



2024

MADISON COUNTY THOROUGHFARE PLAN

ADOPTED BY RESOLUTION XX-2024

NOVEMBER XX, 2024



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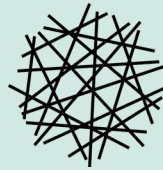
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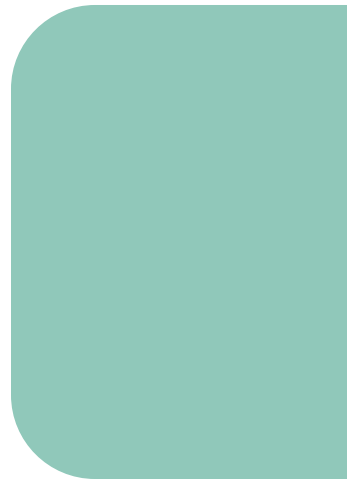
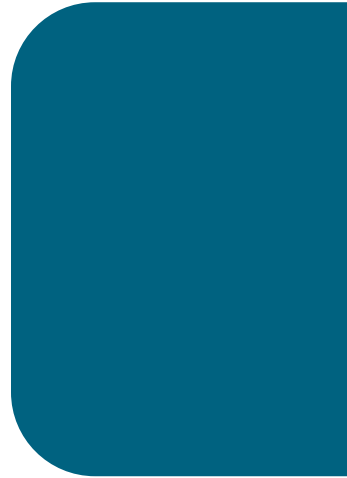
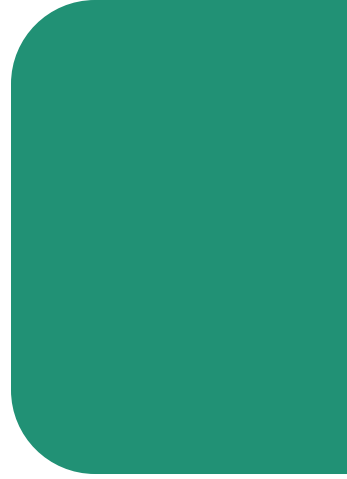
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01

EXECUTIVE SUMMARY



WHAT IS A THOROUGHFARE PLAN?

This planning document serves as Madison County's first thoroughfare plan. A thoroughfare plan is a guiding document that establishes goals, policies, and recommendations for the development of a safe, efficient, and balanced transportation network. This plan focuses on areas within the unincorporated county, which fall under the jurisdiction of the Madison County government. The plan also identifies opportunities for collaboration with other entities, including cities, towns, the Madison County Council of Governments, and the Indiana Department of Transportation.

PURPOSE OF THE PLAN

Regional differences have produced unique transportation needs across Madison County. South Madison is closely oriented with Central Indiana and the Indianapolis metro area. In recent decades, this region has quickly urbanized. Consequently, neighboring counties, such as Hamilton County, have made significant improvements to enhance regional connectivity and facilitate growth. Madison County should consider doing the same to create a seamless, regional transportation network. North Madison, on the other hand, is closely oriented to East Central Indiana and the Muncie metro area. The East Central region is largely rural and agricultural. The transportation network in this region should be maintained to serve existing residents, as well as accommodate frequent use by agricultural vehicles.

Population changes, including growth pressures, are also impacting Madison County communities. From 1980 to 2020, the U.S. Census reports that Madison County experienced population decline of 6.6%. In the last decade, however, population decline has slowed due to rapid growth in the southwest corner of the county. As communities like Pendleton, Lapel, and Ingalls grow, there is increasing demand for transportation infrastructure improvements to make roads, sidewalks, and shared use paths safer and

more effective for current and future users. Planning for these improvements is vital to enhancing the quality of life in this part of the county, as well as crucial to attracting new residents and reversing the trend of population decline.

The Madison County Thoroughfare Plan will help address these emerging transportation needs. The purpose of the plan is to evaluate existing conditions, establish clear goals and objectives based on a set of guiding principles, and identify recommendations for the future of the transportation network.

Prior to this plan, the "Improving Infrastructure" chapter was adopted in the Madison County Comprehensive Plan to address the county's priority transportation concerns. The chapter focused on maintaining existing infrastructure, adopting a Complete Streets approach to roadway design, and prioritizing multi-modal transportation. The Madison County Comprehensive Plan was referenced in the development of this plan.

PROJECT BACKGROUND

To ensure the alignment of future initiatives, Madison County is participating in several long-range planning efforts, each of which builds off of the findings of the Madison County Comprehensive Plan. These complementary planning efforts are made possible through American Rescue Plan Act (ARPA) funds. These funds present a unique opportunity to plan for Madison County's future and invest in initiatives that support economic recovery and fiscal stability.

This planning process represents Madison County's first attempt to develop a robust thoroughfare plan. Other recently completed or ongoing planning initiatives include the following:

- Stormwater Master Plan,
- Water/Wastewater Plan,
- and the Parks Master Plan.

These plans will act as guides, enabling Madison County to move forward in a cohesive, collaborative manner.

OVERVIEW OF THE THOROUGHFARE PLAN

The thoroughfare plan is a comprehensive document that summarizes the findings of an extensive planning process. Each chapter serves an important role by providing community context, explaining the project team’s methodology, outlining goals for the future, or offering recommendations for the transportation network. A brief description, along with key findings, from each chapter is provided below.

INTRODUCTION

The Introduction chapter explains what a thoroughfare plan is, and breaks down the planning process. This section also summarizes the previous planning work that has been done in Madison County, focusing on the transportation network.

Key Takeaways:

- ◆ The planning process for the Madison County Thoroughfare Plan lasted nearly two years and involved four separate phases.
- ◆ Key planning documents referenced include the Forward Madison County 2035, 2050 inMotion, Anderson Metropolitan Planning Area Bicycle Facilities Plan, 2021 Pendleton Thoroughfare Plan, and 2023 Lapel Thoroughfare Plan.

CONTEXT & BACKGROUND

The Context & Background chapter identifies the analysis area for this plan as the whole of Madison County. Demographic trends are described, ranging from a discussion of population change over time to an overview of the regional economy. Further background is provided on the transportation network, which consists of roadways, bicycle and pedestrian amenities, and rail.

Key Takeaways:

- ◆ Madison County’s population declined by 1.1% over the last decade, but certain municipalities within the county, including Pendleton, Lapel, and Ingalls, experienced growth.

- ◆ Madison County’s economy is interconnected with the regional economy of Central Indiana. This is reflected in commuting patterns.
- ◆ In 2022, the average Pavement Surface Evaluation and Rating (PASER) for a roadway in Madison County was 4.7, indicating that the typical road is in poor condition.
- ◆ Madison County is planning ahead to improve its transportation network. The county recently completed a Parks, Trails, and Open Spaces Master Plan and is working on a road impact fee study.

PUBLIC PARTICIPATION

The Madison County Thoroughfare Plan was developed with insight from local leaders, county staff, municipal staff, school officials, first responders, and other community members. The Public Participation chapter summarizes the engagement process for the plan, which heard from over 230 voices in the county.

Key Takeaways:

- The engagement process for the thoroughfare plan consisted of Steering Committee meetings, stakeholder meetings, an online survey and interactive mapping tool, and a public open house.
- According to survey respondents, projects that improve safety, support economic development, and reduce congestion should be prioritized.
- Community stakeholders expressed the need to for appropriate right-of-way to accommodate future roadway improvements, from expanded lane widths to shared use paths.

MODELING & ANALYSIS

This chapter summarizes the transportation modeling and analysis that was done to identify existing conditions, and make predictions for the future of travel in Madison County. Modeling and analysis included generating a travel demand model, capacity analysis, and safety analysis. The travel demand model and capacity analysis were conducted for this plan by EMCS, Inc. using data from the Madison County Council of Governments (MCCOG). Both models use 2015 as the base year and 2040 as the horizon year.

A travel demand model is a mathematical model that analyzes travel patterns on a regional level. The model results in a map of daily traffic volumes across the study area; or, in this case, Madison County. The capacity analysis looks at how well a facility operates from a traveler's perspective, also known as level-of-service.

For safety analysis, the plan refers to, and provides a summary of, the key findings of Protect 2030. Protect 2030 is a comprehensive safety action plan developed by MCCOG for the Anderson Urban Area and Metropolitan Planning Area. The plan was adopted in 2023.

Key Takeaways:

- ◆ A travel demand model was used to provide daily traffic volumes for roadway segments in base year 2015 and horizon year 2040 within Madison County. Several roadways are expected to see an increase in daily traffic volume over the next couple decades.
- ◆ Capacity analysis was used to provide the level-of-service (LOS) ratings for roadway segments within Madison County. All roadway segments owned and maintained by Madison County are assessed at LOS C or above, which indicates stable or near free flow of traffic.
- ◆ The Protect 2030 plan outlines emphasis areas for improved safety in Madison County, including a focus on vulnerable users, roadway design, behaviors, and post-crash care. These emphasis areas were used to identify recommendations (i.e., strategies and countermeasures) to reduce the frequency and severity of crashes.

GOALS & OBJECTIVES

This chapter outlines the goals and objectives for the Madison County Thoroughfare Plan. Goals were crafted based on analysis of the transportation network, public input, and guidance from the Steering Committee. Goals are organized around a set of five guiding principles which represent the community's vision for the future.

Key Takeaways:

- ◆ The five guiding principles identified in the plan include Safety, Connectivity, Quality of Life, Capacity, and Coordination.
- ◆ Each guiding principle is presented with an associated goal and set of objectives. For example, the goal for Safety is to "increase safety for all users of the Madison County transportation network." A related objective is to "use the Protect 2030 Safety Action Plan to prioritize improvements at the most hazardous intersections and thoroughfares."

RECOMMENDATIONS

This chapter represents the culmination of the planning process. Recommendations are informed by analysis of the existing transportation network, future traffic forecasts, public input, and national best practices. The Recommendations chapter includes functional classification maps, a Future Thoroughfare Plan Map, suggested right-of-way standards, typical roadway sections, and other potential improvements to the transportation network in Madison County.

Key Takeaways:

- ◆ This plan does not suggest any changes to the INDOT Functional Classification System in Madison County.
- ◆ This plan replaces existing local classification systems with one streamlined system. This system mirrors the INDOT Functional Classification System, but with a few local modifications. This change applies to county-owned roads.
- ◆ This plan provides recommended right-of-way standards and typical roadway sections for county-owned roads.

GUIDING PRINCIPLES

There are five guiding principles that embody the community's vision for the future of the transportation network. These principles were identified based on feedback from the Steering Committee, community stakeholders, and members of the public. Each guiding principle is presented here, along with its associated goal.

SAFETY

INCREASE SAFETY FOR ALL
USERS OF THE MADISON
COUNTY TRANSPORTATION
NETWORK.

CONNECTIVITY

IMPROVE CONNECTIVITY
OF LOCAL AND REGIONAL
TRANSPORTATION
NETWORKS.

QUALITY OF LIFE

ENHANCE THE TRANSPORTATION NETWORK
TO BOOST REGIONAL COMMUNITY AND
ECONOMIC DEVELOPMENT OPPORTUNITIES
AND SUPPORT AGRICULTURE.

CAPACITY

INVEST IN MAINTENANCE
AND REDESIGN
OF ROADWAYS TO
ACCOMMODATE GROWTH
AND DEVELOPMENT.

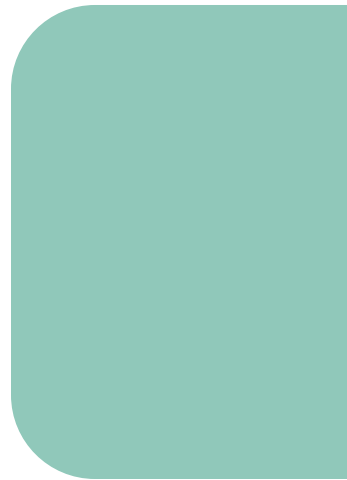
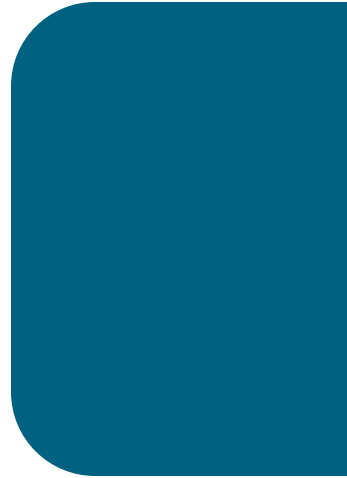
COORDINATION

CONTINUE TO FOSTER LOCAL
AND REGIONAL PARTNERSHIPS
TO IMPLEMENT NEEDED
TRANSPORTATION INITIATIVES.

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INTRODUCTION



WHAT IS A THOROUGHFARE PLAN?

A thoroughfare plan is a guiding document which establishes goals, policies, and recommendations regarding the development of a safe, efficient, and balanced transportation system. Thoroughfare plans identify future roadway design standards and establish the right-of-way for existing and proposed roads. These plans also identify priorities to improve the existing road network and to accommodate future travel demands based on population and employment projections. Unlike a traffic study, which is intended to address immediate traffic concerns, thoroughfare plans address short, medium, and long-term transportation issues. The purpose of the Madison County Thoroughfare Plan is to evaluate existing conditions, establish clear goals and objectives based on a set of guiding principles, and identify recommendations for the future of the transportation network.

PLANNING PROCESS

The planning process for the Madison County Thoroughfare Plan lasted nearly two years, from December 2022 to November 2024, and involved four separate phases. The first phase, *Cast a Vision*, was characterized by research and analysis. During this phase, the project team conducted research to better understand existing issues with the county's transportation network. This phase also involved assembling a Steering Committee to provide feedback, offer insight, and promote the plan within the community. The second phase, *Reach a Consensus*, was centered around utilizing various engagement tools to gather feedback from community members. The third phase, *Form the Plan*, involved using public input to develop goals and draft the plan. Finally, the plan was presented to the public and adopted in the final phase, *Practical Action Steps*.

PHASE 1: CAST A VISION DECEMBER 2022 - APRIL 2023

- ◆ Research demographics and existing conditions
- ◆ Identify current issues and opportunities
- ◆ Review previous planning work
- ◆ Steering Committee Workshop 1: Kickoff Meeting

PHASE 2: REACH A CONSENSUS MAY 2023 - APRIL 2024

- ◆ Host stakeholder meetings
- ◆ Gather feedback through online public input survey and interactive mapping tool
- ◆ Create Travel Demand Model

PHASE 3: FORM THE PLAN APRIL 2024 - AUGUST 2024

- ◆ Develop transportation needs and goals
- ◆ Outline recommendations for future classification system and right-of-way standards
- ◆ (Combined) Steering Committee Workshop 2 and 3: Review of Public Engagement and Recommended Strategies, Goals, and Objectives
- ◆ Complete first draft of plan

PHASE 4: PRACTICAL ACTION STEPS SEPTEMBER 2024 - NOVEMBER 2024

- ◆ Steering Committee Workshop 4: Review Plan Draft
- ◆ Host a public open house to solicit feedback on the draft plan
- ◆ Present and adopt the final draft of the plan

PREVIOUS PLANNING WORK

Several key planning documents helped to provide a foundation for the development of the Madison County Thoroughfare Plan. These documents included the following:

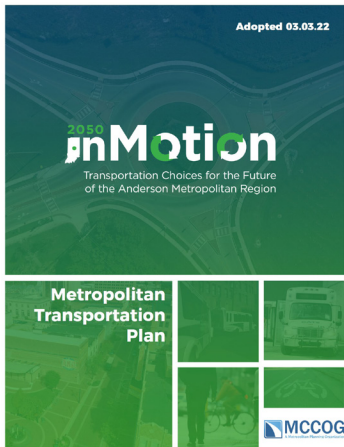


FORWARD MADISON COUNTY 2035 (2021 MADISON COUNTY COMPREHENSIVE PLAN)

Forward Madison County 2035 serves as a guidance document for growth and development within Madison County for the next 20 years. Along with forecasting future land use patterns, the plan evaluates the county’s transportation profile and establishes goals and objectives for improving transportation infrastructure. Key goals of the plan include ensuring the transportation network is complete, safe, and user-friendly for all modes of transportation, connecting transportation corridors within the county and regional network, and maintaining existing facilities.

Key Projects Identified:

- Create a comprehensive thoroughfare plan.
- Create a county-wide application to allow residents and visitors to report infrastructure issues.
- Create a roadway condition inventory system.
- Implement a Complete Streets policy.



2050 INMOTION (2022 METROPOLITAN TRANSPORTATION PLAN)

Adopted in early 2022, the 2050 inMotion Metropolitan Transportation Plan updates the long- and short-range strategies and action plans for the transportation network within the Anderson Metropolitan Planning Area (MPA). The plan analyzes the current state of the transportation system, anticipates what improvements should be prioritized over the next 30 years, and identifies funding opportunities for appropriate projects. 2050 inMotion also assesses potential disruptions to the transportation system as it prepares for fluctuating population trends and changing transportation demands in the region.

Key Projects Identified:

- CR 800 S (136th Street) Corridor Improvement Project (Ingalls)
- 67th Street Extension Project (Anderson)
- SR 9/SR 67 Improvements



ANDERSON METROPOLITAN PLANNING AREA BICYCLE FACILITIES PLAN 2016 - 2040

The Anderson Metropolitan Planning Area Bicycle Facilities Plan serves as a component of the region's Metropolitan Transportation Plan (MTP) and outlines the vision and goals for providing new bicycle facilities, programs, and policies that will encourage safe and efficient bicycling. Through data analysis and committee input, the plan identifies and prioritizes a list of over 200 segments within the Anderson Metropolitan Planning Area that establish a comprehensive bicycle network. Recommended funding sources and programming strategies to support the implementation of the infrastructure projects are also included in the plan.

