



COMPREHENSIVE PLAN 2025-2045



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HELLO!



The authors extend our deepest gratitude to the Steering Committee and City Staff, whose dedication and enthusiasm brought this plan to life. To everyone who attended meetings and shared their voices—you are the heartbeat of this inspiring vision. Your energy fuels progress, and because of you, Muscatine will continue to reach new milestones, shaping a community that captivates and connects people. You are living proof that a city, built on perseverance and shared purpose, can transform into a place where people don't just live and work—they thrive.

Sincerely,

RDG Planning & Design

01



VISION



This chapter provides the purpose of a comprehensive plan, summarizes the public engagement process, and highlights key community trends that shape Muscatine's future.

01

Contents

The Vision Chapter includes the following elements:

- *Purpose of the Plan*
- *Past Planning*
- *Planning Process*
- *Guiding Vision*
- *Future Framework*

Purpose of the Plan

The 2025 Make It Muscatine Comprehensive Plan (the Plan) has three primary purposes to guide decision-making for the City over the next 15-20 years:

- *Provide an essential legal basis for land use regulation.*
- *Present a compelling vision for the City of Muscatine derived from the aspirations of its citizens.*
- *Establish the policies necessary to fulfill that vision.*

Iowa Smart Planning Principles

Iowa Code 18B lists ten smart planning principles that form the umbrella that all policies fit underneath. The individual chapters in the document address all of these principles, which are all interconnected. These principles are captured in Figure 1.1.

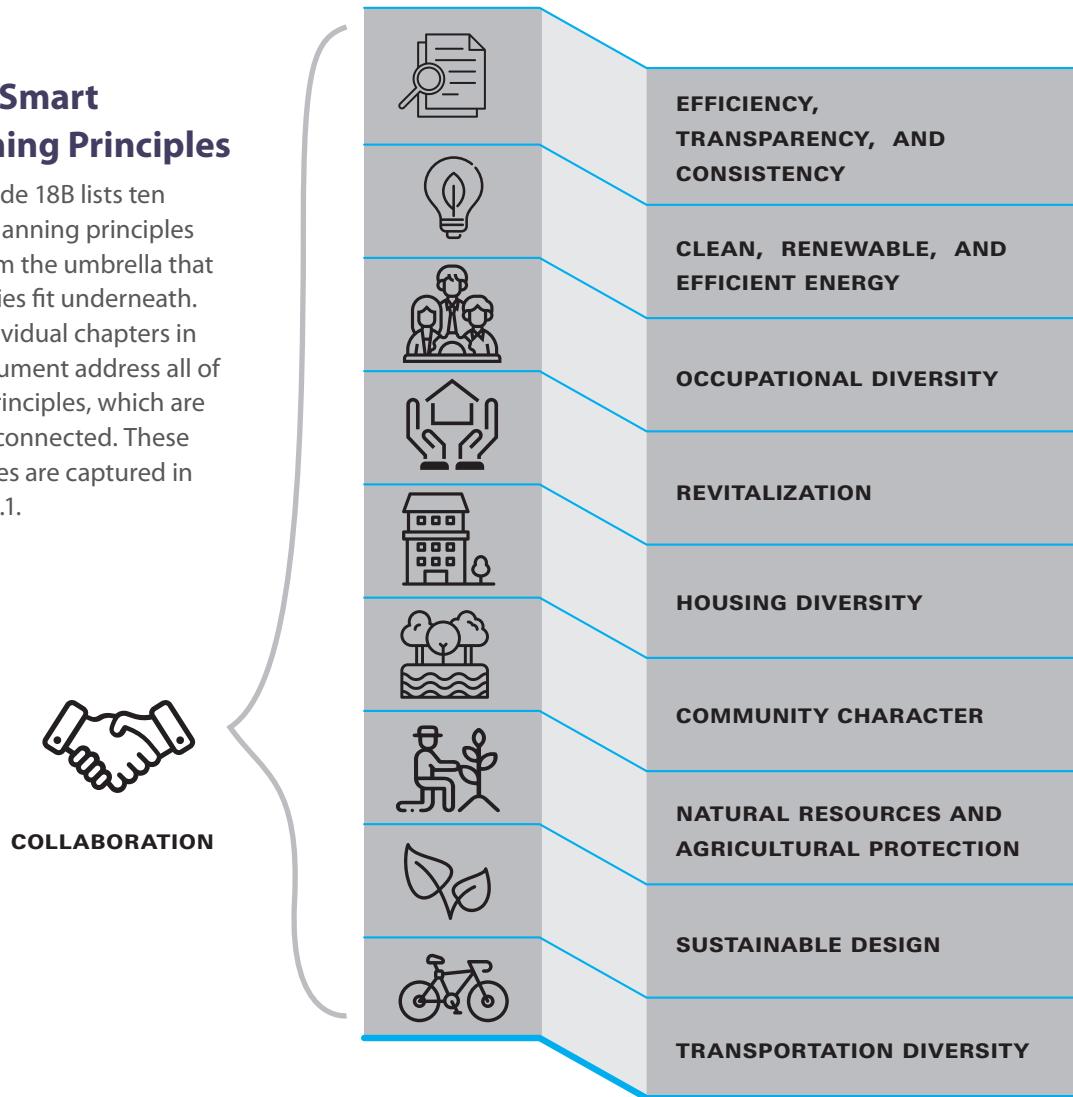


Figure 1.1: Iowa Smart Planning Principles

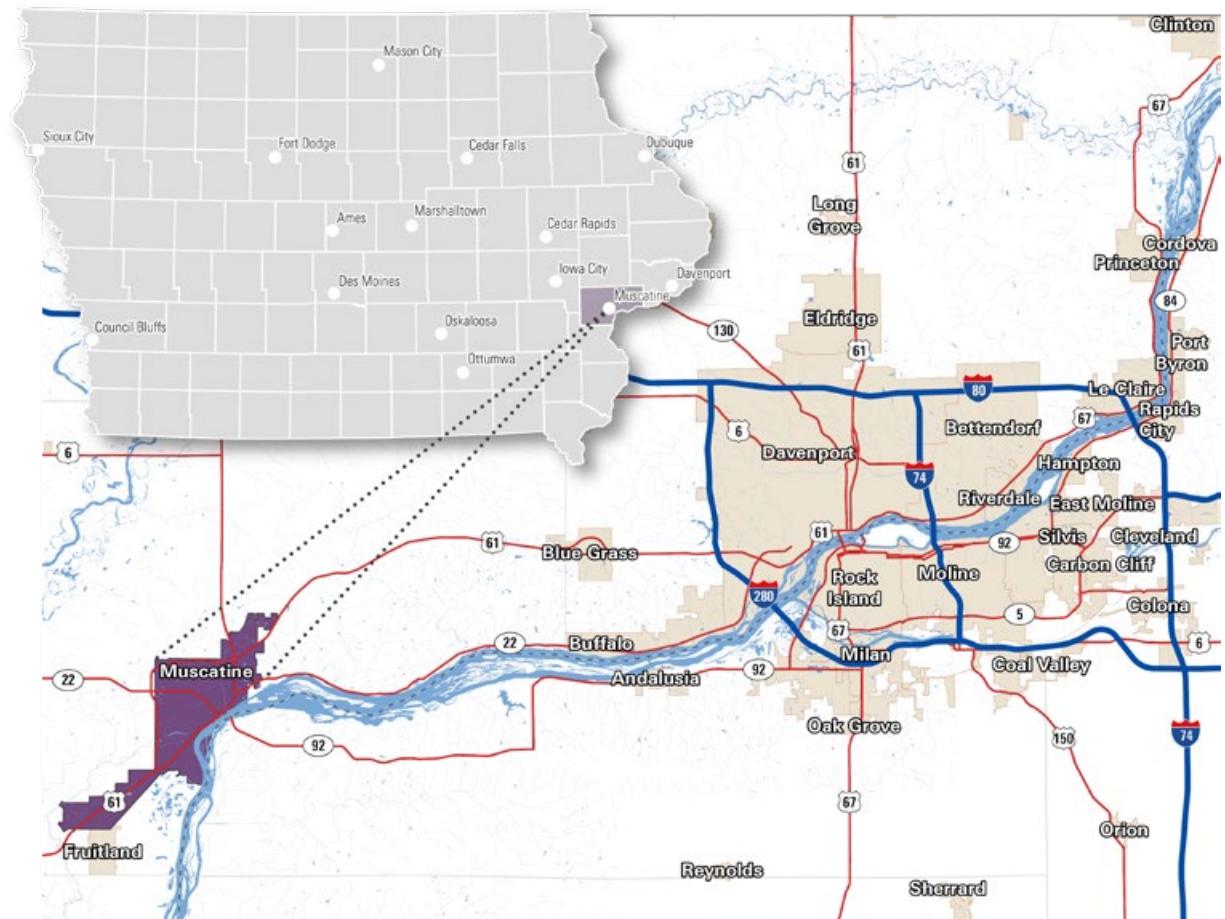
past planning

Muscatine has a strong tradition of planning and executing projects. This plan builds on past initiatives while introducing new ideas to enhance Muscatine's appeal—improving residents' quality of life and attracting new people to call Muscatine home.

The 2013 Comprehensive Plan established a solid foundation for this effort. Since its release, numerous related studies have helped shape the city's direction. While this plan follows a different structure than its predecessor, it adopts a more concise, high-level approach, emphasizing broad strategies over prescriptive details. It also builds upon and integrates key elements from past planning initiatives, including:

- 2024 Muscatine County Housing Study
- 2022 Bike & Pedestrian Master Plan
- 2020 Muscatine County Multi-Jurisdictional Hazard Mitigation Plan
- 2018 Grandview Avenue Corridor Study
- 2017 Housing Market Demand Study
- 2017 Port Feasibility Report
- 2017 Riverfront Park Master Plan
- 2013 Comprehensive Plan
- Several student-led academic studies with focus on branding, sustainability, growth, and riverfront enhancements.

Figure 1.2: Muscatine's Location



planning process

Public engagement is one of the most important pieces of planning, and as such, was carried throughout the entire planning process.

Components of the public engagement process included:

- **Technical Committee.** City staff and consultants met monthly to discuss the coordination of events and provide input/feedback on emerging elements of the plan.
- **Steering Committee.** A committee of eleven engaged local representatives provided guidance and feedback at key milestones in the planning process.
- **Listening Sessions.** Stakeholder groups participated in several discussions about the city, its dynamics, and its potential. Property owners, businesses, neighbors, elected/appointed officials, builders, and non-profit groups were among these stakeholders.
- **Interactive Map (Public Activity #1).** The planning process included the development of a project website as a platform for the project to provide updates of the planning process, and make the process publicly accessible. Over 1,150 unique users visited the site and had the opportunity to share ideas on an interactive map.



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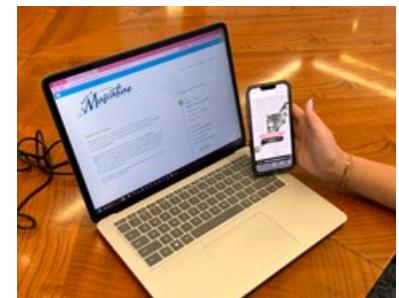
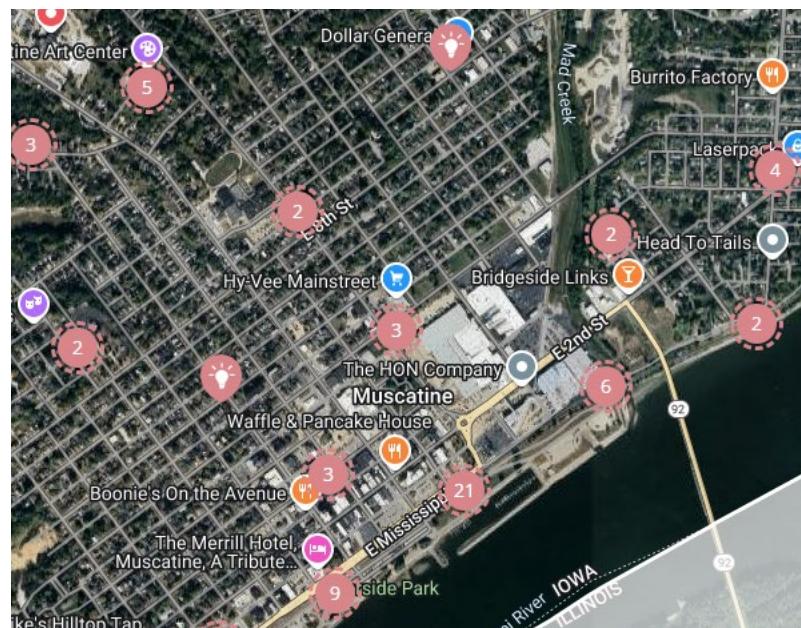
LISTENING SESSIONS

4

PUBLIC ACTIVITIES

- **Community Roundtable (Public Activity #2).** The kick-off event took place on October 15, 2024. This event included a brief presentation about the process and scope of the project. Discussion among participants helped to define the aspirations of the plan.
- **Design Studio (Public Activity #3).** An on-site Design Studio was held on January 22, 2024 to engage the public, stakeholders, and other interested parties in developing concepts for growth in the City. The event encouraged the public to work alongside the project team to test their emerging concepts that were subsequently refined by the project team.
- **Open House (Public Activity #4).** The Final Open House occurred on September 8, 2025 to provide the public an opportunity to review, comment, and prioritize initiatives in the plan before its final publication and adoption.
- **Plan Approval Meetings.** The Planning and Zoning Commission recommended approval of the plan to City Council, who held a public hearing prior to their approval on [insert date].

The planning process began with shaping the Vision to assemble priorities for the future. The Vision is formed into four themes, which are braided into each other and each recommendation in the Plan. To realize the Vision, community leaders and residents must work together with persistence over time to **Make it Muscatine**.



guiding vision



MAKE IT AMBITIOUS

Provide inspiration for the future.

Located on the beautiful and iconic Mississippi River, Muscatine has accomplished many ambitious projects from riverfront enhancements to recreation amenities.

The Plan offers ambitious initiatives to strengthen Muscatine as “the ideal place” to live, work, and play in Eastern Iowa.



MAKE IT HOME

Improve and increase housing options for all.

The housing stock in Muscatine has both older neighborhoods and newer subdivisions.

The Plan offers strategies to retain and care for the older existing housing stock while supporting new development, leading to a broader range of options for current and future residents in search of a new place to call home.

Guiding Principles

Each chapter includes Guiding Principles that establish goals to shape decision-making. Adhering to these principles helps ensure near-term decisions provide for long-term opportunities.



MAKE IT CONNECTED

Ensure continuity and a complete transit network.

Muscatine has convenient access for different modes of transportation: driving, walking, cycling, and boating.

The Plan offers strategies that expand upon these modes of transportation, ensuring people can get to their destinations comfortably and confidently.



MAKE IT ADVENTUROUS

Enhance recreational opportunities.

The recreational opportunities in Muscatine are wide. With trails, river access, the Arts Center, sports fields, and playgrounds, there is something for people of all ages and abilities.

The Plan offers strategies that enhance and expand upon these recreational opportunities for residents and visitors alike to enjoy year-round.

future framework

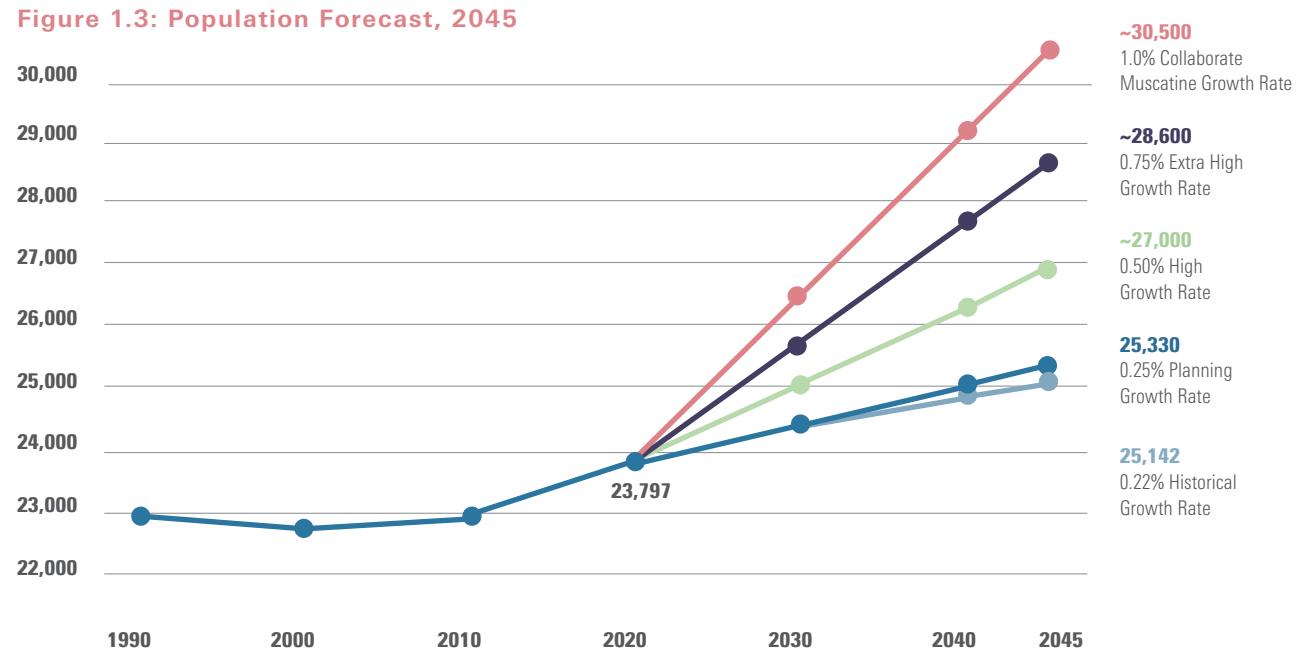
Population Forecast

Planning for future land use considers two population scenarios from market studies and discussions with stakeholders in Muscatine. Figure 1.3 shows these population forecasts through 2045.

In recent decades, population growth has been static in Muscatine. **Some of the growth shown in the 2010s was from an annexation that added 933 people.** This annexation boosted the community's growth rate, but did not result in the need for more resources.

Going forward, a slight growth rate is feasible if the city can add more housing to meet demand and advance quality of life initiatives. **At a 0.25% annual growth rate, Muscatine could reach over 25,000 residents by 2045, over 1,500 more than the 2020 Census population.**

Figure 1.3: Population Forecast, 2045



Source: RDG Planning & Design

What is the planning growth rate?

The plan projects a 2045 population of 25,330, based on a 0.25% annual growth rate—slightly above the city's historical trend of 0.22% since 1990.

