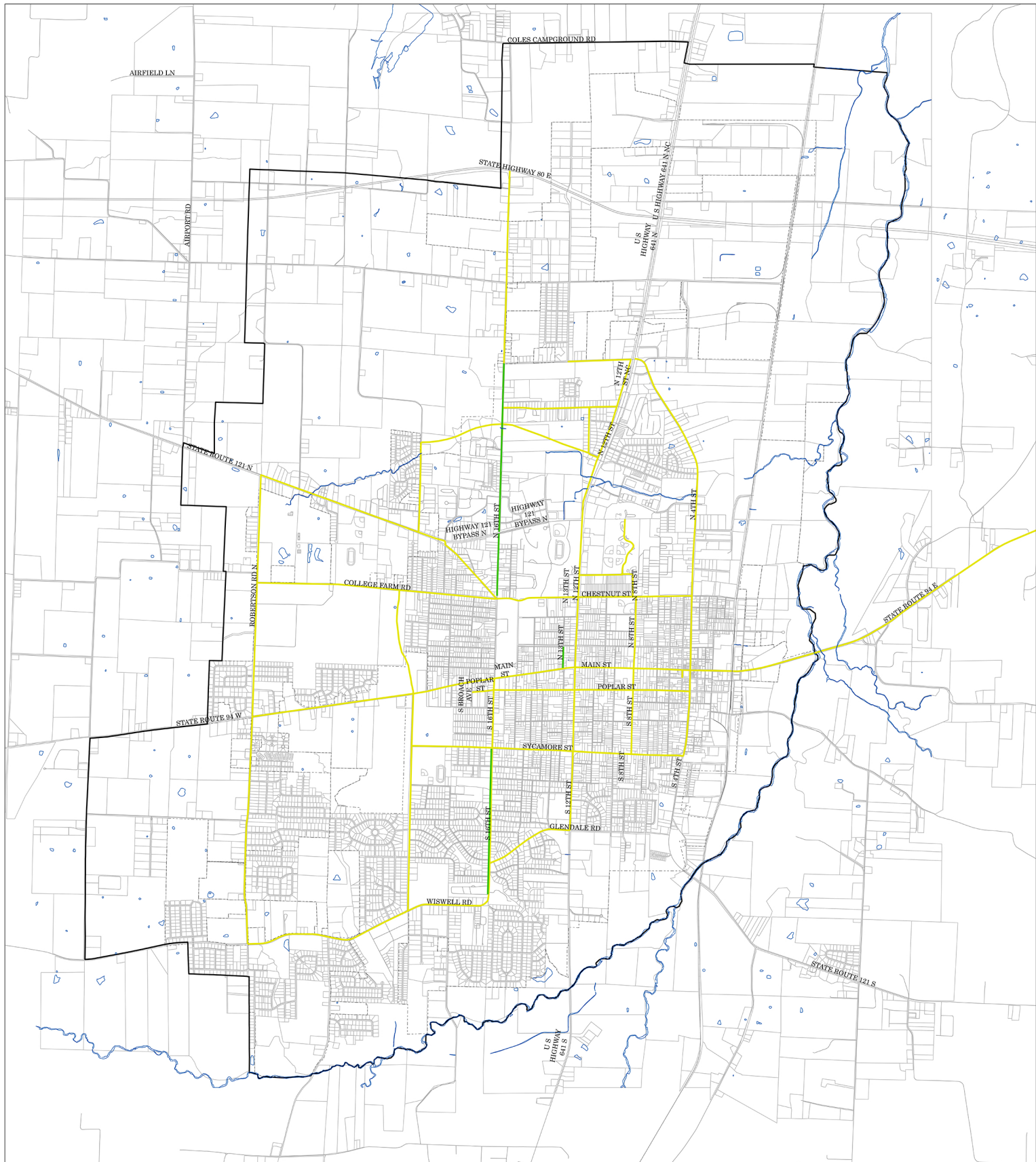


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Filename: PlannedTransportationImprovements2025V5.pdf



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'



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.

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Filename: SdkwskPlan0205v2.pdf

Figure 4

COMMUNITY FACILITIES ELEMENT

INTRODUCTION

Kentucky Revised Statutes (KRS) 100.187 specifies the content of a comprehensive plan in Kentucky. KRS 100.187 (4) states that comprehensive plan shall include a community facilities plan element which shall show proposals for the most desirable, appropriate, economic, and feasible pattern for the general location, character, and the extent of public and semipublic buildings, land, and facilities for specified times as far into the future as is reasonable to foresee. The facilities may include, without being limited to, parks and recreation, schools and other educational or cultural facilities, libraries, churches, hospitals, social welfare and medical facilities, utilities, fire stations, police stations, jails, or other public office or administrative facilities.

KRS 100.187 (6) states the comprehensive plan may include any additional elements such as, without being limited to, community renewal, housing, flood control, pollution, conservation, natural resources, regional impact, historic preservation, and other programs which in the judgment of the planning commission will further serve the purposes of the comprehensive plan.

These two paragraphs from the Kentucky Statutes frame the requirements of the Community Facilities Plan. The Murray Community Facilities Plan is divided into two sections; utilities and other community facilities. The focus of the Community Facilities Plan is to ensure that adequate lands and facilities are available to support the community now and into the future.

UTILITIES

Utilities play a large part in the growth and development of an area. Keeping utilities operating efficiently is a challenge to the company or governmental entity responsible for the utility. This section of the Community Facilities Element of the Murray Comprehensive Plan addresses water supply, wastewater, stormwater, natural gas, electricity, telecommunications, and solid waste. The current status of each utility is generally described. In addition, future plans of each utility related to serving its existing and future customers are delineated. Maps showing service areas and/or system facilities are included for all utilities except solid waste.

Goals and Objectives

Goals and objectives have been adopted by the City of Murray to address the major issues and concerns that are and will be affecting the City of Murray now and into the future. The goals and objectives that relate to the utilities section of the Community Facilities Plan are listed below. The list includes the general area of each goal followed by an objective.

(1) Public Utilities and Services – Continuously review and monitor city infrastructure services and practices (water, electricity, sewer, natural gas, sanitation, telecommunications, stormwater) to identify new ways to deliver these services in an efficient, cost effective manner while taking into consideration the impact of any new infrastructure.

(2) Public Utilities and Services – Provide for the safest and most efficient integration of cellular antenna towers for cellular or personal communications services within the community, primarily through private enterprise, but in cooperation with government.

(3) Environment – Continue to promote community outreach programs such as “Make a Difference Day” and “Adopt a Highway” that stress environmental protection

Water System

Planning

The Murray Water System supplies potable water to the City of Murray and portions of surrounding Calloway County. Administrative office facilities for the water system are located on Andrus Drive. The water system serves approximately 7,682 residential, 1,447 commercial, and 11 industrial customers. The water system currently has a water loss of approximately 9 percent. Plans for the water system are summarized in the “Water Distribution System Master Plan” dated September 2014. The plan described Murray’s water system and identified future system needs out to year 2033. This summary breaks down the plan into the areas of Source, Treatment, Pumps, Storage, Distribution, and Future Plans.

Each of these areas is described below.

Source

Groundwater is used as the raw water source. There are three well fields consisting of six wells, each with a capacity between 700 to 1,200 gallons per minute (gpm), that pump water to the Murray water treatment plant for processing. The water is chemically and physically treated, then disinfected and stored in two 1,000,000-gallon clearwells.

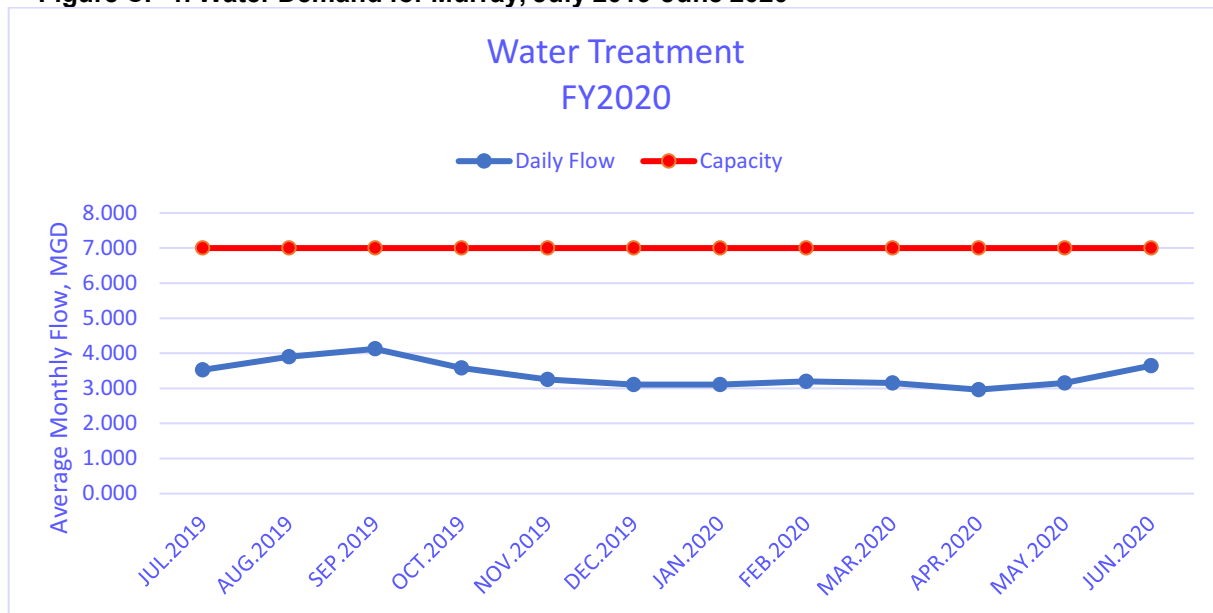
Treatment

The water treatment plant has a rated capacity of 7 million gallons per day (MGD). Figure CF-1 shows the daily average flow and plant capacity for the period of July 2019 to June 2020. Daily maximum pumping volumes ranged from 4.61 MGD in September 2019 to 3.40 MGD in December 2019. The 2014 plan projected the peak water demand to be 7.76 MGD by the year 2033.



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Figure CF-1. Water Demand for Murray, July 2019-June 2020



Pumps

Three new vertical turbine high service pumps are available to draw water from the clearwells and to pump it up to the elevated storage tanks in the distribution system. All three pumps have a rated capacity of 3,000 gpm each (4.3 MGD each). There is space provided for a fourth high service pump to be installed in the near future.

Storage

In addition to the two clearwells at the water treatment plant, there are four storage tanks in the distribution system: two are standpipes on the west side of the city and two are elevated tanks, one at the northern edge of the system near the Industrial Park on 641 North, and one out 94 West. Table CF-1 summarizes the pertinent data associated with each of the storage facilities.

Table CF-1 Existing Storage Facilities				
Storage Facility	Location	Type	Overflow Elevation (ft.)	Available Storage (gal.)
Tank A	Intersection of 18 th and Miller Streets	Standpipe	663.00	1,250,000
Tank B	Robertson Road South	Standpipe	667.00	1,000,000
Tank C	Highway 641 – North	Elevated	657.39	475,000
Tank D	Hudson Road off KY- 94 West	Elevated	715.00	200,000
Clearwells	Water Treatment Plant (2-1,000,000 ea.)	Reservoir	488.00	2,000,000
TOTAL				4,925,000
Source: Murray Water Distribution System Master Plan, 2014				

Distribution

The central portion of the distribution system is a looped grid system, which allows for continuous service should one portion be temporarily closed for repairs. Water from the treatment plant to the system storage tanks flows through the distribution grid and not through a centralized transmission system. With the acquisition of Water District #3, in 2013, a booster pump station was added at the Robertson Road standpipe to pump water to a new elevated storage tank on Hudson Road off KY 94 West for increased pressure to Water District #3. The City of Murray also finalized the acquisition of Water District #2 (KY 121 South) in May 2020.

Upgrades to the distribution system were made as a result of the 2014 plan to obtain increased pressures to satisfy fire flow demands and to enhance system function in certain parts of the system. The control tank for the system is the Robertson Road South tank, and the telemetry system to record tank levels and control system pressure has been implemented (SCADA System). Tank levels are monitored at the Water Treatment Plant.

Future Plans

Murray Public Utilities is always evaluating and analyzing where improvements to the system can be made based upon demand and system pressures. With limited financial resources, these plans have to be prioritized each year based upon available capital budgets made available by Council. Smaller projects are accomplished by in-house distribution crews, while larger projects need to be bid out to water system construction companies. Some high priority plans are shown in Table CF-2.

Table CF-2: Short Term Planned Water System Improvements	
Improvements	Location
16" transmission main	8 th and Olive Streets to Chestnut, to 7 th St. entrance to cemetery, to Bee Creek Dr. to 12" water main on east side of 4 th St.
4 th St main relocation	Relocate and upsize to 8" main out of street to west side of street right-of-way, from Walnut St. to Chestnut St.
Main St main relocation	Relocate and upsize to 8" main out of right-of-way, from 5 th St. to 12 th St.
Water Distribution System Hydraulic Model	System wide distribution model using InfoWater software by Innovyze, or equal, to be compatible with ESRI GIS database of water distribution assets.
In-house small water main replacement	Annual list of small water main project replacements for mains 4" or less in diameter with new 6" water mains.
Source: Murray Public Utilities	

An electrical design of the power system for the water plant has been completed, which calls for a new electrical distribution system and standby generator system for the water plant and all the well fields. Continued improvements to the SCADA system and automatic monitoring of the treatment process are in the upgrade project. WTP improvements total around \$2.5 million dollars, and the project should go out to bid in the summer of 2021. Improvement to the distribution system have also been planned, including replacing water mains 4 inch or less in size, more loop connections to improve distribution and redundancy, and fire protection. Water distribution improvements total 12 million dollars. Lastly, the metering of

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the water flow throughout the system and to our customers will be upgraded to take advantage of technological advances in cellular metering systems AMI (\$500,000 – this price also includes the automated gas meter readings),

Table CF-3: Long Range Water System Improvements

Improvements	Location
8,640-l.f. of 12-inch	Along Roy Graham Road between Highway 121 and Poor Farm Road (Loop)
3,300-l.f. of 12-inch	Along Poor Farm Road between Roy Graham Road and Bailey Road (Loop)
4,830-l.f. of 12-inch	Along Poor Farm Road between Bailey and Brinn Roads (Loop)
7,300-l.f. of 8-inch	Along Bailey Road between Poor Farm Road and Highway 121
1.0 MG elevated storage (NW)	At the intersection of Robertson Road North and State Route 121 N (#23)
700-l.f. of 12-inch	From the proposed Robertson Road North Tank to the intersection of Robertson Road North and State Route 121 N

Map CF-1 shows the Murray Water System.

Wastewater System

Planning

The Murray Wastewater System supplies wastewater treatment to the City of Murray and portions of surrounding Calloway County. Administrative offices for the wastewater system are located on Andrus Drive in the same building as the water system operating offices. The system currently serves approximately 6492 residential, 1317 commercial, and 9 Industrial customers. The wastewater system is summarized in the “Wastewater Facilities Plan Update for the City of Murray” dated December 2009. The plan identifies future system needs up to year 2035. This summary breaks down the plan into the areas of Collection, Transmission, Treatment/Disposal, and Future Plans. Each of these areas are described below.



The City of Murray entered into an Agreed Order with the Kentucky Division of Enforcement in 2015 to upgrade two main interceptor lines, upgrade the East Fork Clark's River Pump Station, and upgrade and expand the Bee Creek Wastewater Treatment Plant. The cost of these Agreed Order projects totaled \$61,100.00. These projects will be finished in 2021.

Collection

The Murray wastewater collection system is a separate sanitary sewer system that includes

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gravity sewers ranging in size from 6-inches to 48 inches in diameter. Due to topography, the system is primarily gravity flow. The total population served by the sewer system is estimated to be approximately 19,000 (2.28 persons per household). The old Bee Creek interceptor was upgraded in 2015 to a 24" pipe size with new manholes at a cost of \$1,538,095. The East Fork Clark's River inceptor was upgraded in 2016 to a 30" and a 24" pipe size with new manholes for \$2,667,317.

Transmission

There are six (6) wastewater pumping stations. The largest of the pumping stations is the 7.0 MGD East Fork of Clark's River Pump Station located near the intersection of the Clark's River and KY 121 South. The station was constructed in 1974, expanded in 1982, and renovated in 1997, and totally upgraded in 2015 through 2021 for \$3,225,000. The new East Fork Clark's River Pump Station now has two pumping stations, each rated at 3.5 MGD; one for normal flow and the other for excess stormwater flows Table CF-4 summarizes the pertinent data associated with each of the pumping stations.