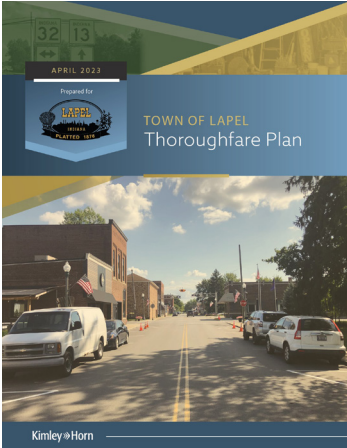


2021 PENDLETON THOROUGHFARE PLAN

As an amendment to the transportation section of the town's comprehensive plan, the Pendleton Thoroughfare Plan identifies the location and types of transportation facilities needed to meet current and projected growth in and around the town. Developed from extensive public input, the plan features matrices and cross-sections for transportation and design elements to be considered as design standards for right-of-way projects. The plan also identifies and prioritizes recommendations, with a key action item being the creation of a Regional Transportation Coordination Program to continue and expand coordination efforts with partner communities impacted by growth from the Indianapolis metropolitan area.

Key Projects Identified:

- Bicycle and Pedestrian Network Expansion Program
- Regional Transportation Coordination Program
- North Heritage Way Extension Project
- 67th Street Extension
- 146th Street Extension
- CR 600 S Corridor Improvement



2023 LAPEL THOROUGHFARE PLAN

The Lapel Thoroughfare Plan was adopted in 2023 as an amendment to the town’s 2021 comprehensive plan. The purpose of the thoroughfare plan is to identify long- and short-term goals, guide future development, classify roadways, establish desired right-of-way boundaries, and identify infrastructure projects. In the last two decades, from 2000 to 2020, Lapel’s population increased by over 25 percent. In a rapidly growing community, planning and foresight are vital. By identifying key projects and coordinating future investments, the plan aims to improve safety, mobility, and access for drivers, passengers, pedestrians, and cyclists throughout Lapel.

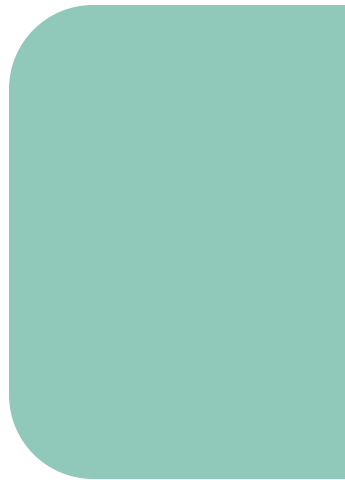
Key Projects Identified:

- SR 13 Corridor and Intersection Improvements
- 146th Street Corridor Improvement Project
- Installing New Sidewalks and Shared Use Paths in Lapel

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CONTEXT & BACKGROUND



ANALYSIS AREA

Madison County was the geographic area of interest for this background analysis. By analyzing the county as a whole, rather than its regions, townships, or individual municipalities, all residents are represented equally. This decision is appropriate since the thoroughfare plan serves the entire county, aiming to improve travel throughout.

It should be noted that Madison County, not the Anderson Metropolitan Planning Area (MPA), was chosen as the analysis area. The MPA's boundaries extend slightly beyond the county's borders, including Fortville and Daleville. These two municipalities were not included in the background analysis since they fall under the jurisdiction of other counties.



Madison County Context Map

Image Source: HWC Engineering

Although the entirety of Madison County was analyzed for this thoroughfare plan, recommendations focus on roadways within county jurisdiction.

DEMOGRAPHIC TRENDS

POPULATION

According to the Decennial Census, Madison County's population peaked in 1980 at 139,336. From 1980 to 2020, the county's population fluctuated, but declined overall by 6.6%. As of 2020, Madison County's population was 130,129. Population decline has slowed in the last decade. From 2010 to 2020, the county's population declined by only 1.1%. Even so, during the same decade, the state's population grew by 4.7%.

Much of Madison County's population decline over the last several decades can be attributed to the post-industrial shrinkage typical of American Rust Belt cities. Anderson, the official seat of Madison County, was once an industrial powerhouse known for its automobile manufacturing. The auto industry in Anderson began to decline as early as the late 1970s, according to "Skeletons of the Auto Industry Linger Across the U.S.," an article by Cheryl Corley at NPR. Eventually, thousands of residents lost their jobs as auto plants closed. Many residents left the county in search of opportunity elsewhere.

While some Madison County communities have seen considerable population decline, others have grown over the last several decades. Growth is particularly apparent in southwest Madison County due to its proximity to the Indianapolis metro area. From 1980 to 2000, Pendleton experienced rapid population growth at 81.8%. From 2000 to 2020, population growth slowed to a rate of 21.8%. In the last two decades, Lapel and Ingalls experienced population growth of 25.3% and 90.3% respectively.

The Forward Madison County Comprehensive Plan outlines four population forecasts for the county, ranging from low growth to very high growth. These forecasts are available in the Appendix.

HOUSING

Of the 59,173 housing units in Madison County, 86.7% are occupied and 13.3% are vacant. In 2020, Indiana had a vacancy rate of 10.4% (2020 U.S. Census ACS 5-Year Estimate Table S25002). Of the 51,276 occupied housing units in Madison County, 69.1% are owned-occupied with approximately two vehicles per housing unit (2020 U.S. Census ACS 5-Year Estimate Tables S2502 and S2504). Madison County's owner-occupancy rate is on par with the state's rate of 69.5%, but the county continues to experience an ongoing issue with aging housing stock. 72.3% of homes in Madison County are aging (i.e. were built before 1980). Across Indiana, 56.9% of housing stock is aging. While a home's age does not necessarily reflect its condition, older homes are more likely to contain health and safety hazards (i.e. lead paint, asbestos), require repairs, and experience blight. This issue, paired with the county's high vacancy rate, is concentrated in the central and northern parts of the county where growth and development have stagnated.

In the southern part of the county, the housing situation is very different. In the last decade, residential growth and development has spread from Hamilton and Hancock County into southwest Madison County. "As land values increase and available spaces decrease" in neighboring counties, the Forward Madison County 2035 Comprehensive Plan predicts that development will shift to Green, Fall Creek, Stony Creek, and Jackson townships. Madison County hopes to direct this new development to incorporated areas where existing services and amenities are available. The county is also intent on reducing the negative effects associated with the "haphazard and unrestrained" residential development that has arisen since the Great Recession. Characterized by the construction of single-family subdivisions on rural greenfields, this type of development has increased blight and abandonment in town centers, encroached upon productive agricultural and environmentally sensitive lands, and created heavy infrastructure burdens for the county.

EMPLOYMENT AND EDUCATION

The largest industry in Madison County is educational services, health care, and social assistance. This top industry employs 22.1% of the full-time, year-round civilian employed population. The second largest industry is manufacturing, employing 19.5% of the civilian employed population (2020 U.S. Census ACS Estimate Table S2404). According to the City of Anderson's Economic Development Department, leading employers include Ascension St. Vincent Anderson, Community Hospital Anderson, Nestle, Continuum Global Solutions, Harrah's Hoosier Park Racing and Casino, and Carter Express.

The county is home to several higher education institutions to support career advancement and skill development. Anderson University, a private college, is well-regarded for its nursing and teaching programs. Ivy Tech Anderson offers programs in a variety of fields, from health care to business. Purdue Polytechnic at Anderson offers computer and information technology programs, engineering technology programs, and more. With proximity to Indianapolis, Fishers, Carmel, and Muncie, Madison County residents also has convenient access to jobs and educational opportunities outside of the county.

COMMUTING

The majority of people living in Madison County and commuting out travel to Marion County (38.1%) or Hamilton County (37.0%) for work (2020 StatsIndiana Commuting Trends Profile). The average commute for Madison County residents is 26.4 minutes (2020 U.S. Census ACS Estimate Table S0801). Public transportation is limited in Madison County, so 80.4% of workers travel to work in their own personal vehicle. Consequently, commuting times can be lengthy when traveling to a neighboring county due to congested, rush hour traffic. An increasing number of workers in Madison County work from home. From 2010 to 2020, the percentage of remote workers increased by 71.4%, from 2.8% to 4.8% of the employed population (2020 U.S. Census ACS Estimate Table S0801). Recent estimates from the American Community Survey show this number continuing to rise in Madison County, likely a result of the pandemic and changing views on remote work.

Madison County sends out more workers than it brings in. Approximately 18,690 people live in Madison County but work outside of the county. Conversely, only 8,555 people live in another county (or state) but work in Madison County. About 9.2% of Madison County's workforce comes from workers that commute in from another county. These workers are often from Delaware, Hamilton, or Henry County (2020 StatsIndiana Commuting Trends Profile).

REGIONAL ECONOMY

Madison County's economy is interconnected with the regional economy of Central Indiana. Here, Central Indiana includes Marion County and the surrounding counties of Boone, Hendricks, Morgan, Johnson, Shelby, Hancock, and Madison County. Central Indiana has approximately 1.04 million employees and 68,404 businesses. The largest industry by employees is the health care and social assistance industry, which employs 18.2% of the Central Indiana workforce. Other primary industries include retail trade (12%), accommodation and food services (8.6%), manufacturing (8.4%), and professional, scientific, and tech services (8.0%) (ESRI 2022 Business Summary).

Central Indiana communities, including Boone, Morgan, Shelby, Hancock, and Johnson County, have identified target industries for future growth and development. These target industries include advanced manufacturing (of auto and aircraft components, farm machinery, and medical devices), food and beverage production, logistics, information technology, life sciences, health care, and agribusiness.

Central Indiana offers ample resources and amenities for businesses and their employees, including access to national transportation networks, educational opportunities, and quality of life amenities. Rail lines and interstates trace their way through Central Indiana, moving raw materials and goods across the state. The Indianapolis International Airport connects Indianapolis to cities around the world. The Central Indiana region is also home to IU Indianapolis, a state university, Ivy Tech Community College, and several private universities. The average household income is \$99,232 and this figure is expected to increase to \$116,096 by 2027 (ESRI 2022 Business Summary).

DEMOGRAPHIC SNAPSHOT



130,129

**2020 COUNTY
POPULATION**



**POPULATION
CHANGE FROM
2010 - 2020**

21.8% GROWTH
PENDLETON

25.3% GROWTH
LAPEL

90.3% GROWTH
INGALLS

1.1% DECLINE
MADISON COUNTY



8,555

**COMMUTERS
INTO MADISON
COUNTY**



18,690

**COMMUTERS OUT
OF MADISON
COUNTY**



26.4 MINUTES
**AVERAGE
COMMUTE TIME**



22.1%
**OF POPULATION EMPLOYED
IN EDUCATIONAL SERVICES,
HEALTH CARE, AND SOCIAL
ASSISTANCE**

Data Source: 2020 U.S. Census; 2020 American Community Survey 5-Year Estimates

DEMOGRAPHIC SNAPSHOT (CONTINUED)



59,173

**2020
TOTAL HOUSING
UNITS**



51,303

**2020
OCCUPIED
HOUSING UNITS**



13.3%

**2020
VACANCY RATE**



**2 VEHICLES
PER HOUSING
UNIT**



69.1%

**2020 OWNER
OCCUPANCY
RATE**



30.9%

**2020 RENTER
OCCUPANCY
RATE**



72.3%

**2020 AGING
HOUSING**

Data Source: 2020 U.S. Census; 2020 American Community Survey 5-Year Estimates

TRANSPORTATION SYSTEM

ROADWAYS AND EXISTING FUNCTIONAL CLASSIFICATION

The road network within Madison County consists of county roads, local roads within incorporated areas, state highways, a U.S. highway, and an interstate. Cities and towns maintain roadways within municipal limits while the county maintains the roadway in unincorporated areas. For boundary roads between incorporated and unincorporated areas, ownership is designated during the annexation process. The Indiana Department of Transportation (INDOT) owns and maintains highways and interstates. State highways in Madison County include SR-9, SR-13, SR-28, SR-32, SR-37, SR-38, SR-109, SR-128, SR-232, and SR-236. Other important connections through Madison County include I-69 and US-36.

Highway facilities are grouped into hierarchical categories as part of the Federal Functional Classification System. This system, created by the Federal Highway Administration, categorizes roadways into classes based on the mobility and access functions they provide. Under the federal classification system, roadways are grouped into three broad categories: arterials, collectors, and local roads. Arterials, the highest order of roadway, primarily serve mobility purposes while local roads, the lowest order of roadway, serve land access purposes. The Federal Functional Classification System is useful for designating roadway design features (including speed, capacity, and access), as well as determining eligibility for federal funding. This system is also referred to as the INDOT Functional Classification System since it is managed by the Indiana Department of Transportation at the state level.

Every public road in the nation is assigned one of the following seven functional classifications:

- Arterials
 - ◆ Principal Arterial - Interstate
 - ◆ Principal Arterial - Other Freeways & Expressways
 - ◆ Principal Arterial - Other
 - ◆ Minor Arterial
- Collectors
 - ◆ Major Collector
 - ◆ Minor Collector
- Local Roads

Madison County does not have any roadways within the Principal Arterial - Other Freeways and Expressways designation.

Madison County also maintains a separate, Local Functional Classification System. Prior to this plan, multiple versions of the local classification system existed, and this plan aims to replace them with one streamlined system. The county's local system serves a similar purpose to the federal system in terms of planning and design, although it does not determine funding eligibility.

Each year, the Pavement Surface Evaluation and Rating (PASER) system is used to assess the condition of roads in unincorporated Madison County. In 2022, technicians evaluated approximately 870 miles of roadway. (In 2023, the total mileage decreased to 867 miles due to annexations by incorporated communities.) The PASER assessment revealed that most county roads are asphalt (57%) or chip seal (35%). Most of the asphalt roads are concentrated around the fringes of incorporated areas or used to connect cities and towns. Over half (53%) of the evaluated roads are in poor condition and only 6% are in good condition. The average PASER rating for a roadway in Madison County is 4.7, indicating that the typical road is in poor condition.