Muscatine expects to grow by at least $\approx 1,500$ people by 2045.

What is high growth rate?

If Muscatine's growth rate more than doubled, reaching 0.50%, the city's population could approach a population of 27,000 by 2045. Make it Muscatine's recommendations are flexible enough to accommodate growth up to this rate. If Muscatine experiences an accelerated growth trajectory, such an ultra high growth rate of 0.75%, updating the comprehensive plan before 2045 will be essential to ensure it reflects the community's evolving needs.

future framework

Land Use Forecasts

Population growth requires land for homes and spurs uses like commercial, employment centers, and parks. Therefore, population growth directly correlates to new developments or redevelopments. Muscatine has enough land within city limits to support the 2045 land use needs. About 2,100 acres of vacant land, open space, or agricultural land are within city limits outside of floodplains and wetlands. This is more than 1,000 acres over the land demand to support the population forecast through 2045. Nonetheless, not all of this land can be easily served and/or developed; thus, opportunities that require annexation are still viable growth considerations.

Muscatine's projected growth of 0.25% translates into a need to convert land for residential, commercial, industrial, and park use.

- Residential Land Needs.** Muscatine will need at least 284 acres of land to support residential growth by 2045.
- Commercial Land Needs.** Muscatine will need at least 44 acres of land to support commercial growth by 2045.
- Industrial Land Needs.** Muscatine will need at least 94 acres of land to support industrial growth by 2045.

Each table includes a calculation for "Land Need," which is based on forecasting methodologies. For planning purposes, the "Designated Land" uses a multiplier (x2 for residential, x1.5 for commercial,

Figure 1.4: Required Residential Land at 0.25% Annual Growth

	% of Demand	Housing Units	Gross Density (du/A)	Land Need (Acres)	Designated Land (x2)
2020-2035					
Low-Density	60%	420	3	140	280
Medium-Density	20%	140	8	18	35
High-Density	20%	140	14	10	20
Total	100%	701		168	335
2036-2045					
Low-Density	60%	293	3	98	195
Medium-Density	20%	98	8	12	24
High-Density	20%	98	14	7	14
Total	100%	488		117	234
Total		1,189		284	569

Source: RDG Planning & Design; Muscatine Housing Market Analysis, 2024

and x3 for industry), because not all land can or will be developed. Land owners decide if they want to develop their land, and some land is not suitable to be developed at all. Therefore, a multiplier attempts to assign more land for development than what can be absorbed during the planning period.

Residential Land

Forecasts for future residential land needs require assumptions about housing demand and preferences. Chapter 4: Housing and Neighborhoods provides the methodology for forecasting future housing needs, which reports a potential need of at least 1,200 units through 2045, an annual average of 48 new units. This is much higher than what has been produced in Muscatine in decades.

The mix of new housing units in Figure 1.4 comes from information in the 2024 Housing Analysis, market trends, and discussions during the planning process.

The housing mix includes:

- 60% low-density (about three units per acre)
- 20% medium-density (about 8 units per acre)
- 20% high-density (about 14 units per acre)

The housing mix results in a need for at least ~1,200 units that absorbs ~284 acres of land. A portion of the new units can be absorbed in existing neighborhoods on vacant lots or through redevelopment. Therefore, not all of the 284 acres is considered a conversion of greenfields.

Figure 1.5: Required Commercial Land at 0.25% Annual Growth

	2020	2035	2045	Land Need (Acres)	Designated Land (x1.5)
Population Proportion Method					
Projected Population	23,797	24,705	25,330		
Commercial Use/100 residents	2.84	2.84	2.84		
Projected Commercial Use (acres)	677	702	720	44	65
Residential Use Proportion Method					
Residential Land (acres)	2,898	3,066	3,183		
Commercial:Residential Ratio	0.23	0.23	0.23		
Projected Commercial Use (acres)	677	716	743	66	100
Projected Commercial Acres			44-66	65+	

Source: RDG Planning & Design

Figure 1.6: Required Industrial Land at 0.25% Annual Growth

	2020	2035	2045	Land Need (Acres)	Designated Land (x3)
Population Proportion Method					
Projected Population	23,797	24,705	25,330		
Industrial Use/100 res.	6.16	6.16	6.16		
Projected Industrial Use (acres)	1,465	1,521	1,559	94	283
Residential Use Proportion Method					
Residential Land (acres)	2,898	3,066	3,183		
Industrial:Residential Ratio	0.51	0.51	0.51		
Projected Industrial Use (acres)	1,465	1,550	1,609	144	431
Projected Industrial Acres				94-144	283+

Source: RDG Planning & Design

Commercial and Industrial Land

Commercial and industrial land needs are difficult to project accurately since one large business could change the need dramatically. Conversely, remote work is changing the office environment, and the demand for commercial space is trending downward with more online presence. The forecasts for Muscatine do not stipulate a destiny or provide a ceiling on growth. Instead, they are a general guideline to evaluate how Muscatine is growing related to past trends.

Commercial Development.

Considering employment trends, the existing commercial land used by the population, and residential land uses, Muscatine can expect 44-66 acres of new commercial land through 2045 to provide a similar level of service per resident.

Industrial Development. Industrial development requires more flexibility and space depending on the use. Therefore, the need for industrial and flex space types is difficult to determine, and Muscatine already has a large industrial base. Using a past

population ratio trend translates to 94-144 acres through 2045.

Park Land

With population growth, Muscatine must continue to provide adequate parks. The forecast for park space should be considered minimum requirements to support the population at the same level of service. The forecast only includes programmed public parks, not passive natural areas and/or areas not meant for public access or use (such as private golf courses).

The City of Muscatine has 408 acres of designated park spaces. With a 2020 population of 23,797, this translates to 12.9 acres per 1,000 people.

Muscatine exceeds the national standard of 10 acres per 1,000 residents, and therefore forecasts do not generate a hard demand. However, that does not mean that everyone in Muscatine is equally served or that the menu of parks serves everyone's needs. The Parks & Trails chapter (page 65) goes into more detail on these needs.

future framework

The City of Muscatine includes 12,310 acres of land, which includes 7,439 developed acres and 2,663 acres of undeveloped area. For the purposes of this calculation, undeveloped land includes open spaces that are prime for development. Some land is excluded from this calculation because of environmental features, such as steep slopes, floodplains, and/or wetlands.

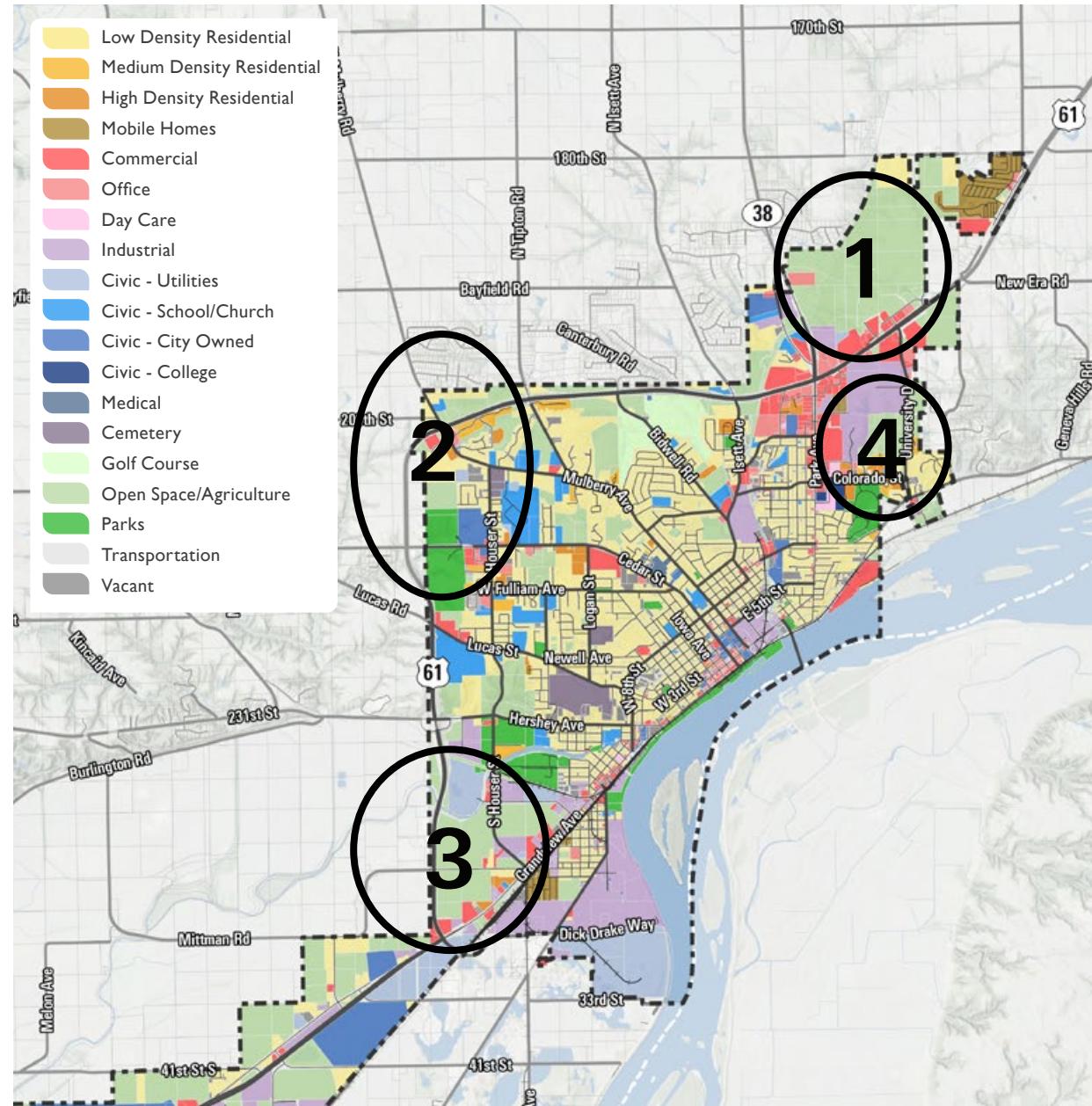
Growth comes in two forms: new development and redevelopment.

- New development occurs on property that is on open ground and can be served by the extension of infrastructure. Land may be in or outside of the city limits.
- Redevelopment occurs on property that is already developed and served by infrastructure, and is subject to change because its use is deteriorated or vacant.

Figure 1.7: Existing Land Use and Growth Areas shows the City's existing land use and defines anticipated growth areas, which were identified during the planning process. Chapter 2: Land Use and Design, includes a Future Land Use Map and land use compatibility guide for future development and redevelopment.

1. **Northeast Corridor.** Vacant within city limits.
2. **Northwest Area.** Vacant land outside of city limits with nearby areas being developed.
3. **West Area.** Vacant land with available services.
4. **East Area.** Vacant land within city limits.

Figure 1.7: Existing Land Use and Growth Areas



Source: RDG Planning & Design



02

LAND USE & DESIGN

This chapter includes Muscatine's land use policy and principles for urban design.

02

The Land Use & Design Chapter includes the following elements:

- *Guiding Principles*
- *Future Land Use Map*
- *Land Use Types*
- *Land Use Compatibility*
- *Growth Areas*
- *Special Districts*

Guiding Principles

- *Grow with equitable housing options.*
- *Direct more intense uses, such as commercial and industrial uses, towards arterial and collector streets.*
- *Ensure connections between newer and older residential areas to build neighborhoods rather than isolated subdivisions.*
- *Manage transitions between land uses while supporting mixed use.*
- *Protect and respect the environment.*

future land use map

The Future Land Use Map is based on population projections, economic trends, and public input. It plans for more development than projected or needed to allow for flexibility, avoid a land shortage, and provide long-term planning scenarios.

Property Owners Decide

The future land use map depicts new land uses for privately owned properties. The transition of these properties from their current use to the depicted use is expected to occur slowly over time in response to market demands, as property owners voluntarily sell, develop, or change the use of their land.

Generalized Map

The future land use map should be interpreted generally and is not intended to be rigid like the zoning map. The boundaries between land uses on the map show approximate areas of transition. Trails, collector streets, and arterial streets indicate connections that need to be made, but the exact areas will be determined by engineering studies.

Basis for Land Use Decisions

The future land use map should provide the basis for decisions by the Planning and Zoning Commission, the City Council, and private developers. The map is a critical part of the approval process for development proposals and zoning decisions.

Figure 2.1: Future Land Use Map

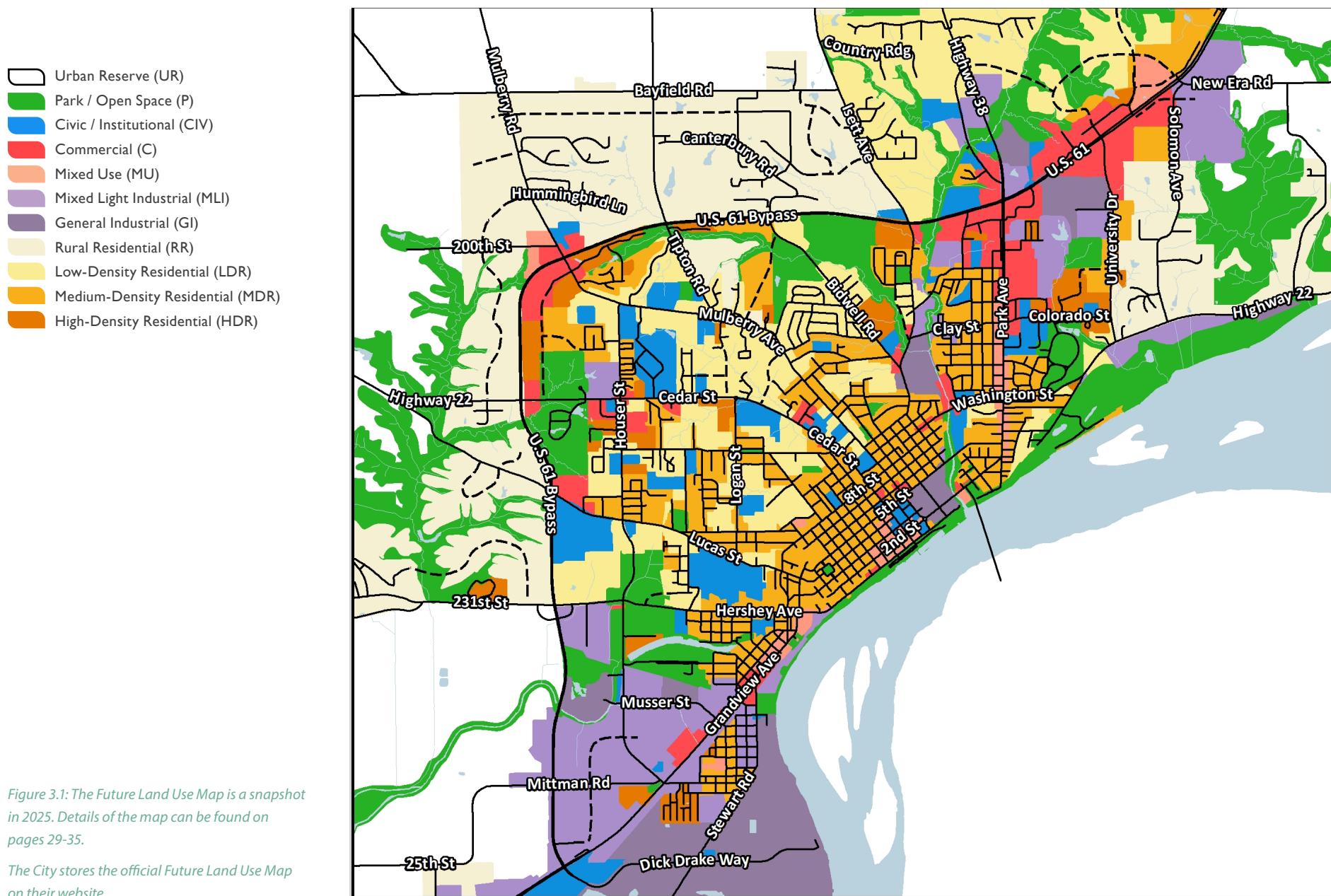


Figure 3.1: The Future Land Use Map is a snapshot in 2025. Details of the map can be found on pages 29-35.

The City stores the official Future Land Use Map on their website.

Source: RDG Planning & Design, 2025

land use types

The 2025 Future Land Use Map includes 11 types of land uses:

- Urban Reserve (UR)
- Parks / Open Space (P)/(OS)
- Civic / Institutional (CIV)
- Commercial (C)
- Mixed Use (MU)
- Mixed Light Industrial (MLI)
- General Commercial (GI)
- Rural Residential (RR)
- Low-Density Residential (LDR)
- Medium-Density Residential (MDR)
- High-Density Residential (HDR)

Urban Reserve (UR)

Use Characteristics

Long-term growth areas with an emphasis on land preservation, such as crop cultivation. These are holding areas beyond the areas needed to accommodate the next 20-25 years of growth. Any privately-led development in UR areas must be reviewed for consistency with the land development principles outlined in the Plan. These areas should be reserved for long-term urban development following the life of this Plan, with primary uses in the near term remaining as open space, agricultural, or low density residential.

Parks / Open Space (P)/(OS)

Use Characteristics

Reserved spaces that can have recreational features. Significant development and impervious land are not permitted.

- Limited uses that are primarily natural.
- Any development is recreational with a low impact on nature (such as park shelters or ball fields) while complementary to the broader area's purpose for recreational uses. Complementary uses may include limited commercial that serves recreational users.
- Includes golf courses because of their open space characteristics.
- Open spaces are generally entirely undeveloped and left natural to protect floodplains, habitats, and forests.
- Passive recreation features like trails may be permitted in open space areas.

Civic / Institutional (CIV)

Use Characteristics

Civic and institutional uses are larger scale public and semi-public spaces such as City-owned buildings, schools, medical facilities, major campuses, cemeteries, landfills, water plants, and major utilities.

General Intensity

Under two dwelling units per acre.

General Intensity

Residential uses are not applicable in the district.

General Intensity

Residential uses are not applicable in the district.

Commercial (C)

Use Characteristics

Includes various commercial uses, including auto-oriented developments, retailers, multi-use centers, restaurants, and other services.

- Office, retail, and service-oriented commercial.
- Limited heavy commercial that has outdoor storage (subject to standards for screening, traffic circulation to arterial or collector streets, and noise).
- High density residential uses may occur in a mixed-use environment, but commercial remains the dominant use.

Upper-story residential allowed.

Mixed Use (MU)

Use Characteristics

Urban areas that can include a mix of commercial, office, service, limited production light industrial, and medium to high density residential.