Table CF-4: Existing Pumping Stations

ID	Pumping Station	Number of Pumps and Pump Type	Estimated GPM / pump
PS No. 1	East Fork Clarks River (Wet)	(3) Dry Pit	2,300
PS No. 1	East Fork Clarks River (Dry)	(3) Submersible	2,300
PS No. 2	Old Benton Road No. 1	(2) Submersible	95
PS No. 3	Old Benton Road No. 2	(2) Submersible	125
PS No. 4	Industrial Park	(2) Submersible	240
PS No. 5	Poor Farm Road	(2) Suction Lift	220
PS No. 6	BP Station/641N	(2) Grinder	120

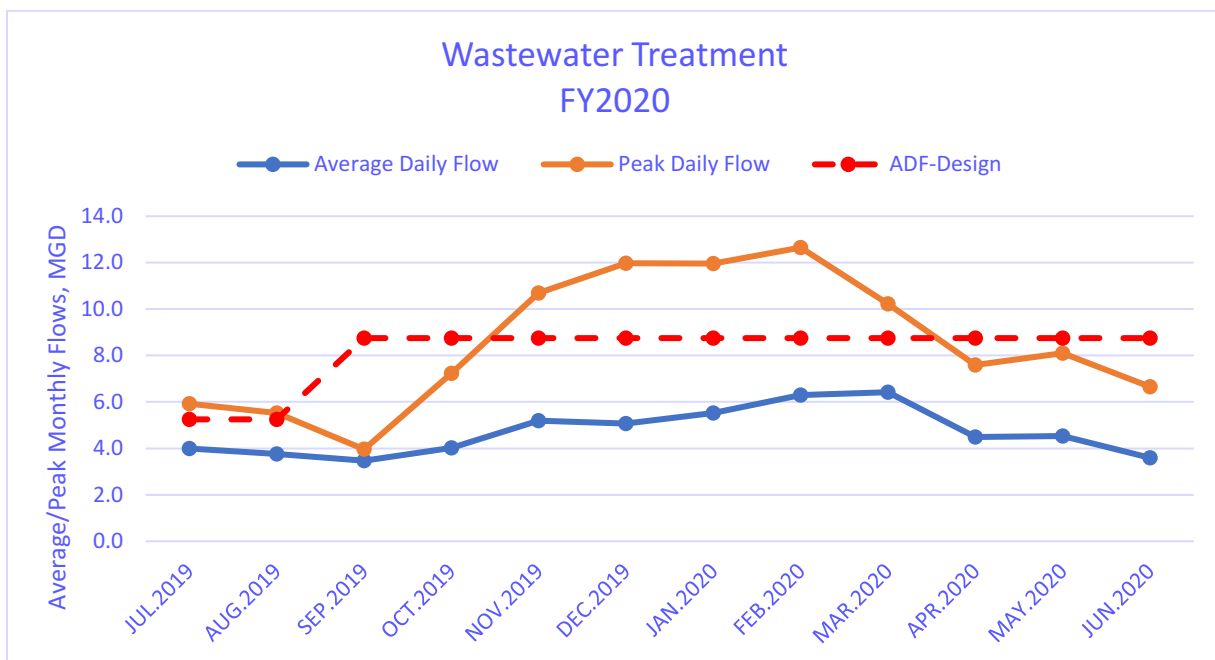
Source: Wastewater Facilities Plan Update for Murray, 2014

Treatment / Disposal

The Bee Creek Water Resource Recovery Facility in Murray is located on CC Lowry Drive at the southeast intersection of the KWT Railroad and Bee Creek. The plant discharges into Bee Creek, which is a wet weather tributary to the East Fork Clark's River. The facility has a design average treatment capacity of 8.75 million gallons per day (MGD) with a design peak hydraulic capacity of 24.0 MGD. Figure CF-2 shows the daily average flow and peak daily flow for the period of July 2019 to June 2020. The daily average flow to the facility ranged from 3.5 MGD in September 2019 to 6.4 MGD in March 2020. The peak daily flow during this same time period ranged from 3.96 MGD in September 2019 to 12.65 MGD in February 2020. Average daily wastewater flow projections for the year 2035 were estimated by the plan to be 8.75 MGD with maximum daily flows of 24 MGD.

The new treatment process consists of fine screening, followed by grit removal, influent pumping, and flow measurement. A new Vertical Loop Reactor Biological process for enhanced nutrient removal is followed by the existing three oxidation ditches for biological treatment, eight final clarifiers (three of which are new), water/solids separation, ultraviolet light disinfection, and then effluent pumping. Sludge is treated using the existing Cannibal Solids Reduction Process (which has been upgraded) and then sludge dewatered for disposal to a sanitary landfill.

Figure CF-2. Flow at the Murray Wastewater Plant, July 2019 - June 2020



Future Plans

Murray has designed five new 18" PVC interceptor lines to replace the existing 12" VCP lines that tie into the East Fork Clark's River Interceptor. Construction of lines #1 and #3 are now complete. There are two existing interceptors that feed the Bee Creek Interceptor that need to

be upgraded in the future. There is a new north interceptor in design to serve the north and northwest side of Murray, consisting of 36" and 24" lines and a smaller feeder line to that interceptor. This line will eliminate four of the existing pump stations and the North Elementary School packaged treatment plant that has been giving problems. The north interceptor will provide gravity service to Max Hurt Drive and the Industrial Parks. All of these projects total more than \$23,660,000 in improvements.

At the Bee Creek Water Resource Recovery Facility there are conceptual plans to expand/upgrade the sludge dewatering system, expand the MLSS screening process, provide for nutrient recovery for Nitrogen and Phosphorus, and add Per Acidic Acid (PAA) disinfection to reduce the energy demand of the UV Light Disinfection process, and even add a solar energy grid to provide up to 30% of the plant's energy needs from sunlight. These projects could total around \$10 million dollars of capital projects in the next 5-10 years.

Murray is working on an update to its wastewater collection system master plan that includes a hydraulic model of the system. This effort should better define the City's future wastewater needs for years to come. Map CF-2 shows the Murray Wastewater System.

Stormwater Quality Management

Planning

The City of Murray's stormwater quality management activities are summarized in the "City of Murray Stormwater Quality Management Plan 2018." The plan is broken down into seven general categories; Local Water Resources, Public Education and Outreach, Public Involvement and Participation, Illicit Discharge Detection and Elimination, Construction Site Runoff Control, Post Construction Stormwater Management, and Pollution Prevention/Good Housekeeping for municipal operations. The plan addresses community involvement and communication. The stormwater program in Murray is supervised by the stormwater supervisor who reports to the Director of Public Works & Utilities. Offices are located on Andrus Drive.

Local Water Resources

The main surface water bodies in Calloway County are the Clarks River, Bee Creek, and Kentucky Lake. Kentucky Lake is the largest body of water in the county, but is located on the east border of Calloway County outside of the permitted stormwater area. Clarks River and Bee Creek reside within the East Fork Clarks River and Middle Fork Clarks River watersheds, located within the Tennessee River Basin.

Stormwater runoff from Murray drains into Bee Creek, Middle Fork, and Clarks River and each are classified as Impaired Water bodies with the total maximum daily load (TMDL) under development for the pollutant causing impairment. The primary pollutant for Bee Creek is Fecal Coliform; the primary pollutants for Middle Fork are nutrients/eutrophication and Fecal Coliform; and the primary pollutants for Clarks River are Fecal Coliform, organic enrichment and nutrient/eutrophication. Each of these streams are also on the Kentucky Division of Water 305b list with Bee Creek and portions of Clarks River not supporting

aquatic life, drinking water, fish consumption, and primary contact recreation.

Through Nonpoint Source Implementation 319h grants, the Four Rivers Basin Team is in the process of developing a Watershed Based Plan for the East and Middle Forks of Clarks River. The purpose is to address sources of pollution, develop solutions, and establish Best Management Practices (BMPs) in both impaired and threatened streams. The focus area is along Clarks River from Bee Creek upstream.

Public Involvement and Participation

The City of Murray Public Involvement and Participation program has been very successful through the measures that have been taken to ensure its productivity. The city council throughout the year gives us an avenue to discuss matters of stormwater pollution with the local government, while allowing the citizens to voice their opinions and concerns over these matters. Being a member of the Four Rivers Basin Team allows the city to work with several volunteers that sample the surrounding watersheds. This supplies the city with valuable information about the pollutants that are in the streams and waterways. The use of our Stormwater Utility to fund our Stormwater Quality Management Plan and minimum control measures have also been a great asset for feedback concerning the support our citizens have for what we are trying to accomplish. The Stormwater Hotline that is in place, judging by the number of calls that are received, shows much improvement in the awareness of our citizens to recognize stormwater quality problems. The City of Murray will continue to partner with the 4RBT, NRCS, MSU, and the County Cooperative to put on events for all citizens to attend for volunteer and educational purposes.

Illicit Discharge Detection and Elimination

The City of Murray is in the process of digitally mapping the complete storm sewer system inside the city limits. At this time, all system conveyance structures and outfalls are inventoried in hard copy form. The city consists of 13 sub-watersheds. Currently 8 sub-watersheds basin studies of the 12 have been converted to digital format. All structures are manually inspected, information is compiled, pictures of the structures taken, and all structures are inspected for illicit discharges. The city will continue to complete these studies each year of the permit cycle until the digital storm sewer system mapping is complete.

An ordinance is in place that institutes prohibition on non-stormwater discharge and appropriate enforcement procedures and actions.

The City of Murray is using several ways to detect illicit discharges and educate the public on identifying possible illicit discharges into the system. “No Dumping” signage at all creek crossings have been put in place. Stormwater ads on TV and radio give the public hotline numbers to call if something has been spotted. The city has a policy of immediate response for illicit discharges that have been detected. The Four Rivers Watershed Watch Basin team samples 14 sites around the city. This information allows us to keep a very close eye on the outfalls surrounding the City of Murray. “Lets Make a Difference Day” is an event that is put on every quarter that allows citizens to dispose of wastes. Everything from cardboard to used motor oil is taken and properly disposed of.

Construction Site Stormwater Runoff Control

The objectives of the City of Murray concerning this measure is to reduce the impact of Construction Site Stormwater Runoff on the waters surrounding the City of Murray by using the appropriate program and the Best Management Practices (BMP's) to control runoff. The city's stormwater conveyance, erosion control and pollution prevention ordinance are the regulatory means of erosion and sediment controls. The ordinance also contains sanctions to ensure compliance.

Construction cannot begin within the city limits until a Notice of Intent has been filed and approved by the Division of Water. Submitted plans are reviewed to ensure that they address city requirements and address water quality. After construction begins, the City of Murray Stormwater and Drainage Management Department conducts periodic site inspections to protect water quality in the area. Inspections are conducted bi-weekly. Hard copies of the inspection reports are filled out at least once a month on each construction site. The city site inspector is a Certified Professional in Municipal Stormwater Management. The city works well with public inquires and their concerns of construction within their area.

Post Construction Stormwater Management

The City of Murray Engineering Department has had in place since 2001 a Stormwater Conveyance Facilities Ordinance. This section of the ordinance requires that any development within the city and its jurisdiction shall provide properly sized stormwater management facilities and shall contain on-site, or provide off-site stormwater management facilities capable of controlling increased stormwater runoff relative to its pre-developed condition. These post construction BMP's are vital in the reduction of stormwater runoff.

The ordinance was updated in 2014 to add water quality management and a treatment standard for water quality. All development and re-development of 1 acre or above must treat the first 0.7 inches of rainfall. As more cities try to promote green ways to help the environment, the Engineering along with the Planning department have taken steps toward promoting rain gardens, alternative pavements, treatment trains, and low impact development strategies that will further program development.

Such things as brush pickup and leaf pickup around the city helps us keep large amounts of sediment and debris from entering our streams. Although, selling this to developers has been hard, the individual residents within the city seem to be getting on board with these green ideas. The tonnage amount collected for the brush pickup and leaf pickup increases each year.

Good Housekeeping for Municipal Operations

The City of Murray Pollution Prevention and Good Housekeeping Plan is a key element of our MS4 Stormwater Quality Management Plan. The education that the city has brought to its employees is vital in keeping many pollutants from entering our storm sewer system. Inspections on vehicles are conducted weekly, while buildings and storage areas are conducted yearly to ensure proper containment and disposal of any material that might be harmful to the environment. The awareness of our employees is a very critical thing that makes for a successful program. Constant training, fleet management, and good

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housekeeping by municipal employees will ensure the success of this minimum control measure.

Regional Stormwater Facilities

Murray staff has studied the construction of regional stormwater facilities to reduce the impact of stormwater runoff from areas that were developed before the stormwater ordinance was enacted. The potential location of these regional facilities and the drainage system in the Murray area are shown on Map CF-3

Natural Gas

Management

The City of Murray owns the Natural Gas System that serves the Murray Comprehensive Plan area. The Murray Natural Gas System operates under the direction of the City of Murray Department of Public Works and Utilities. The offices for the Natural Gas System are located on Andrus Drive. The system annually sells 1.508 million cubic feet per year. System sales of natural gas have increased by 20 percent over the last several years.

Service Area

The Murray Natural Gas System supplies natural gas to the City of Murray, portions of Calloway and Graves Counties and transports gas for the City of Hardin in Marshall County. Murray Natural Gas serves approximately 7,501 customers with residential and commercial customers using approximately 40% of the demand and industrial customers using the other 60%.

Facilities

The City of Murray is served by two transmission companies: Texas Gas and ANR Pipeline. The Texas Gas Transmission supply line is a six-inch line with 520 psi pressure main that runs along KY 121. The ANR Pipeline is an eight-inch line with 500 psi pressure main that runs west into the city near Vanderbilt Chemical Company.

The system is mostly steel with cathodic protection. Gas system employees install all gas mains and house service lines, while licensed merchants provide house piping in accordance with state plumbing and NFPA regulations. The system has an extensive on-going maintenance program that has resulted in a low amount of unaccounted for gas. The system has begun the installation of radio read meters to minimize meter reading costs. A new SCADA system has been installed, along with flow controllers to maintain system flow and pressures.

Future Plans

General plans are to expand the system to serve additional residential areas to the east of Murray. In addition, a loop on the east side of Murray is planned to increase system pressures in that area. The long-term natural gas supply and the distribution system appear adequate to serve the future land use needs of the Murray Comprehensive Plan area.

Map CF-4 shows the Murray Natural Gas System.

Solid Waste Management

Planning

The City of Murray's solid waste management activities are summarized in the "Calloway County Solid Waste Management Five Year Plan 2018-2022." The plan describes Calloway County's and the City of Murray's solid waste activities in four general areas: collection, transfer, disposal, and recycling. Details of the City of Murray's and Calloway County's participation in each of these areas are described in the following:



Management

The City of Murray's solid waste activities are managed by the Solid Waste Manager of the Murray Sanitation Department, who reports to the City of Murray Director of Public Works. The operating offices for the Sanitation Department are located on Andrus Drive.

Calloway County's solid waste activities are managed by the Calloway County Solid Waste Coordinator, whose office is located in the Court House and reports to the Calloway County Judge Executive.

Collection

The City of Murray has mandatory curbside solid waste collection for its residents and businesses. A fleet of collection trucks operated by Republic Services under contract with the City of Murray collects solid waste curbside for City residents. The Sanitation Department through Republic Services, provides residents with 96 gallon roll-out carts, businesses are provided either 96 gallon carts or a commercial front load dumpster ranging in size from 2 to 8 yards based upon the customers' needs. Roll-off container services are also available for open-top or compactor receivers. Murray also conducts annual leaf and brush collection.

Calloway County does not have mandatory solid waste collection. Several licensed private solid waste companies operate in the county to collect solid waste for those citizens who desire to have curbside collection.

Transfer Station

The City of Murray operates the only solid waste transfer station in Calloway County. Residents may deliver their solid waste to the transfer station for disposal. Republic Services is under contract with the City of Murray for pickup, transfer, and disposal of all solid waste collected at the Transfer Station.

Disposal

The solid waste from the Murray transfer station is transported to Republic Service's Northwest Tennessee Disposal Landfill in Union City, Tennessee. This landfill operates under permit from the Tennessee Department of Environment and Conservation.

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Recycling

The City of Murray began single stream curbside recycling in March 2021 for City residents. This is a voluntary subscription-based recycling program. Materials collected curbside include OCC (old corrugated cardboard), mixed paper, numbers 1 and 2 plastics, aluminum and steel cans. Recycling materials are delivered to the Hopkinsville Recycling Processing Center in Hopkinsville, Kentucky for processing and introduction into the recycling market.

The Murray Rotary Club sponsors a quarterly “Make a Difference Day” where recycling facilities collectors are available for a multitude of solid wastes, including e-waste. Several private companies collect a variety of materials for recycling, like scrap metal, tires, batteries, and motor oil.

Murray State University also offers a recycling drop-off point at the North Farm the first Saturday of each month. They collect paper, OCC, metals, and plastics 1-7.

Future Plans

Murray plans to look at expanding its recycling collection program in the future for businesses and industry and possibly to county residents. Should this happen, this will increase the amount of collected recyclables and would most likely necessitate the need for a Recycling Transfer Station to collect and consolidate the recycling materials for transportation to a recycling processing facility. This new transfer station would most likely be co-located with the City’s current solid waste transfer station.

Murray’s solid waste activities appear to be adequately funded through user fees. The residents in Calloway County outside the city pay user fees for private curb side pickup. The combination of city and private solid waste activities should be adequate to serve portions of the Comprehensive Plan area that are projected to develop in the future.

A goal of the “Calloway County Solid Waste Management Plan” is to increase recycling efforts, especially curb side recycling, in both the city and county.

Electrical

Electrical services in the City of Murray Comprehensive Plan area are provided by the Murray Electric System, with offices on Olive Street, and West Kentucky Rural Electric Cooperative, with a billing office in Murray and main offices on the south side of Mayfield. The service area and the services provided by each of these electrical utilities are discussed below.



Murray Electric System

Service Territory: Murray Electric's service territory is primarily within the city limits of Murray. The utility currently provides service to approximately 7,724 customers. The Tennessee Valley Authority is the electricity provider for Murray Electric. Since Murray Electric's service area is surrounded by the West Kentucky Rural Electric Cooperative, there is no room for expansion and the utility's main function is providing service to its existing customers.

Planning: Murray Electric has a 2012 Strategic Plan that describes the long range planning efforts for its electrical system. Murray Electric System has been and will continue to be proactive in system planning, improvements, and implementing new customer service improvements and collaborating with partner TVA in meeting the demands of an ever changing and fast-growing community. Since the adoption of the Strategic Plan, Murray Electric has remodeled its main office building and purchased adjacent property. A need had been identified for a new facility for warehousing, vehicle storage, crew quarters, pole and transformer loading and unloading, and storage. Murray Electric believes its staffing is sufficient to serve the needs of its customers.