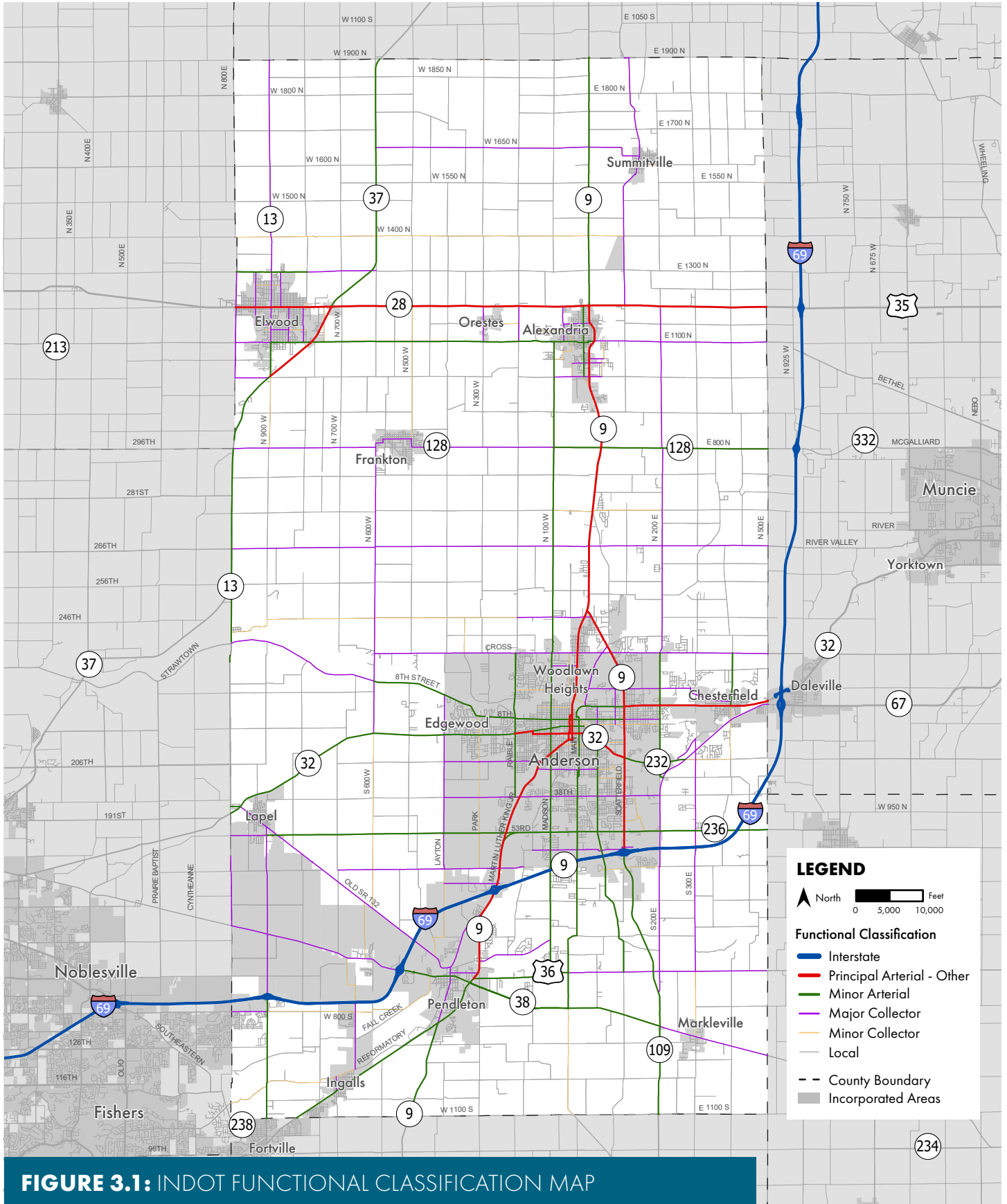


FIGURE 3.1: INDOT FUNCTIONAL CLASSIFICATION MAP

Map Source: HWC Engineering

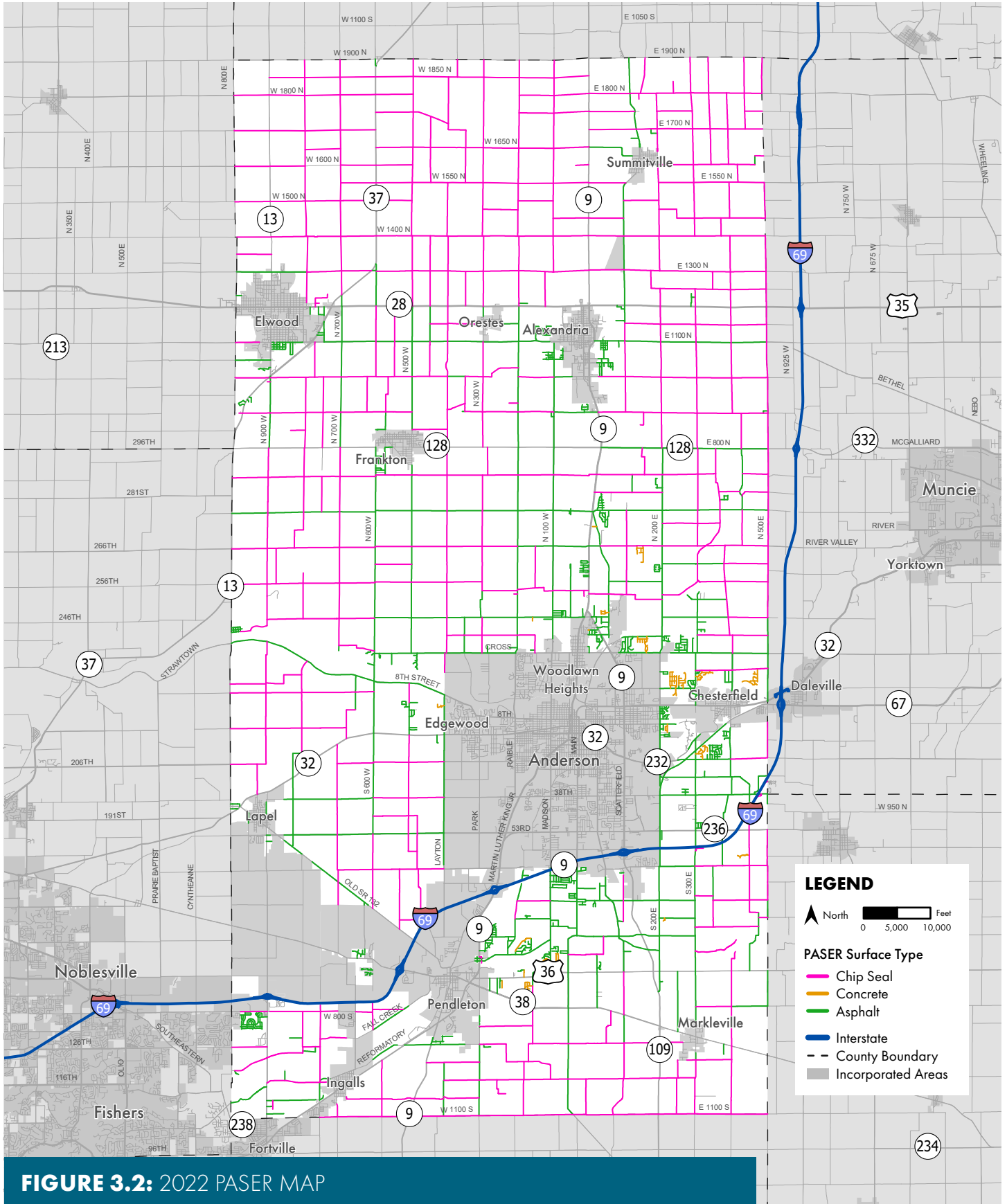


FIGURE 3.2: 2022 PASER MAP

Map Source: HWC Engineering

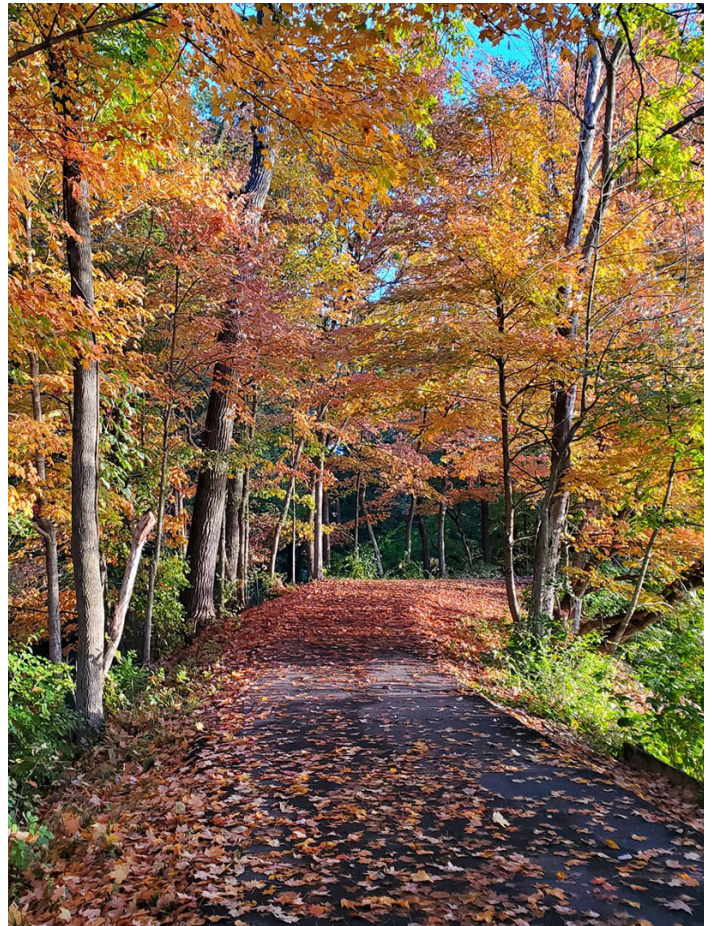
BICYCLE AND PEDESTRIAN NETWORK

According to the Anderson Metropolitan Planning Area Bicycle Facilities Plan 2016 - 2040, the Anderson Metropolitan Planning Area, which includes Fortville and Daleville, has approximately 0.4 miles of bike lanes, 28.6 miles of shared use paths, and 151.1 miles of signed bike routes. Most trails in the county are closed loop trails within community parks, such as in Pendleton and Lapel. Anderson is the only community with trails connecting park facilities to one another, and to other nearby destinations. The Anderson area also has the most extensive trail system, featuring 6 miles of hiking trails at Mounds State Park, 5.3 miles of hiking/mountain biking trails at Rangeline Nature Preserve, 4.2 miles of trails at the White River Trail, the 3.6-mile Shadyside Recreation Trail, and the 1.5-mile Anderson Airport Trail. The signed bike routes in the county are part of the Heartland Bikeways program. Established in the Madison County Bicycle and Pedestrian Facilities Plan 2005-2015, these routes connect cyclists to communities across the county.

While Madison County has made attempts in recent years to develop and expand its bicycle and pedestrian network, alternative transportation is still limited. Sidewalk connectivity in Madison County is insufficient, especially along major corridors and in vehicle-dominated commercial areas. To reach schools and grocery stores from nearby neighborhoods and apartments, residents may be forced to cross busy intersections on multi-lane roads and highways without the aid of sidewalks or signalized pedestrian crossings.

RAIL

Madison County has a robust rail system of nearly 100 miles. The rail lines serving Madison County connect local municipalities while also extending to regional and national hubs. Two Norfolk Southern (NS) lines, one running north-south and another running east-west, meet in Alexandria. Four rail lines pass through Anderson, including the primary north-south Norfolk Southern line, a Central Indiana & Western RR (CEIW) line, a short Indian Creek RR (INCR) line, and a dual lane CSX line. The CEIW line extends to Lapel to service grain elevators. The dual lane CSX line generally parallels the I-69 corridor and travels north to Muncie and south through Pendleton. There are several rail crossings in Pendleton, Alexandria, and Anderson. These crossings can pose challenges to the flow of traffic, causing traffic to stall whenever trains pass through.



Trail at Shadyside Park in the City of Anderson

Image Source: Anderson Parks & Recreation

TRANSPORTATION IMPROVEMENTS

Through partnerships with INDOT, MCCOG, and municipalities, Madison County has made recent investments in the transportation network, enhancing local and regional connectivity. Listed below are some of the complete, ongoing, and planned transportation improvements.

COUNTY-WIDE PARKS MASTER PLAN (COMPLETE)

Adopted in April 2024, the inaugural Parks, Trails, and Open Spaces Master Plan guides Madison County as it develops new opportunities to connect and complement existing assets, enhance the well-being of residents, and attract visitors. The master plan identifies needed parks and recreation infrastructure investments and outlines a strategic framework for the organizational and managerial structure to develop, operate, and maintain these investments. Linear parks and trails are a key focus of the master plan. The plan proposes greenways along waterways (White River, Pipe Creek, Fall Creek) and regulated drains (Stoney Creek, Duck Creek, Sly Fork), in addition to shared use paths along roads and rails-to-trails conversions. Once completed, these trail corridors will provide important pedestrian and cyclist connections to destinations across the county.

ROAD IMPACT FEE STUDY (IN PROGRESS)

The county is working with Ingalls on a joint road impact fee study in the South Madison area, bound by the county lines to the west and south, I-69 to the north, and CR 650 W to the east. This study will analyze the need for, potential impact of, and logistics of assessing a road impact fee for incoming development. If established, an impact fee would allow Madison County and Ingalls to recover some of the infrastructure costs resulting from growth in the area. Impact fees are one-time payments imposed on property developers and are meant to offset the financial impact of new development on public infrastructure, including roads and bridges. Impact fees are not intended to penalize or discourage developers, but rather guarantee an adequate level of service.



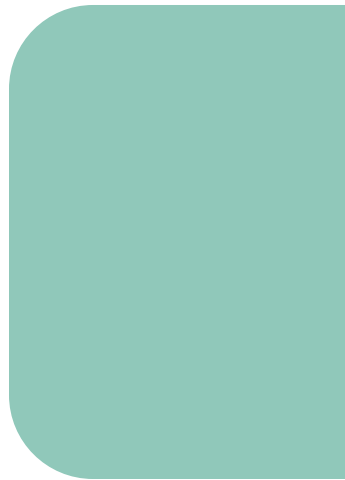
The Town of Ingalls is partnering with Madison County on a Road Impact Fee Study.

Image Source: Google Earth

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04

PUBLIC PARTICIPATION



INTRODUCTION

The Madison County Thoroughfare Plan was developed with insight from local leaders, county staff, municipal staff, school officials, first responders, and community members. These individuals were invited to share their big ideas, questions, and concerns about the future of Madison County’s transportation network through in-person and online events in which over 230 voices were heard. Participants engaged in Steering Committee discussions, stakeholder meetings, an online survey, interactive mapping tool, and public open house. The key takeaways from the public engagement process helped inform the guiding principles, goals, and objectives for the county.

ENGAGEMENT PROCESS

STEERING COMMITTEE

A Steering Committee of 16 individuals helped with the development of the plan. The Steering Committee convened on three separate occasions to discuss the thoroughfare plan, review the results of public engagement, provide feedback on recommended goals and objectives, and help determine the direction of the plan and the future of Madison County.

STAKEHOLDER MEETINGS

Stakeholder meetings were held with twenty participants on May 30th and May 31st, 2023 in North, Central, and South Madison County to discuss the thoroughfare plan. Stakeholders were identified by the Steering Committee and included representatives from across Madison County. Participants were affiliated with government at various levels, community schools, nonprofits, and private industries. Stakeholders were selected for their knowledge regarding local government, schools, public safety, and emergency services. These conversations, facilitated by the project team, helped identify transportation issues and opportunities in all parts of the county.

TABLE 4.1: STEERING COMMITTEE MEMBERS	
NAME	AFFILIATION
TOM BANNON	Community Hospital Anderson Foundation, Vice President/ CFO
JESSICA BASTIN	County Engineer
JOHN BEEMAN	County Sheriff
DEANDRE COLEMAN	County Engineering Technician
ANTHONY EMERY	County Councilman
SCOTT HARLESS	County Highway Superintendent
LISA FLOYD	South Madison County Community Foundation
LUIS LARACUENTE	INDOT, Greenfield District Traffic Engineer
MADDIE LOVE	MIBOR Realtor Association, Economic & Community Development Liaison
MIKE MONTGOMERY	krM Architecture, Architect/ Partner
RYAN PHELPS	Madison County Council of Governments, Principal Transportation Planner
ROB SPARKS	Madison County Economic Development, Executive Director
LARRY STRANGE	County Planning Director
JOHN RICHWINE	County Commissioner
CLAYTON WHITSON	Madison County Chamber, President/CEO
MARK YAUDAS	Transportation for Rural Areas of Madison County (TRAM)

PUBLIC SURVEY AND INTERACTIVE MAPPING TOOL

Two online engagement opportunities were created to generate feedback from Madison County residents. Both engagement opportunities were open to the public from April 12th until May 26th, 2023. The first, a public input survey, received 213 responses. The survey collected feedback on the current use and quality of transportation networks, potential improvements to transportation systems, and priorities when selecting future projects in Madison County. The second, an interactive mapping tool on Map.Social, received 63 comments from community members. Using this tool, participants helped identify problematic intersections, hazardous roadways, and future routes for sidewalks, bike lanes, and shared use paths. Both the survey and mapping tool provided helpful, anonymous ways for residents to contribute to the project from the comfort of their own home.

PUBLIC OPEN HOUSE

A public open house was held on October 1st, 2024 at the Anderson Museum of Art to invite comment on a draft of the plan. The project team presented key findings from the planning process and asked for public comments and feedback. Input could be provided by placing a sticky note or dot on a project board, striking up a conversation with a member of the project team, or by leaving a written comment. Elected and appointed officials, county staff, the Steering Committee, and stakeholders were all encouraged to attend, as well as members of the public. Following the open house, public input was incorporated through edits and additions to the plan.

KEY TAKEAWAYS

- Most residents use a car as their primary form of transportation and choose to do so out of convenience.
- There is a need to improve bicycle and pedestrian facilities in Madison County to make biking and walking more accessible to residents and visitors.
- Stakeholders believe the most significant transportation challenges facing Madison County over the next 25 years will be aging infrastructure, traffic congestion, and safety.
- Projects that improve safety, support economic development, and reduce congestion should be prioritized.
- The transportation network should connect to key destinations in the county, including parks, schools, entertainment, and healthcare.
- County roads need to be wider to accommodate emergency vehicles, school buses, farm equipment, and semi-truck traffic.
- There is a need to establish appropriate right-of-way to accommodate future roadway improvements, from expanded lane widths to shared use paths.



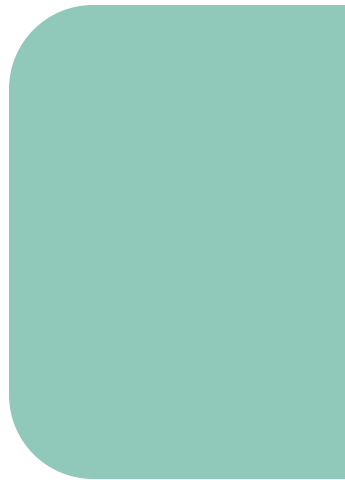
Placeholder for Public Open House Photo

Image Source: HWC Engineering

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05

MODELING & ANALYSIS



TRAVEL DEMAND MODEL

For the purpose of modeling and analysis, the thoroughfare plan considered roadways within Madison County of a functional classification other than “local” according to the INDOT Functional Classification Map, see Figure 3.1 in Chapter 3: Context & Background. Traffic volumes on network roadways were estimated using the travel demand modeling program PTV Visum. A travel demand model is a mathematical model that analyzes travel patterns on a regional level. The model consists of a supply network (available roads), and a demand network (where people want to go). The demand network stores the origins, destinations, and number of trips.

BASE AND FORECASTED NETWORK

Both the supply and demand networks were provided by the Madison County Council of Governments (MCCOG) and modified to match the plan study area and specifications. The provided number of trips was estimated by MCCOG for 2015, which was assumed to be the base year, and for 2040, the horizon year. The 2040 demand network provided by MCCOG was forecasted based on future population and employment estimates. MCCOG’s estimates predict overall traffic growth throughout the entire county at a rate of 1.1% per year. This rate falls between the high and very high growth rates identified in the Forward Madison County Comprehensive Plan. See the Appendix for a breakdown of the comprehensive plan’s population forecasts.

The resulting daily traffic volumes are included in the figures on the following pages.