- A mix of complementary uses, including multi-family housing, schools, mid-sized parks and churches, commercial, and mixed-use structures.
- Detached single-family housing is generally not appropriate.
- Limited light industrial uses can be allowed with special permitting. Usually, these uses serve the community and are not meant for regional export production. Examples might include microbreweries, maker spaces, coops, art studios with heavier production equipment, etc.
- Amenities such as parks, plazas, and quality streetscapes should be more prevalent than in MDR and HDR areas.

Mixed Light Industrial (MLI)

Use Characteristics

Areas of manufacturing, production, or heavier commercial uses.

- Uses include indoor production operations that may have higher outdoor loading and truck traffic levels for warehousing purposes.
- A variety of uses such as warehousing, distribution, office/industrial flex space, home improvement stores, and light manufacturing.

General Industrial (GI)

Use Characteristics

Areas reserved for more extensive production of materials and extracting. GI land uses require larger acreages for large operations, to maximize clustering, and offer efficient connections to export transportation routes.

- General industrial areas have more intense uses with outdoor areas for storage, equipment use, and other operations.
- All types of industries such as manufacturing, warehousing, distribution, and resource extraction are possible.

General Intensity

12+ dwelling units per acre (if provided).

General Intensity

7-12+ dwelling units per acre.

General Intensity

12+ dwelling units per acre if permitted with a master planned mixed-use development.

General Intensity

Residential uses are generally not appropriate.

Rural Residential (RR)

Use Characteristics

Existing residential acreages are not proposed for change in the future. Rural residences and associated uses are permitted. Rural residential can include acreages, homesteads, or cluster developments. New rural residential uses should not occur in areas where city services can be provided or are likely to have city services in the planning horizon.

Low-Density Residential (LDR)

Use Characteristics

Neighborhoods with moderate to larger lot sizes compared to the overall density in the city. LDR areas tend to emphasize single-family development or other housing types with similar character.

- Similar density and scale duplex or attached housing arrangements are permitted.
- Civic uses, such as places of worship, are generally allowed, with special reviews for higher intensity civic uses like schools.
- Existing neighborhood-scale commercial that provides service to neighborhood residents may remain.
- New non-residential uses that serve the immediate neighborhood may be permitted through special review and approval to consider scale, design, and character that complements low-density residential uses.

Medium-Density Residential (MDR)

Use Characteristics

Neighborhoods that incorporate a mix of housing types, including single-family detached, single-family attached, townhouses, duplexes, and small-lot single-family.

- Limited medium-scale multi-family development may be allowed with a special review.
- Civic uses, such as places of worship, are generally allowed, with special reviews for higher intensity civic uses like schools.
- Existing neighborhood-scale commercial that service area residents can remain.
- New non-residential uses that serve the immediate neighborhood can be permitted through special reviews or approvals that consider scale, design, and character to complement medium-density residential uses.

High-Density Residential (HDR)

Use Characteristics

Neighborhoods that can incorporate a broad mix of housing types, including multi-family housing. The primary use is still residential.

- Allows attached, townhome, and multi-family housing at a more concentrated scale. Single-family detached uses can still be allowed, but more appropriate as small lots, tiny homes, or integrated arrangements with other housing types.
- Civic uses, such as places of worship, are generally allowed, with special reviews for higher intensity civic uses like schools.
- Neighborhood services, limited office, and retail commercial within primarily residential areas may be appropriate.

General Intensity

Under two dwelling units per acre.

General Intensity

2-6 dwelling units per acre.

General Intensity

5-12 dwelling units per acre.

General Intensity

12+ dwelling units per acre.

land use compatibility

One of the most important concerns in land use planning is the relationship between different uses and their relative compatibility with each other. In areas where densities are low, compatibility is usually achieved using spacing between buildings and by congregating similar uses together. This simple method is easy to administer and understand. However, it can lead to some undesirable conditions, such as less walkable neighborhoods.

Compatibility in mixed-use districts and contexts can be attained in a more nuanced way by focusing more on the performance (effects) of various uses and designing land use regulations that allow for more integration of uses. If carefully done, the integration of uses can create transportation efficiencies and walkable neighborhoods, all while preserving privacy, security, and aesthetics.

The future land use types exist on a continuum of intensity and, therefore, have a continuum of compatibility methods. As land uses become more intense and uses become

more integrated, compatibility methods focus less on spacing and congregating similar uses and more on performance-based methods that directly address issues such as noise, traffic, privacy, and aesthetics.

It is important to remember that while many areas allow mixing

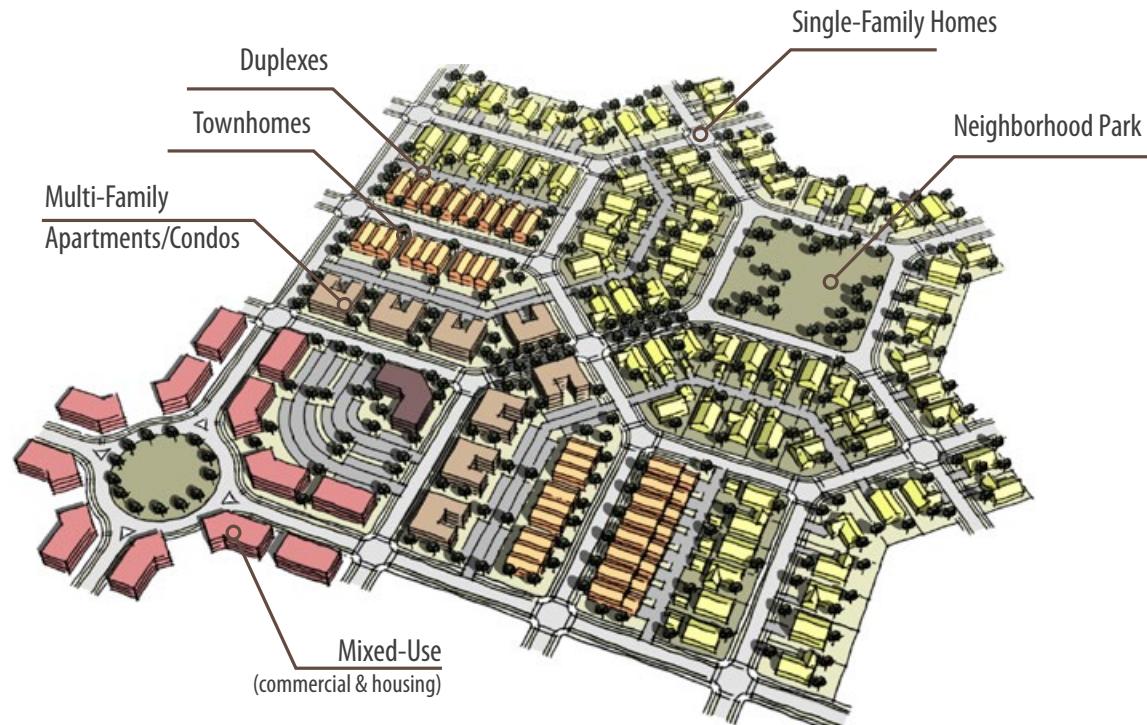


Figure 2.2: Land Use Compatibility

uses, it does not mean that every land use is appropriate everywhere. Location standards and compatibility requirements for higher impact uses are an important part of the land use system proposed in this plan.

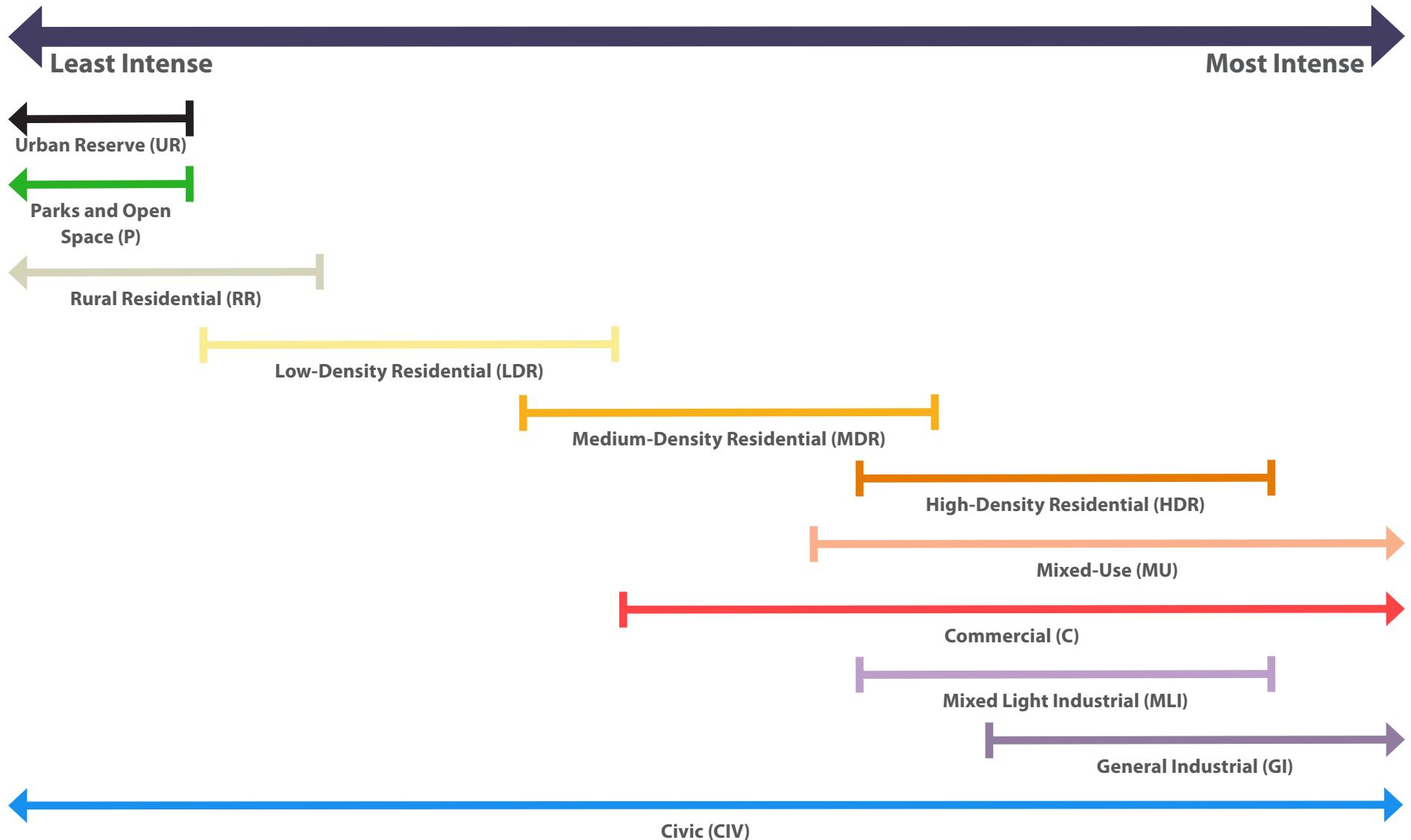
Land Use Compatibility

The further apart uses are on the intensity scale, the greater the level of mitigation is needed to protect or buffer - as defined in the zoning code - the less intense use.

Potential mitigation techniques, and necessary documentation as determined by the City, should be outlined with the Zoning and Subdivision ordinances.



Figure 2.3: Future Land Use Intensity Scale



>This chart should be used to assess the relationship between land uses and provide a basis for development proposal review in conjunction with the compatibility design guides.

Compatibility Design Guides

There are many ways to achieve compatibility between different land uses. Each land use district describes broad compatibility guidance for all uses in each district. This section provides additional guidance for the compatibility pairings to ensure specific types of development flow with adjacent uses and the visions of the Plan. These guidelines are applicable during land use changes, zoning reviews, site plan reviews, and for higher intensity project elements.

Environmental Features

- In sensitive areas, allow minor encroachments of residential zoning for existing uses and limit allowances for new development without specific plans to locate structures outside of sensitive areas to retain the natural, aesthetic, and environmental value of these features.
- Build around natural water flows rather than rerouting water and wetland areas.
- Encourage landscaping that more slowly filters rainwater and reduces the amount of pollutants entering streams and waterways.

Service Facilities

- Shield functional utility fixtures as much as possible when visible from the right-of-way. Options include landscaping, placement, art, and even creative paintings on the fixtures.
- Use stormwater detention and retention areas as opportunities for plant diversity, neighborhood paths, and features of development.

Undeveloped Fringe Areas

- In undeveloped areas designated for future residential uses, require bulk standards that prevent or discourage the development of rural subdivisions but still maintain agricultural possibilities until residential development occurs.
- Permit land divisions only to allow splitting off an existing home site or farmstead from a farm area.
- Limit high intensity agricultural and extraction uses that may prevent future neighborhood development.

Integrating Mobility

- Ensure there are accessible pedestrian paths to the entrances of all buildings from parking areas or sidewalks.
- Require infill and new development to connect to existing sidewalk or path systems.
- Require enhanced street crosswalk treatments along designated trail paths on the Future Land Use Map.

- Use a complete streets approach to the design of all streets, which includes pedestrian paths buffered from traffic, streets that are not overly wide, and consideration of on- and off-street protections for pedestrians and bicyclists.

Community Corridors

- Respect existing businesses and historic character of major corridors, like Park Avenue.
- Allow increases in the number of people living in and immediately around major corridors.
- Create environments on major corridors that allow people to comfortably walk, bike, or use other active modes to travel. This includes sidewalks and shared use paths that continue to the entrances of residences, restaurants, businesses, and public spaces.
- Allow and encourage transitions of underused parking lots, vacant sites, obsolete buildings, and marginal uses that do not

contribute to the character of these corridors.

- Maintain local street connections to major corridors that offer alternative routes.
- Manage the size and visibility of commercial signage along corridors and focus signage toward the major corridor.
- Limit and consolidate driveways when possible through access management policies.
- Keep drive-through lanes on the side or rear of buildings to maintain the character of the street corridor.

Residential Neighborhoods

- Make smooth transitions in scale and intensity of uses from pre-existing contexts to higher intensity development. Use prevailing density as the guide for redevelopment but allow for building variations to fit infill lots.
- Maintain street trees and landscaping features for a pedestrian friendly environment.

Plant street trees with street extensions. Ensure diversity to protect the longevity of tree coverage.

- For high density development, avoid secluded developments from adjacent areas. Instead of large campus style sites, encourage integration through multiple vehicle access points, walkways to adjacent areas and within the site, and parking lots shielded behind buildings. Locate buildings along collector and arterial streets if possible.
- Avoid monotony in multi-family building design and architectural features. Encourage design with variation in porches, facade articulation, and building placement.
- Avoid long cul-de-sacs or multiple cul-de-sacs in one neighborhood. Reserve pedestrian accessways at the end of cul-de-sacs that are wide enough to allow a paved pedestrian path when possible to logically connect to other neighborhoods, parks, or open spaces.

- Have sidewalks on both sides of the street in all neighborhoods if not prevented by environmental features.
- Use the Future Land Use Map to ensure most residents have access to neighborhood services within a reasonable walking distance.
- If neighborhoods are developed under Homeowner Association subdivisions, ensure that off-street paths across the subdivision allow public access.

- Orient commercial service areas toward each other, or locate commercial service areas in places that avoid impacts on neighboring residential development.
- Use mixed-use areas as opportunities to create walkable environments with buildings closer to the street, parking in the rear, and shorter block lengths.
- Taller buildings should be oriented on collector or arterial streets. Larger setbacks may be more appropriate if taller buildings are next to one-story residential uses.
- Place lower density residential farther away from main streets and closer to pre-existing neighborhoods.
- Share off-street parking spaces between uses whenever possible. Shared parking can occur between residential and non-residential uses. Avoid creating oversized parking lots.

Mixed-Use Areas and Sites

- For mixing uses across a site, focus uses with higher traffic volumes and activity along intersections or higher volume streets. Transitions to lower trafficked uses can be made gradually or more abruptly through public environments like public open spaces, interior streets or drive aisles with a residential street character, and trail and greenway corridors that separate residential and commercial uses.

growth areas

Figure 2.1 presents the Future Land Use Map (FLUM), and the following pages summarize the targeted individual growth areas. Although growth may expand in multiple directions, this plan recommends concentrating resources—administrative efforts and incentive funding—on these specific areas. The growth principles highlight two key elements for each area: Land Use and Connectivity. Target areas for future growth include:

- Infill
- West
- Northwest
- Northeast
- East
- Rural Subdivisions
- Annexation

The City has long recognized these areas as key opportunities for future growth and is now seeing a trend of rural residential subdivisions developing north of Highway 61. With access to city-supported services such as public safety and parks, these areas are well-positioned for future annexation, enhancing Muscatine's potential for population growth.

Figure 2.4: Infill

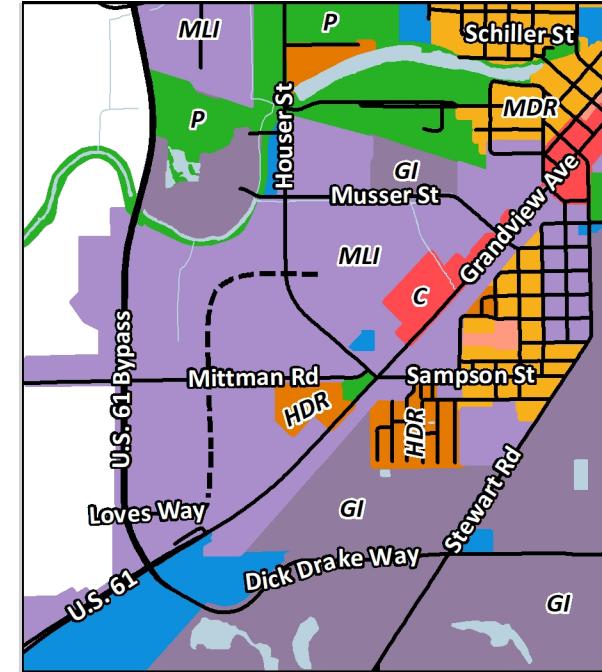


Infill (Priority)

The City has several parcels of land that remain undeveloped, sometimes through the loss of a home and the property owner decides to not rebuild. These lots are prime for new construction and infrastructure is readily available to these properties.

Infill in older neighborhoods should match the context of its surroundings in style and home and lot size. Acreage parcels within the City are opportunities to support more development as well.