Murray Electric takes delivery of wholesale power from TVA at its Primary Substation. From this point it is delivered to 5 other substations, 3 of which were built within the last 20 years. The West Murray Substation, built in 1965 is currently being upgraded to increase its capacity. Murray Electric has sufficient substation and distribution system capacity to meet the needs of current and future projected customers.

The last City of Murray Comprehensive Community Facilities Plan, completed in 2009, indicated that planning should begin for converting Murray Electric's overhead power lines to underground power lines with a 15-year time frame for completion of the project. This project was found to be not feasible due to the cost of converting existing above ground lines to underground lines. However, Murray Electric now uses steel poles instead of wooden poles when poles need to be replaced. In addition, any new subdivisions have underground service. The use of steel posts and underground service in new subdivisions is believed to result in lesser damage and down time during extreme weather events.

Murray Electric has recently completed a new project for a second delivery point on the major transmission line into the city to serve as a backup for the current one delivery point from TVA.

Future Plans: (1) replacing of transformers at the District Substation, and (2) systematic replacement of substation breaker relays and step-voltage regulator controls for interfacing with the remote monitoring and control system.

West Kentucky Rural Electric Cooperative

Service Territory: West Kentucky RECC serves approximately 49,000 customers in Calloway, Marshall, Graves, Carlisle, Fulton, and Hickman Counties. The distribution of customers is approximately 31,440 residential, 8,500 commercial and small industrial, and 6 large industrial. In Calloway County, West Kentucky RECC operates 3 substations serving 13,300 residential, 129 small industrial and commercial, and 2 large industrial customers. The

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service area includes all of the City of Murray not served by Murray Electric System. The Tennessee Valley Authority is the electricity provider for West Kentucky RECC.

Planning: West Kentucky RECC is in the process of updating its long-range plan. The staff's focus is to continue to construct projects that upgrade service to existing customers and provide the facilities necessary to serve future customers. Recent projects have been completed to upgrade substations, including the installation of new circuit breakers. In addition, projects have been completed to provide dedicated feeds from the substations for Murray industry. Also, a second double circuit has been installed on Poor Farm Road to increase system capacity and reliability in that area.

Calloway County is served by three Western Kentucky RECC substations, Stella Substation, East Murray Substation, and Coldwater Substation. The Stella and the East Murray Substations serve the Murray planning area. The Stella Substation is located on the west end of Poor Farm Road. This substation is fed by a 161kV transmission line supplied by the Tennessee Valley Authority. The substation consists of five residential circuits and one industrial circuit. The industrial circuit serves Vanderbilt Chemical, Pella, IWIS, and all of Max Hurt Drive. It will also serve the new industrial park located on US 641, north of Max Hurt Drive, which is where TPG Plastics is located.

The East Murray Substation is centrally located on Outland School Road. This substation consists of three residential circuits and one residential/industrial back-feed circuit. The industrial back-feed circuit provides automated back-feed to the industrial customers served by the Stella Substation.

Future Plans: West Kentucky RECC has been adding approximately 400 customers each year. For 2007 its peak usage was 197 MW and for 2008 its peak usage was 185 MW. The 2007 peak was due to the unusual extreme heat. The projected normal draw for 2012 was estimated to be 196 MW. Within the next five years, projects are planned to (1) increase capacity on one of the Stella Substation circuits, (2) install a new 3-phase circuit on the East Murray Substation, and (3) upgrade the 3-phase on Highway 121 south of Murray. The system has stable load projections. These projections, coupled with the upgrades undertaken over the last few years, indicate there is sufficient substation and distribution system capacity to meet the needs of existing and future customers.

Map CF-5 shows the electrical system serving the Murray planning area.

Telecommunications

Telecommunications, including broadband internet services, in Murray and Calloway County are provided by Murray Electric System, West Kentucky Rural Telephone Cooperative, AT&T, Spectrum, Comcast, Galaxy, T-Mobile, Cricket and Verizon. The services provided by each of these providers are listed below:

Murray Electric System

- Telephone
- Cable/Digital television
- Broadband

Spectrum

- Telephone
- Broadband
- Cable/Digital Television

AT&T

- Telephone
- Broadband
- Wireless

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West Kentucky Rural Telephone Cooperative

- Telephone
- Broadband
- Digital Television

Comcast

- Telephone
- Broadband
- Cable/Digital Television

Galaxy

- Cable/Digital Television
- Broadband

T-Mobile

- Wireless

Cricket Wireless

- Wireless

MediaCom

- Cable/Digital Television
- Broadband

Verizon

- Wireless

With the multitude of telecommunication providers in Murray and Calloway County, there should be sufficient system capacity to meet the needs of existing and future projected customers.

Map CF-6 shows the service territory of broadband providers in the Murray area.



OTHER COMMUNITY FACILITIES

In addition to Utilities, there are numerous other community facilities that play a large part in supporting the well-being of an area. These agencies cover a wide spectrum of the life of the community. This section of the Community Facilities Element of the Murray Comprehensive Plan addresses several of these agencies. The current status of each agency is generally described. In addition, future plans of each agency related to serving the existing and future population are described. Maps showing service areas and/or agency locations are included.

Goals and Objectives

Goals and objectives have been adopted by the City of Murray to address the major issues and concerns that are and will be affecting the City of Murray now and into the future. The goals and objectives that relate to the Other Community Facilities section of the Community Facilities Element are listed below. The list includes the general area of each goal followed by an objective.

(1) Community Relations - Encourage participation to enhance the community through citizen support, neighborhood groups, service by citizens on Boards and Commissions, government outreach programs including Fire and Police Academies, West Kentucky Night, and other civic organizations such as Character Counts, Community of Promise,

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Leadership Murray, Leadership Tomorrow, Town & Gown, and CASA.

(2) Community Relations - Improve intergovernmental relations with county, state, and federal governments, the University, the Purchase Area Development District, and other agencies that promote Murray.

(3) Economy - Support economic growth sponsoring entities such as the Economic Development Corporation, Chamber of Commerce, Murray Convention and Visitor's Bureau, Murray Main Street, and MSU Center for Economic and Entrepreneurial Development.

(4) Public Facilities and Services - Maintain government facilities so that they promote accessibility, efficiency, and safety for citizens and government employees.

(5) Public Facilities and Services - Secure library facilities and services that satisfy resident needs, including timely, helpful, and readily available services that are attractive, accessible, convenient, and provide continuing education to all.

(6) Public Facilities and Services - Enhance the City of Murray Park System by, assisting with the completion of a new Parks and Recreation Master Plan, continuing to seek funding for maintaining existing neighborhood parks and encouraging developers to dedicate land for adding additional neighborhood parks in newly developed areas, search for private land opportunities to expand the City Park System by citizens and private enterprise dedicating land, gifts, and through philanthropy, continuing to look for alternative sources of revenue such as the leasing of government property for a narrow and limited range of commercial uses, and investigate the possibility of creating a Regional Park that will attract recreational leagues to participate in sporting activities.

(7) Public Facilities and Services - Provide adequate health care services and facilities to accommodate all citizen needs and continue to seek funding for health care expansion and facility improvement.

(8) Housing - Encourage a greater sense of community within the city's residential neighborhoods through the organization of neighborhood associations or similar groups, with emphasis on safety, beauty, and overall pride.

Law Enforcement

Law Enforcement in the Murray Comprehensive Plan area is provided by the City of Murray Police Department, the Calloway County Sheriff, Murray State University, and the Kentucky State Police. The law enforcement agencies are described in this section.

City of Murray Police Department

The Murray Police Department consists of a staff of 48, including 40 sworn officers. The Police Chief, one of the sworn officers, exercises administrative control over the

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department. One of the officers is dedicated to crime prevention and community relations and serves as the department's media spokesperson. The department does provide three resource officers in the Murray City Schools. There is one resource officer assigned to each of the schools. The department operates dispatch for both the Murray Police Department, and the Fire Department, and the ambulance service. The department's fleet consists of 9 patrol vehicles, 5 investigative vehicles, 3 administrative vehicles, and one utility truck.



The department moved to its operating space at North 5th Street in September 2018. The building was constructed in 1978 and renovated in 2004 when it was used as City Hall. The operating space consists of 16,786 square feet. This space has two floors and a basement. The first floor consists of lobby area, report room, copy room, armory, server room, dispatch room, sally room, roll call room, records archive, office supply room, seven offices, two kitchens, and one conference room. The second floor consists of an evidence vault, two interview rooms, evidence processing room, training room, office supply room, found property room, conference room/library, seven offices, and one kitchen. The basement consists of a mechanical room and separate male and female locker rooms. Another operating space is an impound lot on Andrus Drive. The department currently has no satellite police stations.

All the Murray departments operate on the same radio frequency. They use UHF to be able to communicate with the County and Murray State University law enforcement. In 2008, the Murray Police Department implemented a Computer Dispatch System (CAD) for easier record keeping. Since then, the new CAD system has been updated to a newer version in 2014. The City and County sought grant funding for a new CAD system and were awarded in 2019. The CAD system became operational in 2020. All the department's patrol vehicles have Mobile Data Terminals. Each patrol vehicle also has mobile tablets that have built in cell cards. The department practices Roll Call Training through the Kentucky League of Cities.

Both Murray and Calloway County operate Enhanced 911 systems. They are in the process of implementing a Phase 2 wireless system where 911 calls from cell phones in the Murray area are routed to the city dispatch center rather than to the Kentucky State Police.

In 2017, the Murray Police Department received accreditation from the Kentucky Association of Chiefs and Police, which is good for 5 years. The accreditation lowers the department's liability insurance. In addition to funds from the general fund, the department receives income from the liquor license ordinance that was implemented in 2001, increased in 2012, and decreased in 2020. The pay scale for officers of the Murray Police Department is about the median for officers of other third class cities in Kentucky.

Current needs for the department include 4 new officers and updated mobile and portable radios. In late 2019, new vehicles with new equipment and new tasers were ordered, and both were put in service in 2020. Another highlight in future plans is to maintain competitive salaries. This will be done by keeping salaries consistent to what other local agencies are paying. Murray Police Department is committed to the school resource officer program. As evidence of this commitment, is a grant project funded by COPS grant to install cameras in the Middle

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School and Elementary School to compliment the cameras in the High School. Lastly, the Murray Police Department administration plans to expand the leadership training program.

Map CF-7 shows the location of the Murray Police Station.

Calloway County Sheriff

The Calloway County Sheriff's office is located at 701 Olive Street in a building separate from the Calloway County Courthouse. The Sheriff's Department consists of 33 full time employees and 3 part time employees. Of the full-time staff, there are 16 patrol deputies, 6 dispatchers, 2 resource officers, 6 court security deputies, 2 office workers, and one records clerk. The department has 11 reserve deputies and hires part-time office staff during tax collections. The department owns a fleet of 17 patrol vehicles and 7 administration vehicles. Of the 17 patrol vehicles, 14 are assigned full-time to officers and 3 are spare vehicles.

The department works with the Murray Police Department, the Murray State University Police, and the Kentucky State Police to develop a Crime Scene Task Force. The department implemented in 2008 a Memorandum of Understanding with Murray State University that granted Murray State's 16 officers county wide jurisdiction and makes them available on an as needed basis. In addition, the two agencies alternate answering the alarms at the Hancock Biological Station and the county schools. The Sheriff's department has radios to communicate with the Kentucky State police and the police in the adjoining Tennessee Counties.

Future plans for the Calloway County Sheriff's Department include adding 2 detectives, one for general use, and one for drugs. They also plan on replacing four patrol vehicles and upgrading their radio systems.

Map CF-7 also shows the location of the Calloway County Sheriff's Office.

Murray State University

The Murray State University Police are primarily responsible for safety and security on the Murray State University campus. The department consists of 16 sworn officers and 24 support personnel. As described above, the department, through a Memorandum of Understanding, works with the Calloway County Sheriff's Department to assist in law enforcement in Calloway County.

Kentucky State Police

The Kentucky State Police has a nearby post in Mayfield. The state police have 3 officers assigned to the Murray area to assist the City of Murray Police and the Calloway County Sheriff's Department in law enforcement activities.

Fire Protection

Fire protection is provided in the Murray Comprehensive Plan area by the City of Murray Fire Department and by Calloway County Fire-Rescue. These two fire protection agencies are discussed in this section.

City of Murray

The City of Murray Fire Department provides fire protection within the Murray city limits. The department's staffing, dispatch, equipment and the city's water system result in an ISO rating of 3 for those structures within the city limits. The department operates out of three fire stations. Station 1 is the downtown station and is located on South 5th Street. A new Station 2 is was built next to the old station 2, which was demolished. Station 2 is located on 16th Street. Station 3 is located on US HWY 641 North. The department is equipped with 3 engines, 2 aerial ladders, a command vehicle, a multi-purpose vehicle, technical rescue trailer, breathing air/command trailer, and a hazmat vehicle (not owned by the City). The operating staff of the Murray Fire Department consists of 36 fire fighters assigned to operations, and 4 sworn officers assigned to administration.



Future plans for the Murray Fire Department include replacing 3 engines and 1 ladder in the fleet, completely replacing self-contained breathing apparatus, adding an additional 9 new fire fighters, an additional full-time fire inspector, and develop an Information Technology (IT) staff.

Map CF-7 shows the location of the existing fire stations for the Murray Fire Department.

Calloway County

Fire protection outside the Murray city limits is provided by Calloway County Fire-Rescue, an all volunteer organization. Calloway County Fire-Rescue serves a single fire district composed of 11 fire stations. The ISO ratings of the areas served by the fire stations range from 7 to 10, with 9 stations rated a 7, and 2 stations rated a 10. Calloway County Fire-Rescue consists of approximately 65 volunteer firefighters.

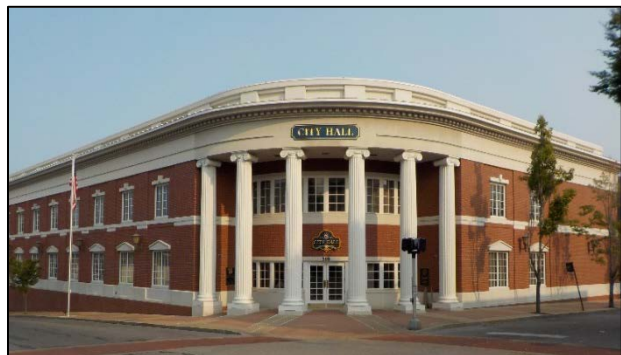
Map CF-7 shows the county fire stations and the districts served by the fire stations.

General Government Facilities

Several state and federal agencies maintain office facilities in Murray. However, the two primary government agencies that maintain office facilities in Murray are the City of Murray and Calloway County. The facilities of these two agencies are discussed in this section.

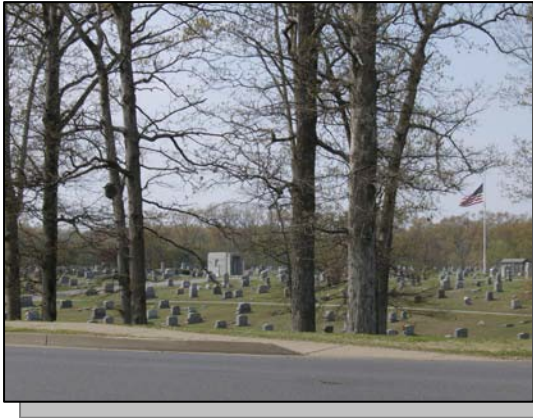
City of Murray

The facilities of the City of Murray, in addition to the Police Department, Fire Department, Utility Departments, Tourism, and Mass Transit facilities discussed elsewhere in this plan, are the City Hall and the Cemetery. The building currently used as City Hall was purchased from BB&T Bank in May of 2017. The building was renovated, and city departments moved in December 2017. The Finance Department,



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the Human Resources Department, the Planning Department, and the Administration Department are in the City Hall building.



At the City Cemetery, there is one small office building. The city is in the process of constructing a larger maintenance building that will be equipped with water and sewer facilities. A second mausoleum was built in 1994. A columbarium was constructed in 2019 near the mausoleum. The last acquisition of property for the cemetery was in 2019. The current land is believed to be sufficient for up to 50 years. There are lands adjacent to Cemetery property that currently might be available for purchase if a need arose to further expand the Cemetery.

Map CF-8 shows the location of City Hall and the City Cemetery.

Calloway County

Government facilities for Calloway County Government, in addition to the Sheriff's office discussed earlier, include the Court House, the Robert O. Miller Courthouse Annex, the Judicial Center, and the Road Maintenance Facility. The locations of these facilities are shown on map CF-8.



Murray Convention and Visitors Bureau

In 1979, Murray's City Council created the Murray Tourism Commission. The office did not become full-time until the late 1990s. In 2007, the name of the organization was changed to Murray Convention & Visitors Bureau (CVB). The mission of the CVB is to increase the overnight stays in Murray through tourism and events, such as conferences and sporting events. The CVB also works closely with other community organizations to increase the economic impact in Murray and Calloway County.

The CVB staff plan and execute Freedom Fest, Murray's Fourth of July celebration, the city-wide yard sale, and a fundraiser for Freedom Fest.

The CVB is located downtown at 206 South 4th Street. Visitors and locals alike are welcome to visit the Bureau to find the most up-to-date information on community happenings and to browse the wide array of brochures available. The main focus of the Murray Convention and Visitors Bureau is to attract events to Murray that generate tourism revenue for local businesses. The Bureau is also rented out to the public for special events for a nominal fee. The space is rented out for the purpose of conventions, wedding receptions, forums, business meetings, etc.

The location of the Convention and Visitors Bureau is shown on Map CF-8.

The Convention and Visitors Bureau is currently developing a "brand" for Murray to use in

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its tourism promotion activities. The Bureau has developed and promotes events like the Ice Cream Festival, R/C Aircraft Fly-In, Lumberjack Challenge, Highland Festival, Trail of Treats, Dickens Alley, Fiddle Festival, Freedom Festival, Downtown Saturday Market, and the City-Wide Yard Sale. In addition, the Bureau promotes nearby attractions like the Hazel Antique District, Kentucky Lake, and the "Land Between The Lakes National Recreational Area".