Rural Road in Madison County

Image Source: HWC Engineering

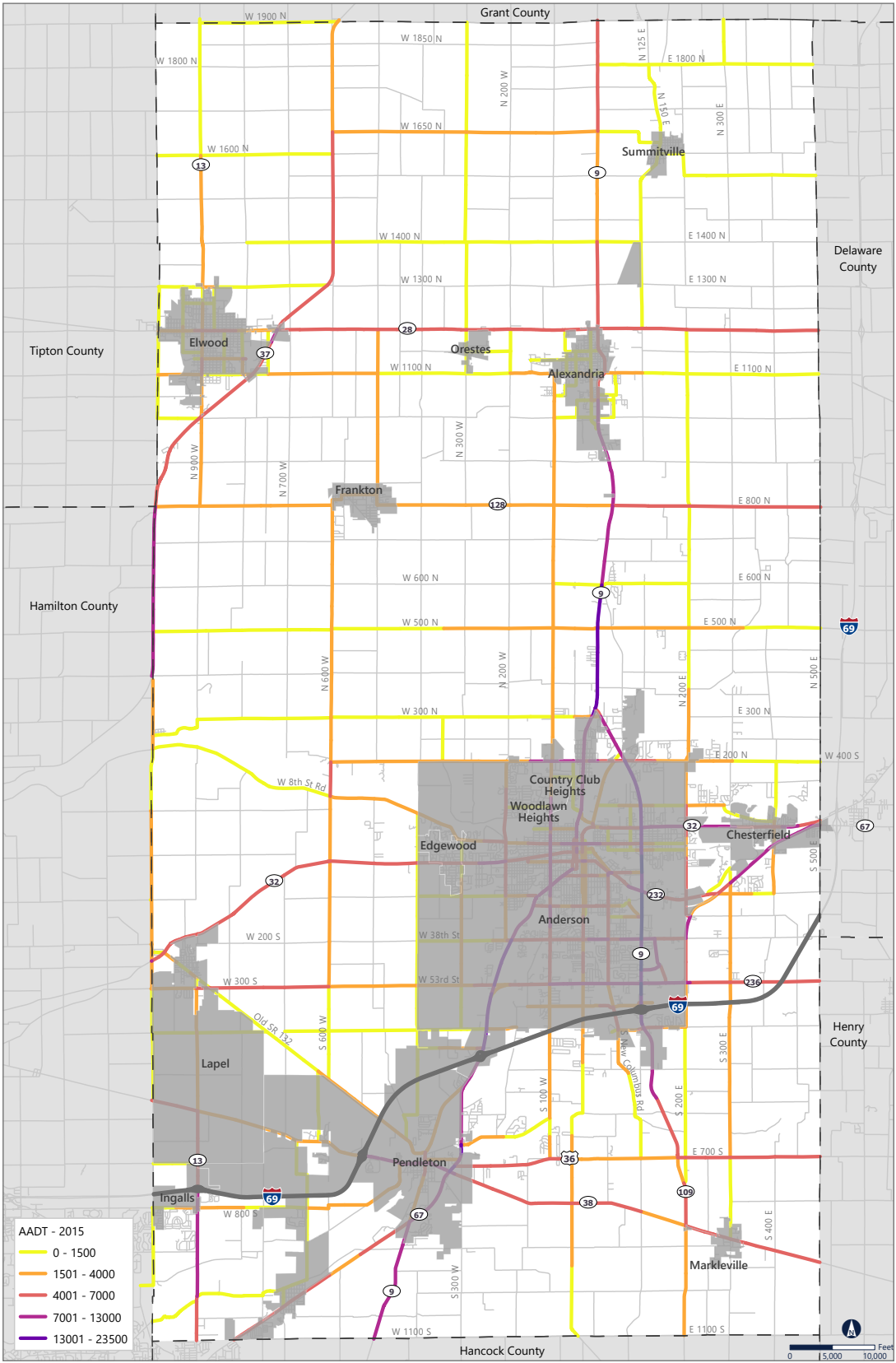


FIGURE 5.1: 2015 TRAFFIC VOLUMES

Map Source: EMCS

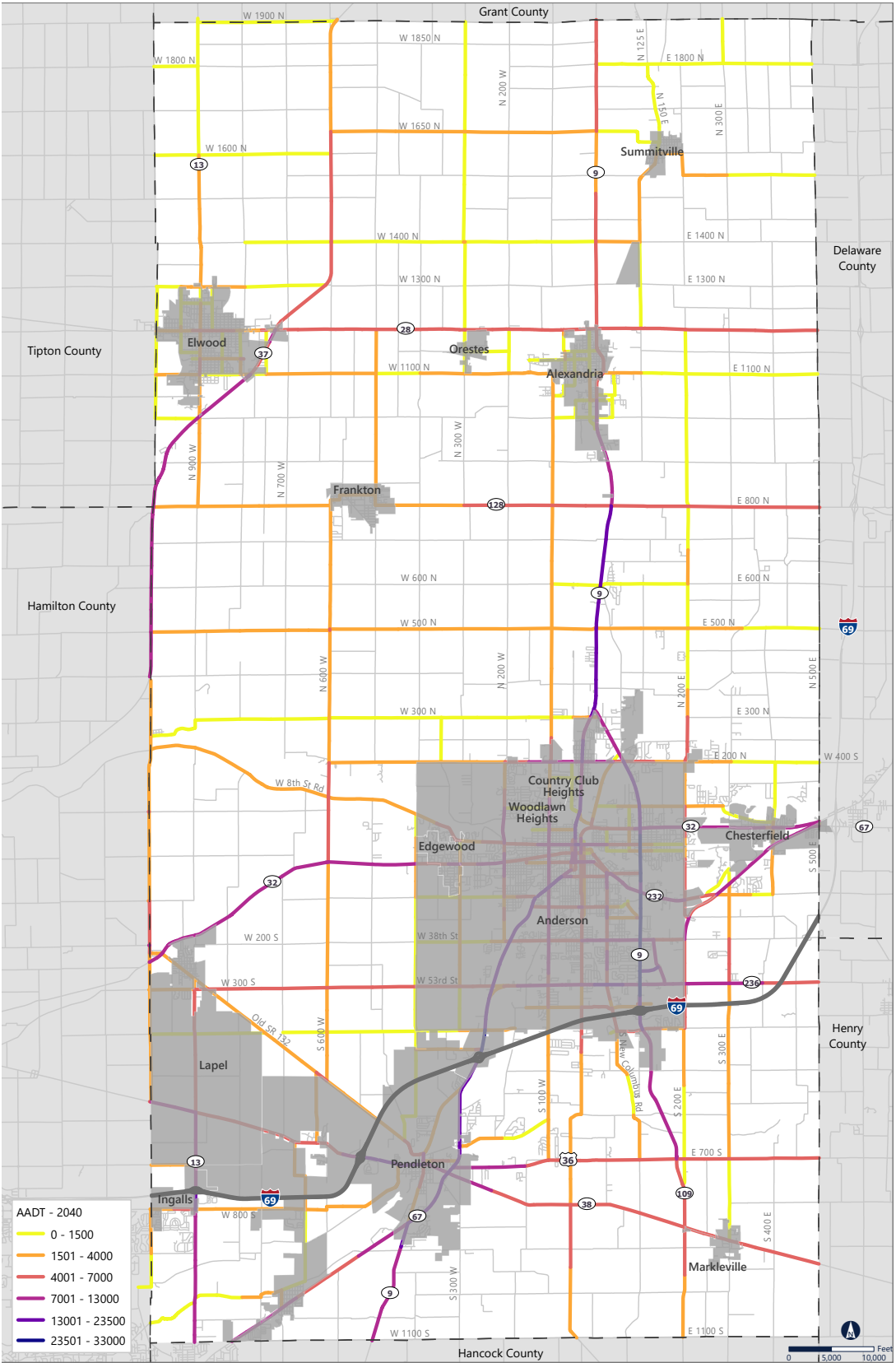


FIGURE 5.2: 2040 TRAFFIC VOLUMES

Map Source: EMCS

CAPACITY ANALYSIS

Capacity can be defined as the maximum number of vehicles that can pass a given point over time under the given conditions, usually expressed as vehicles per hour. A capacity analysis is the method in which traffic engineers determine if the supply of the roadway can accommodate the traffic volume demand.

A similar concept is the quality of service, which describes how well a facility operates from a traveler’s perspective. The standard way of representing this is level-of-service (LOS).

The LOS is a scale that ranges from A-F with each level indicating driving operations from best to worst. Although a LOS D or better is generally accepted in transportation planning, Madison County aspires towards a LOS C or higher within the county’s jurisdictional area. The LOS for a given facility is determined based on an appropriate service measure, such as delay, speed, travel time, or density. Definitions for each LOS level are provided in the following table.

TABLE 5.1: LEVEL-OF-SERVICE (LOS) DEFINITIONS	
LOS	DEFINITION
A	Free flow. Traffic flows at or above the posted speed limit and motorists have complete mobility between lanes. The average spacing between vehicles is about 550 ft (167 m) or 27 car lengths. Motorists have a high level of physical and psychological comfort. The effects of incidents or point breakdowns are easily absorbed. LOS A generally occurs late at night in urban areas and frequently in rural areas.
B	Reasonably free flow. LOS A speeds are maintained, maneuverability within the traffic stream is slightly restricted. The lowest average vehicle spacing is about 330 ft (100 m) or 16 car lengths. Motorists still have a high level of physical and psychological comfort.
C	Stable flow, at or near free flow. The ability to maneuver through lanes is noticeably restricted and lane changes require more driver awareness. Minimum vehicle spacing is about 220 ft (67 m) or 11 car lengths. Most experienced drivers are comfortable, roads remain safely below but efficiently close to capacity, and posted speed is maintained. Minor incidents may still have no effect but localized service will have noticeable effects and traffic delays will form behind the incident. This is the target LOS for some urban and most rural highways.
D	Approaching unstable flow. Speeds slightly decrease as traffic volume slightly increases. Freedom to maneuver within the traffic stream is much more limited and driver comfort levels decrease. Vehicles are spaced about 160 ft (50m) or 8 car lengths. Minor incidents are expected to create delays. Examples are a busy shopping corridor in the middle of a weekday, or a functional urban highway during commuting hours. It is a common goal for urban streets during peak hours, as attaining LOS C would require prohibitive cost and societal impact in bypass roads and lane additions.
E	Unstable flow, operating at capacity. Flow becomes irregular and speed varies rapidly because there are virtually no usable gaps to maneuver in the traffic stream and speeds rarely reach the posted limit. Vehicle spacing is about 6 car lengths, but speeds are still at or above 50 mi/h (80 km/h). Any disruption to traffic flow, such as merging ramp traffic or lane changes, will create a shock wave affecting traffic upstream. Any incident will create serious delays. Drivers’ level of comfort becomes poor. This is a common standard in larger urban areas, where some roadway congestion is inevitable.
F	Forced or breakdown flow. Every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required. Travel time cannot be predicted, with generally more demand than capacity. A road in a constant traffic jam is at this LOS, because LOS is an average or typical service rather than a constant state. For example, a highway might be at LOS D for the AM peak hour, but have traffic consistent with LOS C some days, LOS E or F others, and come to a halt once every few weeks.

SEGMENT CAPACITY

To determine the overall capacity of Madison County’s roadway network, daily service volume tables were used to estimate the level-of-service of each segment.

METHODOLOGY

To begin, qualifying roadway segments were sorted into one of the following categories from the *Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis*: two-lane highways, two-lane urban streets, or four-lane urban streets. Segments were sorted based on a set of standardized assumptions about traffic control, roadway geometries, and turning traffic volumes. Figure 5.3 shows the result of this categorization process for Madison County’s transportation network.

It is noted that many segments throughout the county do not perfectly align with the assumptions for their designated category. For example, a segment in Madison County may have a smaller lane width than the model assumes for a two-lane urban street. Differences between the model and reality are expected. Capacity analysis is intended to provide an overview of the traffic flow within a roadway network, and comes with some limitations. Although the categories selected are the best match based on existing conditions, refined analysis may be needed before an improvement project is implemented.

Once categorized, each segment was screened using corresponding daily service volume tables from the *Highway Capacity Manual*. Table 5.2 summarizes the daily service volumes applied for each category, along with the corresponding level-of-service.

FINDINGS

All road segments owned and maintained by Madison County were assessed at LOS C or above, indicating that they operate with little to no capacity constraints. As growth occurs in the southwest part of the county, roadways should be periodically assessed to ensure that level-of-service remains high, and that needed improvements are made.

METHOD	A	B	C	D	E
FOUR LANE URBAN	n/a	n/a	2,000	22,300	32,200
TWO LANE URBAN	n/a	n/a	1,600	10,700	16,100
TWO LANE RURAL	n/a	4,400	7,900	13,400	27,100

Data Source: Exhibit 16-6 and 15-46 in the Highway Capacity Manual, Sixth Edition