Figure 2.5: West Growth

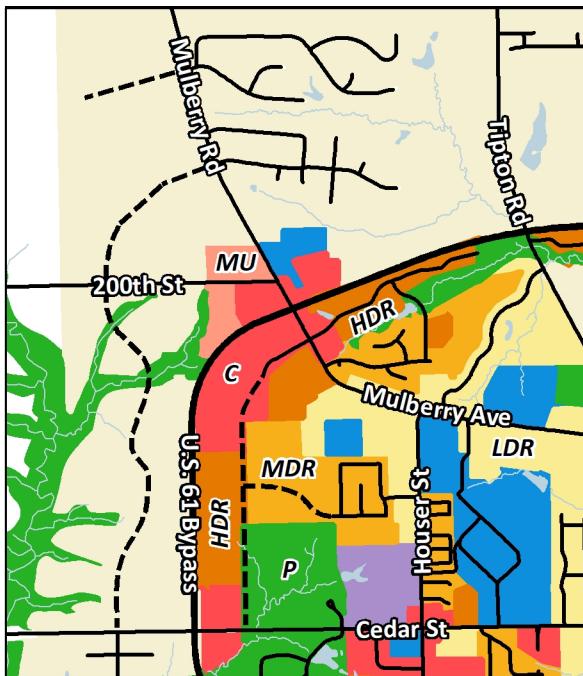


West Growth

The West Growth Area is convenient to Highway 61 and the airport. Growth should be limited to the east side of Highway 61.

- **Land Use.** Considered a "shovel ready" site, this area should be reserved for commercial and/or low-intensity industrial uses. Residential uses would likely be too fragmented from the rest of the community.
- **Connectivity.** Development should connect Loves Way to Mittman Road and Houser Street. Development should have interconnected parking areas so drivers can easily navigate between sites.

Figure 2.6: Northwest Growth

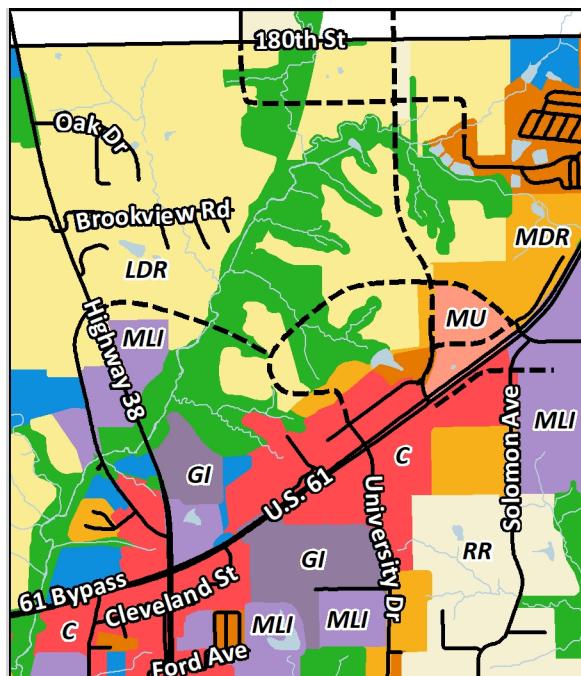


Northwest Growth

The Northwest Growth Area is a growth area that is conveniently accessible, desirable, and more development interest is probable.

- Land Use and Density.** The area near Mulberry Avenue is designated for commercial use, while property further away from Mulberry Avenue tiers down to residential.
- Connectivity.** Development should connect to a shared drive and have connected parking lots, similar to development along Highway 61.

Figure 2.7: Northeast Growth

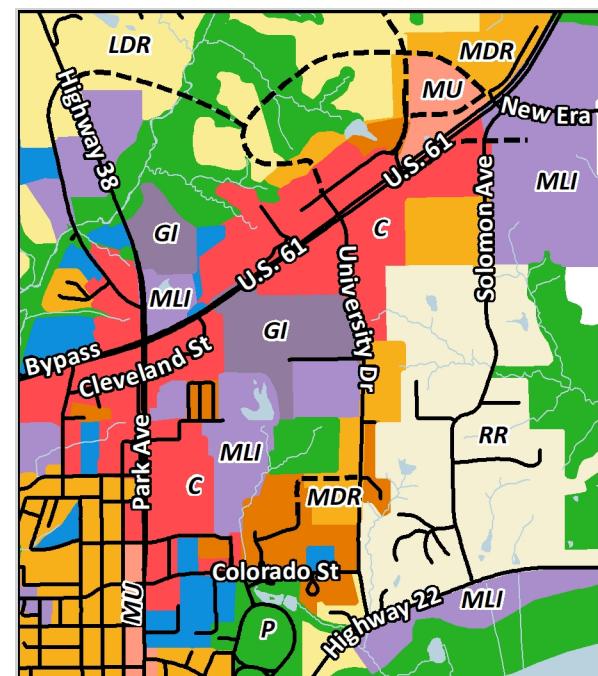


Northeast Growth

The Northeast Growth Area includes open land within the city limits and was previously subject of a growth study, Northeast Corridor Project (2014).

- Land Use and Density.** The area is designated for residential (LDR/MDR). Commercial (C) uses should orient to Highway 61.
- Connectivity.** Future streets should logically connect to Highway 61 and new buildings should not obstruct future street extensions.
 - » Retrofit and extend University Avenue.
 - » Connect frontage roads.
 - » Connect to Highway 38 and 180th Street.

Figure 2.8: East Growth



East Growth

The East Growth Area includes vacant land within city limits. Nearby development includes a mix of multi-family, duplexes, and townhouses.

- Land Use and Density.** The area is designated for medium-density residential (MDR). Development should be allowed to cluster its density, allowing the overall unit count for the site to be achieved while preserving the woodlands as an amenity. Unbuilt portions of the Cobblestone subdivision (MDR) just west of this area has ready access to infrastructure.
- Connectivity.** Development should have logical connections to its surroundings, this includes placing roads and intersections to minimize conflicts.

Rural Subdivisions

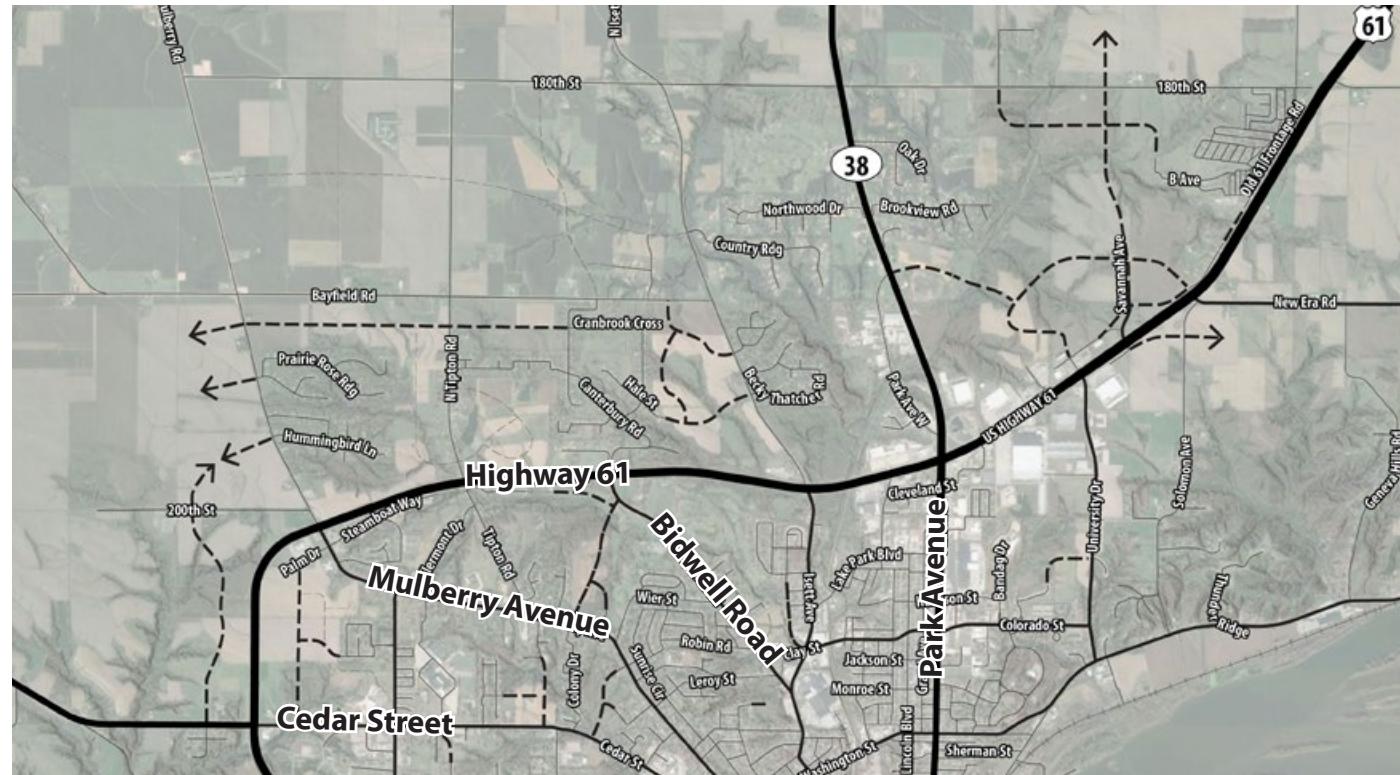
Muscatine has authority to review development applications for subdivisions located in the county within its 2-mile jurisdiction.

Several existing developments exhibit challenges that should be avoided in the future and corrected through the subdivision review process.

Challenges/Policies

- **Pattern of Cul-de-sacs.** Fire trucks, ambulances, snowplows, and school buses struggle to navigate cul-de-sacs efficiently, slowing down response times and services.
 - » Policy: Avoid cul-de-sacs. Where necessary, limit them to 500 feet.
- **Emergency and Service Access.** Many subdivisions have a single point of access to a major road, particularly between Isett Avenue and Highway 38. If the access road to one of these major roads were blocked, emergency services may not be able to respond in an emergency because alternative routes are unavailable. Conversely, residents evacuating a subdivision may be trapped if an obstruction blocked the road.

Figure 2.9: Rural Subdivision Connections



- » Policy: Subdivisions must have two points of access from a major road and planned connections to adjoining property.
- **Isolated Property.** Linear development along roadways prevents rear access to property and developed subdivisions lack planned connections to adjacent property. The result makes building future subdivisions tucked behind developed property much more difficult and expensive to retrofit. Figure 2.17 shows a demonstration for adding connections between existing and future developments.
- » Policy: Future development must include planned connections to adjacent property, using the framework in Figure 2.9.

Annexation

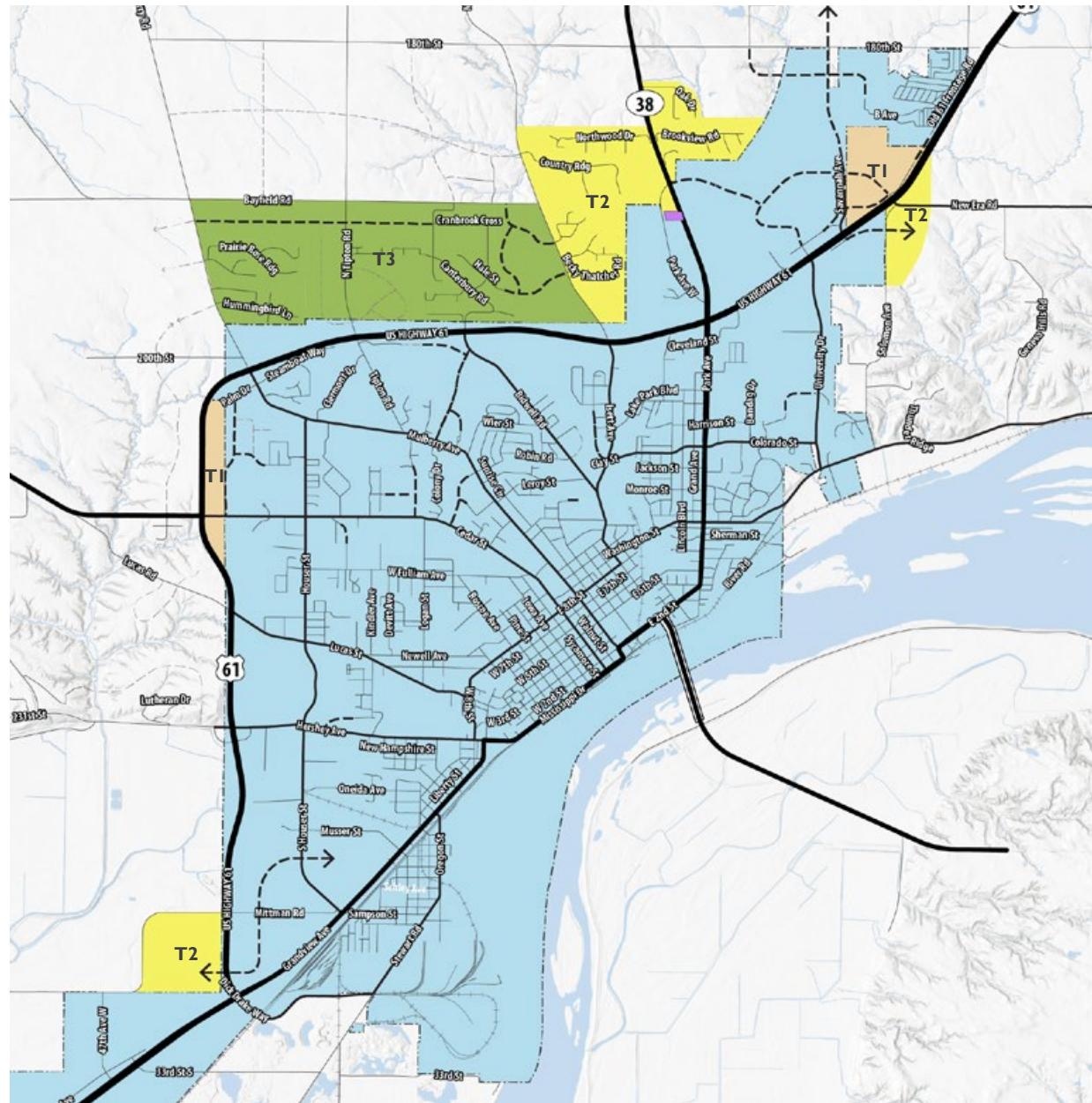
The Future Land Use Map, Figure 2.10, shows development inside and outside of the City's limits. This boundary is expected to change over time through voluntary annexation.

Figure 2.18: Annexation Tiers shows candidate areas for annexation through 2045. This map incorporates findings from Chapter 6, Facilities, which includes a review of infrastructure's ability to serve growth. Any annexation should include a study to determine fiscal implications. Muscatine's growth areas are categorized into three tiers, including:

- **Tier 1.** Tier 1 areas are continuous to the city and already served by infrastructure or serviceable by extension of public infrastructure from nearby property.
- **Tier 2.** Tier 2 areas are generally contiguous to Tier 1 areas and capable of being served after Tier 1 areas are served.
- **Tier 3.** Tier 3 areas are not expected for near-term annexation. Urban development should be reserved for Tier 1 and 2 areas before Tier 3 is permitted to develop.