Tourism activities are supported by a number of facilities owned and operated by other entities like Murray State University. One example of this is the West Kentucky Livestock and

Exposition Center, a venue for rodeos, American Quarter Horse Association shows, tractor pulls, pony pulls and the Murray Motocross. Also, on the campus of Murray State is the CFSB Center, home to Murray State basketball. The CFSB Center also hosts a variety of events, including the annual West Kentucky Boat and Outdoor Show, Home and Garden Show, circuses and concerts. Roy Stewart Stadium on Murray State campus is home to the Murray State football, rifle and women's track and field teams. The stadium hosts a variety of events, including band competitions, Special Olympics, and fund-raising events. The American Society of Golf Architects designated the Frances E. Miller Memorial golf course as one of the best-designed 18-hole courses in America. Miller offers a variety of challenges, with over 50 sand bunkers and scenic water hazards. Murray is also home to Sullivan's par 3 golf course with a challenging 18-hole par 3 course, a driving range, and mini golf. There are 2 private golf clubs; Oaks Country Club, founded in 1961, and Murray Country Club, established in 1956.



Murray has long been known for its attractiveness to retirees. In 1987, "Rand McNally's Retirement Places Rated" named Murray and the surrounding lakes area as the number one place in the nation to retire. Since then, Murray has welcomed hundreds of retirees choosing to relocate to Murray from all over the United States. In 2001, Murray was selected as a Certified Retirement Community by the Kentucky Tourism Development Cabinet.

***"IF YOU ARE SEEKING A WELL-ROUNDED COMMUNITY WITH
PLENTY OF OUTDOOR RECREATION, LOW HOUSING COSTS
WITH A FOUR SEASON CLIMATE, THEN MURRAY
MAY BE JUST WHAT YOU'RE LOOKING FOR."
-RETIREMENTAMERICA.COM***

In addition to being named the Friendliest Small Town in America by Rand McNally and USA Today, the community constantly receives other recognition and awards. Recently, the city was named a Playful City USA, "100 Best Communities for Young People", and the #1 Place to Live in Kentucky. Murray was chosen because of the community's efforts to fulfill five essential promises critical to the well-being of young people: caring adults who are actively involved in their lives; safe places in which to learn and grow; a healthy start toward

adulthood; an effective education that builds marketable skills; and opportunities to help others.

The attractiveness of Murray as a retirement and relocation area should result in a steady future demand for residential housing and the accompanying demand for commercial services. In addition, the Convention and Visitors Bureau would like to see the development of a Convention Center that could host a range of large events and conventions.

Murray-Calloway County Parks and Recreation

Planning

The Murray-Calloway County Parks and Recreation Department is a joint effort by the City of Murray and Calloway County. The department is managed by a Board of Directors appointed by the City Council and the Fiscal Court. Funding comes from the city and county as well as from grants. The Murray-Calloway County parks system is comprised of two community parks totaling over 162 acres. The parks system for Murray and Calloway County is described in the “Murray-Calloway County Parks and Recreation Master Plan” dated March 2005. The community parks operated by Murray-Calloway County Parks and Recreation consist of Central Park and Chestnut Park.

Central Park and Bee Creek Soccer Complex

The Central Park and Bee Creek Soccer complex is composed of approximately 144 acres. The southern entrance to the park is off Arcadia Circle and the access to the Bee Creek Soccer complex on the northern end is off Fourth Street, and there is access off of HWY 641 North through Keepers Way. This area is located in the northern portion of the City of Murray. Existing facilities in the park include:



- (1) Five baseball and softball fields. Four of the fields are in a wagon wheel arrangement with the restroom/concession/press box building in the center.
- (2) The Bee Creek Soccer Complex with 15 soccer fields. The arrangement could provide for more fields. In addition, there are paved parking lots, a playground, a restroom/concession facility, and a walk/bike/run trail around the Soccer Complex.
- (3) An “L” shaped swimming pool and bathhouse. In 2004, improvements were made with a new liner and improvements to the filtration system. Additional repairs will be required in the near future to guarantee the reopening of the pool.
- (4) Six picnic shelters including the one in the Bee Creek area.
- (5) Six playgrounds located throughout the site, and an “aquatic spray ground”.
- (6) Rotary Memorial Walkway, located between the ball field complex and the main road. The walk is highlighted with Willow Oak Trees that are planted with memorial plaques with the names of past governors of Rotary.
- (7) The Waters School House, an old school house relocated to this site.
- (8) The Old Courthouse located north of the ball field complex. The Courthouse was the first courthouse and first public building in the Jackson Purchase area and was built in 1823.
- (9) An amphitheater originally developed using grant funds for an open-air performance area. Future plans are to add a changing building with bathrooms.

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(10) A 27-Hole Disc Golf Course that is the park's most used facility. The 27-hole course is located off Arcadia Drive.

(11) A variety of trails in the park with natural surfaces. The Ryan Loop extends from the tobacco barn area and is approximately one-half mile. The John Mack Carter Trail outlines the park. The Maple Trail starts near the area of the old courthouse and extends to the western portion of the site and to the Bee Creek area.

(12) Concrete Skate Park located in the Southwest Corner of the Park, next to Arcadia Circle.

(13) A fenced in, leash free, dog park with two sections for smaller and larger dogs.

(14) Home of Playhouse in the Park. The theatre is one of the oldest continuously producing theatres in the county.



Chestnut Park

Chestnut Park was the original Murray Park and consists of 18.4 acres. The park is located south of Chestnut Street and is bordered on the east by 8th Street and on the west by 10th Street. Payne Street goes through the center of the park. The existing facilities in the park include:

- (1) A small park headquarters building.
- (2) Two lighted baseball/softball fields.
- (3) Three lighted basketball courts.
- (4) A playground
- (5) Four picnic shelters.
- (6) A paved figure eight walking path.
- (7) A 9-hole foot golf course.
- (8) Veterans' Park on the northeast corner of Chestnut and North 10th Street.

The locations of the Murray Parks are shown on Map CF-8.

Adequacy of Park Land and Expenditures

The Parks and Recreation Master Plan compared the ratio of citizens per acre of park in Murray and Calloway County to the ratio obtained from a survey of 1,242 parks and recreation departments across the country. The national median was 132 citizens served per acre of park land. In the year 2004, Murray had 112 citizens per acre, and Calloway County had 206 citizens served per acre. Projecting out to 2020, population shows that the city would have 117 citizens served per acre, and the county would have 240 citizens served per acre.

This comparison indicated that the residents of the City of Murray are much better served with park land than the residents of Calloway County.

The Parks and Recreation Master Plan also compared the expenditures for parks and recreation facilities and services in Calloway County with those of other parks and recreation organizations in Kentucky. It found the overall expenditure of the local and county government bodies for parks and recreation facilities and services in Calloway County to be less than \$12.05 per capita. The average per capita expenditure for 40 cities and counties in

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Kentucky with parks and recreation departments was found to be \$33.76. The plan also found the cities and counties in Kentucky known for strong park programs spend in the range of \$58 to \$130 per capita. The Master Plan concluded this less than average expenditure is evident in the overall shortage of park space, the lack of parks in some parts of the county, and the lack of parks programming.

Future Plans

The Parks and Recreation Master Plan provided a list of action items for future activities of the park system in Murray and Calloway County. Several of the action items in the plan have been completed, including the establishment of an off-leash dog park. Some of the more significant items remaining to be completed include:

- (1) Continue to seek alternative sources of revenue for parks and recreation.
- (2) Develop a greenway system to connect parks, schools, and neighborhoods.
- (3) Make upgrades to the baseball/softball field lighting and backdrops.
- (4) Develop a new park in the southwest portion of the city.
- (5) Add a changing building next to the amphitheater with bathrooms.
- (6) Upgrade the pool area.

Calloway County Public Library

The Calloway County Public Library is located at 710 Main Street. The library contains approximately 10,000 square feet and was initially constructed in 1970 with an addition in 1975. The location of the library is shown on Map CF-8.

The library currently houses approximately 65,000 items. Because of space limitations, unused items are discarded on a regular basis. There are approximately 80 parking spaces at the library. Current services provided by the library include public bathrooms, reading space, meeting space, genealogy, and computers. The library houses the Regional Office of the Kentucky Department for Libraries and Archives.

There is not a written long-range plan for the library. However, expansion of the facility is under construction.

Murray-Calloway County Senior Citizens Center

The mission of the Center is to support the mature population in the community by improving their physical, mental, and emotional well-being so they can lead independent, fulfilling lives. The 10,000 square foot facility is equipped with a large dining room; a billiards room; a large, fully-equipped workout room; a gymnasium with room for basketball, ping pong, or shuffleboard; a modern, internet accessible computer lab, including Wi-Fi; a large, contemporary library; and areas for lounging, relaxing, quilting, and more. The goals of the Center are to promote healthy living, improve nutrition, and socialization.

Public Schools

The public school system serving the City of Murray Comprehensive Plan area includes the Murray Independent School District, the Calloway County School District, and the Murray-

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Calloway County Technology Center. These educational organizations are discussed in this section.

Murray Independent School District

In 2021, Murray Independent School District had a total enrollment of approximately 1683 students in K-12 and 95 preschool students. Students in grades 9-12 attend Murray High School, and students in grades 4-8 attend Murray Middle School. Students in Kindergarten through grade 3 attend the Murray Elementary School. The Murray Independent School District has approximately 156 certified instructional personnel, and 400 total employees. Map CF-9 shows the boundary of the Murray Independent School District and the locations of the District's facilities.

The boundary of the Murray Independent School District and the Calloway County School District that surrounds it are shown on Map CF 9. Over the last twenty years, approximately 100 pieces of property have been taken from within the fixed district boundary by expansions of the Murray-Calloway County Hospital and Murray State University. The

loss of students from these properties and the removal of these properties from the tax roll have significantly impacted the revenue of the Murray Independent School District.



Due to its landlocked boundaries, enrollment within the Murray Independent School District has stabilized. The Murray High School facility was expanded to the east and south from 2017 to 2019. The front entrance was changed to Sycamore Street from Doran Road.

Calloway County School District

In 2021, the Calloway County School District had a total enrollment of approximately 2896 students in K-12, and 169 preschool students. Students in grades 9-12 attend Calloway County High School, and students in grades 5-8 attend Calloway County Middle School. The Calloway County School District has three elementary schools serving kindergarten through grade 4, and a preschool. The three elementary schools are East Calloway Elementary, North Calloway Elementary, and Southwest Calloway Elementary. The Calloway County School District has approximately 230 certified instructional personnel, and 575 total employees. Map CF-9 shows the locations of the Calloway County School District facilities. Enrollment at each of the Calloway County schools is as follows:

Calloway County High School	862
Calloway County Middle School	677
East Calloway Elementary School	294
North Calloway Elementary School	549
Southwest Calloway Elementary School	441
Calloway County Alternative School	73
Calloway County Preschool	169

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Recent improvements within the Calloway County School District include renovations at the high school's gymnasium. At this time, there are no future plans for building renovations. Enrollment is stable and projected population growth in Calloway County does not indicate the need for additional school construction in the near future. There are plans to construct an auxiliary gymnasium on the high school/middle school campus.

Murray-Calloway County Area Technology Center

The Murray-Calloway County Area Technology Center is located at 126 Roberson Road North on property owned by the Murray Independent School district and is operated by the Kentucky Education and Workforce Development Cabinet. The primary purpose of the area technology center is to serve high school students by enhancing and expanding student career options that lead to continuation of education at the postsecondary level and/or successful employment upon graduation from high school. Students receive instruction in sound academic principles, theory, laboratory and clinical experiences to ensure they can compete successfully in today's changing workplace. The enrollment is approximately 300 students. The programs available are Automotive Technology, Carpentry, Culinary Arts, Health Sciences, Machine Tool Technology, Marketing Education, and Welding.

Murray State University

General

Murray State University is a state funded regional comprehensive university serving approximately 9,569 students, and 1,100 faculty and staff. It is composed of four academic colleges (Jesse D. Jones College of Science, Engineering and Technology, Arthur J. Baurenfeind College of Business, College of Education and Human Services, College of Humanities and Fine Arts), and two academic schools (School of Nursing and Health Professionals and the Hutson School of Agriculture).



There are nine residential colleges on campus. The main campus is comprised of 72 major core buildings and two libraries. The university libraries hold approximately 460,000 volumes, 33,801 audio-visual materials, 1,569 periodical titles, and 207,121 microforms materials for the community to enjoy.

The University extends its services to its space bound students through its Regional

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campuses in Paducah, Hopkinsville, Madisonville, Fort Campbell, and Henderson; and through its distance learning programs.

The University also houses the Breathitt Veterinary Center in Hopkinsville, which is a fully accredited animal diagnostic laboratory dedicated to the efficient production of safe animal products to the consumers of Kentucky.

Enrollment/Student Body

For the fall 2020 semester, the student body consisted of a total of approximately 9,569 students. Of the total, approximately 6,718 were full time and 2,851 were part time. Approximately 62% were female and 38% were male. At the undergraduate level the percentages of full-time and part-time students have stayed fairly consistent over the years. Of the fall 2020 student population, approximately 86% were undergraduate students while 14% were graduate students. Most undergraduate students (82%) are full-time, whereas 69% of the graduate students are part-time. The student body represented 45 states, 46 countries, and 119 Kentucky Counties. The out-of-state population was 27% of the total. Students older than 24 years made up 32% of the total population.



Murray State receives its first-time freshman students who are Kentucky residents mainly from Calloway, Christian, Graves, McCracken and Marshall Counties. The top-sending states are Kentucky, Illinois, Indiana, and Missouri.



The undergraduate student to faculty ratio at Murray State during the fall of 2020 was 15 to 1. Full-time faculty was 86% of the total faculty. Faculty with doctoral or terminal degrees in their field in 2020 made up 78% of the total. Fifty-four percent of full-time instructional faculty are tenured. Twenty-four percent of faculty were not on tenure track.

Minority faculty made up 11% of the full-time instructional faculty. Females were about 39% of full-time instructional faculty.

Faculty/Class Size/Academic Offerings

The average class size at Murray State was 19. Classes that have less than 20 students made up 62% of all classes and classes that have more than 50 students made up 3% of all classes. Murray State University has 143 academic programs that encompass areas that position students for their future careers.

National Honors

- A “Top Tier” university in academic quality for 29 consecutive years – 1992-2019 – US

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News & World Report.

- Ranked 24th Best Regional University Among all Public Universities in the South Region in 2019 – *US News & World Report*.
- Ranked 11th Top Public Regional University among all public universities in the southern region – 2019- *US News & World Report*.
- Recognized as the top four-college in Kentucky by *Schools.com*.
- Ranked on the “America’s Best Colleges” list twelve consecutive years – 2018-2019 - *Forbes*.
- Murray State ranked “Best Bang for the Buck” – 2016, 2019 – *Washington Monthly*.

University Facilities

Map CF-10 shows the buildings and grounds of the main campus and Map CF-11 shows the boundaries of the properties owned by the university. Table CF-5 gives a summary of the facilities at the various Murray State campuses. Henderson Community College, Madisonville Community College, and Fort Campbell Education Center also have Murray State Campuses, which are not owned by Murray State.

Table CF-5. Summary of Facilities owned by Murray State University

Campus	Square Footage
Main Campus	3,484,191
West Farm	285,989
North Farm	3,902
Garrett Farm	8,653
Biological Station	40,682
Breathitt Veterinary Center	77,141
Hopkinsville Campus	36,342
Paducah Campus	42,861
Total	3,989,761

The Arboretum at Murray State

The mission of the Arboretum is to provide and display a collection of both local and introduced plants, with emphasis on native trees, shrubs, and flowers of historic significance to the Western Kentucky regions. There is a 0.8-mile-long track where you can walk, run, or walk your leashed dog. The students maintain the gardens.

Future Plans

Murray State is currently working on a new Master Plan. The current Master Plan was presented to the Board of Regents in 2013. Specific expansion areas and facilities in the Master Plan update included the site for a new Library building, look into North 16th Street closure and pedestrian mall concept, continue to develop new residential halls, addition of an Athletic Field House facility east of the football field, improvements to the stadium parking lot,

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relocation of the Tennis facility, relocation of the motor pool, changes to Waldrop Drive, adding additional signs along 12th Street, and possibly a new parking structure.

The Master Plan highlights general plans for the residential campus. These plans come from the 2012 Housing Strategic Plan laid out by Murray State. This study included a Housing Assessment and Needs report based on the quality and quantity of existing residential facilities, reviewed national housing trends and developed growth projections for Murray State to the academic year 2023. The report recommendations were to renovate Hart, Regents, Hester, and Elizabeth Residential Colleges.

Also highlighted in the plan is to develop three new low-rise residential colleges. The last plan was to continue support and renovate the existing College Court apartments.

The general trend of Murray State campus development is to the west. Current development on the west side of 16th Street has increased student crossings of this busy street. Campus planners indicate that the campus probably won't extend much further to the south. Murray State currently has three agricultural farms to support the University's agricultural programs. The Murray State Regents have voted to form a task force to look at expanding the agricultural properties and program.

Overall enrollment at the main campus of Murray State has been relatively stable over the past few years. It is envisioned to remain that way and the emphasis for growth is at the satellite campuses.

Hospital and Public Health Facilities

Murray-Calloway County Hospital

Murray-Calloway County Hospital is located at 803 Poplar Street. It is a public/not for profit facility serving West Kentucky and Northwest Tennessee. It began as the William Mason Memorial Hospital in 1910, was purchased by the Murray Hospital Association in 1947, and was called Murray Hospital from 1947 to 1964. In 1964 it became Murray-Calloway County Hospital. The location of the hospital is shown on Map CF-7.