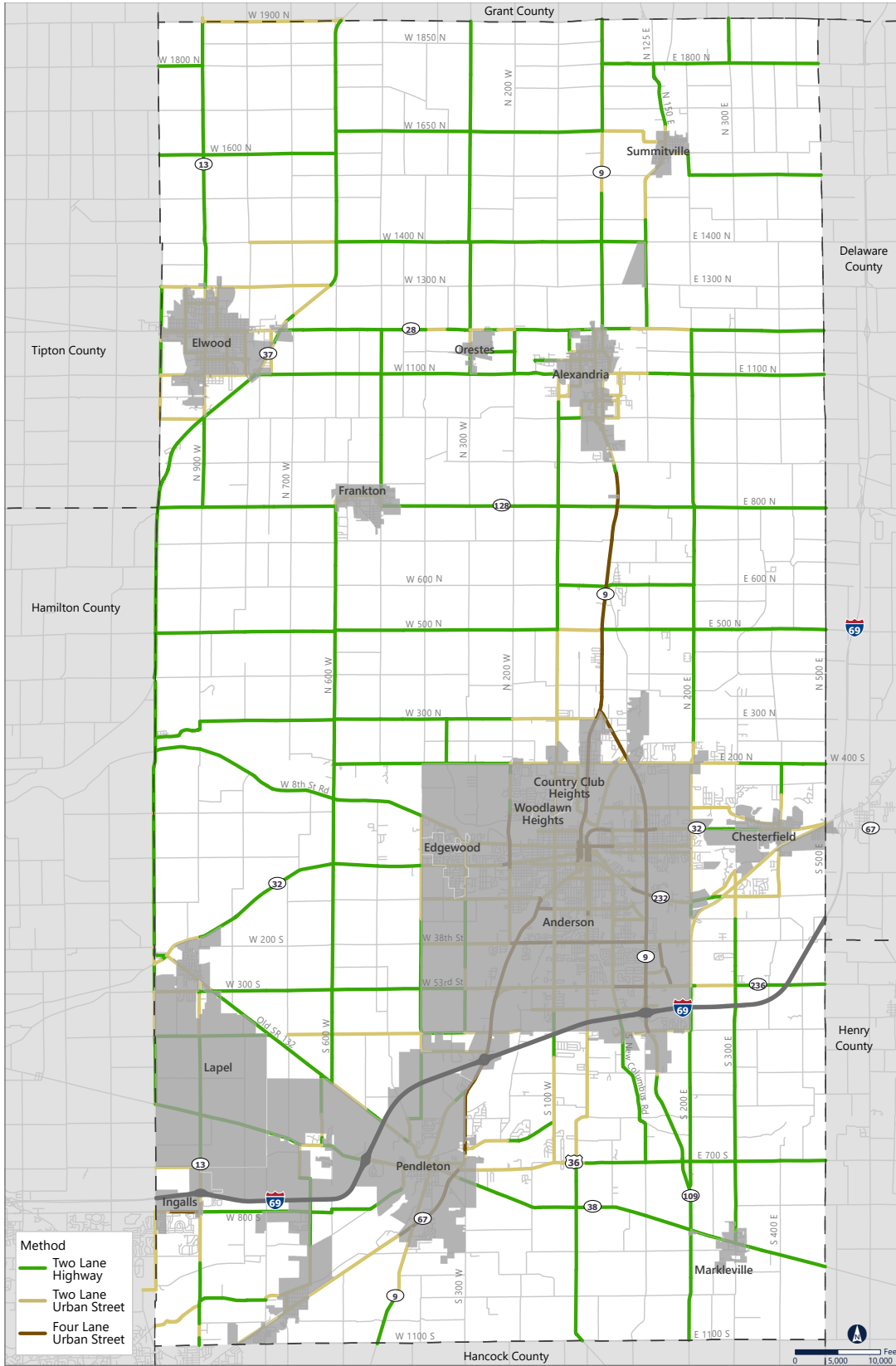


FIGURE 5.3: LEVEL-OF-SERVICE (LOS) METHODS

Map Source: EMCS

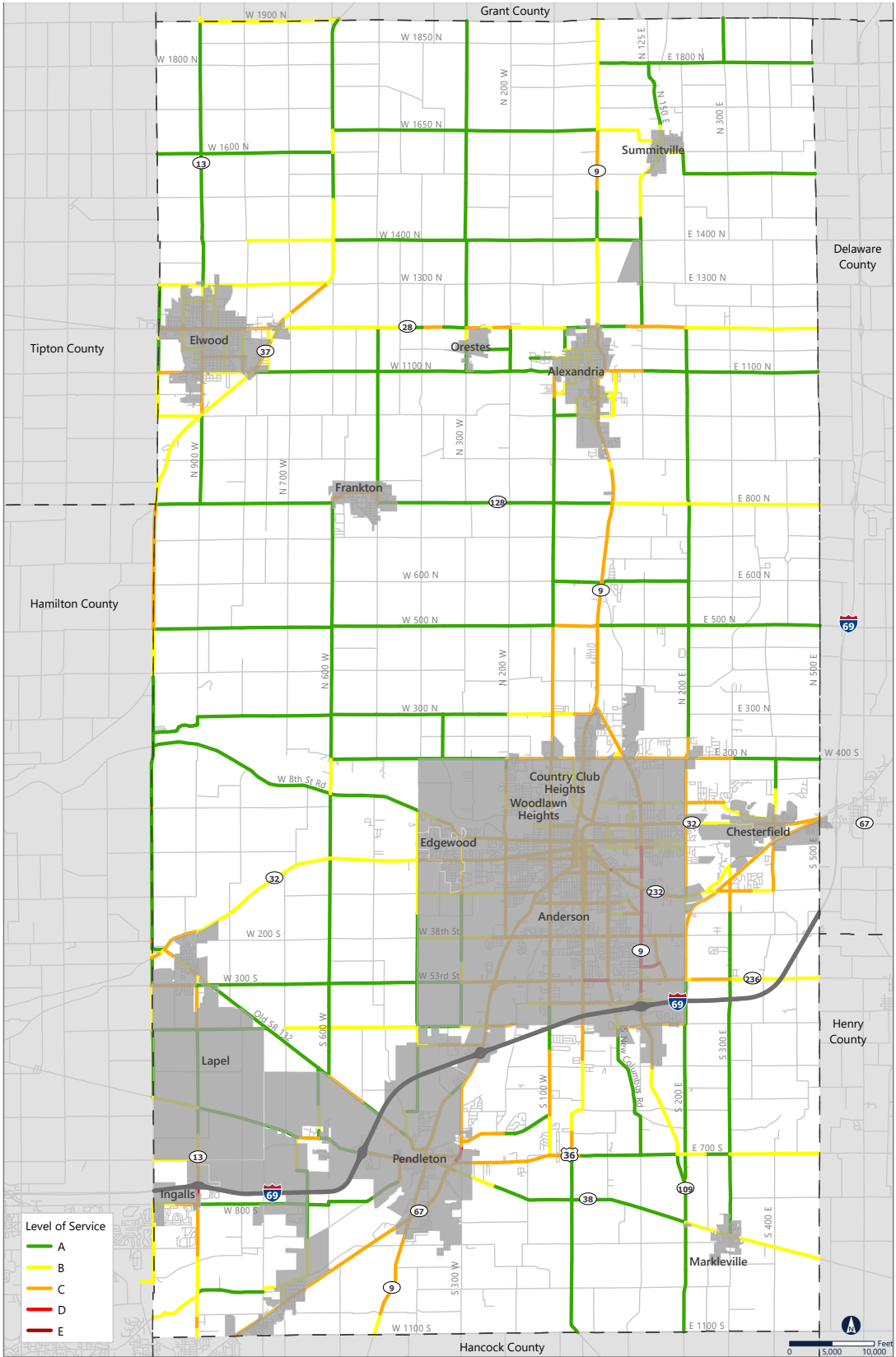


FIGURE 5.4: 2015 LEVEL-OF-SERVICE (LOS)

Map Source: EMCS

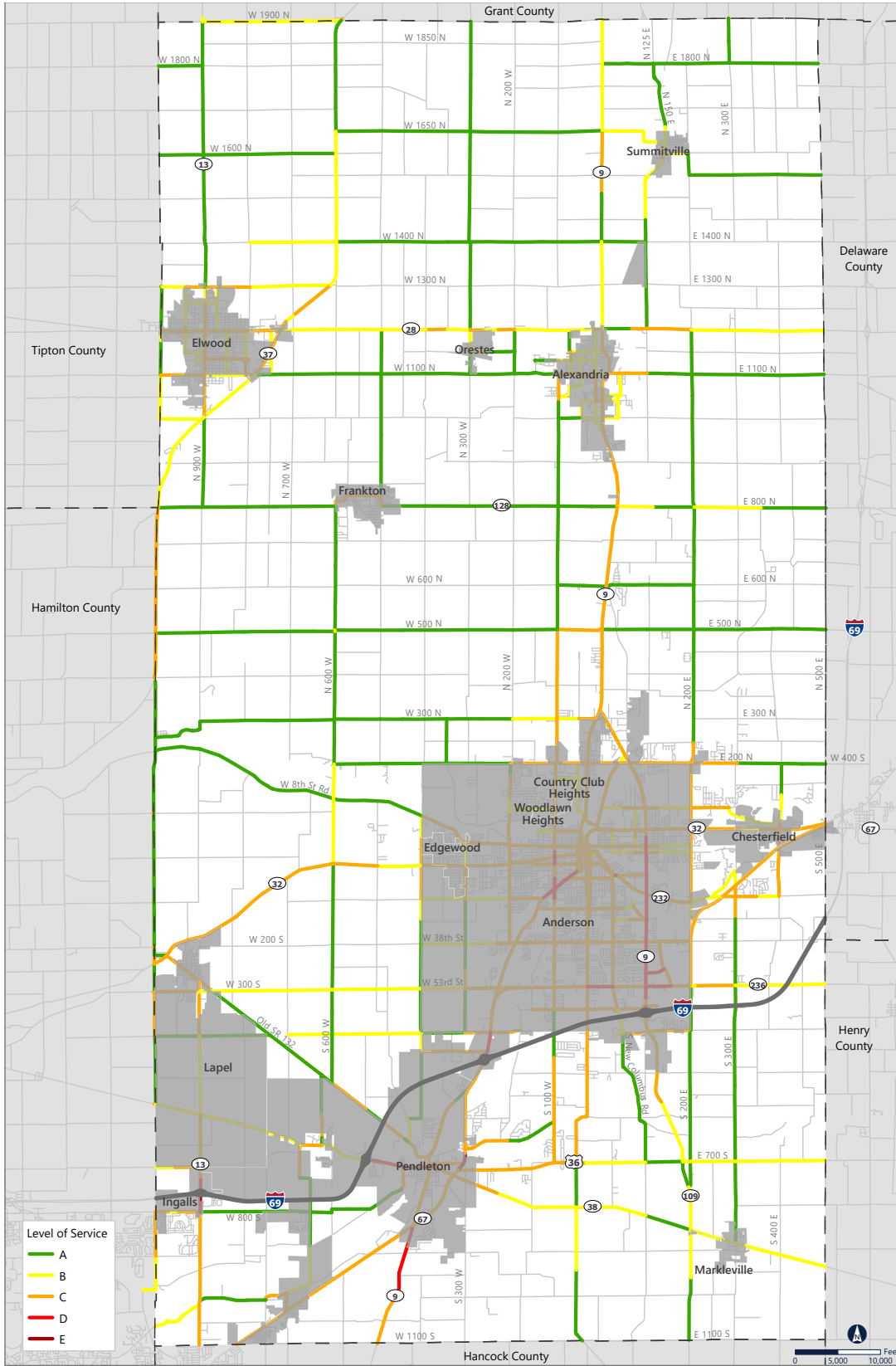


FIGURE 5.5: 2040 LEVEL-OF-SERVICE (LOS)

Map Source: EMCS

SAFETY ANALYSIS

In March of 2023, the Madison County Council of Governments (MCCOG) adopted Protect 2030, a comprehensive safety action plan for the Anderson Urban Area and Metropolitan Planning Area, which encompasses all of Madison County, as well as areas around Daleville and Fortville, Indiana. Protect 2030 embraces a vision zero approach to transportation safety which envisions a transportation system free of deaths and life-changing injuries. By 2030, the plan aims to reduce fatalities and incapacitating injuries by 5% compared to 2015-2019 averages. Protect 2030 was guided by public input gathered from a 15-member task force, a vision survey, a prioritization survey, and a hazard reporting tool. The project team also analyzed crash data to understand trends and highlight problem areas.

Protect 2030 uses emphasis areas (EAs) to categorize similar areas of concern determined through public feedback and analysis. The four emphasis areas are (1) vulnerable users, (2) roadway design, (3) behaviors, and (4) post-crash care. Each emphasis area contains multiple contributing factors, outlined in the table below.

Emphasis areas were used to identify recommendations (i.e. strategies and countermeasures) to reduce the frequency and severity of crashes. In Protect 2030, MCCOG outlined:

- 27 non-infrastructure recommendations across four categories (engineering, education, enforcement, and emergency services).
- 26 systematic engineering solutions based on the Federal Highway Administration’s Proven Safety Countermeasures (PSCs).
- 3 railroad crossing solutions.

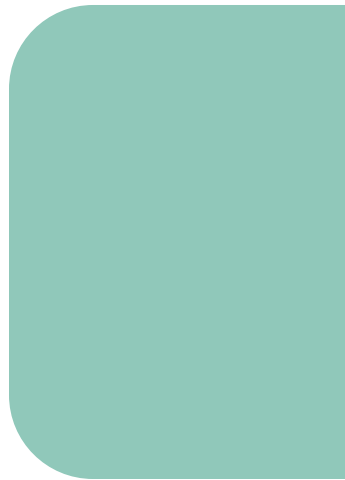
TABLE 5.4: PROTECT 2030 EMPHASIS AREAS	
EMPHASIS AREAS	
VULNERABLE USERS	Pedestrians Motorcycle Bicycle Age 65 Plus
ROADWAY DESIGN	Rural roadway departures Rural curves Urban intersections Two-way stop control
BEHAVIORS	Impaired driving Safety equipment use Speeding Distracted driving
POST-CRASH CARE	Rural response time Overnight response time

The plan also identifies eight high-crash locations throughout the county based on facility type (e.g. local-owned segment, State-owned interchange, at-grade railroad crossing, etc.). For each high-crash location, MCCOG provides a location overview, emphasis areas, as well as short- and long-term goals.

Non-infrastructure recommendations are summarized in the Implementation chapter along with their corresponding emphasis areas, project partners, time frame, and priority. The plan also calls for the continued collection, management, and reporting of crash data through the online Protect 2030 hub. The plan advises that data be made available to the public to increase transparency and access to the decision-making process. Finally, the plan calls for continued monitoring and evaluation. The project’s success will ultimately be determined by its real impact on crashes in Madison County.

06

GOALS & OBJECTIVES



This chapter outlines the goals and objectives for the Madison County Thoroughfare Plan. These goals were crafted based on analysis of the transportation network, public input, and guidance from the Steering Committee.

GUIDING PRINCIPLES

Five guiding principles emerged over the course of the planning process. These guiding principles represent the community's vision for the future of the transportation network. Guiding principles were used to organize and inform the goals and objectives.

Each guiding principle is presented here, along with its associated goal.

SAFETY

INCREASE SAFETY FOR ALL
USERS OF THE MADISON
COUNTY TRANSPORTATION
NETWORK.

CONNECTIVITY

IMPROVE CONNECTIVITY
OF LOCAL AND REGIONAL
TRANSPORTATION NETWORKS.

QUALITY OF LIFE

ENHANCE THE TRANSPORTATION NETWORK TO BOOST
REGIONAL COMMUNITY AND ECONOMIC DEVELOPMENT
OPPORTUNITIES AND SUPPORT AGRICULTURE.

CAPACITY

INVEST IN MAINTENANCE AND
REDESIGN OF ROADWAYS TO
ACCOMMODATE GROWTH AND
DEVELOPMENT.

COORDINATION

CONTINUE TO FOSTER LOCAL
AND REGIONAL PARTNERSHIPS
TO IMPLEMENT NEEDED
TRANSPORTATION INITIATIVES.

SAFETY

Safety is a crucial component of a well-functioning transportation network. Community members share this sentiment. On the public input survey, 91% of respondents chose safety as a top criterion for prioritizing transportation projects. In other words, desirable projects should enhance the safety of roadway users, from pedestrians to motorists, and should mitigate the threat of accident and injury.

Adopted in March 2023, Protect 2030 is a comprehensive safety action plan created by the Madison County Council of Governments for the Anderson Metropolitan Region, which includes all of Madison County. This plan envisions a transportation system free of deaths and life-changing injuries. To achieve this vision, Protect 2030 outlines recommendations to improve the safety of the transportation network, and identifies high-crash locations where investments should be focused. Going forward, the county should partner with Madison County Council of Governments and local municipalities to implement the recommendations of this plan.

Other steps can also be taken to enhance safety in Madison County. During stakeholder meetings, community members expressed the need for wider county roads. They explained that the current roads are too narrow to safely accommodate emergency vehicles, school buses, farm equipment, and semi-truck traffic. Anecdotally, community members shared near-miss encounters, and emergency personnel described issues with access and response time on county roads. By maintaining sufficient right-of-way, Madison County paves the way for future projects to widen lanes and add shoulders. These improvements would allow larger vehicles to safely navigate rural areas.

As development occurs in southwest Madison County, the risk of accidents grows. Frequently traveled intersections, including the entrances to new subdivisions along county roads, can pose a hazard. To slow traffic and keep drivers more aware, new developments should implement appropriate traffic calming designs.

Finally, Madison County government is already taking steps to improve intersection safety, independent of Protect 2030. The following initiatives should be continued into the foreseeable future to safeguard the lives of roadway users:

- ◆ Systematically reviewing intersections of concern;
- ◆ Reviewing existing conditions and proposing short-term and long-term improvements;
- ◆ Pilot testing additional safety measures, including adding blinkers, LED stop signs, rumble strips at intersection approaches, stop sign spinners, and post reflectors;
- ◆ Establishing standard operating practices for intersection signage to provide consistency in existing and proposed safety measures at intersections.

INCREASE SAFETY FOR ALL USERS OF THE MADISON COUNTY TRANSPORTATION NETWORK.

- Use Protect 2030 Safety Action Plan to prioritize improvements at the most hazardous intersections and thoroughfares.
- Maintain sufficient right-of-way to allow for safe and efficient transport of agricultural equipment, school buses, emergency vehicles, and semi-trucks.
- Require new developments to implement appropriate traffic calming designs.

CONNECTIVITY

Connectivity is an invaluable part of any transportation network. According to the U.S. Department of Transportation, connectivity reduces the distances traveled to reach key destinations, increases route options, and facilitates walking and bicycling. In growing parts of Madison County, connectivity has become increasingly important as residents seek to visit nearby communities to work, shop, eat, and play.

To improve local connectivity, Madison County should provide more complete route options, particularly in southwest Madison County. As this area grows, residents will need alternative routes between Pendleton, Ingalls, Lapel, and neighboring counties. Regional connectivity, which plays an important role in economic development and impacts the lives of residents through their daily commute, can be improved by facilitating access to I-69. In time, this may include coordinating with the Indiana Department of Transportation on future interchanges.

The importance of connectivity extends beyond just vehicular routes. Madison County, in collaboration with local municipalities, should increase non-motorized transportation options by expanding the bicycle and pedestrian network. A well-connected bicycle and pedestrian network would benefit Madison County by promoting active lifestyles, strengthening community character, supporting economic development, forwarding equity and accessibility, and reducing traffic congestion. Adopted in April 2024, the inaugural Madison County Parks, Trails, and Open Spaces Master Plan is a valuable guide to future bicycle and pedestrian investments. The master plan outlines a proposed network of linear parks and trails, which would lace through the county and connect key destinations.

Madison County's Complete Streets policy represents a final tool to enhance connectivity. As stated in the policy, every transportation project, from new construction to reconstruction, should be considered an opportunity to further develop Madison County's Complete Streets network. Complete streets are roadways designed and operated to enable safe use and mobility of all users. Depending on community context, complete streets may include sidewalks, bike lanes, bus lanes, crossing opportunities, curb extensions, accessible pedestrian signals, and more. Where appropriate, Madison County should leverage the Complete Streets policy to plan, design, operate, and maintain better roadways.

IMPROVE CONNECTIVITY OF LOCAL AND REGIONAL TRANSPORTATION NETWORKS.

- Support increased connectivity between communities by providing more complete route options.
- Boost regional connectivity by ensuring quick access to I-69 from anywhere in Madison County.
- Expand the bicycle and pedestrian network to increase regional, non-motorized transportation options in Madison County.
- Implement the Complete Streets policy to provide a safe, efficient, complete, and well-connected transportation network in Madison County.

QUALITY OF LIFE

Madison County's story is intertwined with the legacy of the American Rust Belt and the Midwest's agricultural heritage. At the same time, change is happening. Growing communities in southwest Madison County are attracting a professional workforce which commutes to neighboring Hamilton County and Marion County. A community's transportation network can facilitate the flow of workers to their jobs, students to school, and residents to shops, restaurants, and public facilities, or act as a barrier. Similarly, the transportation network can support or undermine the flow of resources and products, influencing the growth of industries and job opportunities. As Madison County looks to the future, community leaders have an opportunity to facilitate community and economic development, and consequently enhance quality of life, through improvements to this network.

On the public input survey, 78% of respondents chose 'supports economic development' as a top priority for future transportation projects. This sentiment was echoed by participants in stakeholder meetings. Community members, including farmers, expressed concerns about agricultural equipment and semi-trucks navigating narrow county roads. To support ongoing agriculture and logistics operations, Madison County could identify roadways with high truck traffic volumes and enhance them accordingly.

Workers commuting to and from neighboring counties often travel via I-69. To support this flow of workers, Madison County can explore opportunities for additional interchanges where appropriate. The county may also coordinate with local municipalities to ensure that future land use plans consider these potential changes to the transportation network. Through careful planning, the county and its partners can ensure that buildings and other structures don't have to be relocated or acquired to accommodate anticipated interstate improvements.