Figure 2.10: Annexation Tiers



Source: RDG Planning & Design, 2025

Figure 2.11: Future Land Use Map

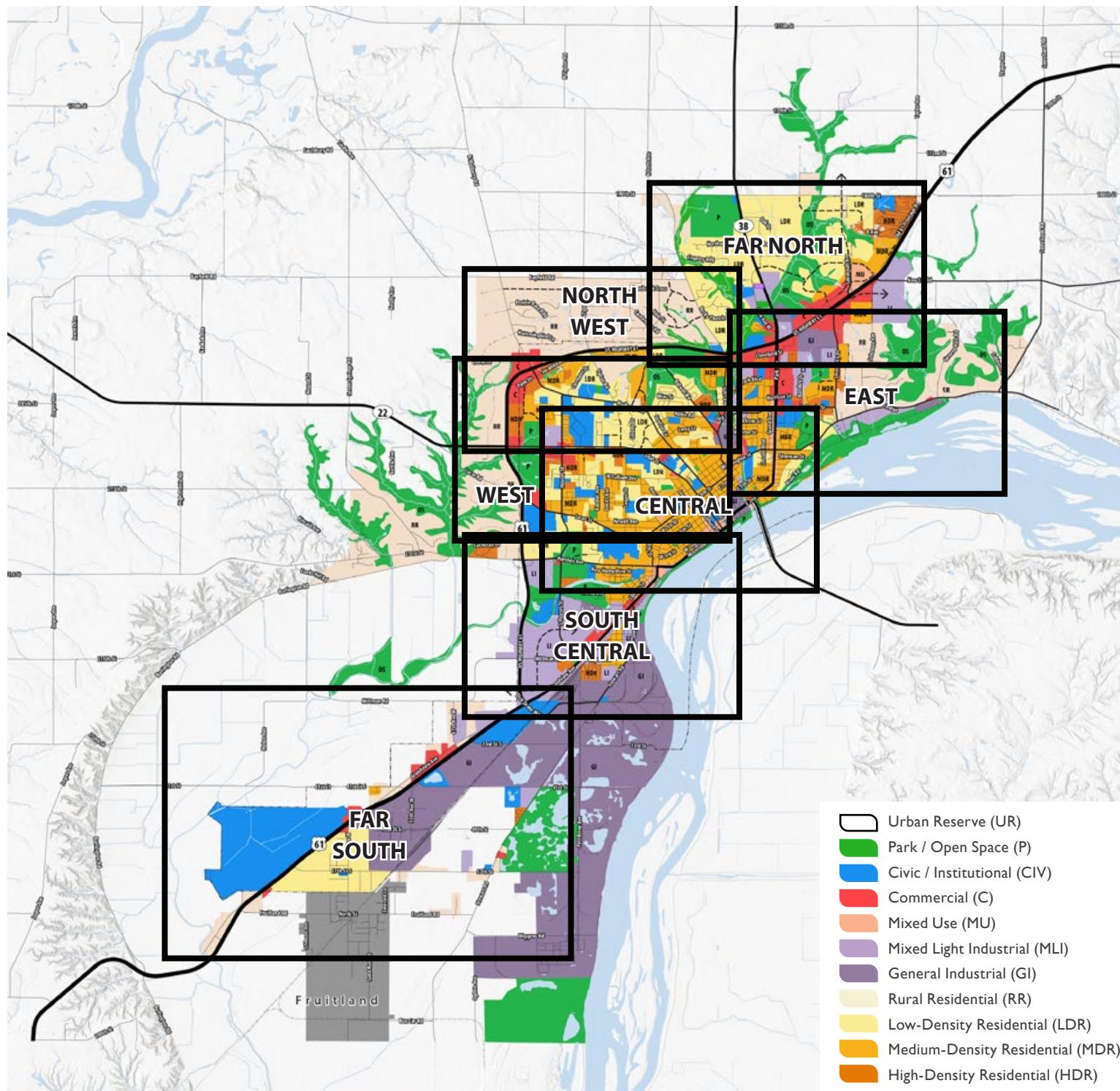


Figure 2.12: Central

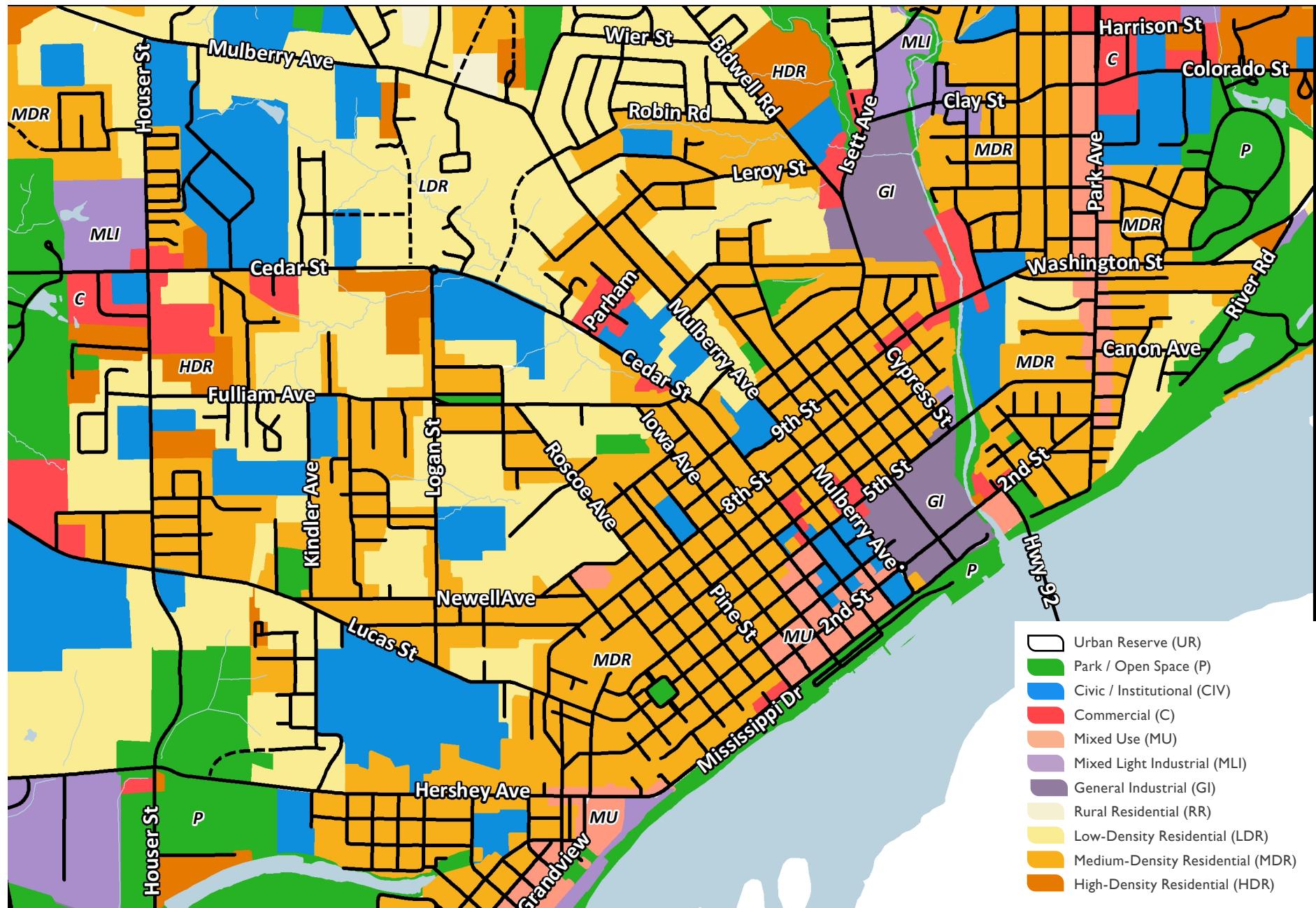


Figure 2.13: East

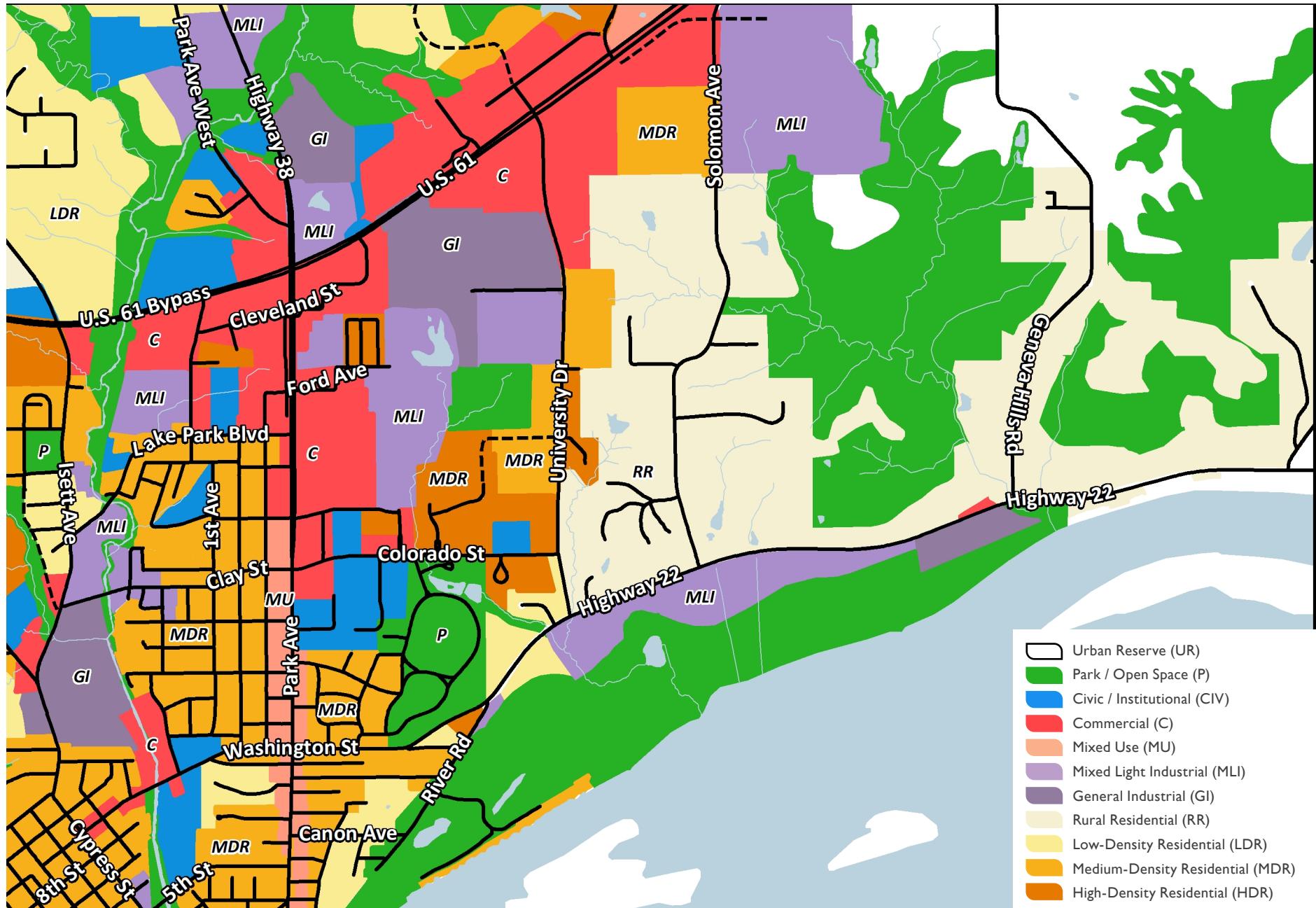


Figure 2.14: Far North

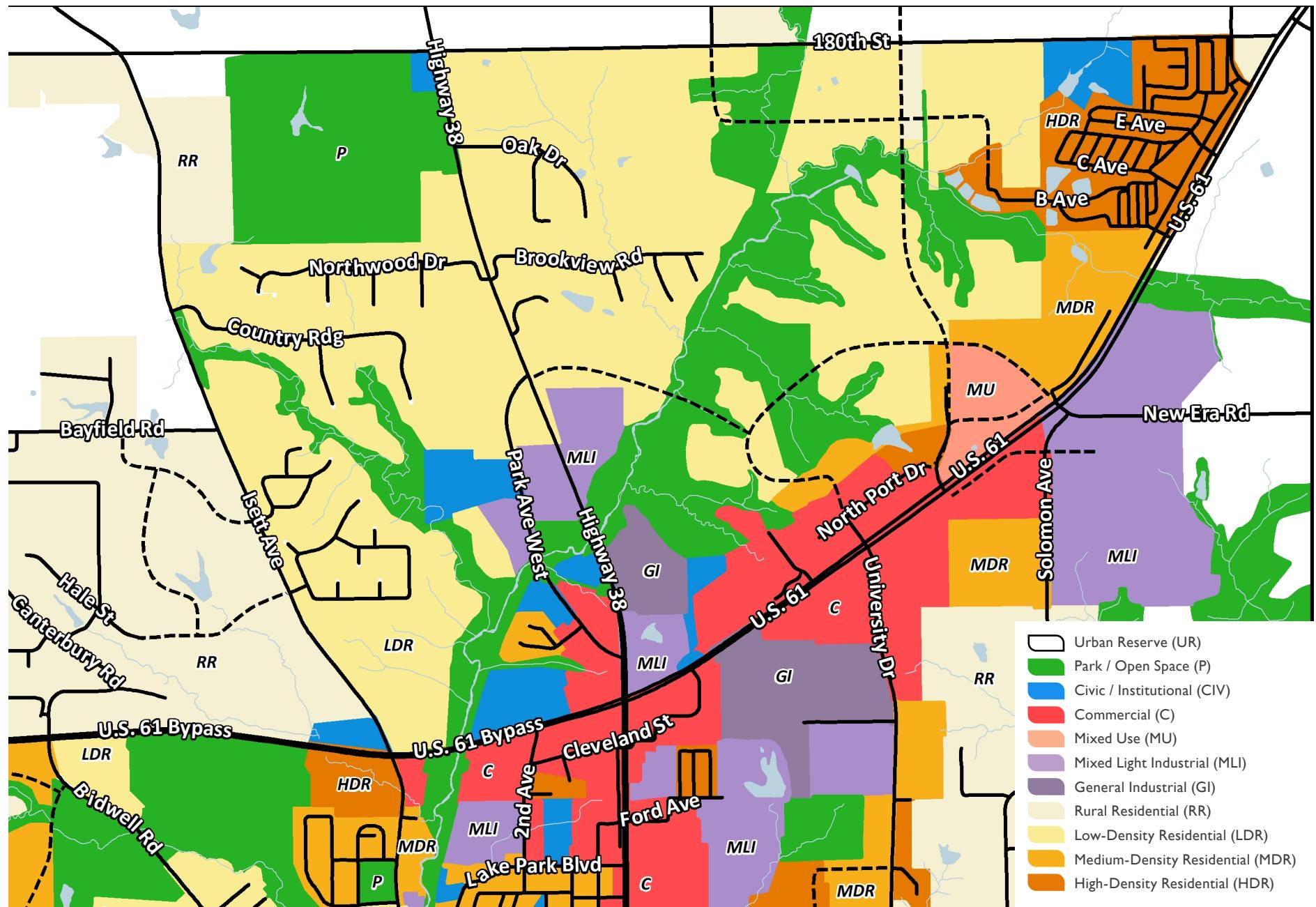


Figure 2.15: North West

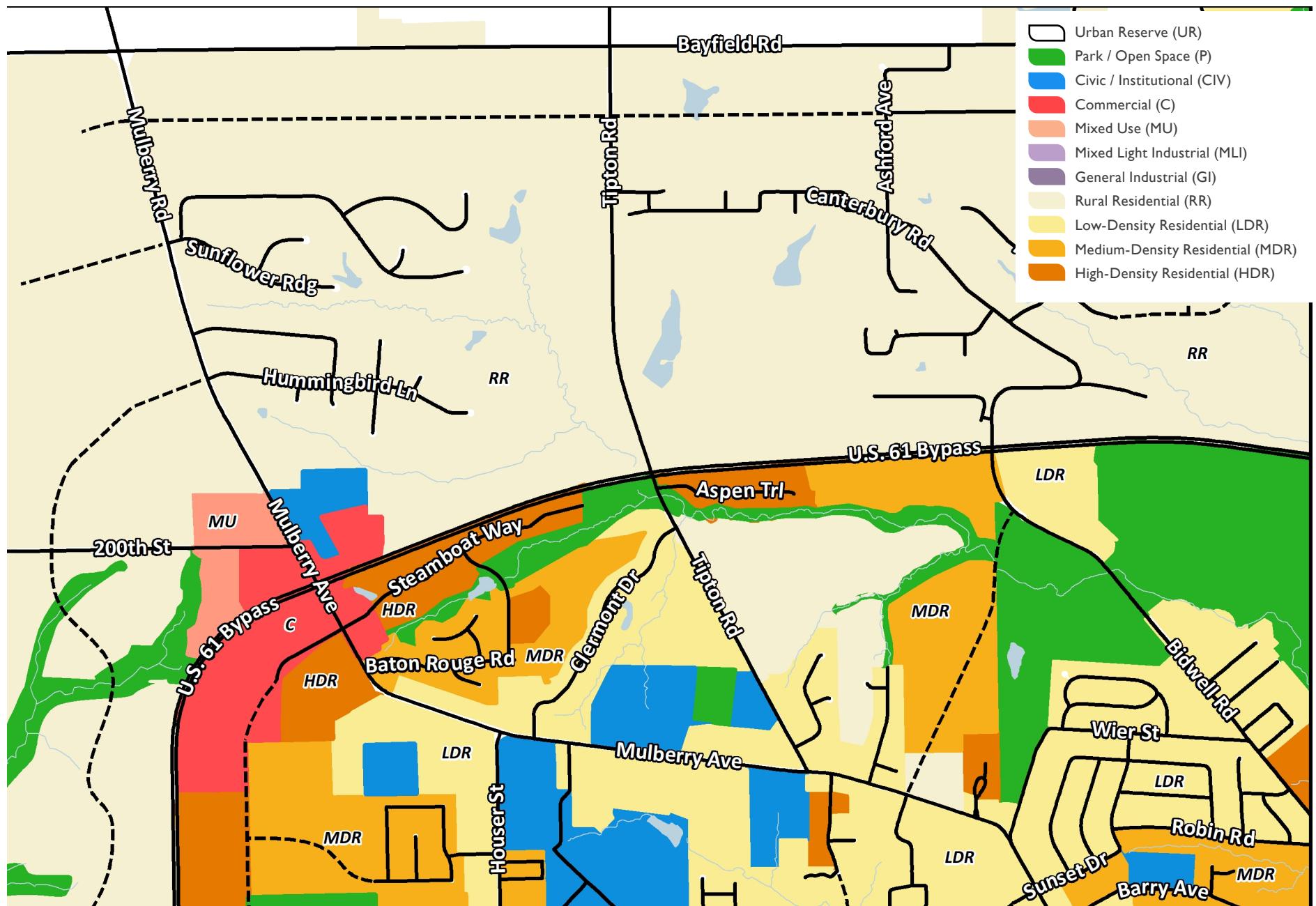


Figure 2.16: West

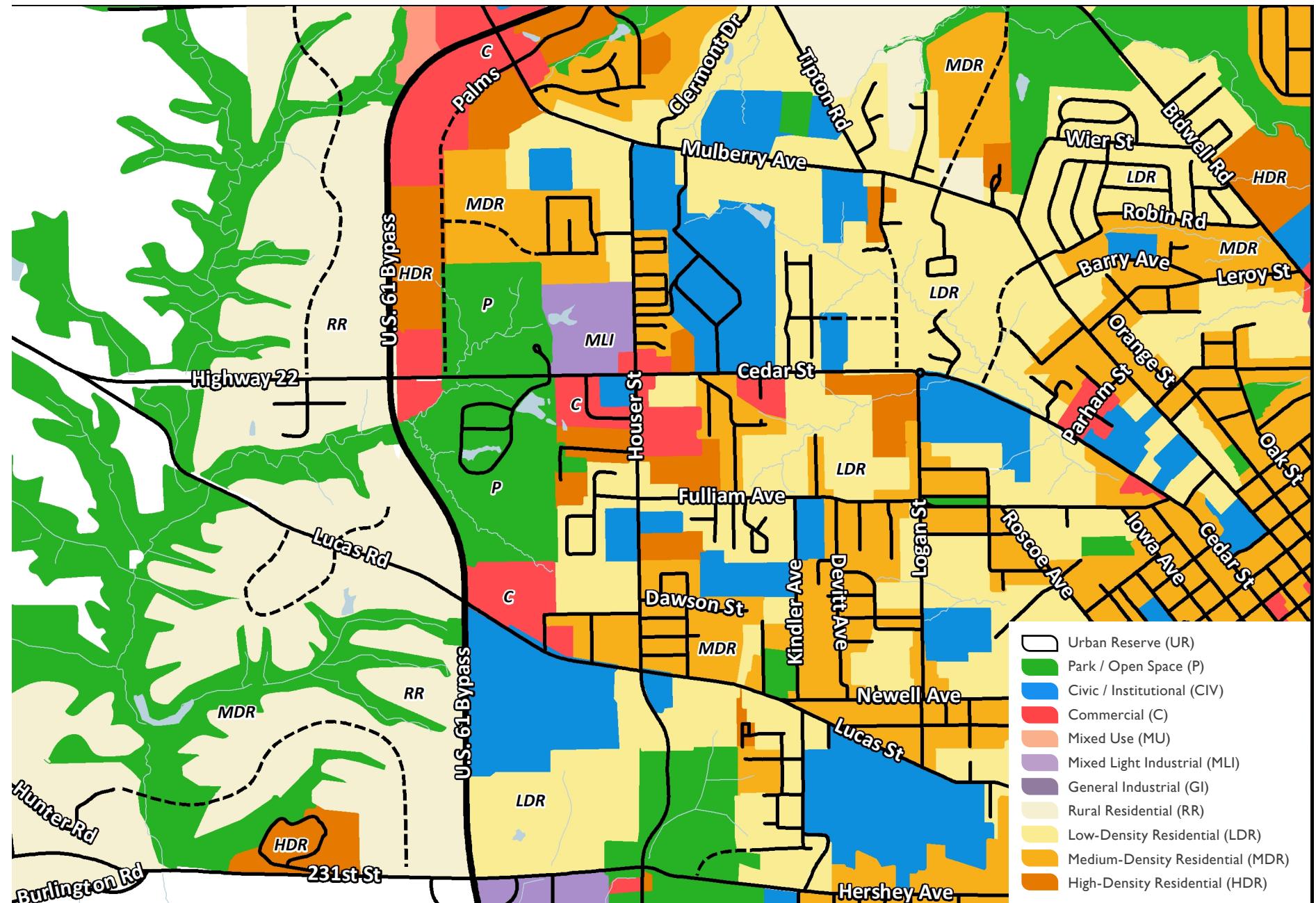


Figure 2.17: South Central

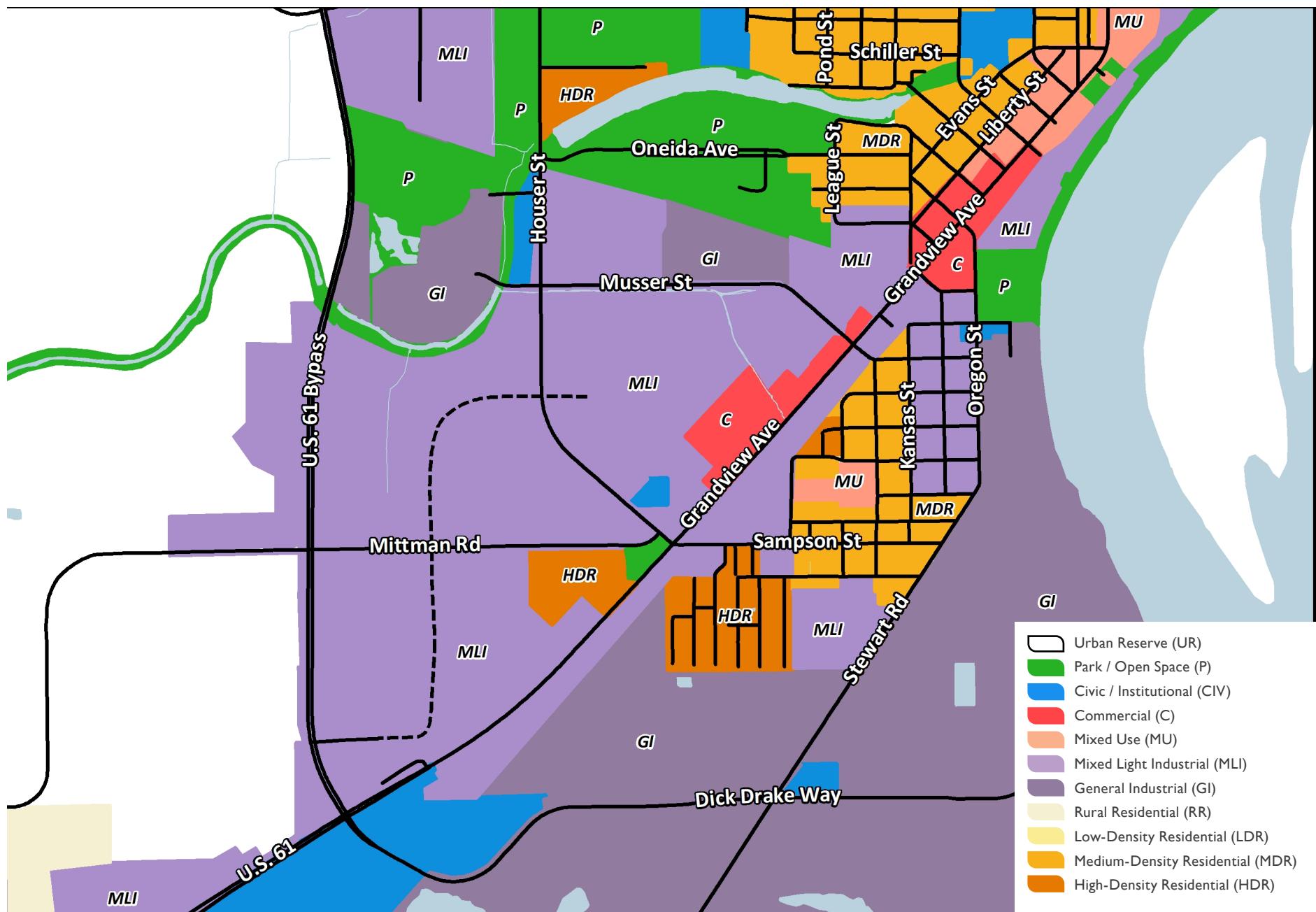
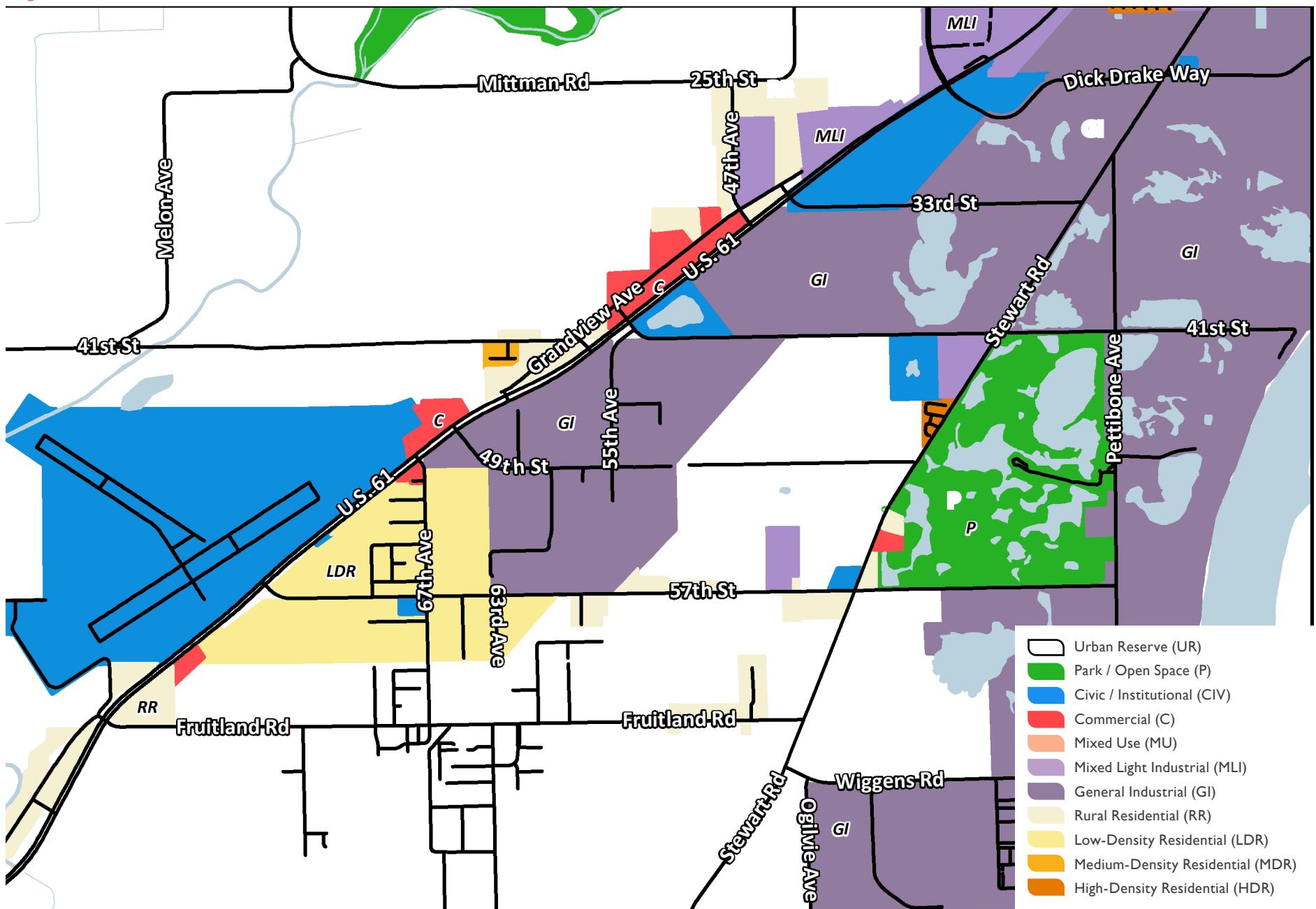


Figure 2.18: Far South



special districts

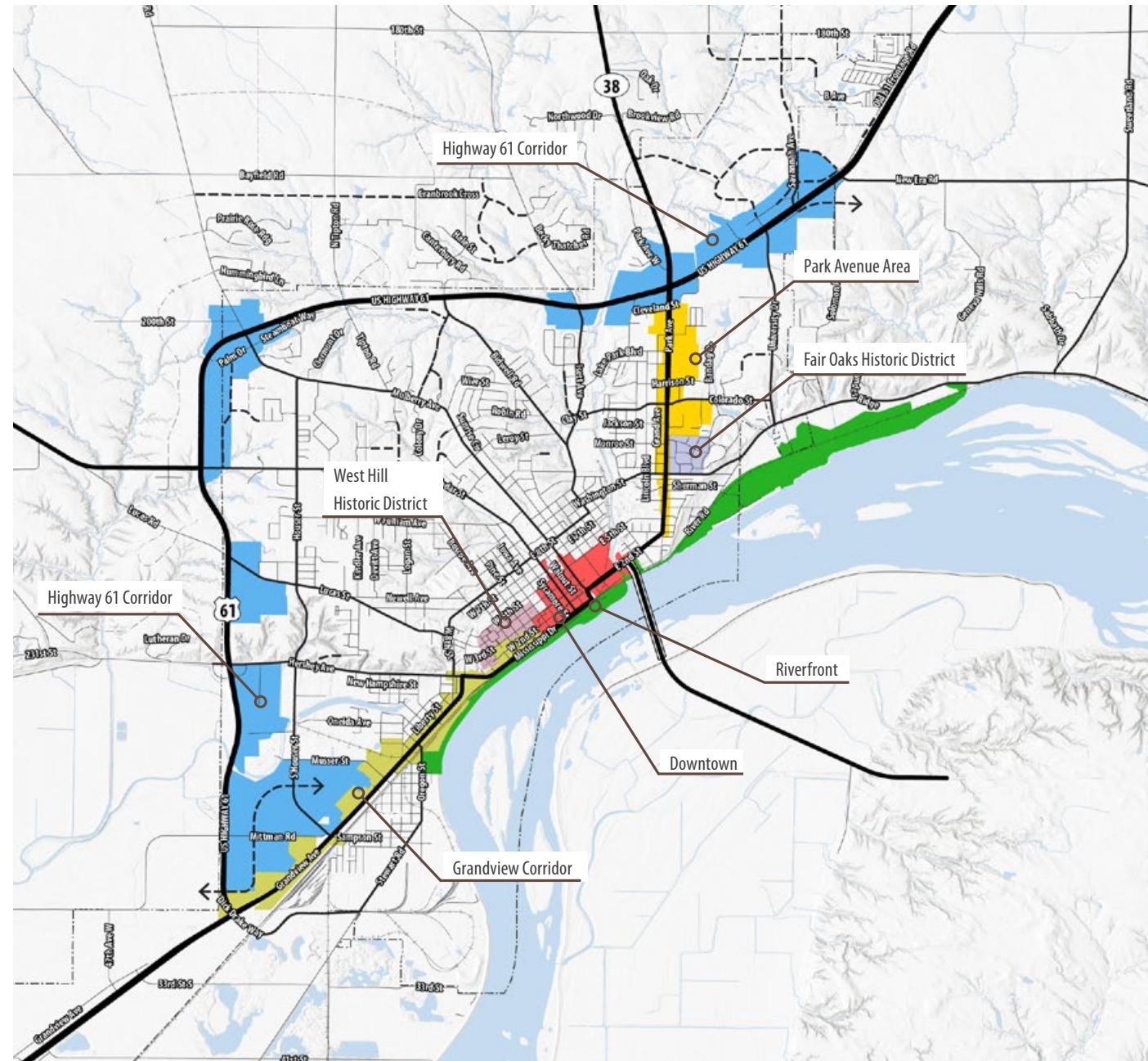
Special Districts are subareas within Muscatine that deserve their own tailored plan that targets the involvement of stakeholders that are directly affected by their recommendations.

Make it Muscatine acknowledges these special districts and recommends a list of studies that can be adopted as part of the Comprehensive Plan in the future.

Figure 2.19 Special Districts identifies Muscatine's character areas and the narrative on the following pages provides elements that should be further studied within each area. Any proposed development within these districts are subject to the policies until commissioning a detailed study. These districts include:

- Downtown & Riverfront (page 39)
- Park Avenue (page 39)
- Highway 61 (page 40)
- Historic Districts (page 40)

Figure 2.19: Special Districts



Key Initiatives



Downtown & Riverfront

Downtown is never complete and will continue to remain a priority. The completion of the Merrill Hotel in 2018 represents an important milestone for both downtown and the riverfront. More initiatives, both private and public, will continue to add charm and function to the district and improve people's perception of the area. Policies for downtown include:

- Author a downtown plan.** The City should continue their economic development initiatives for supporting investment in downtown and consider adopting a downtown plan that establishes a unified strategy for the area. The study area should include the area between the Mississippi River and 7th Street, from Mad Creek to Pine Street and 2nd Street corridor to Park Avenue.

- » Identify underused sites and prepare redevelopment scenarios. Concepts should include housing opportunities and mixed use.
- » Provide design guidelines for new development.
- » Prioritize preservation and reuse of quality older buildings.
- » Improve mobility. Pedestrian and bicycle movements are paramount along with parking.
- » Partner with property owners to replace unneeded parking areas with stormwater management features.

Key Initiatives



Park Avenue Area