Murray-Calloway County Hospital employs approximately 955 with 670 full time equivalent employees. The Medical staff consists of 30 physicians, 25 med-level providers (Nurse Practitioners and Physician Assistants, representing 28 medical specialties. The hospital currently has 152 acute licensed beds and 226 long-term care beds located at Spring Creek Heath Care Nursing & Rehabilitation. The hospital is accredited by the Joint Commission on Accreditation of Healthcare Organizations, the Kentucky Health Facilities and Health Services, American Association of Blood Banks, and the Kentucky Department of Health and Human Services.

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The hospital is a member of the American Hospital Association, The Kentucky Hospital Association, the Premier Healthcare Alliance, and the Twin Lakes Hospital District.

The hospital offers the following services – Acute Inpatient Rehabilitation, Adult Day Care, Ambulance, Blood Bank, Cardiac Rehab, Cardiovascular, Center for Diabetes, Center for Health & Wellness, Center for Rehab & Sports Medicine, Critical Care/Progressive Care, Emergency, Health Express Mobile Screening Unit, Home Care, Hospice, Laboratory, Medical Records, Miracle Moments Maternity, Nutrition, Obstetrics, Pastoral Care, Pharmacy, Radiology, Regional Cancer Center (under construction), Rehabilitation Services, Social Services, Inpatient and Outpatient Surgery, Women's Health, and Wellness Works/Health Promotions.

Spring Creek Health Care, was owned by Murray- Calloway County Hospital, and was renovated in June of 2006. The new construction added 64 beds, including 14 private rooms, a full-service kitchen, and many improved amenities including a separate room for physical therapy and occupational therapy. This expansion also allows for x-rays to be taken on-site, expediting care plans and serving as a convenience to the residents and staff while avoiding the historical ambulance transfer to the hospital. The Spring Creek Health Care is currently owned by Spring Creek KY Opco LLC.

The Anna Mae Owen Residential Hospice House opened in November of 2016. This facility provides specialized end of life care to people in their disease process by providing education, assistance, and comfort for our community and surrounding region.

Future Plans

Murray-Calloway County Hospital has a Strategic Plan that sets specific goals for the hospital. The most recent Strategic Plan established the following goals:

- provide the highest quality services in the region,
- create a culture of excellence for all stakeholders,
- implement a physician recruitment and retention process,
- become a regional healthcare facility,
- improve the physical facilities to support organizational goals, and
- maintain and improve financial performance

Each goal has a set of key initiatives aimed at accomplishing the goal. The key initiatives related to improving the physical facilities include the most recent addition of the Women's Pavilion, Acute Inpatient Rehabilitation Unit, Spring Creek renovations, and renovations to the Medical Arts Building, as well as the current hospital expansion that is underway.

Since the founding in 1910, the hospital has strived to provide the highest quality health care services for the region. Beginning in the 1970's & 1980's the hospital added new beds, laboratory facilities, and a major renovation and expansion. In the 1990's, Murray-Calloway County Hospital added a freestanding Regional Cancer Center; a new Center is under construction. Within the last twenty years, the hospital added the Centers for Sleep Studies, Rehabilitation & Sports Medicine, Diabetes, Health and Wellness, and the acquisition and expansion of Spring Creek Health Care Nursing & Rehabilitation.

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Murray-Calloway County Hospital is continuing its long-range plan to provide the highest quality health care services to the region by expanding its facilities and services offered.

Calloway County Health Center

The Calloway County Health Center located at 602 Memory Lane works in the areas of preservation of community health, disease prevention, health statistics, health education, and environmental protection. The Center's General Health Services include AIDS and other sexually transmitted infections, cardiovascular and diabetes services, PAP and mammography services, tuberculosis programs, and communicable diseases.

The Environmental Health program includes issuing permits and investigating complaints related to a variety of environmental health risks. Also included are the testing of private water supplies and the issuing of subsurface wastewater disposal permits. The program also responds to nuisance complaints regarding the control of rodents, mosquitoes, and birds. Periodic distribution of rodent bait and lead paint testing and follow-up are also part of this program. Other programs conducted by the Health Center include Health Education, Nutrition Education, Maternal and Child Health Services, Tobacco Prevention and Cessation, and Safe Communities.

The location of the Calloway County Health Center is shown on Map CF-7.

FUTURE COMMUNITY FACILITIES PRINCIPLES

The planning principles related to Utilities and Other Community Facilities and resulting goals defined in this section are a restatement of the community facilities goals and objectives adopted by Murray for the Comprehensive Plan. Each principle is defined along with a related goal and strategies to achieve that goal. The strategies outline actions that can be taken to work toward the attaining of the goal. The full list of goals and objectives adopted by Murray for the Comprehensive Plan is contained in Appendix A.

All of the Community Facilities Principles discussed in this section are the same as the Land Use Principles except for "Preserve Strong Public Utilities". "Preserve Strong Public Utilities" could probably be a subset of the one Land Use Principle, "Preserve Compact Nature", not listed in this section. However, because of the importance of public utilities to the life, growth, and development of the community, it is listed and discussed here as a stand-alone Community Facilities Principle.

1. Preserve Strong Public Utilities

The City of Murray is fortunate to own and operate water, wastewater, stormwater, electric, telecommunications, solid waste – now contracted with Republic Services, and natural gas utilities. These utilities primarily serve within the Murray city limits, but service is provided outside the city limits where there is a demand and the service can feasibly be provided. Having strong public utilities allows Murray to plan and develop the utilities and related services in a manner to facilitate the growth of the city. Making sure these utilities remain strong is a priority with the City of Murray.

Strong Utilities Goal: Preserve strong public utilities by conducting timely planning that leads to strong systems that serve without interruption with rate structures that adequately support system expansion, operation, and maintenance.

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Strategy 1: Maintain Up To Date Planning

Planning is very important to maintaining a strong public utility. Although plans with 20-year horizons may be useful in developing system road maps for the future, they have proven not sufficient to meet the shorter time frames necessary for efficient operation of public utilities. While 10-year planning time frames may be appropriate for large capital expenditures, like treatment plants and major utility transmission improvements, 1-year and 5-year periods are the work horses of utility planning.

Murray will evaluate its public utility planning efforts and develop up to date master plans with 5 and 10 year planning horizons for the water, wastewater, stormwater, electric, solid waste, and natural gas systems. Once developed, they will be formally reviewed each year. The plans will be revised every five years.

Strategy 2: Provide Systems with Redundancy

In the operation of public utilities there are strong systems and systems that just meet basic needs. Systems that just meet basic needs have service disruptions when system components fail. Strong systems have constructed facilities that provide backups to key components and continue to provide service even with failures of system components.

As part of each utility's master planning, system redundancy will be evaluated. Capital

planning associated with the master plans will include the development of projects that provide the maintaining of high levels of service in time of system component failure.

Strategy 3: Maintain Sound Rate Structure

The rate structure plays a key role in determining whether a public utility is a strong utility or one that just provides the minimum level of service. The rates for services should be set at levels to provide top quality operations and maintenance, system redundancy to maintain continuous operation, systems expansions, and a depreciation fund for the replacement of system components that have passed their useful life. Rates for the operation of a public utility should be set based on sound business principles and never on political considerations. Grants should not be used to fulfill the basic mission for providing utility service, but to shorten the time frame for system expansions.

Many times utility rates are adjusted at long time intervals that bear no correlation to the changing needs of the utility. Many public utilities find automatic adjustment of rates based on economic indicators to be very useful. Many utilities also find useful more frequent and smaller adjustments of rates based on business needs.

As part of the master planning for its public utilities, Murray will review the rates of its public utilities and assess their ability to fund the components mentioned above for strong utilities. Murray will also consider integrating yearly rate adjustments into the rate ordinance based on utility needs or economic indicators. In addition, Murray will conduct comprehensive rate evaluations every five years as part of the utilities master planning.

Strategy 4: Efficiently Manage the Assets

Murray's public utilities are valuable assets worth 10's of millions of dollars. Murray strives to manage these assets in a manner that allows them to increase their value to the

COMPREHENSIVE PLAN

community. Strong systems cannot be sustained if adequate operations and maintenance personnel are not employed to extend the life of the assets by keeping them in top operating order. Preventative maintenance programs and the stocking of, sometimes expensive, spare parts and components can be instrumental tools in managing the assets.

Murray will constantly monitor the programs in place for managing its public utility assets. New programs, including the integration of new software, will be developed when found necessary to properly manage these important assets.

2. Enhance Unique Small Town Community Character

Murray is a unique town with a progressive regional university that has won numerous awards for its educational value. Murray has also been recognized as a top retirement destination. Murray is in the center of an agricultural area and has the small town feel generally associated with agriculture. This blend of economies supports services and activities not generally associated with similar sized towns in Kentucky. The blends of these different cultures and the life style they support give the residents of Murray a distinct pride in their community and its character. The character of Murray will be enhanced through the integration of improved planning, citizen participation, and the installation of community based technology to enhance the desired academic atmosphere.

Community Character Goal: Enhance Murray's unique community character by protecting

and enhancing core neighborhoods, the downtown, and historic areas, while providing for the efficient flow of people and goods throughout.

Strategy 1: Improve Community Development Coordination

There are several agencies that impact the planning and execution of community development in the Murray planning area. In addition to the City of Murray, these agencies represent Calloway County Government, State and Federal Government, the Purchase Area Development District, and Murray State University. When multiple agencies are involved, the speed at which a community development project progresses is generally a function of the amount of coordination that occurs.

Murray will develop steps to improve the character of the community through coordination with other governmental agencies to improve community development efforts. Tools to be considered for improved coordination include face to face meetings at a regularly scheduled frequency and regularly scheduled teleconferences.

Strategy 2: Encourage Citizen Participation

The participation of the citizens is always important in developing and enhancing the community's character. Murray has lots of opportunities where citizens can be involved including service on boards and commissions, Fire and Police Academies, West Kentucky Night, Character Counts, Community of Promise, Leadership Murray, Leadership Tomorrow, Town and Gown, and Court Appointed Special Advocate. Another possible avenue for citizen involvement is through neighborhood associations.

Murray will continue to encourage and enlist citizen participation in the many activities that define the community's character. Murray will encourage the development of active neighborhood associations and assist the neighborhoods in their formation as part of the effort to encourage participation by its citizens.

Strategy 3: Go “High Tech”

The sophisticated, academic image desired by Murray to define its community character can be facilitated through the integration of technology. Many cities have integrated into their operating strategies the expansion of electronic government services. The high availability of affordable broadband service in the Murray area facilitates the use of the internet to provide governmental services. Another use of technology that would be “over the top” in terms of enhancing the desired academic image would be establishing Murray as a “wireless city”. In addition to benefitting local residents, access to wireless anywhere in the city would be a benefit to students when they visit off campus locations in Murray.

Murray will investigate the expansion of technology to enhance its image. Opportunities like enhanced electronic government services and the creation of “Wireless Murray” will be investigated.

3. Enhance, Preserve, and Protect the Environment

Murray is a very environmentally aware community. The environmental programs at Murray State University and the ever-increasing awareness of environmental impacts from human activity have fostered this environmental awareness. This principle recognizes the desire of the area’s citizens that the development of land occur in an environmentally friendly manner and that the resulting developed land contain significant environmentally friendly green space. Streams, their associated floodplains, and forested areas are the most

significant environmentally sensitive features in the Murray area. Environmentally friendly communities recognize that enhancement of the environment goes beyond land development activities to include other actions that impact the entire community. Several of these activities are discussed here.

Environmental Goal: Maintain a natural environment by protecting, preserving, and enhancing natural resources and promoting design, development and construction practices that create green space, neighborhood connectivity, and a visually pleasing environment.

Strategy 1: Enhance Community Outreach

Events in the Murray area that reach the public and emphasize the protection of the environment include “Make a Difference Day” and “Adopt a Highway.” Numerous additional opportunities for community environmental outreach exist, particularly in the public schools and Murray State University.

Murray will continue to promote existing community outreach activities. The addition of new events and new outreach audiences will be evaluated.

Strategy 2: Increase Community Recycling

Murray’s solid waste program currently contracts with Republic Services to conduct limited curb side recycling. A recycling program is also conducted monthly on campus at Murray State University’s north farm. Environmentally friendly communities have strong recycling programs and Murray desires to increase its participation in recycling efforts.

Murray will seek ways to increase its participation in recycling programs. Murray will also evaluate the potential of increasing recycling by establishing a cooperative recycling

program with Murray State University.

Strategy 3: Improve Building Designs

Environmentally friendly communities strive to reduce their carbon foot print. One common way to accomplish this is to reduce the energy consumed by new buildings through the use of energy efficient designs. In addition, existing buildings can sometimes be retrofitted to reduce energy consumption. Another aspect of environmentally friendly buildings is the use of sustainable materials in their construction.

Murray will evaluate the use of environmentally friendly building design in all new city owned buildings and in existing city owned building retrofits. In addition, Murray will evaluate ways to encourage other public and private building owners to design, construct, and retrofit their buildings in an environmentally friendly manner. Options to be evaluated include the adoption of policies and ordinances, conducting education to encourage voluntary programs, and voluntary programs with incentives.

Strategy 4: Efficiently Integrate Cell Towers

Structures that support wireless services are a concern from an environmental and safety viewpoint. A progressive “high tech” environmentally friendly city generally embellishes the expansion of wireless services, but desires that the facilities supporting the services be constructed so as not to distract from the pleasing visual aspect desired for the community. In addition, safety concerns also dictate that the structures be located to minimize potential damage to residents and property in the event of failure during disasters.

Murray will work with public and private agencies in developing a plan for the location of facilities supporting wireless communications. The plan will seek to identify best locations for these facilities so they blend with the environment and be in safe locations. Murray will also seek ways to encourage the location of new wireless facilities on existing structures.

4. Develop and Enhance Quality of Life Measures

Quality of life is a key component for Murray to keep its current residents, attract new retiring residents, or attract new commercial and industrial investment in the community. Murray currently has a high quality of life, but there are measures that can be taken to increase its attractiveness for future residents and related commercial and industrial investment. There are many things that contribute to a high quality of life and some of these measures have already been addressed in Principles 1-3. Additional measures are discussed in this section.

Quality of Life Goal: Develop new programs, events, and other quality of life measures while enhancing existing cultural and recreational opportunities and where possible integrate these quality of life measures into all aspects of life in Murray.

Strategy 1: Maintain a Safe Environment

A safe community is a community where its citizens can move about freely without fear of being a victim of a crime. A safe community also is able to protect property from destruction by fire. In a safe community, citizens can visit government and other buildings without fear of safety and accessibility problems.

Murray will seek ways to continue to improve police and fire protection services to the community. The construction of the new fire station on South 16th Street was completed

in 2021. Murray will also continue to seek ways to improve building safety and accessibility for its employees and the public.

Strategy 2: Maintain a Caring Environment

Residents of communities with a high quality of life sense a feeling that the community and its leaders truly care about them and their needs. The caring of a community is expressed in the manner a community provides for its elderly, disabled, and youth. Murray strives to be a retirement destination. As an outgrowth of attracting retirees, the median age of Murray's population will continue to increase, necessitating the provision of more and better services for the elderly.

Murray will continue to seek ways to make the quality of life better for all its citizens, especially the youth, the elderly, and the disabled. Murray will evaluate the formation of an Advisory Group to seek ways to enhance services to these target groups.

Strategy 3: Maintain a Healthy Environment

Murray has excellent health care facilities available for its citizens. The availability of good health care is an important measure of the quality of life, especially to an aging population. Health care has, to a large degree, become a technology driven enterprise. Funds must continually be sought to finance the technology improvement necessary to provide adequate health care.

Another aspect of a healthy environment is the availability of programs that educate citizens on things they can do to improve their health. Murray-Calloway County Hospital and the Calloway County Health Center offer several excellent programs that serve this need, like nutrition and smoking cessation. An additional aspect of a healthy environment becoming more and more important to community citizens is the ability to visit public places without the exposure to second hand smoke from tobacco products. This could be an important element in the attraction of retirees to the Murray area. Several of the area's restaurants have voluntarily become "smoke free" In 2018, the City passed an ordinance making all workplaces and public spaces in Murray smoke-free.

A third aspect of a healthy community is the opportunity to participate in recreational activities that contribute to a healthy life style. Access to sidewalks, parks and recreational trails create these healthy life style opportunities.

Murray will continue to seek ways to fund advances in health care and to expand the desired health care services and facility improvements. Murray will continue to encourage healthy life style programs like nutrition and smoking cessation.

Strategy 4: Enhance and Expand the Park System

The access to public parks and recreational trails is an important measure of the community's quality of life. It is also an important element in the attraction of the retired community to Murray. The Land Use Element of the Comprehensive Plan discusses ways to enhance the park system through the land development process. Other means are available to assist with park expansion and include citizen philanthropy and income from leasing park facilities for a limited range of commercial services.

Murray will continue to seek ways to expand and enhance the public park system, including recreational trails. Murray will also continue to seek grants and citizen and business philanthropy to assist funding of the needed park system enhancement.

Strategy 5: Improve the Public Library

In a community focused on maintaining an academic nature, the provision of library services is very important. These services are also important to the age group of the retirees Murray hopes to attract, as many of them are not yet fully a part of the digital media revolution. Murray has an excellent library and recognizes the need to expand library facilities and services to enhance their availability to the area's citizens.

Murray will support the planned expansion of library facilities and services. Support may take the form of assistance with needed utilities, public services, and other means available to city government.

Strategy 6: Increase Adult Education

Adult education is a community amenity that contributes to a high quality of life, especially for an aging population. Older citizens want to stay active and continue the learning process, which has been found to have health benefits.