Finally, now more than ever, workers are prioritizing quality of life. Instead of moving for a job, workers are moving in pursuit of a vibrant community where

they can imagine themselves and their loved ones thriving. Employers are following close behind to capture talent. To attract new residents, visitors, and employers, Madison County should foster local character at interchanges and along the Interstate Corridor. Some communities, including Pendleton, have already taken steps to do so. Madison County can encourage additional gateway improvements by providing partner communities with guidance and technical assistance.

ENHANCE THE TRANSPORTATION NETWORK TO BOOST REGIONAL COMMUNITY AND ECONOMIC DEVELOPMENT OPPORTUNITIES AND SUPPORT AGRICULTURE.

- Prioritize future projects based on their potential to boost quality of life and economic vitality throughout Madison County.
- Identify roadways with high truck traffic volumes and plan infrastructure to safely handle heavy loads.
- Explore opportunities for future interchanges where appropriate.
- Ensure that future land use plans consider changes in the transportation network, including new interchanges and roadway additions.
- Foster a positive first impression of Madison County by encouraging local character at interstate interchanges and along the corridor.
- Upgrade roadways throughout rural Madison County to accommodate the travel of agricultural vehicles and equipment.

CAPACITY

According to data from the 2020 U.S. Census, communities in southwest Madison County are experiencing unprecedented growth. Since 2000, Ingalls has grown by 90.3%, Lapel by 25.3%, and Pendleton by 21.8%. With growth like this, it is no surprise that 58% of survey participants selected increasing traffic congestion and delays as a major challenge facing the county in the next 25 years. Already, the county is experiencing delays at interstate exits, along major thoroughfares, and at key intersections, especially during morning and evening rush hour. Approximately 68% of survey respondents found it hardest to travel during the late afternoon, from 3pm to 6pm, in Madison County.

Most capacity challenges in Madison County are within municipal limits, particularly in the southwest part of the county. Roadways in unincorporated areas are facing few, if any, capacity constraints. Nonetheless, creating a seamless transportation network requires action, and collaboration, from both municipal and county government. The county should keep an eye on growth and development in municipalities, and adjust and respond accordingly. The county may also support local municipalities by continuing to make improvements along roadways connecting Madison County communities to one another and to the broader region.

Madison County should apply access management best practices in appropriate areas, including large subdivisions, schools, and major places of employment within its jurisdiction, to preserve the flow of traffic, reduce collisions, and improve access. Access management, as defined by the U.S. Department of Transportation, is the proactive management of vehicular access points to parcels adjacent to all manner of roadways. Access management encompasses a wide range of techniques, but may include street connections, turning lanes, and traffic signal spacing.

Although access management is more typically associated with municipal transportation planning, Madison County has seen an increase in subdivisions

and other development in the unincorporated county. Whether these parcels remain unincorporated or are eventually annexed, applying access management best practices now can ensure a more seamless transition in the future, and sufficient capacity throughout the transportation network in the meantime.

On key roadways, where it is safe and appropriate for all users, bicycle and pedestrian facilities can be installed to increase capacity. From sidewalks to shared use paths, these amenities take cars off roads, reducing congestion elsewhere in the transportation network while producing other community benefits. Madison County should maintain right-of-way along county roads to accommodate these and other future corridor improvements.

INVEST IN MAINTENANCE AND REDESIGN OF ROADWAYS TO ACCOMMODATE GROWTH AND DEVELOPMENT.

- Employ access management best practices in appropriate areas to preserve the flow of traffic, reduce the frequency of crashes, and improve access to businesses and homes.
- Maintain sufficient right-of-way along county roads so that corridor improvements can accommodate future needs.
- Reduce congestion on key roadways by fostering a complete transportation network which accommodates all users.

COORDINATION

Coordination is key to creating a safe, complete, and cohesive transportation network in Madison County. Fortunately, through this planning process, Madison County has already taken steps to engage the Indiana Department of Transportation, Madison County Council of Governments, and local municipalities inviting them to join the Steering Committee and/or participate in stakeholder meetings. Going forward, Madison County should continue to foster local and regional partnerships to implement needed transportation initiatives. The other goals in this chapter cannot be achieved without the diverse perspectives, strong communication, and effective coordination associated with genuine partnership.

Coordination ensures that transportation initiatives align with shared goals. Rather than one entity determining what is best for a particular project, collaboration allows for insight from all impacted parties. From this insight, transportation initiatives can be designed effectively to meet the needs and desires of multiple communities at once, forwarding broader goals like safety, connectivity, capacity, and economics.

Coordination is also important when it comes to land use planning. The transportation network and land use are intertwined. Changes to one directly impacts the other. Consequently, major developments or changes to the transportation network must be thoughtfully planned with the help of state, regional, and local partners.

Finally, for maximum efficiency, Madison County may coordinate with local utility providers to complete utility improvements in tandem with transportation improvements. For example, if redoing a major roadway in southwest Madison County, there may be an opportunity to replace piping, install fiber optic lines, or pursue other utility improvements at the same time. Coordinating these improvements minimizes disruption to travelers and may be more cost-effective.

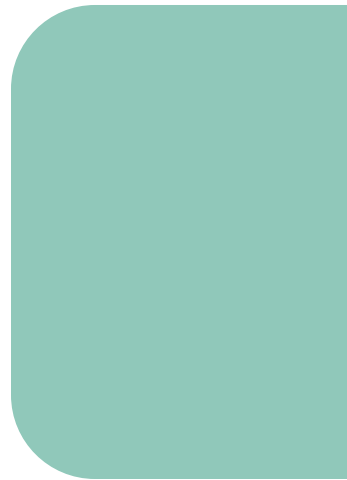
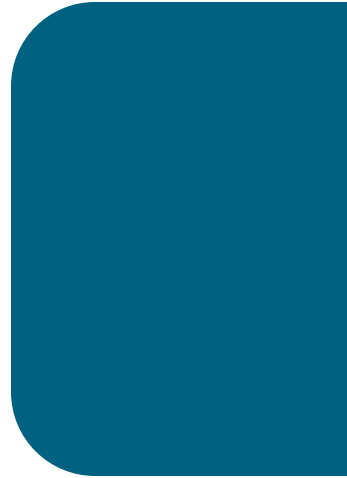
CONTINUE TO FOSTER LOCAL AND REGIONAL PARTNERSHIPS TO IMPLEMENT NEEDED TRANSPORTATION INITIATIVES.

- Collaborate with the cities and towns within Madison County to ensure that future transportation plans and projects are in alignment with shared goals.
- Partner with state, regional, and local jurisdictions to ensure transportation and desired land uses support one another.
- Coordinate with local utility providers to complete future utility improvements in tandem with transportation improvements.

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07

RECOMMENDATIONS



The transportation recommendations outlined in this chapter come in the form of maps, standards, and potential projects. These recommendations are informed by analysis of the existing transportation network, future traffic forecasts, public input, and national best practices. Recommendations are organized into the following four categories:

- Recommended INDOT Functional Classification System
- Recommended Local Functional Classification System
- Future Thoroughfare Plan Map
- Recommended Right-of-Way Standards
- Typical Roadway Sections
- Potential Improvements

The transportation network is constantly changing, as are its users. To ensure that the transportation network keeps up with the needs of travelers, Madison County should revisit the thoroughfare plan each year to ensure its relevance. Periodically, county staff should review the plan with the Board of Commissioners and Plan Commission to (1) ensure that they are equipped to use the plan in their official role and to (2) ensure that the plan aligns with Madison County’s vision for the future of the transportation network. If there are discrepancies, Madison County should take steps to update the plan.

RECOMMENDED INDOT FUNCTIONAL CLASSIFICATION SYSTEM

The Federal (or INDOT) Functional Classification System established by the Federal Highway Administration (FHWA) and managed by the Indiana Department of Transportation (INDOT) categorizes roadways into classes to determine federal funding eligibility. These seven classes include Principal Arterial - Interstate, Principal Arterial - Other Freeways or Expressways, Principal Arterial - Other, Minor Arterial, Major Collector, Minor Collector, and Local Roads. To request an update to the Functional Classification System, the county must provide a letter of concurrence from the Madison County Council of Governments (MCCOG), the Metropolitan Planning Organization (MPO) for the region. These requests are then approved by INDOT.

This plan does not suggest any changes to the INDOT Functional Classification System in Madison County. Consequently, the Recommended INDOT Functional Classification Map in Figure 7.1 is the same as the Existing INDOT Functional Classification Map in Chapter 3: Context & Background, Figure 3.1. This map provides valuable reference to the other recommendations in this chapter.

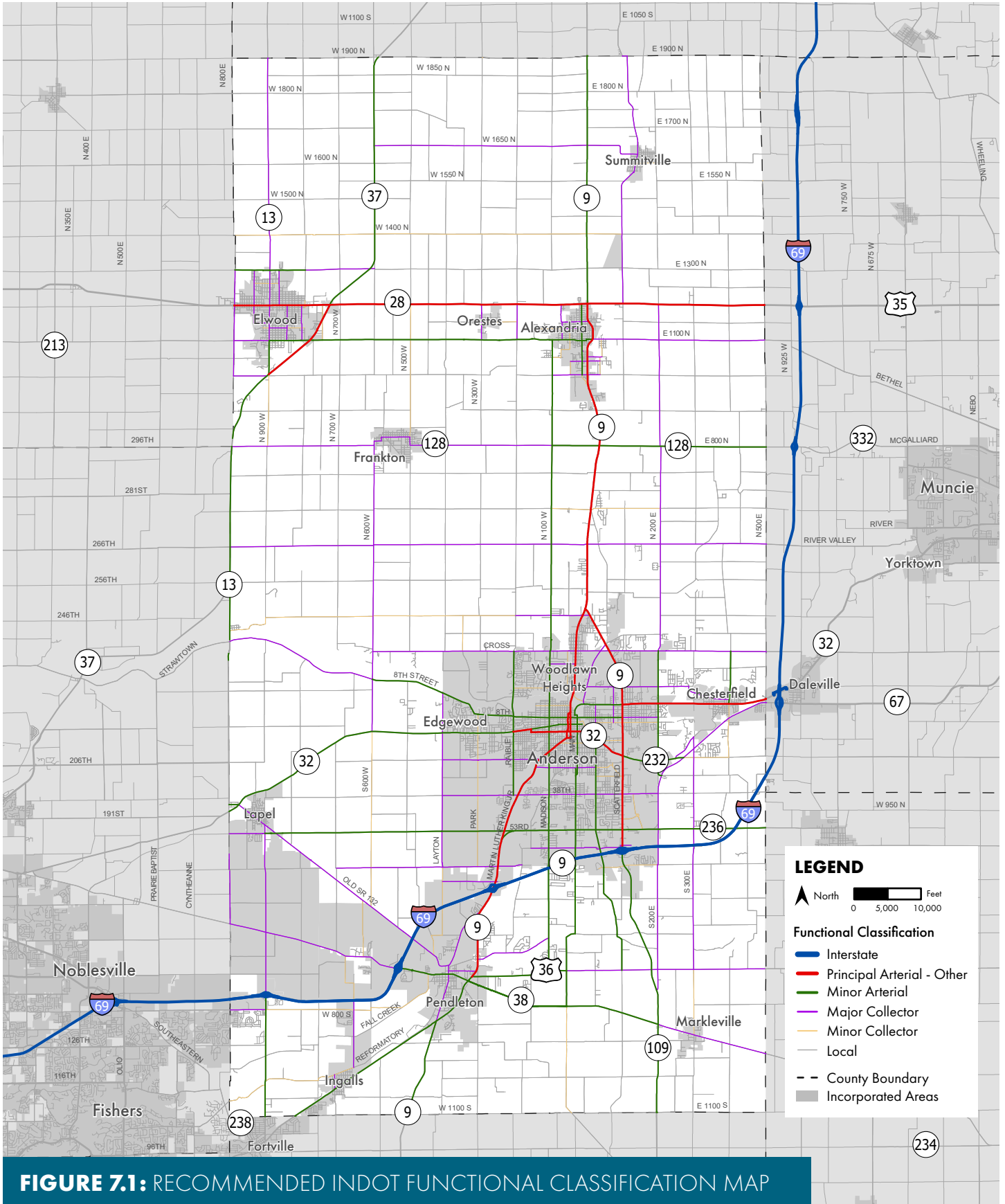


FIGURE 7.1: RECOMMENDED INDOT FUNCTIONAL CLASSIFICATION MAP

Map Source: HWC Engineering

RECOMMENDED LOCAL FUNCTIONAL CLASSIFICATION SYSTEM

The Local Functional Classification System, established by the county, is used to determine elements of roadway design and plan for right-of-way needs. Local functional classification systems are helpful because they allow the county to plan for needed improvements ahead of INDOT. For example, Madison County may designate a segment of Fall Creek Drive in the unincorporated county as a ‘major collector’ in its local classification system, even though it remains a ‘local’ road in the INDOT system. The county knows that traffic volumes on this road are going to increase in the future due to nearby development, even if this has yet to occur. By amending the local functional classification, the county can obtain additional right-of-way, possibly to expand lane widths or add a shared-use path, before traffic volumes on the road increase.

This plan replaces other versions of the local classification system by instead adopting the INDOT Functional Classification System with a few local modifications. The system features the following seven classes from the Federal Highway Administration: Principal Arterial - Interstate, Principal Arterial - Other Freeways and Expressways, Principal Arterial - Other, Minor Arterial, Major Collector, Minor Collector, and Local Roads.

The map in Figure 7.2 shows the proposed Local Functional Classification System for Madison County. Although this map shows all public roads within Madison County, the Local Functional Classification System only applies to county-owned roads. This is not meant to supersede the systems that cities and towns within Madison County already have in place.

Local modifications to the INDOT Functional Classification System are indicated by a numbered star. Modifications also itemized in the table below.

TABLE 7.1: LOCAL MODIFICATIONS TO THE INDOT FUNCTIONAL CLASSIFICATION SYSTEM

#	ROUTE	DESCRIPTION	INDOT FUNCTIONAL CLASSIFICATION	LOCAL FUNCTIONAL CLASSIFICATION
1	CR E 1800 N	From SR 9 to CR 500 E	Local	Minor Collector
2	CR E 1550 N	From CR 200 E to CR 500 E	Local	Minor Collector
3	CR N 200 E	From CR 1550 N to CR 1600 N	Local	Minor Collector
4	CR W 1800 N	From CR 1000 W to SR 13	Local	Major Collector
5	CR W 1600 N	From CR 1000 W to SR 37	Local	Minor Collector
6	CR N 500 W	From SR 128 to SR 28	Minor Collector	Major Collector
7	CR W 800 S	From SR 13 to CR 650 W	Minor Collector	Major Collector
8	W Fall Creek Dr	From CR 650 W to CR 800 S	Local	Major Collector

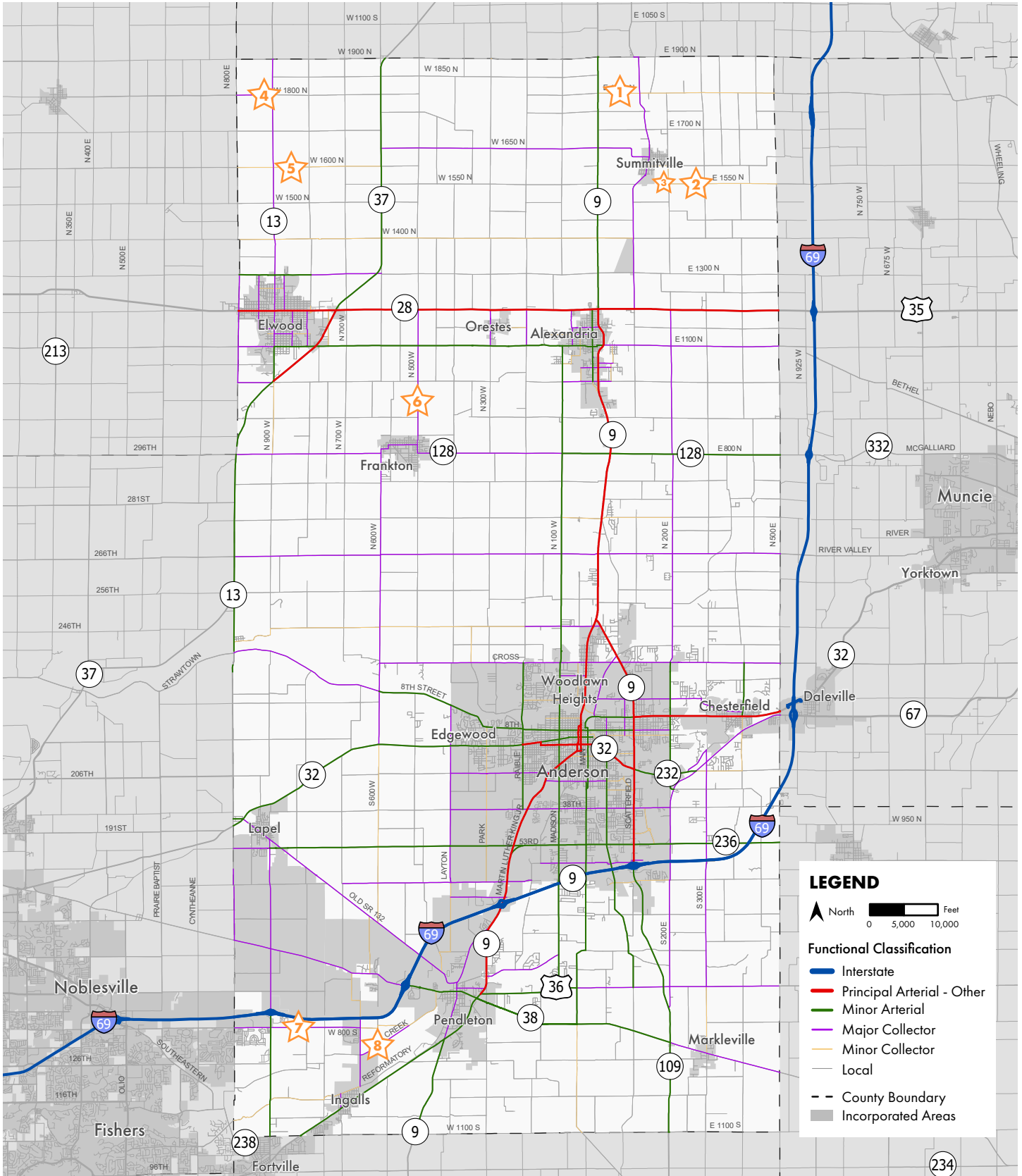


FIGURE 7.2: RECOMMENDED LOCAL FUNCTIONAL CLASSIFICATION MAP

Map Source: HWC Engineering



Rural Road in Madison County
Image Source: HWC Engineering

FUTURE THOROUGHFARE PLAN MAP

The Future Thoroughfare Plan Map, displayed in Figure 7.3, depicts the desired future roadway network for Madison County. Typically, this map indicates where future connections are planned; however, at this time, no new routes are proposed within Madison County. In conjunction with the guiding principles established earlier in the plan, this map serves as a helpful tool for county staff, local officials, developers, and community members making decisions about the transportation network and adjacent land use in Madison County.