Park Avenue serves as the gateway corridor to Muscatine's commercial center and neighborhoods. While Park Avenue is no longer part of US 61, it remains a state highway. Park Avenue was partially reconfigured in 2021 from four lanes to three lanes south of Colorado Street. This change enhanced traffic flow and safety along the corridor, which is lined with commercial properties and single-family homes. Policies for Park Avenue will require State DOT partnerships and include:

- Improve pedestrian circulation, particularly north of Colorado Street.
- Design gateway enhancements at Park Avenue and Highway 61.
- Design adaptations to the streetscape, including plantings, lighting, art, graphics, and furniture.

- Adhere to and implement the Wayfinding Plan.
- Redesign the five-way intersection at Park Avenue and 2nd Street to reconcile awkward and potentially dangerous movements.
- Create an overlay district that manages signage, access, setbacks, and development.
- Retrofit private parking lots to improve connections for customers and add stormwater management features.
- Identify an incentive program for improving the curb appeal of residential homes.

Key Initiatives



Highway 61 Corridor

Highway 61 is experienced by everyone who lives or visits the city. Its appearance influences people's impression of the community. Policies for the corridor include:

- Design and implement intersection enhancements for key impression areas, particularly at heavily-trafficked intersections. This includes plantings, artwork, and wayfinding.
- Author and adopt landscaping standards for private/public property.
- Build trails that follow the highway and establish connections to businesses.
- Development must share access to Highway 61, rather than have independent points of access.

- Prepare feasibility studies to connect fragmented frontage road routes. Prohibit development that would obstruct these future connections or until a feasibility study is complete.
 - » Reconnect Old 61 Frontage Road.
 - » North Port Road to Old 61 Frontage Road.
 - » Oakview Place to North Port Drive.

Key Initiatives

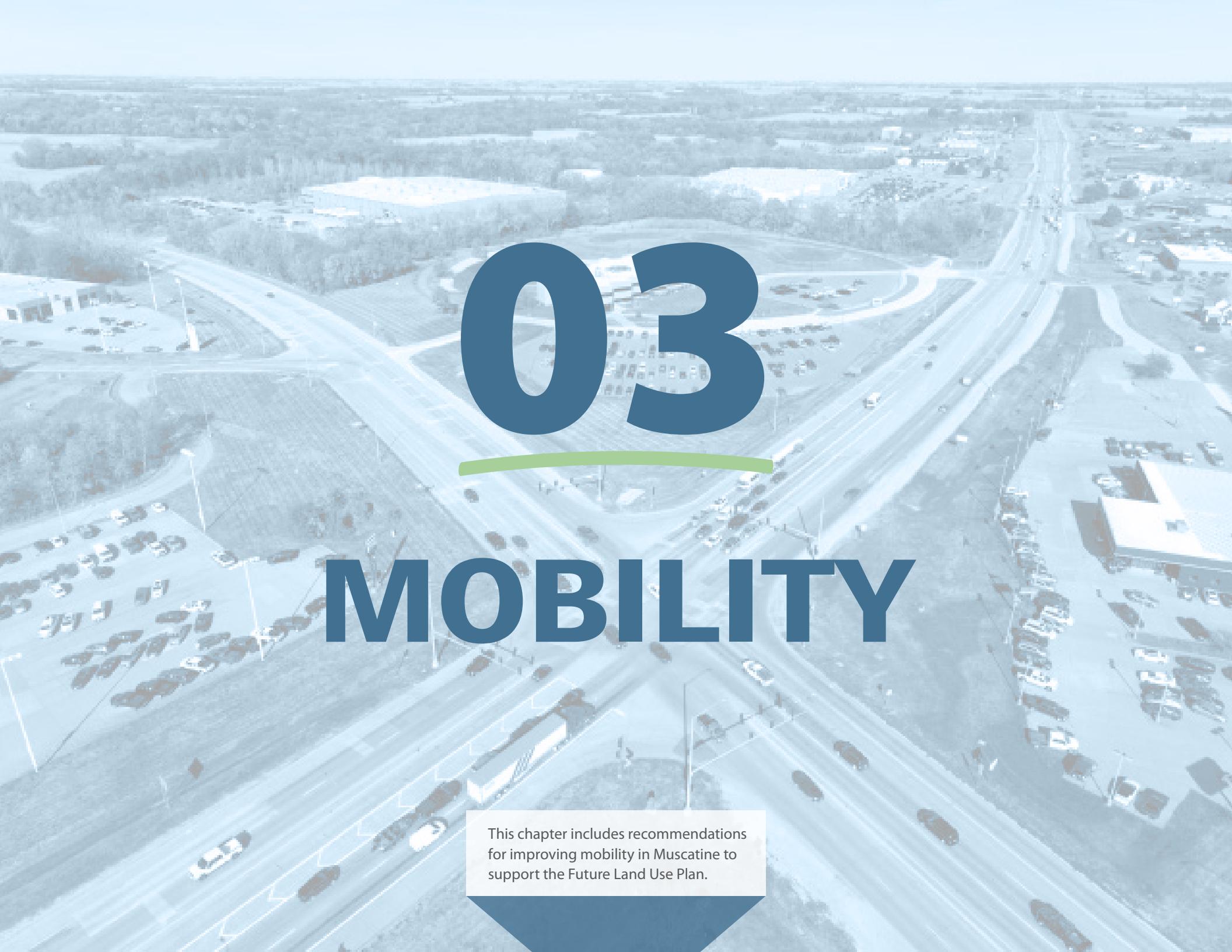


Historic Districts

Muscatine's historic neighborhoods offer some of the city's most distinctive living environments. Preserving their charm and historical significance ensures future generations can appreciate their legacy. The city contains several historic neighborhoods and other areas that may qualify for historic designation. The Historic Preservation Commission has previously studied areas such as West Hill, Fair Oaks, Colver Street, and Laura Musser McColm. Their past and future efforts can help shape planning projects that develop strategies and resources to enhance these districts beyond regulatory measures.