Murray will continue to seek ways to maintain an active community adult education program. This will include seeking ways to cooperate with the public schools and Murray State University to leverage their resources for providing community based adult education.

5. Maintain Economic Opportunity

Approximately 25 percent of the jobs and 30 percent of the income result from jobs in the public sector giving Murray a stable employment base. Approximately 13 percent of the jobs and 20 percent of the income come from manufacturing. Despite current challenges in the manufacturing sector due to the national downturn, future economic potential for the Murray area appears good. The completion of the industrial park on Highway 641 North gives the area excellent future potential for attracting new industrial investment and the resulting jobs. The continued growth of the Murray-Calloway County Hospital and the completion of the expansion there, also bode well for the future of the Murray area. Agriculture will also continue to play an important role in Murray's economic future.

The quality of life is high in Murray and actions taken as a result of this Comprehensive Plan should ultimately make it even better. The quality of life and proximity to Kentucky Lake and the Land Between the Lakes National Recreational Area should prove to be positive and important factors for the Murray area in recruiting new businesses, new retirees, and developing income from tourism.

The Land Use Element included several economic strategies related to land use. Additional strategies are included here.

Economic Opportunity Goal: Develop a diverse economic base with multiple employers to help promote stability in employment for Murray and the surrounding area.

Strategy 1: Support and Enhance Economic Development

The economic development team in Murray supported by local government consists of the Economic Development Corporation, Chamber of Commerce, Convention and Visitors Bureau, and Murray Main Street. Another excellent economic development resource in the Murray area is the Center for Economic and Entrepreneurial Development at Murray State University. These agencies support a range of economic development activities including encouraging downtown growth, developing industrial land, and recruiting new investment in industrial facilities.

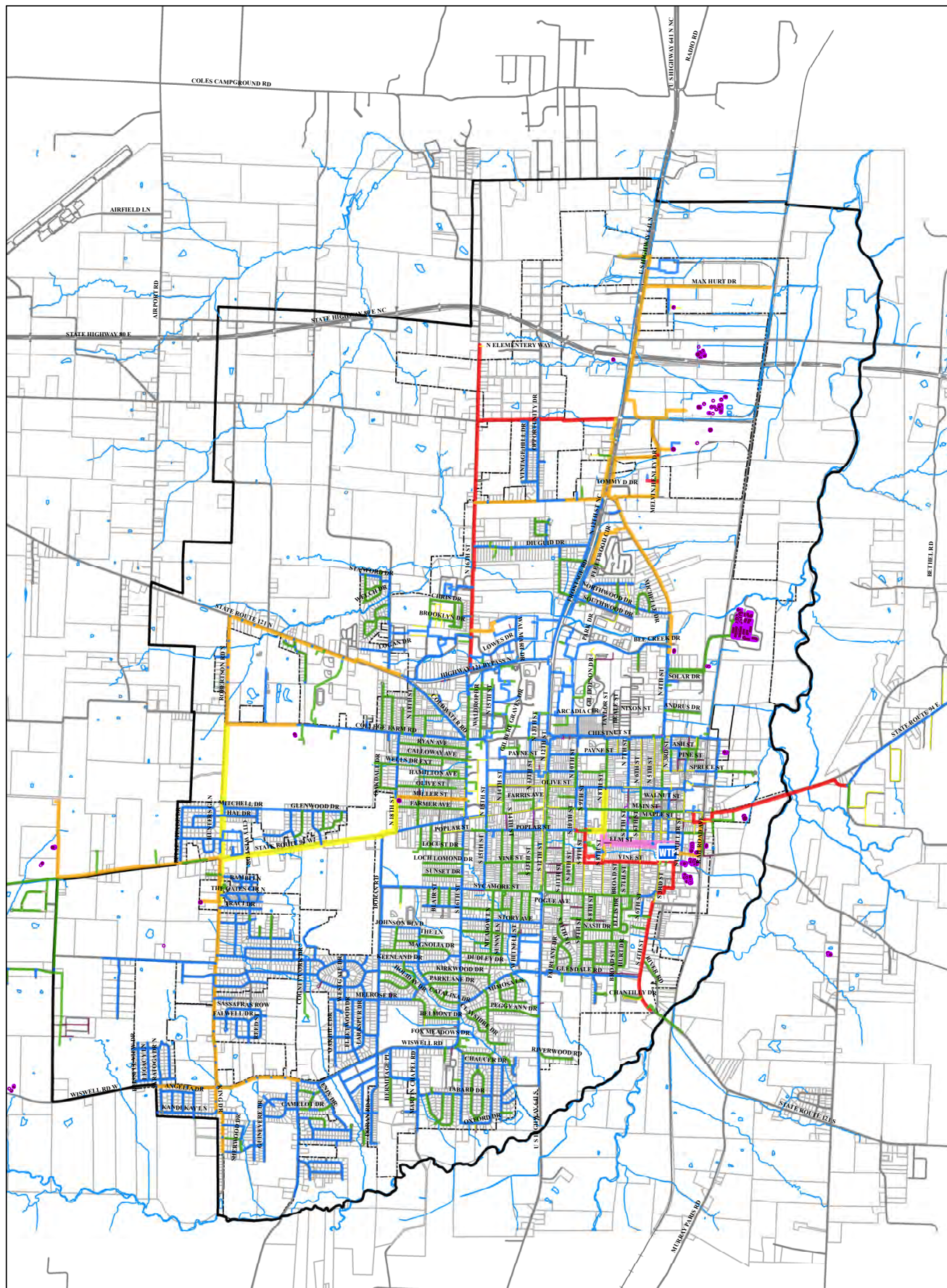
COMPREHENSIVE PLAN

Murray will coordinate and continue to support the local economic development team.

Strategy 2: Improve Educational Opportunities

A key element in attracting outside investment to create economic opportunity is the quality of the local work force. Maintaining a quality work force happens by design, not by chance. Murray State University, the public schools, and the Area Technology Center provide a strong nucleus of educational agencies to provide the kinds of training needed by the Murray area work force.

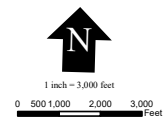
The Murray economic development team will coordinate activities between these educational institutions and assist them in structuring the correct educational programs for the Murray area.

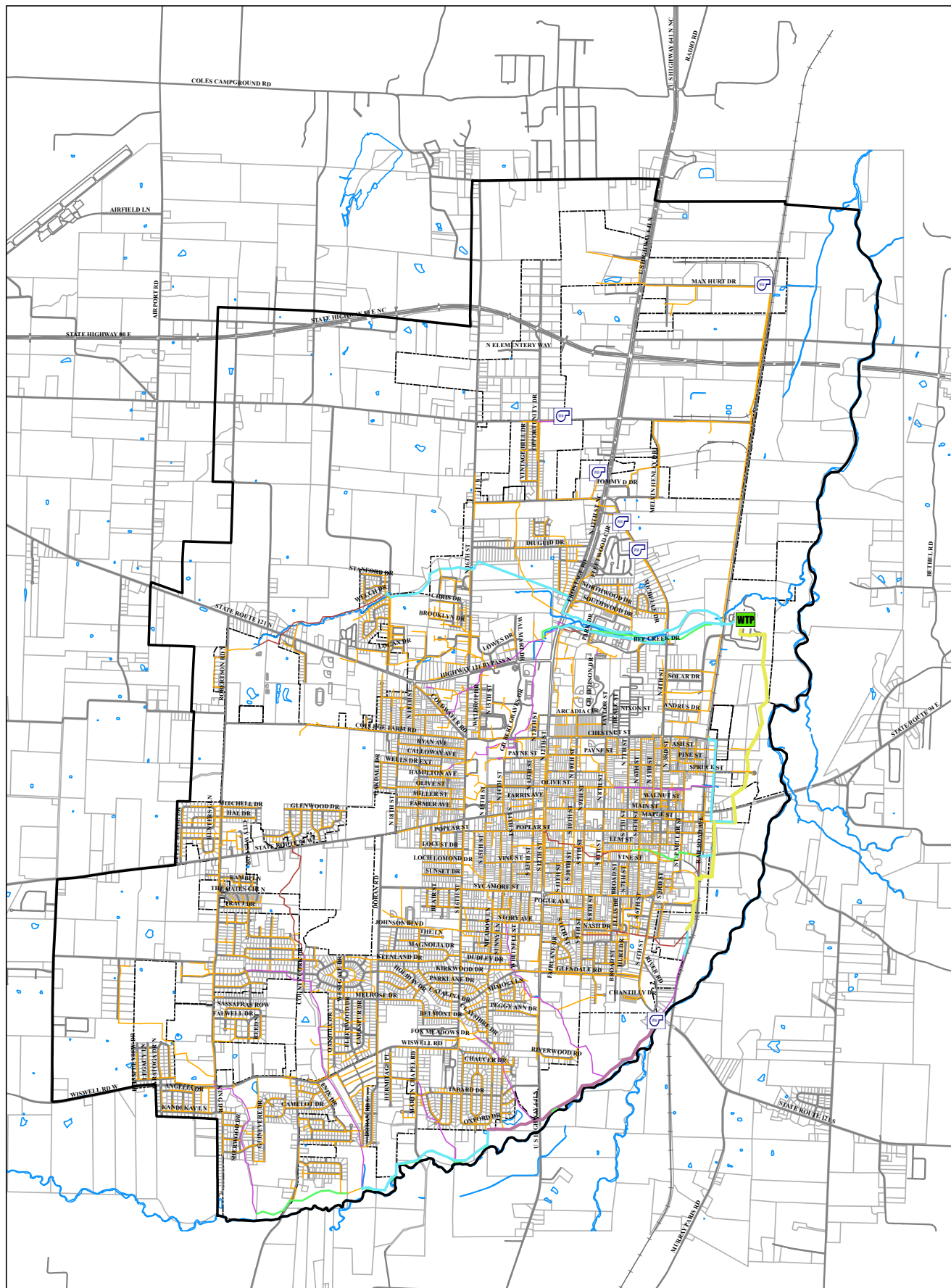


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CF-1: Murray Water System

- | | | |
|---------------|----------------|-----------------------------|
| 1" Water Main | 9" Water Main | ----- City Limits |
| 2" Water Main | 10" Water Main | — Urban Services Area |
| 3" Water Main | 12" Water Main | ■ Tanks and Reservoirs |
| 4" Water Main | 14" Water Main | ■ WTP Water Treatment Plant |
| 6" Water Main | 16" Water Main | |
| 8" Water Main | 24" Water Main | |

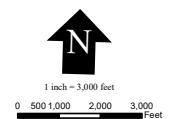


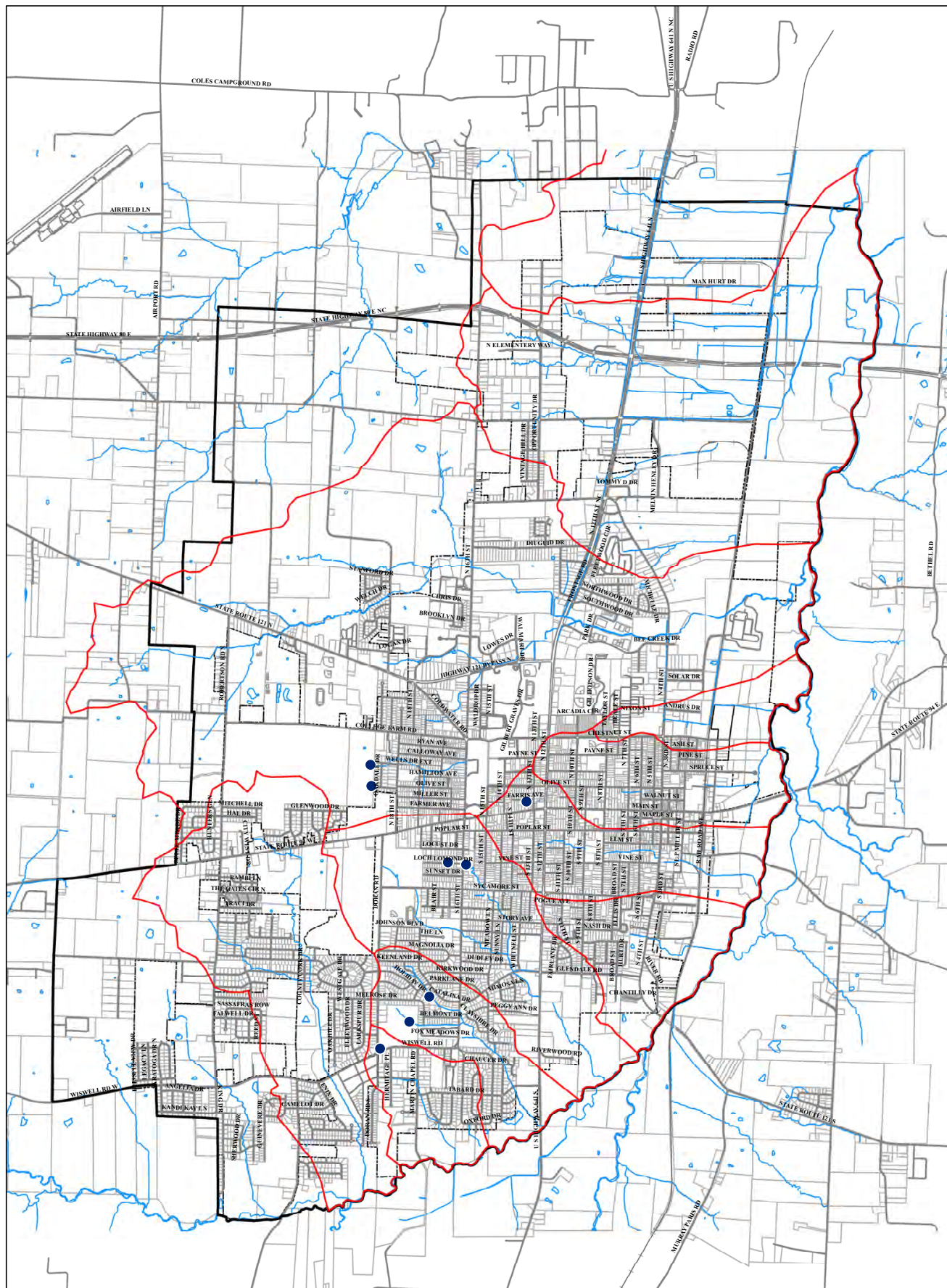


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CF-2: Wastewater System

- | | | |
|------------------------------|-------|----------------------------|
| — Small Diameter Sewers <10" | — 18" | Wastewater Treatment Plant |
| — 12" | — 24" | Lift Station |
| — 15" | — 30" | --- City Limits |
| — 16" | — 36" | — Urban Services Area |

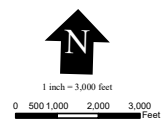


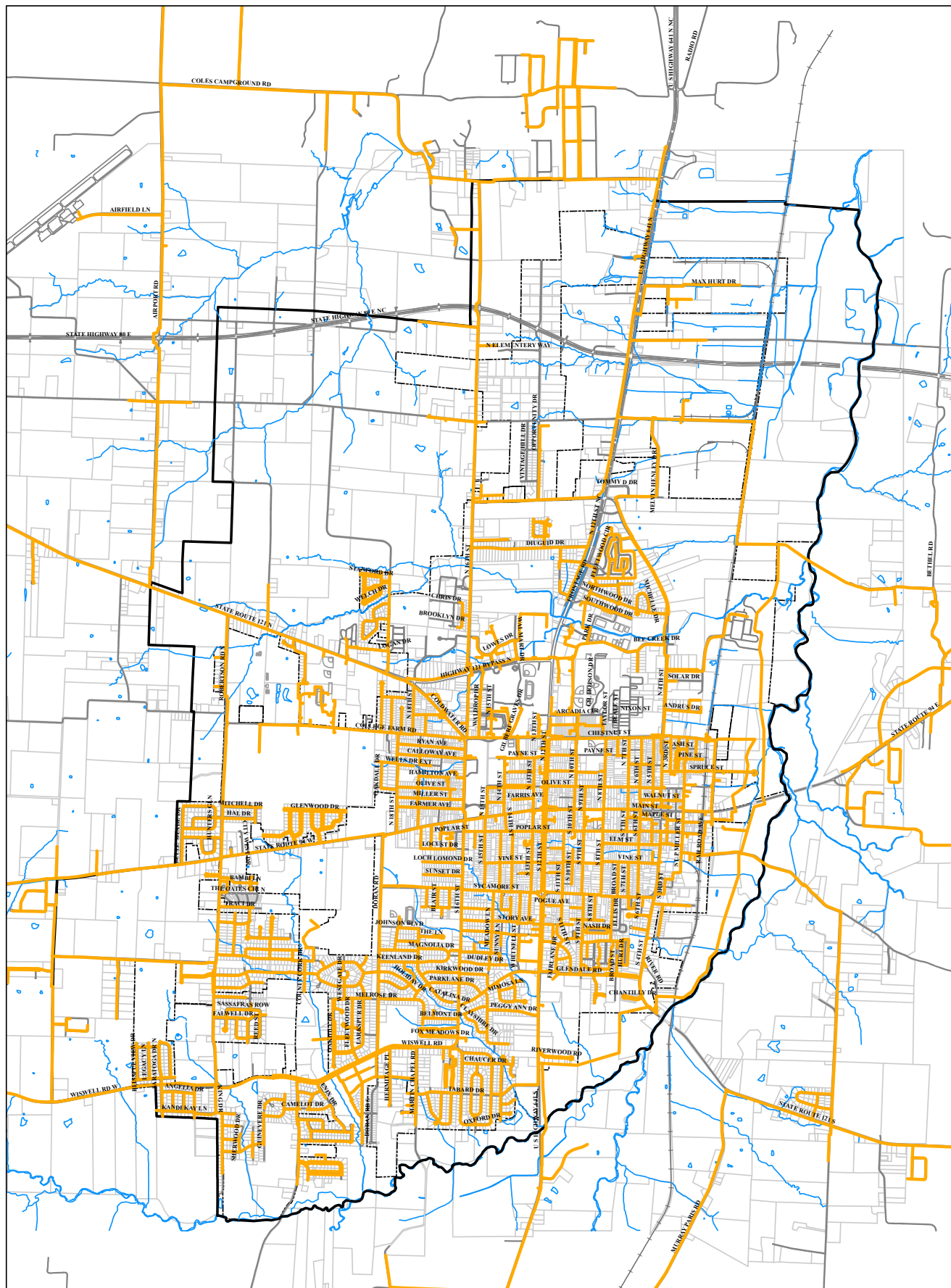


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CF-3: Stormwater Facilities

- Potential Detention Ponds
- Stormwater Drainage Basins
- - - - City Limits
- Urban Services Area