The Future Thoroughfare Plan Map organizes the transportation network by local functional classification. These roadway classifications relate to the right-of-way standards presented in the following section. If development occurs along a classified roadway, the developer will need to dedicate adequate right-of-way in alignment with minimum width standards.

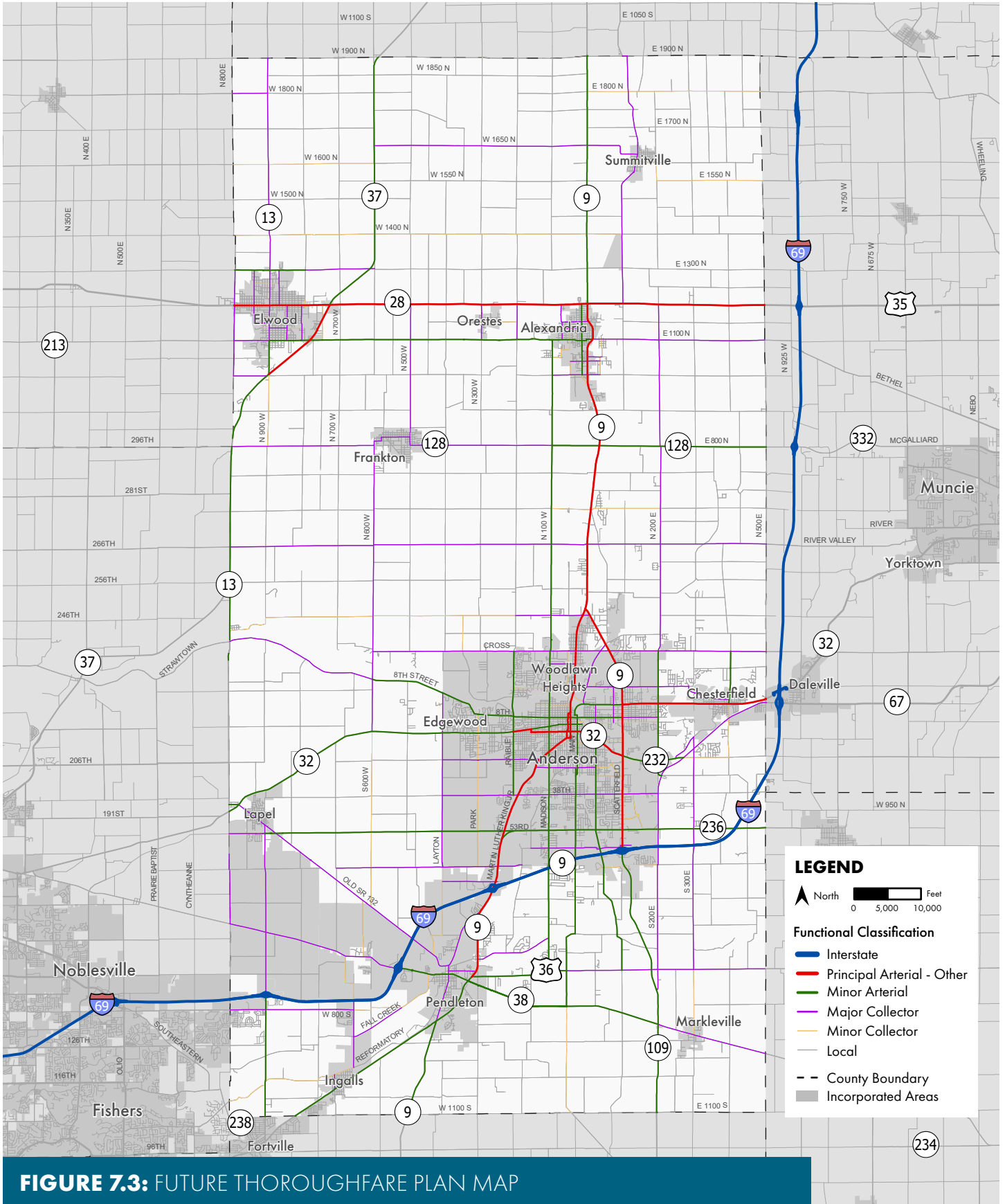


FIGURE 7.3: FUTURE THOROUGHFARE PLAN MAP

Map Source: HWC Engineering

RECOMMENDED RIGHT-OF-WAY STANDARDS

As development and redevelopment occur, Madison County may wish to install design elements, from shoulders to shared use paths along roadways, to facilitate the movements of people and goods throughout the transportation network. To accommodate these improvements, which may evolve over time, the county should preserve appropriate right-of-way. The thoroughfare plan outlines expected minimum right-of-way widths by local functional classification. These right-of-way widths were established in Madison County’s Subdivision Control Ordinance as part of mandated Street Design Requirements.

TABLE 7.2: RIGHT-OF-WAY STANDARDS	
LOCAL FUNCTIONAL CLASSIFICATION	MINIMUM RIGHT-OF-WAY
PRINCIPAL ARTERIAL	
Rural	100'
Urban	100'
MINOR ARTERIAL	
Rural	100'
Urban	100'
MAJOR COLLECTOR	
Rural	80'
Urban	80'
MINOR COLLECTOR	
Rural	80'
Urban	80'
LOCAL	
Rural	60'
Urban	60'

TYPICAL ROADWAY SECTIONS

In addition to right-of-way standards, the roadway classifications identified in the Future Thoroughfare Plan Map also have typical sections associated with them. These are minimum standards to be used for guidance in conjunction with the county’s ordinances and street design standards. As county-owned segments are redeveloped, they should be constructed in alignment with these standards, and should feature elements shown in the cross-section renderings.

It should be noted that urban and rural sections exist for all roadway classifications. The determination of whether a particular roadway segment is urban or rural is context-dependent. Typically, roadways that are closer to municipalities should be considered for the urban designation. At some point in the future, these roadways could be annexed into adjacent communities, and should be designed, maintained, and improved with this transition in mind.

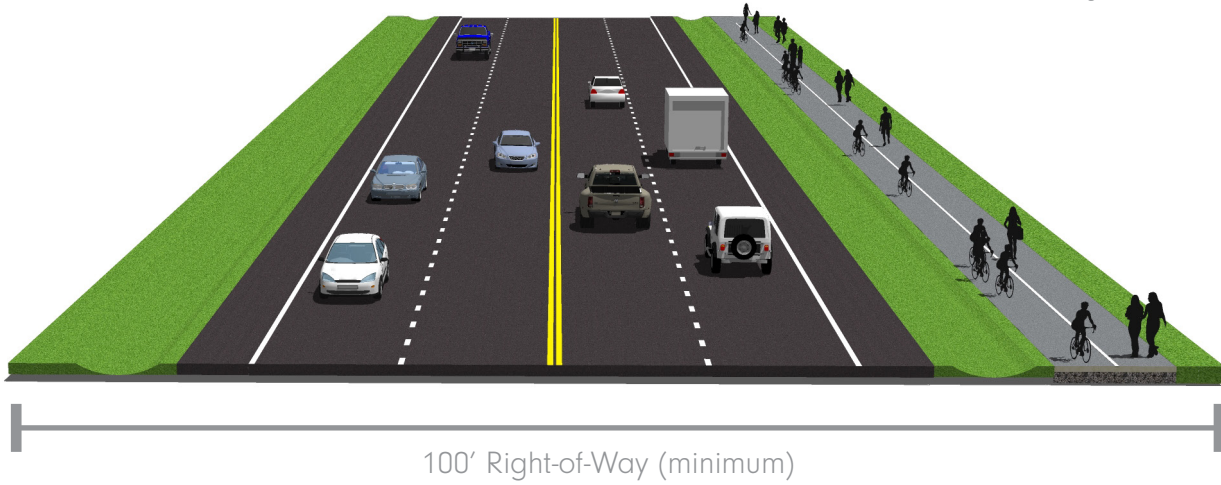
The following pages illustrate potential cross-sections for each roadway classification based on the standards outlined in Table 7.3.

TABLE 7.3: TYPICAL ROADWAY SECTIONS

PAVEMENT SECTION										BORDER SECTION			
MIN. R.O.W.	NO. OF TRAVEL LANES	NO. OF PARKING LANES	TRAVEL LANE WIDTH	AUX. LANES WIDTH	MIN. PARKING LANE WIDTH	MIN. SHOULDER WIDTH	MEDIAN DIVIDER	CURB AND GUTTER (EACH SIDE)	PLANTING STRIP MIN.	SIDEWALK (EACH SIDE) OR SHARED USE PATH	SHARED USE PATH (ONE SIDE) OR SIDEWALK		
PRINCIPAL ARTERIAL													
Rural	100'	2-4	0	12'	12'	none	8' (6' paved)	none	10'	8' opt.	10' opt.		
Urban	100'	2-4	0	11' min	12'	none	none	2'	10'	8'	10' opt.		
MINOR ARTERIAL													
Rural	100'	2-4	0	12'	12'	none	8' (6' paved)	none	10'	8' opt.	10' opt.		
Urban	100'	2-4	0	11' min	12'	none	none	2'	10'	8'	10' opt.		
MAJOR COLLECTOR													
Rural	80'	2	0	11'	12'	none	8' (6' paved)	none	10'	8' opt.	10' opt.		
Urban	80'	2	1-2 opt.	11' min	12'	8'	none	2'	10'	5'	10' opt.		
MINOR COLLECTOR													
Rural	80'	2	0	11' min	none	none	8' (6' paved)	none	10'	8' opt.	10' opt.		
Urban	80'	2	1-2 opt.	11' min	none	8'	none	2'	10'	5'	10' opt.		
LOCAL													
Rural	60'	2	0	10' min	none	none	2'	none	6'	8' opt.	10' opt.		
Urban	60'	2	1-2 opt.	10' min	none	8'	none	2'	6'	5'	10' opt.		

PRINCIPAL ARTERIAL

Image Source: HWC Engineering



RURAL

MINIMUM STANDARDS

- 12' travel lanes
- 2-4 lanes
- 8' shoulder (6' paved)

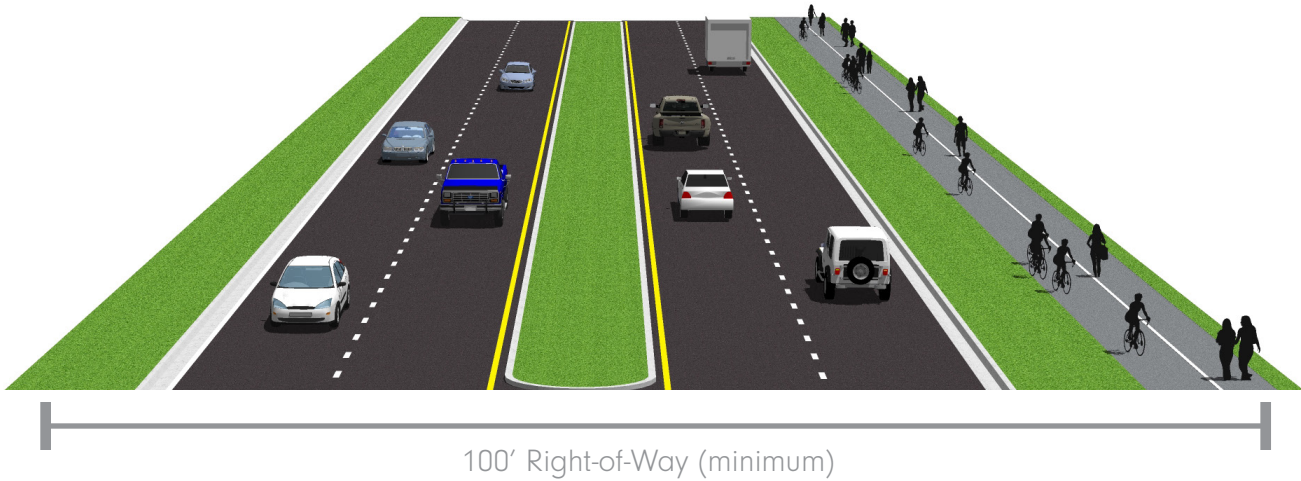
- 10' minimum planting strip
- No parking

OPTIONAL STANDARDS

- 8' sidewalks (each side)
- 10' shared use path (one side)

URBAN

Image Source: HWC Engineering



MINIMUM STANDARDS

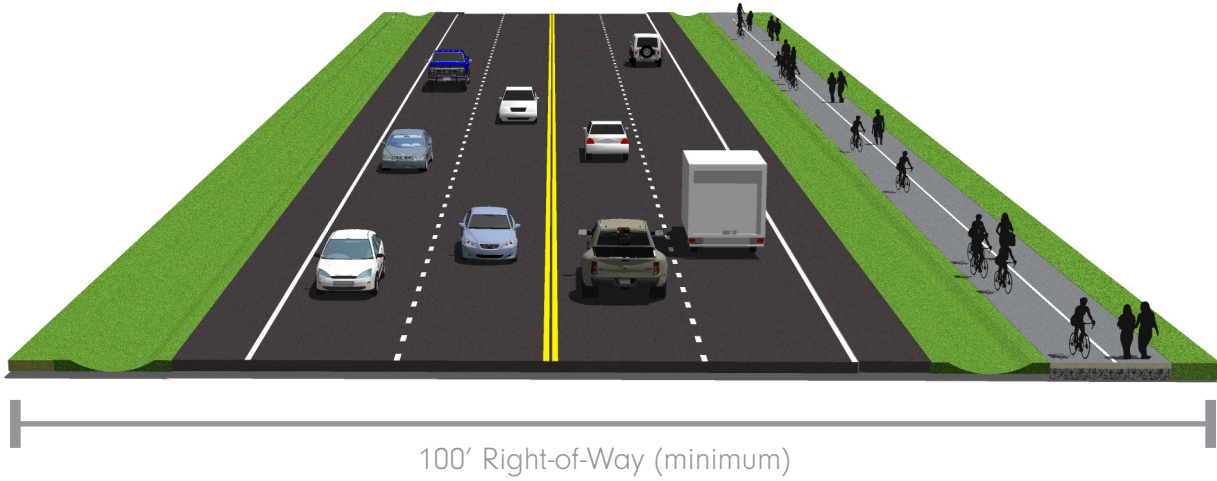
- 11' minimum travel lanes
- 2-4 lanes
- 2' curb and gutter (each side)
- 8' sidewalk (each side)
- 10' minimum planting strip
- No parking

OPTIONAL STANDARDS

- 3' to 16' median/center turn lane
- 10' shared use path (one side)

MINOR ARTERIAL RURAL

Image Source: HWC Engineering



MINIMUM STANDARDS

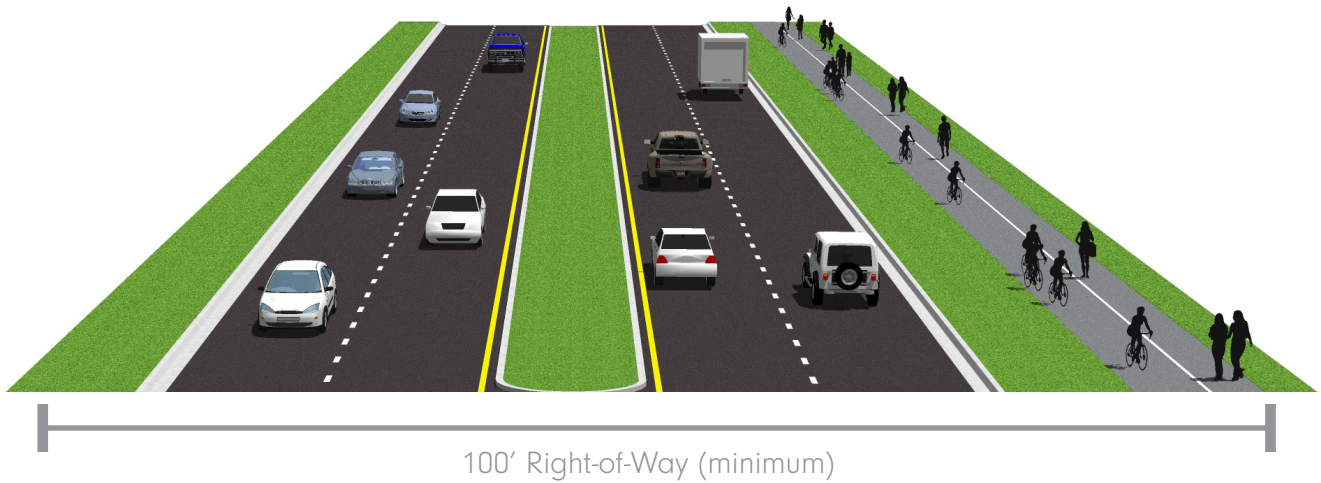
- 12' travel lanes
- 2-4 lanes
- 8' shoulder (6' paved)
- 10' minimum planting strip
- No parking