Policies for Historic Neighborhoods:

- Develop a neighborhood preservation plan that addresses all neighborhoods and establishes both required standards and advisory guidelines for preserving improving private and public properties.
- Launch the neighborhood preservation plan with a city-funded capital project to generate interest and encourage participation. This could include a street reconstruction project or park improvements.
- Identify grant funding to help private property owners meet preservation requirements and alleviate financial burdens.



03

MOBILITY

This chapter includes recommendations for improving mobility in Muscatine to support the Future Land Use Plan.

03

The Mobility Chapter includes the following elements:

- *Guiding Principles*
- *Existing Conditions*
- *Future Transportation Plan*
- *Key Initiatives*

Guiding Principles

- *Ensure connections between newer and older residential areas to build neighborhoods rather than isolated subdivisions.*
- *Avoid building structures where a future road may eventually be built.*
- *Minimize conflicts at intersections and along corridors.*
- *Support multi-modal improvements for all streets, providing space for pedestrians and bicyclists.*
- *Repair and replace the City's aging streets annually to improve functionality, appearance, and private investment.*

Existing Conditions

Understanding the City's existing transportation system provides a basis for authoring the guiding principles and future recommendations. The data to generate Figures 3.1-3.3 were sourced from the Iowa Department of Transportation (DOT).

Figure 3.1: Street Classification Map. The Iowa DOT classifies the City's streets into three categories:

- Arterial streets provide direct, relatively higher speed service for longer trips and large traffic volumes than collector and local streets.
- Collector streets typically provide direct service to neighborhoods, commercial areas, and local destinations.
- Local streets primarily serve residential areas.

Figure 3.2: Average Daily Traffic Map. The Iowa DOT provides a report on the City's average daily traffic (ADT) and some street data is dated back to 2010. Counts for arterial roads are collected more frequently, having data as recent as 2023. Arterial streets experience a higher traffic volume than collector and local streets.

Figure 3.3: Crash Frequency Map. The heat map spotlights conflict areas in the City's transportation network where crashes occur. Many of these incidents occur at intersections, particularly along Highway 61, Park Avenue, 5th Street, and Mulberry Avenue. Notably, these streets are all arterial roads.

future transportation plan

Muscatine's transportation system is vital for sustaining quality of life and economic appeal. The Future Transportation Plan is influenced by the Guiding Principles and applies to all of the concepts.

Figure 3.4: Transportation Plan Map. The Plan identifies 11 projects and future streets.

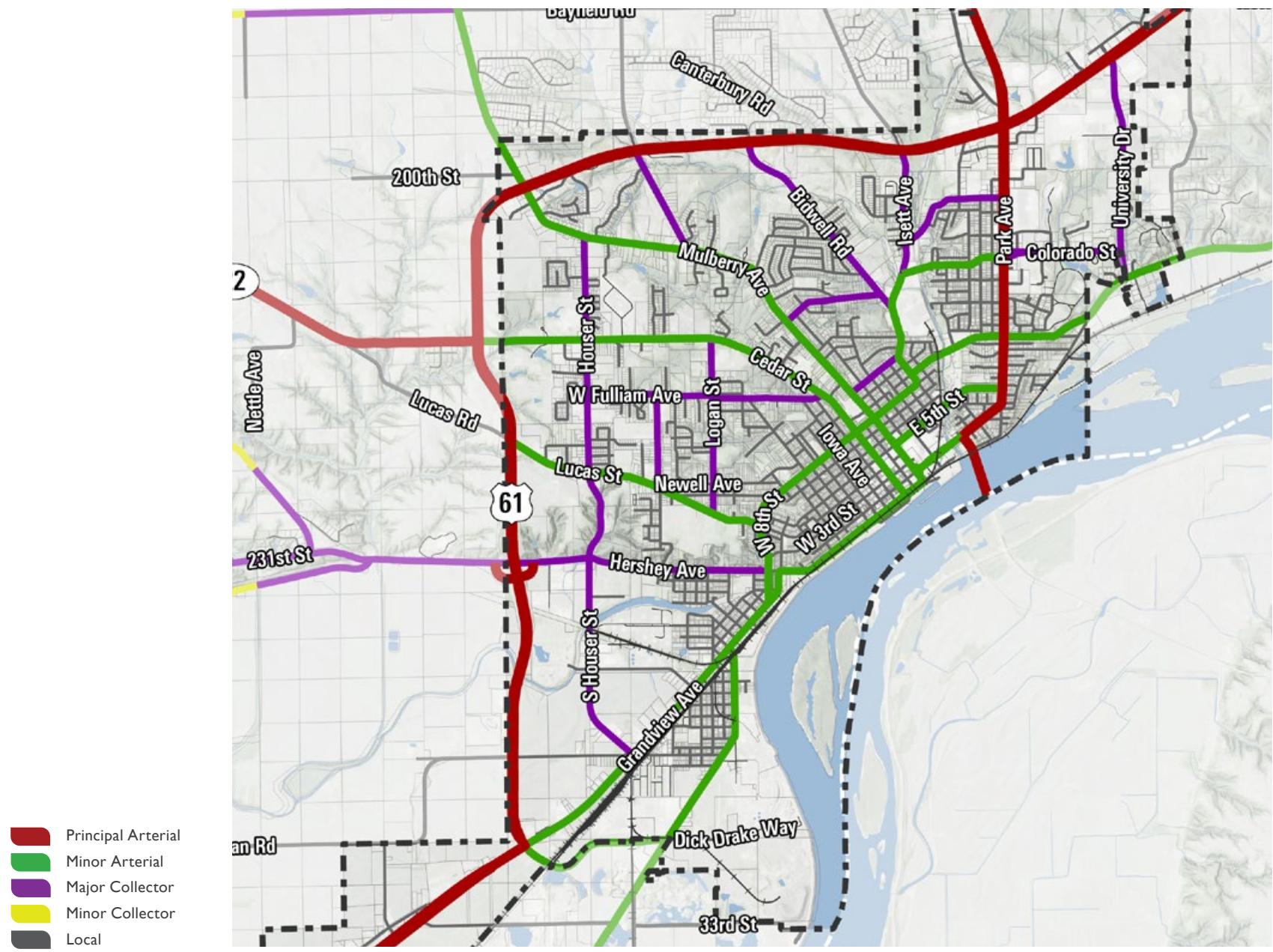
Figure 3.5: Transportation Plan Projects. The figure provides supporting narrative for the projects identified in the map.

Policies & Projects

Future transportation policies and projects include:

- West Growth Policies
- Northwest Growth Policies
- Northeast Growth Policies
- East Growth Policies
- Park/4th Alignment Project
- Paving Program
- Wayfinding Program
- Bike/Pedestrian Projects
- Transit Projects
- Landscaping Standards

Figure 3.1: Street Classification



Source: Iowa Department of Transportation

Figure 3.2: Average Daily Traffic

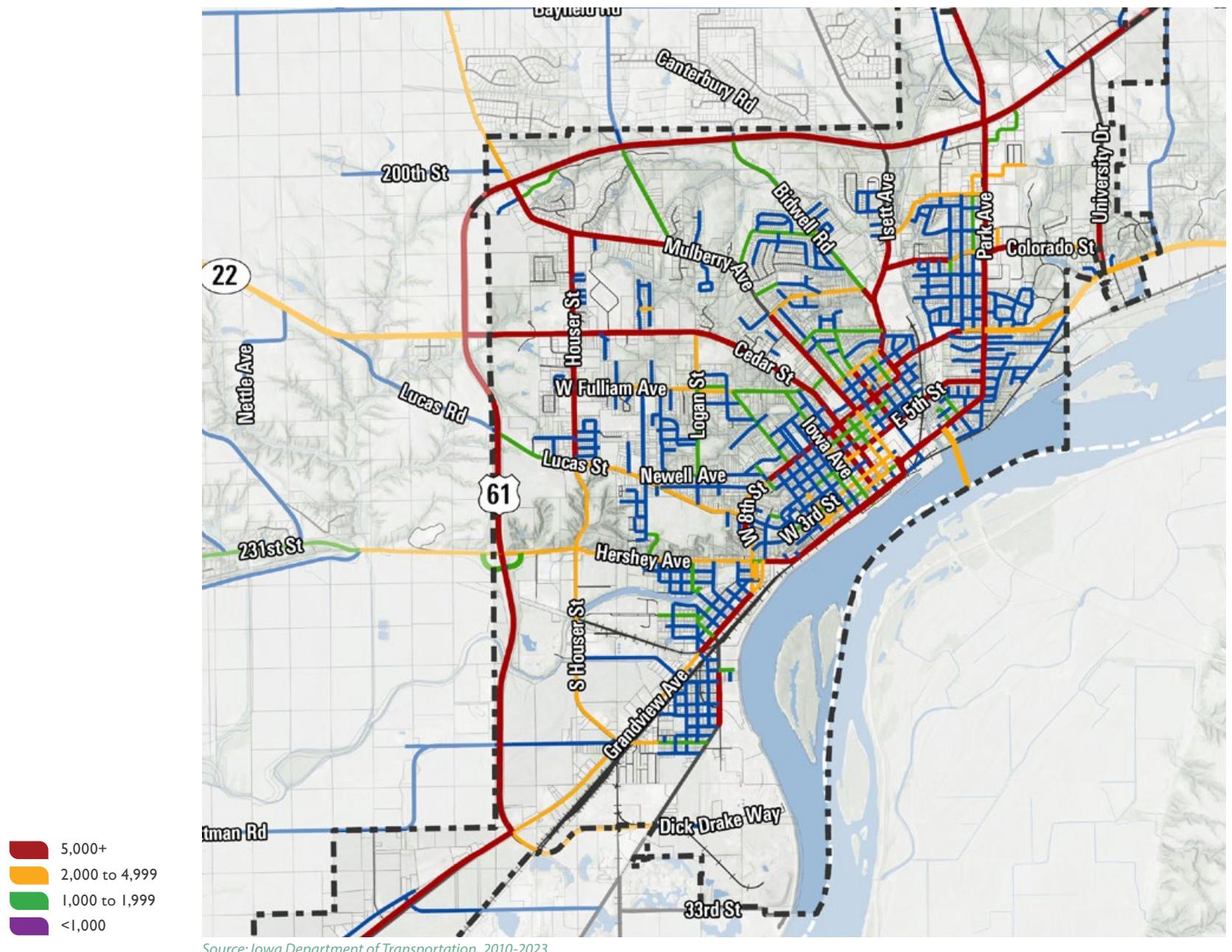
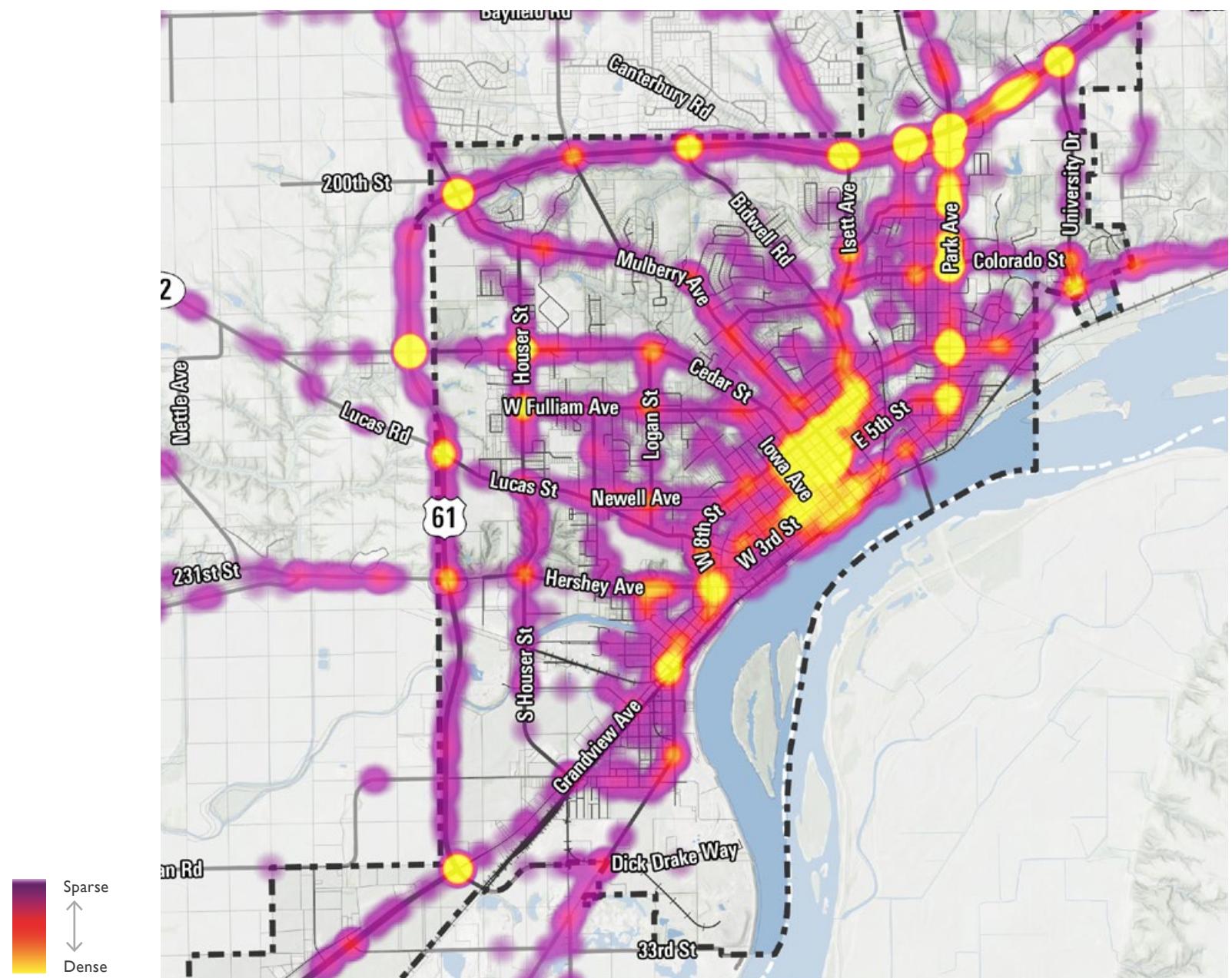


Figure 3.3: Crash Frequency



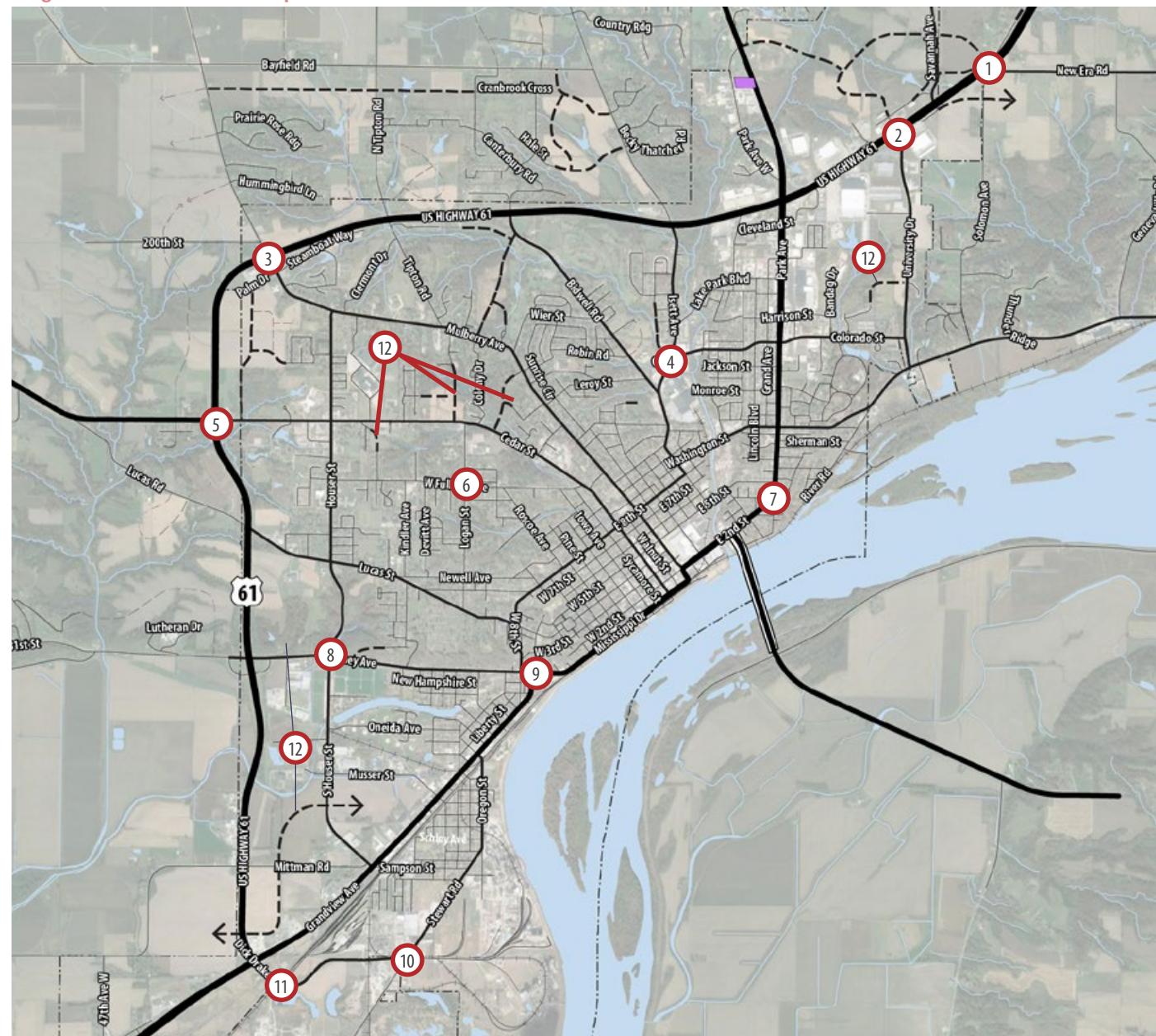
Source: Iowa Department of Transportation, RDG Planning & Design

Figure 3.4: Future Transportation Plan

- 1 US 61 and New Era Road
- 2 US 61 and University Drive
- 3 U.S. 61 and Mulberry Avenue
- 4 Isett Avenue
- 5 Cedar Street and Old U.S. 61
- 6 Fulliam Avenue and Logan Street
- 7 Park Avenue Corridor
- 8 Hershey Avenue and Houser Street
- 9 Hershey Avenue and Green Street
- 10 Dick Drake Highway and Steward Road
- 11 Dick Drake Highway and Railroad
- 12 New Streets

Note: While several street improvements and extensions are identified in the map, they do not necessitate further description in Figure 3.5. Descriptions for new streets are described in Key Initiatives on page 47.