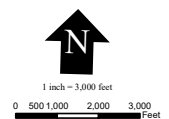


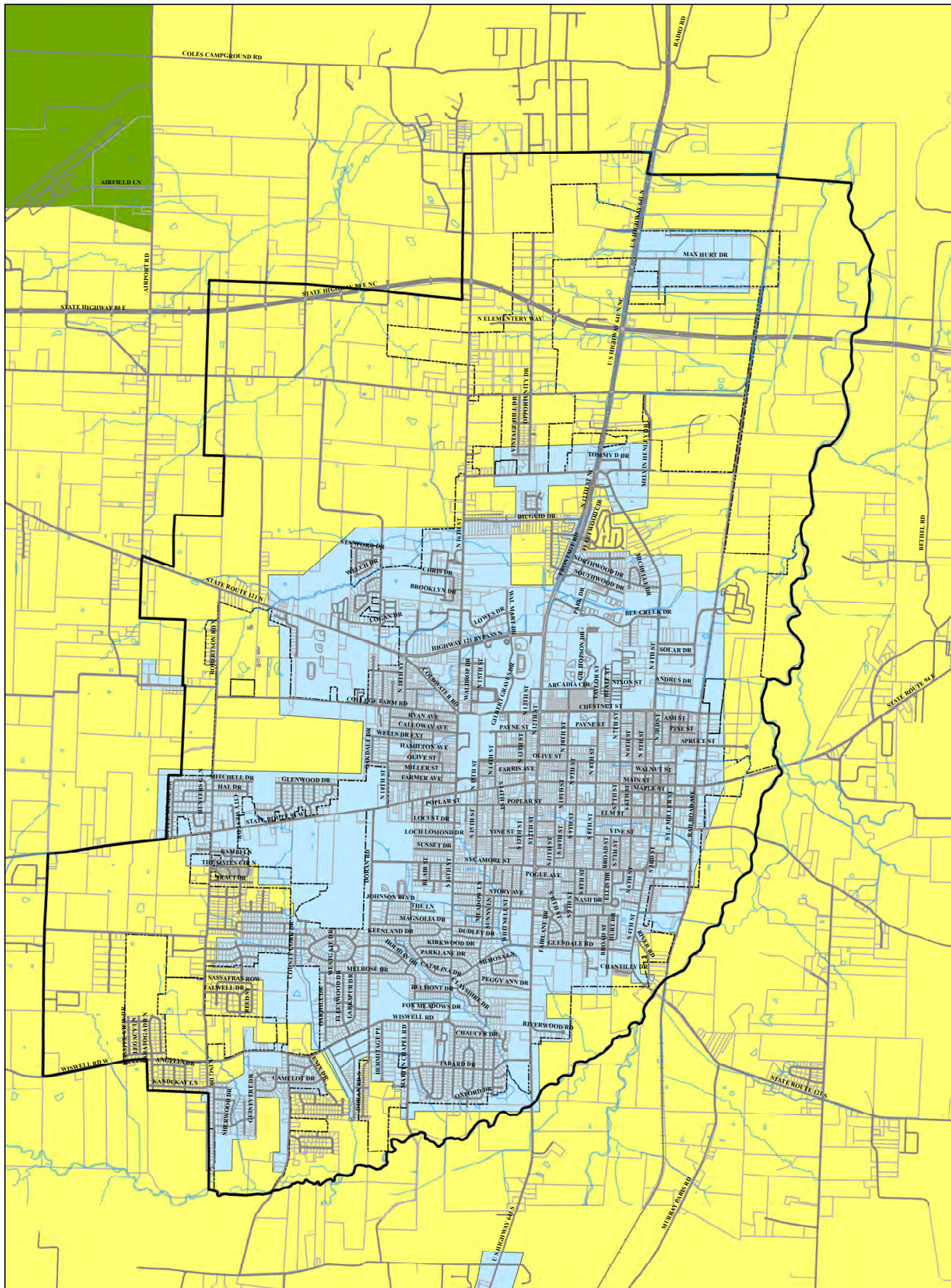


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CF-4: Natural Gas System

- Natural Gas Lines
- Urban Services Area
- - - - City Limits





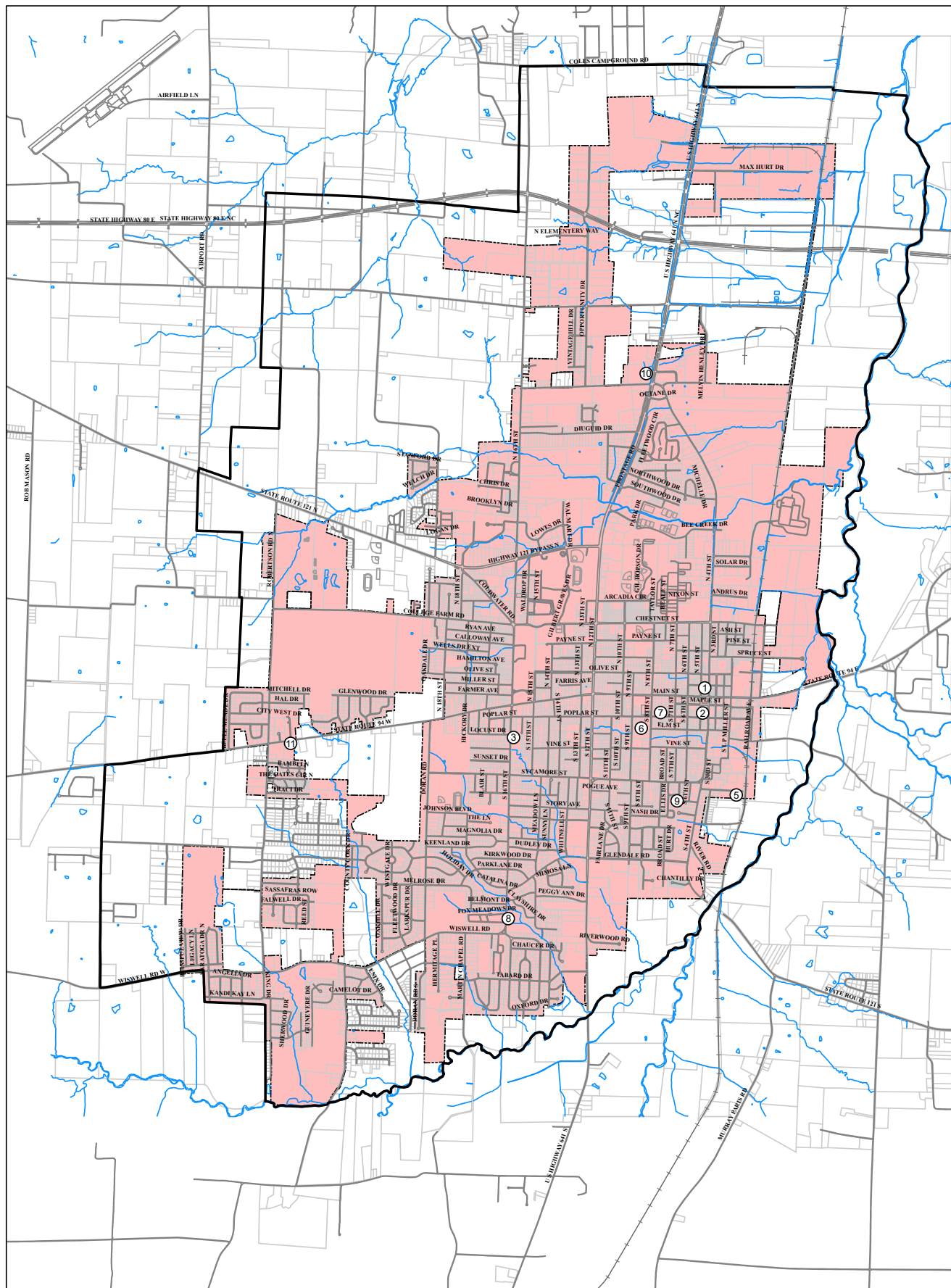
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CF-6: Telecommunications

- Urban Services Area
- City Limits
- Murray Electric Service Area
- West Kentucky Rural Telephone Cooperative
- Other Telecommunication Providers



1 inch = 3,000 feet
0 500 1,000 2,000 3,000 Feet

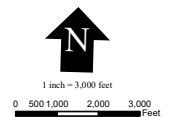


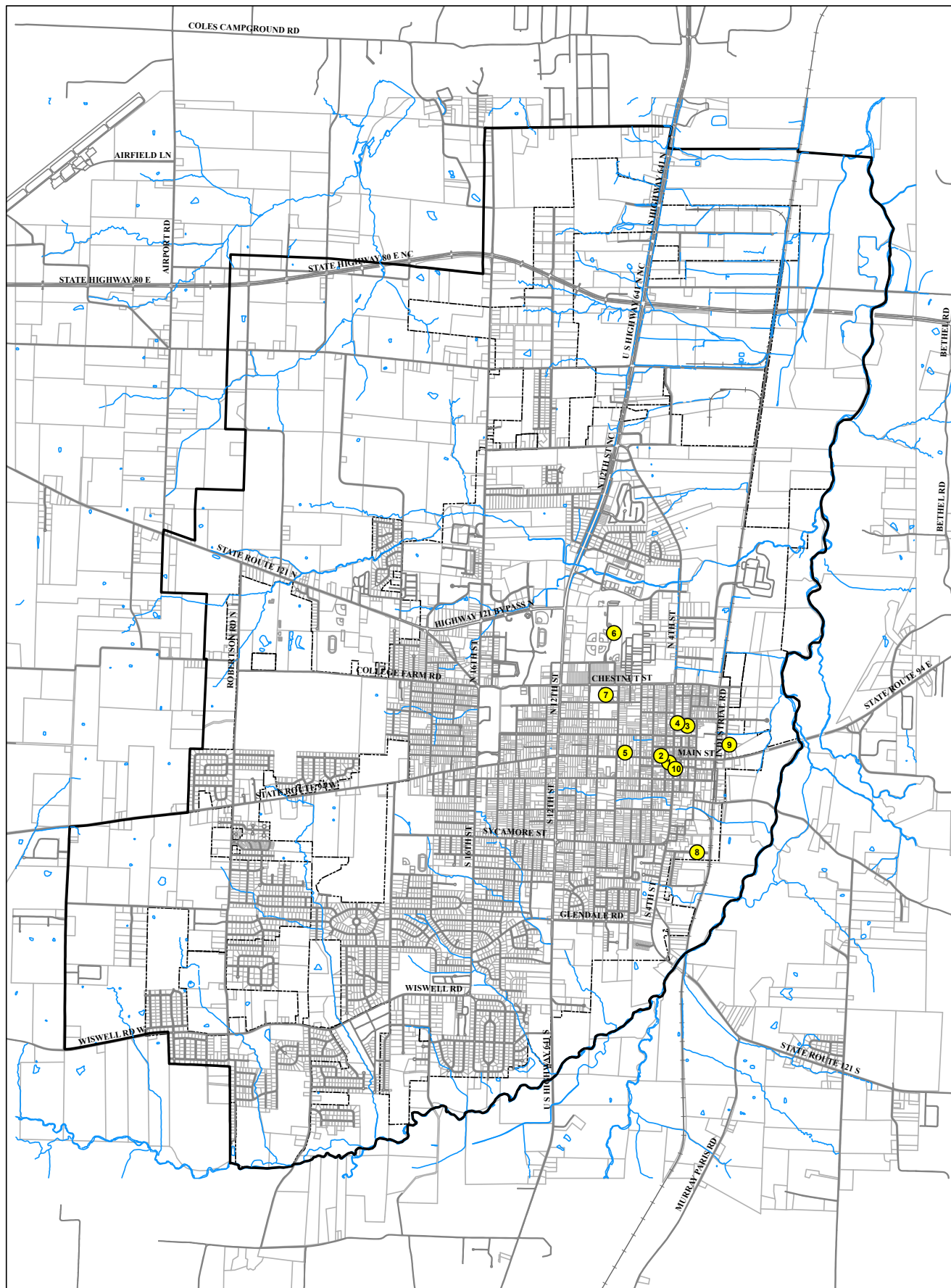
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CF-7: Law Enforcement, Fire, & Medical Facilities

- Facility Locations
- Urban Services Area
- City Limits
- City of Murray Fire District
- Calloway County Fire District

- | Id | Facility Names |
|----|---------------------------------|
| 1 | Murray Police Station |
| 2 | Murray Fire Station No. 1 |
| 3 | Murray Fire Station No. 2 |
| 5 | Calloway County Rescue Squad |
| 6 | Murray-Calloway County Hospital |
| 7 | Wellness Center |
| 8 | Spring Creek Health Care |
| 9 | Calloway County Health Center |
| 10 | Murray Fire Station No. 3 |
| 11 | Anna Mae Owens Hospice House |



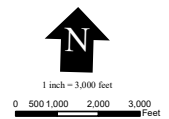


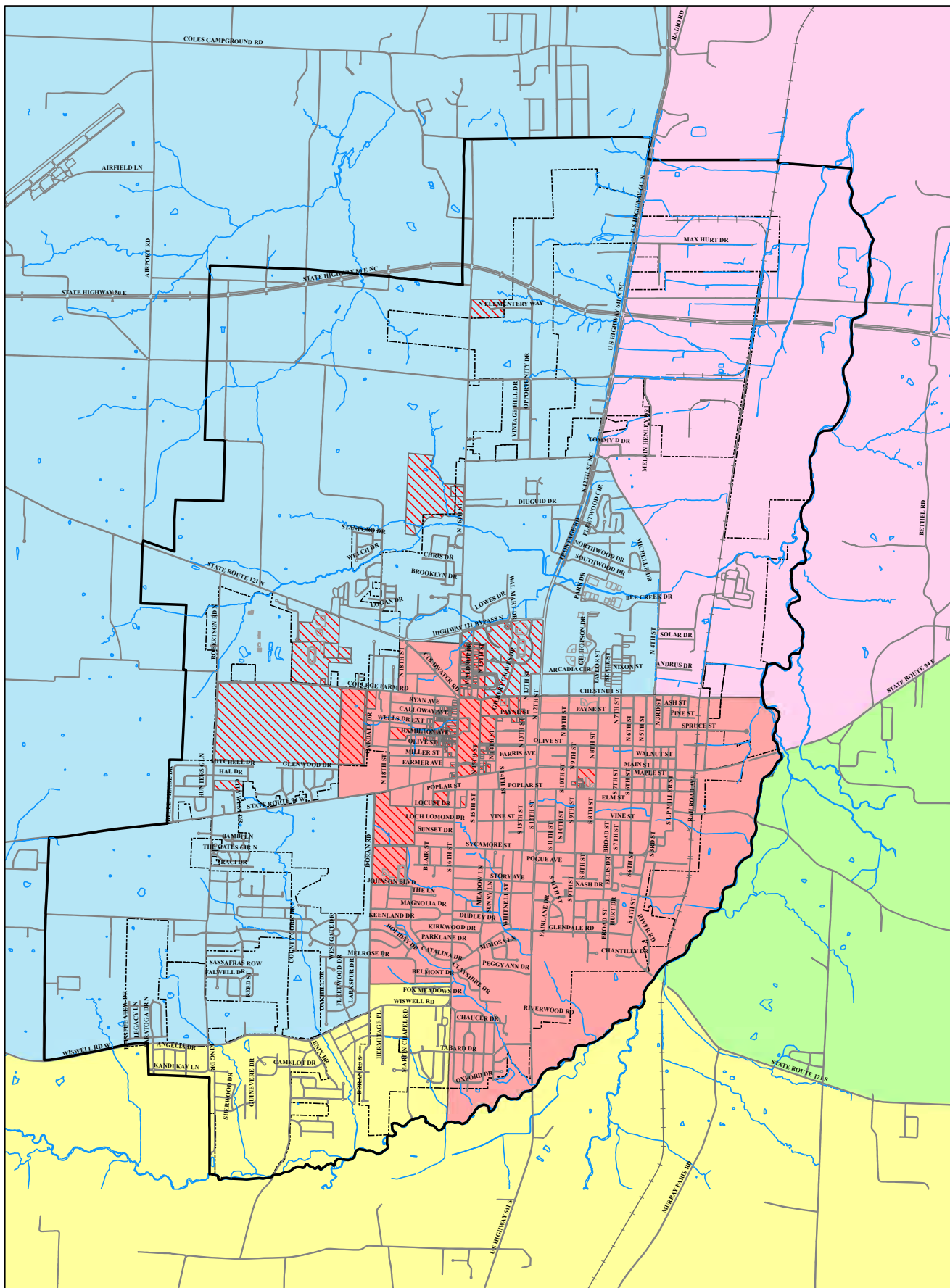
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CF-8: Courthouses, Judicial, City, Parks, & Library Facilities