OPTIONAL STANDARDS

- 8' sidewalks (each side)
- 10' shared use path (one side)

URBAN

Image Source: HWC Engineering



MINIMUM STANDARDS

- 11' minimum travel lanes
- 2-4 lanes
- 2' curb and gutter (each side)
- 8' sidewalk (each side)
- 10' minimum planting strip
- No parking

OPTIONAL STANDARDS

- 3' to 16' median/center turn lane
- 10' shared use path (one side)

MAJOR COLLECTOR RURAL

Image Source: HWC Engineering



MINIMUM STANDARDS

- 11' travel lanes
- 2 lanes
- 8' shoulder (6' paved)
- 10' minimum planting strip
- No parking

OPTIONAL STANDARDS

- 8' sidewalks (each side)
- 10' shared use path (one side)

URBAN

Image Source: HWC Engineering



MINIMUM STANDARDS

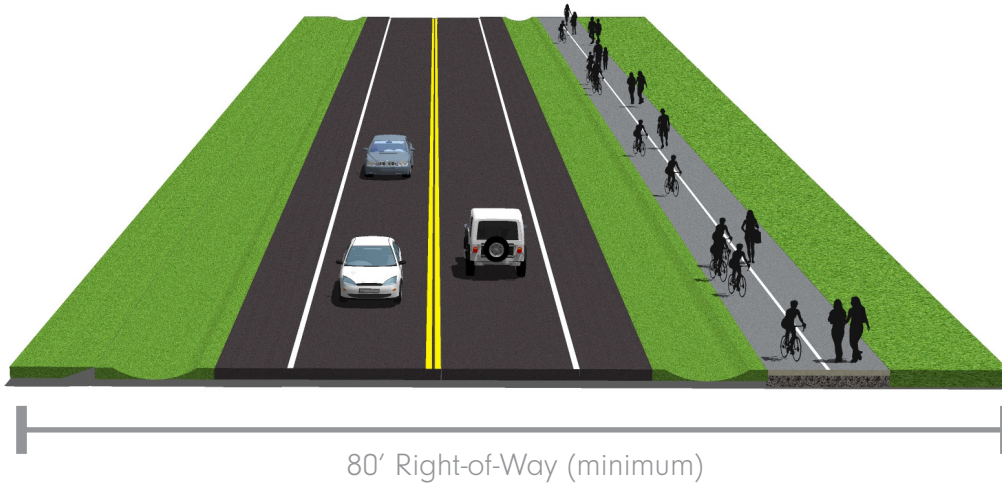
- 11' minimum travel lanes
- 2 lanes
- 2' curb and gutter (each side)
- 5' sidewalk (each side)
- 10' minimum planting strip

OPTIONAL STANDARDS

- 3' to 16' median/center turn lane
- 10' shared use path (one side)
- 1-2 parking lane(s)

MINOR COLLECTOR RURAL

Image Source: HWC Engineering



MINIMUM STANDARDS

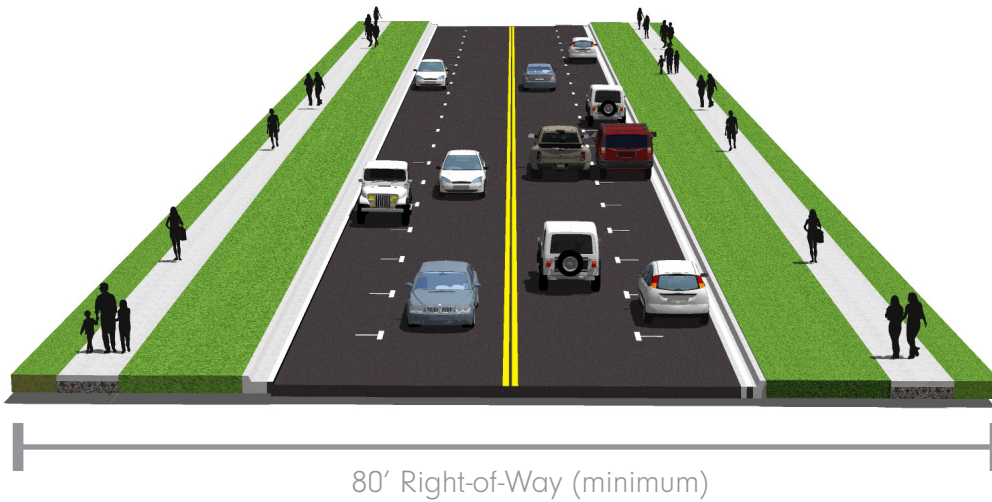
- 11' minimum travel lanes
- 2 lanes
- 8' shoulder (6' paved)
- 10' minimum planting strip
- No parking

OPTIONAL STANDARDS

- 8' sidewalks (each side)
- 10' shared use path (one side)

URBAN

Image Source: HWC Engineering



MINIMUM STANDARDS

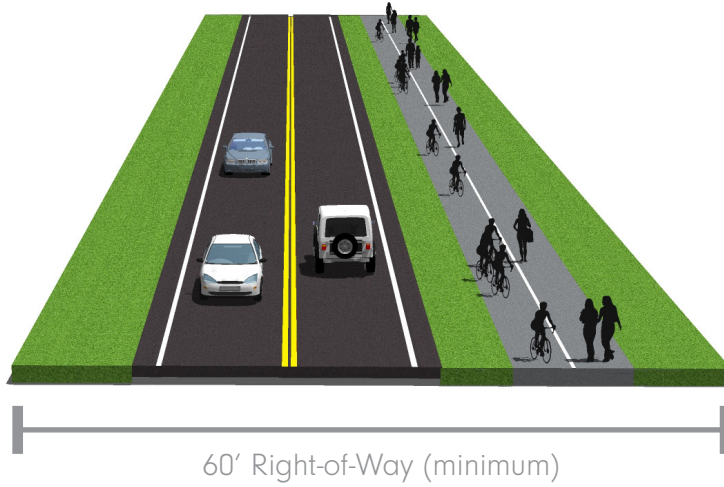
- 11' minimum travel lanes
- 2 lanes
- 2' curb and gutter (each side)
- 5' sidewalk (each side)
- 10' minimum planting strip

OPTIONAL STANDARDS

- 10' shared use path (one side)
- 1-2 parking lane(s)

**LOCAL
RURAL**

Image Source: HWC Engineering



MINIMUM STANDARDS

- 10' minimum travel lanes
- 2 lanes
- 2' paved shoulder
- 6' minimum planting strip
- No parking

OPTIONAL STANDARDS

- 8' sidewalks (each side)
- 10' shared use path (one side)

URBAN

Image Source: HWC Engineering



MINIMUM STANDARDS

- 11' minimum travel lanes
- 2 lanes
- 2' curb and gutter (each side)
- 5' sidewalk (each side)
- 6' minimum planting strip

OPTIONAL STANDARDS

- 10' shared use path (one side)
- 1-2 parking lane(s)

POTENTIAL IMPROVEMENTS

Potential improvements for consideration by the county were developed based on network analysis, review of previous plans, and feedback from community stakeholders.

NETWORK ANALYSIS RECOMMENDATIONS

No segments that are owned by the county are expected to have a low level of service based on the segment capacity screening. There may be segments that are affected by localized traffic problems that may not have been captured by the screening. Such locations should be studied with locally collected data and refined analyses procedures. Safety improvements should also be considered county-wide on rural roads, in accordance with the recommendations of the Madison County Council of Government's Protect 2030 Safety Action Plan. Enhancements such as improving sight distance, adding turn lanes, shoulder improvements, and two-way stop visibility improvements have been proven to boost safety within the roadway network.

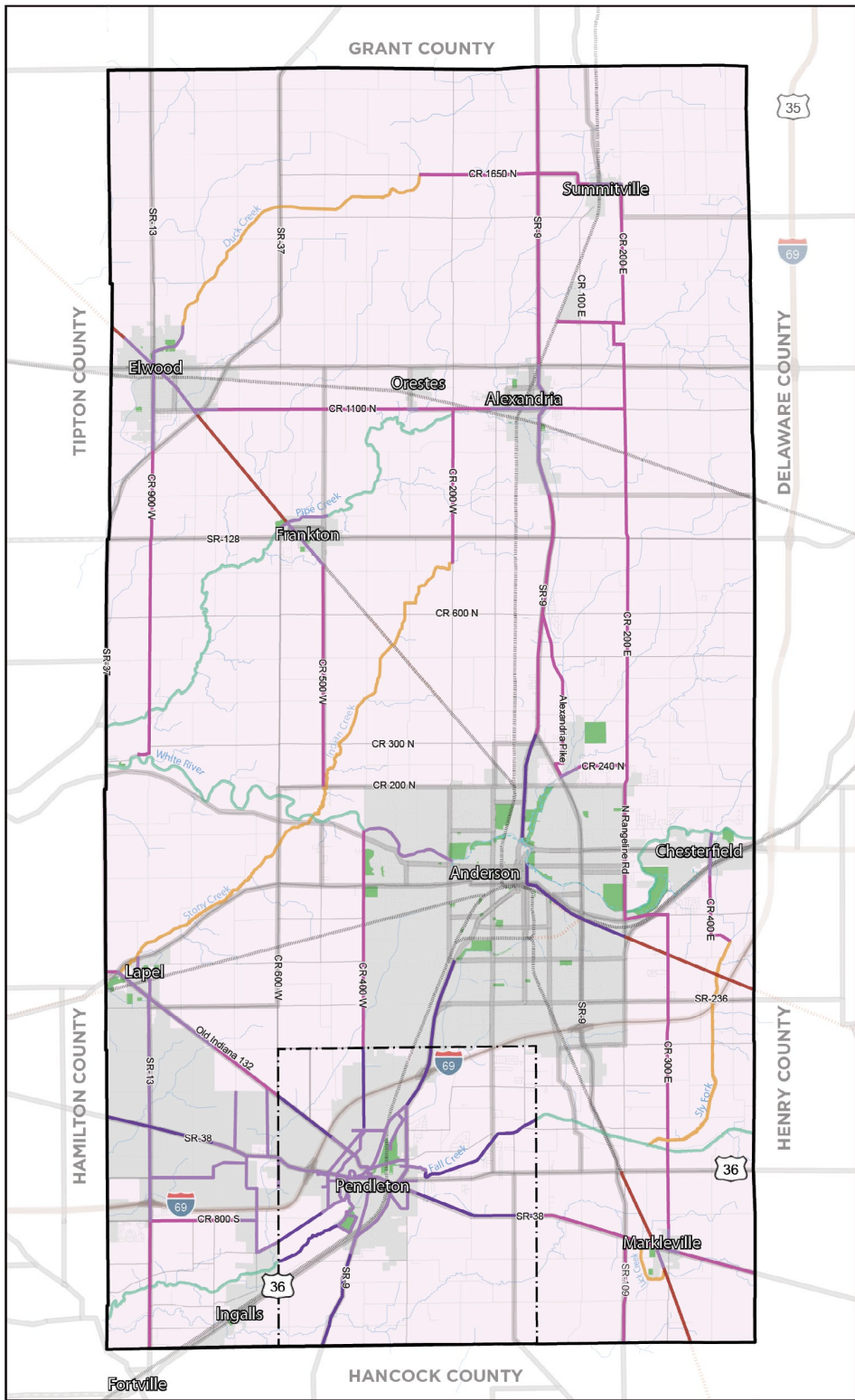
Although the segment capacity screening indicated no deficiencies, it is reiterated that the screening level analysis includes assumptions for roadway geometry such as lane widths, available shoulder widths, and sight distance. The focus of recommendations in the thoroughfare plan includes improving existing roadway facilities to appropriate lane and shoulder widths to match the typical cross-sections, and to provide additional turn lanes and sight distance improvements as necessary.

BICYCLE AND PEDESTRIAN RECOMMENDATIONS

By supporting non-vehicular transportation, bicycle and pedestrian infrastructure has been shown to enhance economic growth and sustainability, making it easier for individuals without a car to access school, work, and other destinations. This type of infrastructure also improves quality of life by promoting outdoor recreation and encouraging active lifestyles. Madison County has a trail network, but it largely consists of disconnected segments. There is ample room for improvement going forward to make Madison County a multimodal community.

The 2024 Parks, Trails, and Open Spaces Master Plan outlines a future vision for pedestrian and bicycle infrastructure in Madison County. The plan was developed through inter-departmental collaboration between the county's Engineering Department, Highway Department, Surveyor's Office, and Planning Department. This foundation of collaboration makes the master plan an integral document for identifying connectivity opportunities across Madison County.

According to the Parks, Trails, and Open Spaces Master Plan, Madison County's vision for future pedestrian and bicycle connectivity is to provide trail connections along existing waterways, regulated drains, abandoned rail corridors, and roadways. Shared use paths along roadways are of particular importance to this thoroughfare plan, since their construction requires right-of-way preservation. Roadways designated for shared use paths are indicated in Figure 7.4, and include major cross-county connections such as CR 200 E and CR 1100 N. Other opportunities to advance bicycle and pedestrian infrastructure can be found in the master plan.



LEGEND

EXISTING ELEMENTS

- Existing Parks and Open Spaces *by others*
- Planning Area
- Incorporated Cities/Towns
- Falls Park Planning Area
- Existing White River Trail
- Active Railroads
- Abandoned Railroads
- Regulated Drains

MADISON COUNTY PROPOSED TRAIL CORRIDORS

- Greenway
- Greenway Along Regulated Drains
- Shared Use Path Along Road
- Rail Corridor to Trail Conversion

ADDITIONAL TRAIL OPPORTUNITIES

- Proposed Collaboration Opportunity
- Proposed Trail Opportunity *by others*

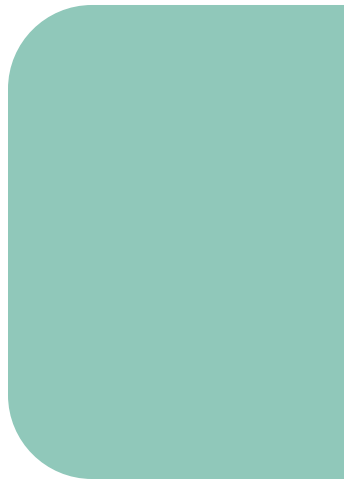
DATA SOURCES:

- IndianaMap - <https://www.indianamap.org/>
- Madison County GIS Data
- Town of Pendleton - Bicycle & Pedestrian Master Plan (February 2017)



FIGURE 7.4: MADISON COUNTY PARKS AND RECREATION SYSTEM MAP

08
APPENDIX



**PLACEHOLDER
ADOPTION RESOLUTION**

POPULATION FORECAST

FROM THE FORWARD MADISON COUNTY COMPREHENSIVE PLAN

TABLE 8.1: LOW FORECAST

GEOGRAPHY	EXISTING		2035 FORECAST			
	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	GROWTH	ANNUAL GROWTH RATE
Madison County	130,979		135,717		4,738	0.12%
North	30,459	23.3%	31,791	22.5%	1,332	0.15%
Central - East	74,485	56.9%	75,109	53.2%	624	0.03%
Southwest	26,035	19.9%	28,817	20.4%	2,782	0.36%

TABLE 8.2: MODERATE FORECAST

GEOGRAPHY	EXISTING		2035 FORECAST			
	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	GROWTH	ANNUAL GROWTH RATE
Madison County	130,979		141,197		10,218	0.25%
North	30,459	23.3%	33,239	23.5%	2,780	0.29%
Central - East	74,485	56.9%	75,744	53.6%	1,259	0.06%
Southwest	26,035	19.9%	32,214	22.8%	6,179	0.71%

TABLE 8.3: HIGH FORECAST

GEOGRAPHY	EXISTING		2035 FORECAST			
	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	GROWTH	ANNUAL GROWTH RATE
Madison County	130,979		149,933		18,954	0.45%
North	30,459	23.3%	35,787	23.9%	5,328	0.58%
Central - East	74,485	56.9%	76,983	51.3%	2,498	0.11%
Southwest	26,035	19.9%	37,163	24.8%	11,128	1.42%

TABLE 8.4: VERY HIGH FORECAST

GEOGRAPHY	EXISTING		2035 FORECAST			
	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	GROWTH	ANNUAL GROWTH RATE
Madison County	130,979		200,000		69,541	1.43%
North	30,459	23.3%	47,081	23.9%	16,623	1.46%
Central - East	74,485	56.9%	107,288	51.3%	32,803	1.22%
Southwest	26,035	19.9%	45,629	24.8%	19,595	1.89%