- Urban Services Area
- - - City Limits
- (X) Points of Interest

- | Id | Name |
|----|--------------------------------------|
| 1 | Calloway County Courthouse |
| 2 | City Hall |
| 3 | County Jail |
| 4 | Calloway County Judicial Center |
| 5 | Murray-Calloway County Library |
| 6 | Central Park |
| 7 | Chestnut Park |
| 8 | Calloway County Road Department |
| 9 | State Highway Department |
| 10 | Murray Convention & Visitor's Bureau |



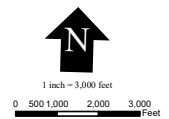


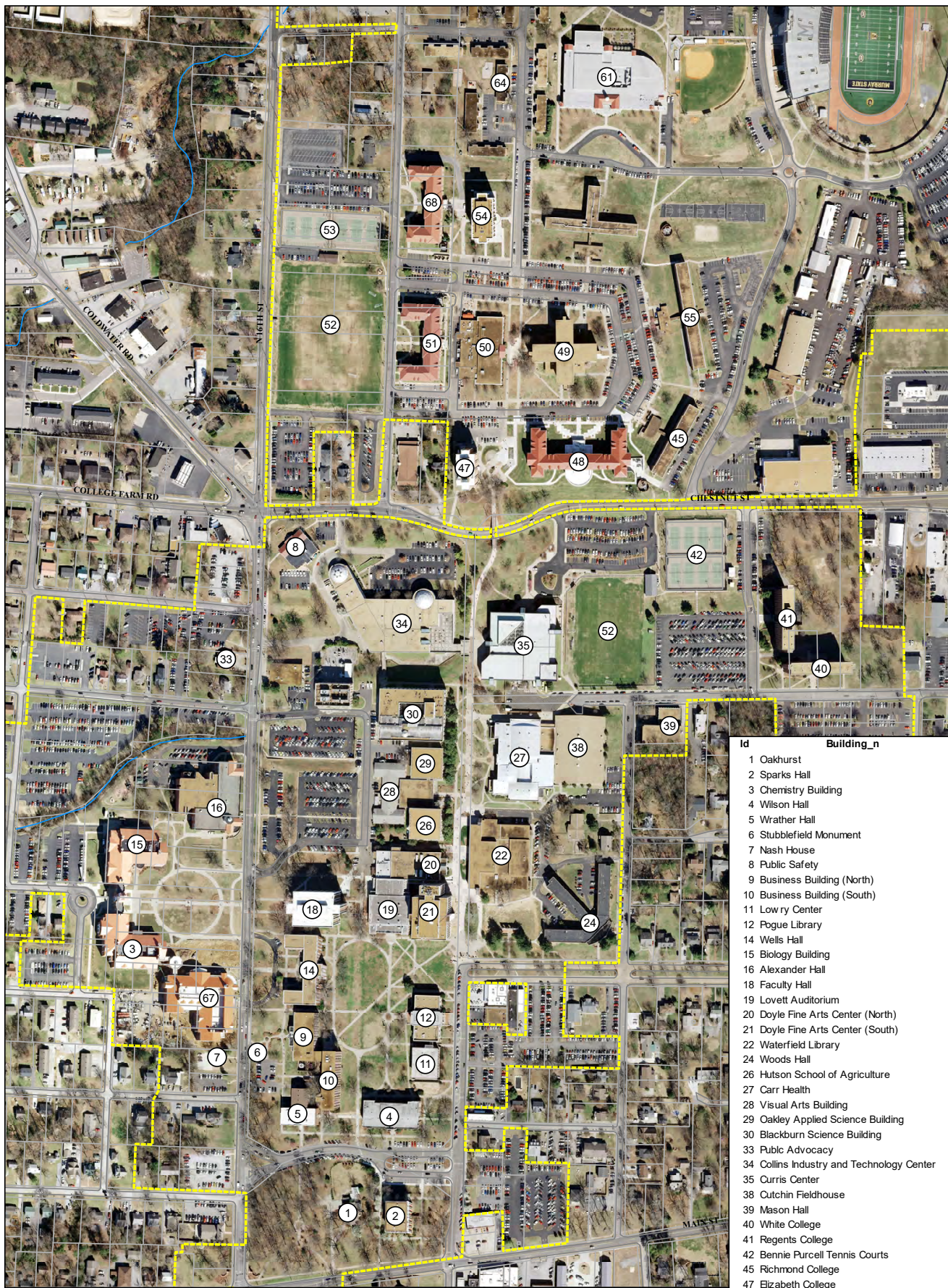
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CF-9: Schools & District Boundaries

- Murray Independent School District
- Urban Services Area
- City Limits
- School Campuses
- Murray Independent

- Callaway School District 1
- Callaway School District 2
- Callaway School District 3
- Callaway School District 5





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CF-10: Murray State University Campus

- (X) Murray State Buildings
 - - - - - Murray State Property



- | Id | Building_n |
|----|---|
| 1 | Oakhurst |
| 2 | Sparks Hall |
| 3 | Chemistry Building |
| 4 | Wilson Hall |
| 5 | Wrather Hall |
| 6 | Stubblefield Monument |
| 7 | Nash House |
| 8 | Public Safety |
| 9 | Business Building (North) |
| 10 | Business Building (South) |
| 11 | Low ry Center |
| 12 | Pogue Library |
| 14 | Wells Hall |
| 15 | Biology Building |
| 16 | Alexander Hall |
| 18 | Faculty Hall |
| 19 | Lovett Auditorium |
| 20 | Doyle Fine Arts Center (North) |
| 21 | Doyle Fine Arts Center (South) |
| 22 | Waterfield Library |
| 24 | Woods Hall |
| 26 | Hutson School of Agriculture |
| 27 | Carr Health |
| 28 | Visual Arts Building |
| 29 | Oakley Applied Science Building |
| 30 | Blackburn Science Building |
| 33 | Public Advocacy |
| 34 | Collins Industry and Technology Center |
| 35 | Curris Center |
| 38 | Cutchin Fieldhouse |
| 39 | Mason Hall |
| 40 | White College |
| 41 | Regents College |
| 42 | Bennie Purcell Tennis Courts |
| 45 | Richmond College |
| 47 | Elizabeth College |
| 48 | Franklin College |
| 49 | Hart College |
| 50 | Winslow Dining Hall |
| 51 | Clark College |
| 52 | Intramural Sports Field |
| 52 | Intramural Sports Field |
| 53 | Outdoor Tennis Courts |
| 54 | Hester College |
| 55 | Springer College |
| 61 | Susan E. Bauernfeind Student Recreation |
| 64 | College Courts |
| 67 | Engineering Building |
| 68 | New Richmond College (Out of Commisio |



DEPARTMENT OF
PLANNING & ENGINEERING
CITY OF
MURRAY
CALLOWAY COUNTY
KENTUCKY
NOVEMBER, 2018

CF-11: Murray State University

----- MSU Property Boundary



1 inch = 500 feet
0 0.025 0.05 Miles

RESTATED GOALS AND OBJECTIVES

Goals and Objectives Statement Adopted for the Comprehensive Plan

The Kentucky Planning and Zoning Legislation, contained in Chapter 100.187 of the *Kentucky Revised Statutes*, include a requirement that the Planning Commission and City Council shall adopt statements of goals and objectives. The statements shall serve as a guide for the physical development as well as the economic and social well being of the city.

FRAMEWORK

The establishment of community goals and objectives is an essential step in the comprehensive planning process for Murray and will provide the legal framework and documentation for supporting planning and development decisions by the Murray Planning Commission. The goals and objectives should address the major issues and concerns that are and will be affecting the City of Murray now and in the future.

Goal – A goal is defined as a general statement of a desired result. Goals establish the long- term end toward which land use programs and activities are directed.

Objective – An objective is a statement of a specific, measurable, intermediate end that is achievable and marks progress toward a goal. Statements on community objectives provide the official governmental guidance for achieving goals.

FUTURE LAND USE GOAL

To achieve a balanced pattern of land use that meets the needs of the population, stimulates physical, social and economic development, and protects the environmental well being of the community.

The City of Murray is seen as a place where people can:

- Provide shelter and meet the basic needs for themselves and their families.
- Provide equal opportunity to all people.
- Enjoy the beauty, safety, and security of our community.
- Become responsible citizens.
- Promote a community which is aesthetically attractive for residents, visitors, and potential investors.
- Create happier, healthier, and smarter children by promoting community wide efforts that improve the well being of our youth.

COMPREHENSIVE PLAN

Goal – Community Relations: *To improve, both locally and regionally, the interrelationships among citizens, government, community, education, and business.*

Objectives

- Encourage participation to enhance the community through citizen support, neighborhood groups, service by citizens on Boards and Commissions, government outreach programs including Fire and Police Academies, West Kentucky Night, and other civic organizations such as Character Counts, Community of Promise, Leadership Murray, Leadership Tomorrow, Town & Gown, and CASA.
- Work toward better coordination of community development activities with County officials and representatives.
- Improve intergovernmental relations with county, state, and federal governments, the university, the Purchase Area Development District, and other agencies that promote Murray.
- Continue assisting Murray and Calloway County's elderly and people with disabilities to be more independent and to live a fuller life.
- Establish a monitoring system for the comprehensive plan to ensure that the goals and objectives are being pursued.

Goal - Economy: *To improve the local economy through a planning process that stresses retention, expansion, attraction, local initiatives, diversification, and quality of businesses and manufacturers.*

Objectives

- Support economic growth sponsoring entities such as the Economic Development Corporation, Chamber of Commerce, Murray Convention and Visitor's Bureau, Murray Main Street, and MSU Regional Business and Innovation Center that would:
 - a. Encourage growth in the downtown business sector.
 - b. Utilize land for industrial development and continue recruiting new manufacturers.
 - c. Promote the use of the new Murray EDC Industrial Park on 641 North.
- Work with the educational systems in their effort to provide an educated, skilled work force.
- Prepare for the economic impact of HWY 80 and the widening of HWY 121 Bypass North by addressing annexation policies and zoning regulations.
- In accordance with our zoning ordinance and boundaries, establish more neighborhood businesses along the periphery of residential zoning districts (within buffer zones) that are of lower impact and limited to neighborhood residential convenience needs such as groceries, pharmacies, barber and

beauty shops, and similar uses that contribute limited traffic into the area, while minimizing resident trips out of the neighborhood for purchases.

- Continue investigating sources of revenue that will provide for growing service demands, finance capital improvements, and close the gap of unfunded mandates.
- Support regional economic planning efforts; in particular the Regional Industrial Park to be located in Graves County.
- Consider incentives and other programs that would promote infill, redevelopment and community improvement.

Goal -Transportation: *Plan for the development and management of a transportation system that accommodates the various means of moving people and goods from place to place in a safe and efficient manner.*

Objectives

- Identify potential problem areas such as HWY 80 along 641 North and Brinn Road, N. 16th Street from Main Street to HWY 80, and the Five Points Intersection.
- Support efforts which encourage the construction of the HWY 68/80 bridges across Kentucky Lake and Barkley Lake.
- Coordinate efforts with state and local officials to work toward completion of projects identified in the Kentucky Transportation Cabinet Six Year Highway Plan.
- Identify intersections that need to be realigned.
- Continue to seek funding for state priority projects such as the Murray Business Loop, HWY 121 Bypass North improvement project, and the HWY 641 South widening and improvement project.
- Establish a Strategic Traffic Management Plan that would expand cooperative efforts with KYTC regarding the 2008 Small Urban Area Traffic Study:
 - a. Maximize connectivity between existing and proposed developments so as to facilitate traffic flow throughout the city.
 - b. Continue a sidewalk maintenance program and expand our current sidewalk system in accordance with the Five-Year sidewalk improvement plan.
 - c. Establish suitable bikeways that ensure safety and promote bicycle travel through a bikeway improvement plan.
 - d. Re-inventory or reclassify streets as necessary.
- Update subdivision regulations to ensure that residential developments are constructed with sidewalks.

- Support government efforts to improve upon the facilities at the Kyle-Oakley airport.
- Recognize the need for private railroad companies that will provide goods-movement services in areas where noise, pollution, accident and conflict potential with vehicular street traffic will be kept to a minimum while meeting required federal and state standards.
- Encourage the use of public transportation and provide fixed routes through the Murray Calloway County Transit Authority.
- Coordinate efforts with local authorities to avoid traffic delays and hazards at community events.
- Increase public awareness programs and support government sponsored initiatives that encourage alternative sources of fuel (or alternative forms of energy) for transportation.

Goal – Public Facilities and Services: *To improve the quality of life for all citizens by providing a wide range of services and facilities to include education, recreation, health/social, protective (fire, police, and emergency), infrastructure (water, sewer, streets, drainage), waste disposal, planning/code enforcement, and administration.*

Objectives

- Investigate expanding E-Government services and utilize internet capabilities that quickly process and deliver information. Consider the possibility of making Murray a “wireless city.”
- Enhance commercial and residential public safety services by:
 - a. Expand the S. 16th Street fire station to a centralized public safety facility (police, fire, and 911 dispatch) to better serve the southwest annexation area, Murray State University, and the downtown area.
 - b. Construct a new fire station on HWY 641 North that will provide adequate coverage for residential, commercial, and industrial development.
 - c. Promote the safety of the community and a feeling of security among the residents as well as encourage citizen participation through programs such as the Citizen and Youth Police Academies.
 - d. Continue to update fire and police equipment by seeking state and federal funding through grants.
- Maintain government facilities so that they promote accessibility, efficiency, and safety for citizens and government employees.
- Secure library facilities and services that satisfy resident needs, including timely, helpful, and readily available services that are attractive, accessible, convenient, and provide continuing education to all.

- Enhance the City of Murray Park System by:
 - a. Continuing to seek funding for maintaining existing neighborhood parks and encouraging developers to dedicate land for the purpose of adding additional neighborhood parks in newly developed areas.
 - b. Search for private land opportunities to expand the City Park System by citizens and private enterprise dedicating land, gifts, and through philanthropy.
 - c. Continuing to look for alternative sources of revenue such as the leasing of government property for a narrow and limited range of commercial uses.
 - d. Identify land in the Future Land Use Element of the Comprehensive Plan for expansion of the City Park System and designate land as either public or semi- public.
 - e. Investigate the possibility of creating a Regional Park that will attract recreational leagues to participate in sporting activities.
- Continuously review and monitor city infrastructure services and practices (water, electricity, sewer, natural gas, telecommunications, sanitation, stormwater) to identify new ways to deliver these services in an efficient, cost effective manner while taking into consideration the impact of any new infrastructure.
- Provide for the safest and most efficient integration of cellular antenna towers for cellular or personal communications services within the community, primarily through private enterprise, but in cooperation with government.
- Provide adequate health care services and facilities to accommodate all citizen needs and continue to seek funding for health care expansion and facility improvement.

Goal – Housing: *To support a diversity of housing opportunities that provide adequate, safe, and affordable housing units for the citizens of Murray; and, to upgrade the quality and character of residential areas.*

Objectives

- Protect natural resources that enhance the quality and character of development.
- Upgrade the city's landscaping requirements for buffer areas between residential and commercial uses.
- Inventory older homes and neighborhoods that need revitalization. Seek TIF funds, CDBG grants, or other funding mechanisms for neighborhood revitalization.
- Encourage renovation of older neighborhoods.

- Establish a historical district that encourages mixed uses with renovated buildings that will accommodate suitable living space.
- Support stricter enforcement of the Property Maintenance Code to help preserve neighborhood aesthetics.
- Update the City of Murray's subdivision regulations and zoning ordinance.
- Encourage a greater sense of community within the city's residential neighborhoods through the organization of neighborhood associations or similar groups, with emphasis on safety, beauty, and overall pride.
- Allow for a wide range of residential types and densities throughout the city while continuing to support programs that provide more affordable housing opportunities for single and multi-family homes.

Goal –Commercial, Industrial, and Agricultural Areas: *To recognize the need for a variety of commercial, industrial, and agricultural areas in our community that will provide the necessary goods and services while minimizing adverse effects on all other nearby uses.*

Objectives

- Improve the landscaping standards for site development.
- Adopt minimum standards for building design that will sustain and enhance community character.
- In accordance with our zoning ordinance and boundaries, establish more neighborhood businesses along the periphery of residential zoning districts (i.e. within buffer zones) that are of lower impact and limited to neighborhood residential convenience needs such as groceries, pharmacies, barber and beauty shops, and similar uses that do not attract much traffic into the area, but will minimize resident trips out of the neighborhood for their most frequent purchases.
- Avoid conditions and patterns that would create hazards in vehicular circulation.
- As urban expansion continues, secure additional agricultural lands and increase production accordingly, to offset the growing demands of food, raw materials, and other necessities of life.

Goal – Historic Preservation: *To protect and preserve Murray's historic sites and structures while promoting a better understanding of the significance of the city's historic places, people, and events.*

Objectives

- Update the current Architectural Review Board ordinance by establishing an overlay district in the zoning ordinance.
- Sites and structures shall adhere to Historic Preservation Design Guidelines

as administered by the Architectural Review Board.

- Support the Murray Main Street Master Plan by encouraging revitalization through rehabilitation of substandard buildings, removal of unattractive poles, wires, and signs that will make buildings, sidewalks, and other facilities in the downtown area more attractive, efficient, and convenient.
- Continue to seek state and federal funding for historical preservation.

Goal – Environment: *To protect the natural environment from further deterioration and to improve existing environmental quality.*

Objectives

- Continue to promote community outreach programs such as Make a Difference Day and Adopt-A-Highway that stress environmental protection.
- Encourage the use of green space for both residential and non-residential developments.
- Reduce forms of pollution and continue researching (and implementing) alternative sources of energy that decrease pollution.
- Review the need for adopting a policy to encourage the construction of public and commercial buildings according to “Green-Building” standards.
- Continuously review stormwater management practices so that site developments are designed to minimize the volume of stormwater runoff by requiring the use of porous pavement, detention facilities, or other dissipating mechanisms.
- Establish a cooperative recycling plan in conjunction with Murray State University’s Community Recycling Center.