- Proposed Improvements
- Proposed Street Extensions



Source: RDG Planning & Design

Figure 3.5: Transportation Projects

Street Segment	Schedule			Project Description
	<10 Years	10-20 Years	20+ Years	
1 New Era Road Extension	●			<ul style="list-style-type: none"> New Era Road is an important connection to having a continuous, connected street network. Future development in the Northeast Corridor will rely on this access. Reconnect gaps along Old US 61 to Port Drive and Ripley Court to create a frontage road.
2 University Drive Extension	●			<p>University Drive provides a critical connection for the future development of the Northeast Growth Area. Also, University Drive can become an important collector street that links Highway 22, Highway 61, and possibly Highway 38.</p> <ul style="list-style-type: none"> Add a dedicated left-turn lane from northbound University Drive to westbound Highway 61. Extend University Drive, north of Highway 61
3 Mulberry Avenue and Highway 61 Intersection	●			<p>Retrofit intersection with street lights and turn lanes.</p> <p>Update the intersection to allow for safer pedestrian movements.</p>
4 Isett Avenue/Cypress Street Reconstruction	●			Complete planned improvements for Isett Avenue. Also, improve the intersection at Clay Street.
5 Cedar Street and Highway 61 Intersection	●			Work with DOT to determine feasibility of retrofitting with intersection with turn lanes.
6 Fulliam Avenue	●			<p>Reconstruct Fulliam Avenue from Kindler Avenue to east of Roscoe Avenue. Also improve the intersection at Logan Street.</p> <p>Construct a new roundabout at the Fulliam/Houser intersection for improved intersection safety.</p>
7 Park Avenue Corridor	●	●		<p>Work with DOT to redesign the five-way intersection at Park Avenue and 2nd Street to improve safety and circulation.</p> <p>Update and maintain the gateway at Park Avenue and Highway 61 with plantings, artwork, and pedestrian pathways.</p> <p>Design and install a unified landscaping theme for the entire corridor.</p> <p>Manage and retrofit large access drives to minimize conflict zones.</p>
8 Houser Street	●			Complete improvements to Houser Street to improve visibility, connectivity, and general safety for all users.
9 Green Street and Hershey Avenue Intersection "Carver Corner"	●			Complete planned improvements to better connect Mississippi Drive and Grandview Avenue.
10 Dick Drake Highway and Stewart Road		●		Complete planned improvements at the intersection of Dick Drake Highway and Stewart Road.
11 Dick Drake Highway Railroad Tracks		●		<p>Prepare a feasibility to build a bridge over the railroad tracks at Dick Drake Highway.</p> <p>The south neighborhoods can be effectively cutoff from the City when a train covers the road. This creates a public safety conflict when emergency vehicles are prevented from responding to calls in the neighborhood or industrial facilities.</p>
12 Street Extensions and New Streets	●	●	●	The key initiatives on the following pages identify new streets to provide stronger connectivity between existing and older areas of the community.

Figure 3.6: West Growth Area | Key Initiatives



West Growth Policies

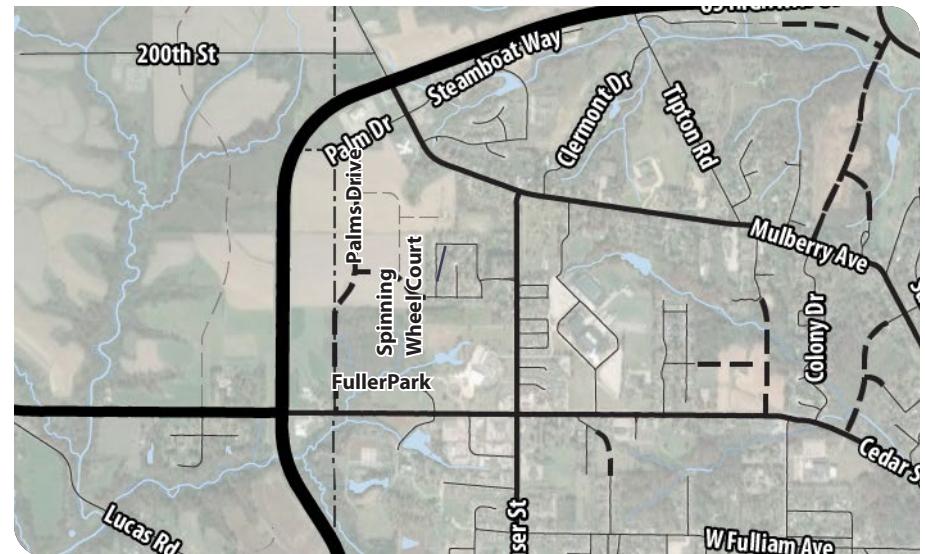
The Future Land Use Map for the West Growth Area focuses on projects that form a Business Park. The concept shows a roadway that connects to Houser Street; this connection also supports commercial/industrial uses. The street alignment allows for properties to support various scales of development and, combined with a connection to Houser Street, creates a unified circulation system for this future Business Park.

- **Platting for Roadways.** A new road that connects Loves Way to Houser Street, becoming a common road that links future development and offers internal circulation.
- **Prepare West 61 Business Park Master Plan.** The process for preparing the Master Plan should engage area property owners. Elements of the plan should include an alignment of new and existing roadways, including a connection from Houser Street to the truck stop and Mittman Road.

Related Reference:

- *West Growth Area, page 26*

Figure 3.7: Northwest Growth Area | Key Initiatives



Northwest Growth Policies

Palms Drive should eventually connect to Cedar Street, providing a parallel route to Highway 61. Spinning Wheel Court, which serves a pocket neighborhood and is stubbed for a future extension, should connect to Palms Drive. This will provide options for circulation and stronger emergency access to residents.

- **Platting for Roadways.** Future development should ensure that Palms Drive extends to Cedar Street.
- **Preserve Street Continuity in Rural Subdivisions.** Page 28 provides policies for street continuity for future subdivision design outside of the city limits.

Related Reference:

- *Northwest Growth Area, page 27*

Figure 3.8: Northeast Growth Area | Key Initiatives



Figure 3.9: East Growth Area | Key Initiatives



Northeast Growth Policies

As land develops in the Northeast Growth Area, it should provide a well-connected street network. Many of the subdivisions built north of Highway 61, particularly along Isett Avenue, have a single access point and lack the level of connectivity to tether neighborhoods to each other.

- **Platting for Roadways.** Future subdivisions should be platted to reserve future roadway connections, including extensions of University Drive, New Era Road, connecting Cobblestone to University, and a bridge over Mad Creek to Highway 38. These connections promote local circulation, providing options for movement and stronger emergency access.
- **Redesign University Drive, north of Highway 61.** Continuing University Drive north is not possible because of existing development. The City will need to realign the roadway, which will require negotiating with area property owners. Until achieving a design solution, the City should discourage any new development in this area.

Related Reference:

- *Northeast Growth Area, page 27*

East Growth Policies

The East Growth Area focuses on developing property along University Drive. Key principles for the mobility network, include:

- **Connect Roadways and Align Intersections.** Cobblestone Drive, Oak Valley Drive, and Colorado Street are all possible connections to the growing neighborhood. Preferably, all of these streets align to create a unified network of streets. Most importantly, Cobblestone Drive should connect to University Avenue.
- **Platting for Roadways.** With multiple property owners, development will be phased over time. The development concepts should consider future roadway connections.

Related Reference:

- *East Growth Area, page 27*

Park Avenue Corridor | Key Initiatives



Park Avenue Corridor

Park Avenue is the main route from the north to downtown. Its function and appearance influence people's perception of the community. Figure 3.3 shows that intersections along Park Avenue experience a greater frequency of accidents than other areas of the community. Redesigning the street from a 4-lane to 3-lane section will ultimately improve the safety of left-turning movements into businesses. Priorities for the corridor include:

1. Redesign the five-way intersection at Park Avenue to improve safety and circulation.
2. Update the gateway at Park Avenue and Highway 61 with plantings, artwork, and pedestrian pathways.
3. Design and install a unified landscaping theme for the entire corridor.
4. Manage and retrofit large access drives to minimize conflict zones.

North of Colorado Street, priorities include:

- Install sidewalks on both sides of Park Avenue.
- Replace roadside ditches.
- Improve stormwater management.

Paving | Key Initiatives



Paving

The City of Muscatine has and maintains 128 miles of roadway.

- Inventory and assess the condition of all streets, noting defects. This includes a systematic review of all streets every 5 years.
- Identify a funding mechanism to finance street repair/replacement. Cedar Rapids adopted a local option sales tax to fund the improvement of their streets. Alternative approaches include approving a bond.
- Replace at least 1% of the City's roads each year, which indicates approximately 1.25 miles each year.
- In conjunction with the paving program, the City should establish an incentive program for residential properties for intercepting stormwater. This may include rain gardens and/or rain barrels.

Wayfinding | Key Initiatives



Wayfinding

Muscatine needs to implement the Comprehensive Wayfinding program that directs people to popular destinations in the community. The program includes:

- Vehicle-oriented signage to community and cultural destinations.
- Trail signage to guide users to major districts and recreation areas.
- Pedestrian wayfinding for downtown, the riverfront, and around recreational amenities near Kent-Stein Park.

Bike/Ped | Key Initiatives



Bike/Ped

Muscatine supports a multi-modal transportation system, with a goal of providing a safe route to make any trip within town by non-motorized means. Several community-supported plans provide detail for implementation, including the Bicycle and Pedestrian Master Plan (2022), the Complete Streets Policy, the Sidewalk Policy, and the Capital Improvement Plan. Make it Muscatine recommends:

- Continue to review and refine projects and policies related to Complete Streets.
- Require sidewalks for any new development.
- Fund and implement an annual sidewalk replacement program. Priorities should focus on connections to schools, parks, and businesses.
- Implement recommendations from the Bicycle and Pedestrian Master Plan.

Transit | Key Initiatives



Transit

MuscaBus operates three routes during peak commuting hours on weekdays. The Red and Blue routes also run during the day on Saturdays. The Plan recommends:

- Evaluate each bus stop to ensure ADA accessibility, and prepare a program of improvements.
- Provide routine maintenance of bus shelters and stops. This includes retrofitting existing stops to ensure that they are ADA accessible.
- Continue to evaluate routes and utilization.

Landscaping Standards

The condition and appearance of Muscatine's arterial streets influences people's impression of the quality and values of the community. These corridors are the gateways into the business and neighborhood districts, and should be carefully maintained to elevate their identity as a desirable destination.

- **Highway 61.** Improvements should focus on changes to the public right-of-way, having more mounted banners to existing poles, and introducing native grasses and wildflowers in the median. Planning for this will require partnership with Iowa DOT, since they own the right-of-way.
- **Park Avenue.** Park Avenue deserves its own detailed study to identify the types of plantings and design configuration for both public and private property. Planning for this will require the partnership of the Iowa DOT because Park Avenue is a state highway. Implementation should be a public-private initiative.
- **Neighborhood Streets.** Initiate a Re-Tree program and Stormwater Water Assistance Program (SWAP) that offers grant assistance to residential owners for improving their yards.

Figure 3.10: Key Initiative - Landscaping Highway 61



Example images of desirable applications for business corridors and neighborhood streets





04



HOUSING & NEIGHBORHOODS

This chapter recites and expands upon previous studies and supplemental strategies to provide adequate housing choices in Muscatine.

04

The Housing & Neighborhoods Chapter includes the following elements:

- *Guiding Principles*
- *Demographic and Population Insights*
- *Housing Insights*
- *Housing Needs*
- *Housing Forecasts*
- *Housing Recommendations*

Guiding Principles

- *Support attainable housing options through partnerships, policy, and public incentives.*
- *Offer a range of housing types to accommodate workers and residents in all stages of life.*
- *Grow neighborhoods that create connected communities and not secluded enclaves.*
- *Have quality existing neighborhoods with support to encourage reinvestment, conservation, and enhancement of existing housing.*

Existing Conditions

The Muscatine Submarket Analysis was prepared as part of the Muscatine County Housing Market Analysis in 2024. It provides a detailed analysis of the community's demographics and key findings. The Executive Summary of that publication is as follows:



Population Key Trends & Challenges

*In recent years, the City of Muscatine has witnessed modest population **growth**, particularly among **aging** demographics, alongside a notable **increase in minority** populations, of which a majority are Latinos. Despite a slight decline in the overall workforce, incomes have continued to rise, showcasing the community's resilience amidst economic fluctuations in the late 2000s and early 2020s.*

Housing Key Trends & Challenges

*Over time, Muscatine's supply and demand shifted, going from high demand for owner units in the 2000s to constructing rental units in the 2010s to keep up with an **influx of renters** after the 2008 market crash. Current **homeowners have experienced more favorable conditions than renters**, who have struggled to find affordable housing or break into homeownership due to rising costs across the spectrum. The widening gap in appropriately priced housing for all segments of households adds to these existing difficulties, creating an overarching sense of frustration among both current homeowners and renters.*

Future Housing for Muscatine

*Muscatine is likely to see limited **population growth** in the foreseeable future, primarily driven by aging demographics, mirroring trends dating back to 2000. Consequently, it becomes crucial for the community to ready itself to accommodate the housing needs of its older residents, who may need **different housing options**. Furthermore, Muscatine needs to achieve a more balanced distribution of housing units relative to their occupants. The current situation, where **higher-income households occupy lower-cost units**, exacerbates constraints and competition for lower-income households with limited options. It is imperative to **introduce additional housing units** across various income brackets throughout the community to expand choices and enhance overall housing quality.*

Source: Muscatine Submarket Analysis



Collaborate Muscatine

After the adoption of the latest housing study, a coalition of community leaders, Collaborate Muscatine, launched a coordinated, community-wide effort to expand housing options throughout Muscatine. This initiative set a bold target of **2,000 new housing units by 2033**, with the intention of growing population, strengthening neighborhood vitality, and supporting the stability of the community.

Demographics Trends

The 2024 Muscatine Housing Analysis provides a detailed analysis of Muscatine's demographics. This Plan provides a brief overview of its content without full reproduction.

Population. Since 1960, Muscatine has been experiencing slow growth; items to note in this pattern include:

- 2020 Census population: 23,797
- 2022 ACS population: 23,671
- 2022 ACS Average age: 35.9
- 2022 ACS Average household size: 2.5

Race and Ethnicity. Distribution of population for the non-white population rose from 19.5% to 28.4% between 2010 and 2022. Hispanic/Latino represent the most growth. The 2022 ACS data reports:

- 71% White
- 20% Hispanic/Latino
- 9% Other

Education

- 65% with high school diploma or higher

Median Household Income

- Muscatine: \$58,474
- State of Iowa: \$69,588

Available Labor Force. Muscatine's labor force is stable compared to other communities.

- Manufacturing industry represents about 25% of the labor force.
- Labor force participation: 64.9%
- Unemployment: 4.3%

Commuting Patterns. More employees live in and commute to Muscatine for their job than leave.

- 5,734 people live and work in Muscatine.
- 9,720 people commute to Muscatine for work.
- 5,361 people leave Muscatine to work.

Population Change Insights

The demographics of Muscatine are fairly consistent with a community of its size. As a supplement to the Housing Analysis, this Plan provides an analysis that lends support to diversifying the future housing options offered in the community.

- **Historical annual growth rate of 0.2%.** Since 1960, Muscatine has been experiencing an average annual growth rate of 0.2%. The annual growth rate between 2000 and 2020 was 0.39%. Between 2010 and 2020, Muscatine had faster annual growth than Muscatine County, 0.39% and 0.11% respectively.

- **Growth in family-formation age groups.** The age groups with the largest growth between 2010 and 2020 were adults under the age of 35 and adults between the ages of 65 and 74. One key piece of information this can tell us is that young adults are choosing Muscatine as a community to raise their families, and older adults are choosing Muscatine as a community to retire in. This information is imperative to planning for future housing to determine the most in-demand housing styles, sizes, and price points.

- **In-migration of older adults.** The large Baby Boomer generation is entering retirement age. Over 10% of people that moved to Muscatine in 2022 were

55 or older. The in-migration of people in this age cohort resulted in the city's population of those 65 and older growing 39.6% between 2010 and 2020.

- **Higher birth rates and in-migration.** When standard birth and death rates are applied to the city's 2010 population, the city grew at a faster rate than expected through in-migration. Based on the city's 2010 population, it was predicted that the city would have declined in population. The increase in population indicated that the city had both in-migration of new residents and/or higher than expected birth rates.

- **Growing population scenario.** The Plan anticipates that Muscatine will grow by at least 1,350 between 2020 and 2045, representing a growth rate of 0.25%. This rate is supported by shifts in demographic trends, which include growth in family formation age groups, higher than expected birth rates, new employment opportunities, and in-migration.

Housing Insights

The housing market in Muscatine has changed over time. Some of the most notable changes between 2010 and 2023 are:

- Owner-occupancy rates in Muscatine are holding steady.** This is different than the national trend of communities Muscatine's size, where renting is becoming increasingly popular. This may be partially due to Muscatine's higher median age, indicating that more residents are in or reaching a stage of life where home ownership is preferred or possible.
- The cost of homes in Muscatine rose 49.9%.** Over that same period of time, homes in Muscatine County rose 43.3% and homes across Iowa rose 64.0%.

- Rent costs rose 51.1% in Muscatine.** For context, over the same period of time, the annual median household income rose just 28.5%. While incomes are rising, they are not rising at the same rate as housing costs.
- Households in Muscatine are highly cost burdened.** Any household paying more than 30% of its income on housing is considered cost burdened. Nearly 1/3 of owners and nearly 1/2 of renters in Muscatine fell under this designation in 2023.

- Vacancy rates are influenced by multiple factors, and may not be high enough to provide options within the housing market.** Vacancy rates below 5.0% are often considered too low to provide new residents with the options they desire if the vacant units are in livable condition. Of vacant units in Muscatine, most are rental options, providing less options for residents pursuing ownership. The vacancy rate of 8.7% in Muscatine includes all vacant units, vacant for any reason, including units in poor or uninhabitable conditions or units being used as short-term rentals. The vacancy rate for available units for rent or for sale in Muscatine is closer to 2.6%.

Figure 4.1 Housing Snapshot

MEDIAN HOUSEHOLD SIZE: 2.41

Source: American Community Survey

HOUSING OCCUPANCY

Owner-Occupied



	2010	2023	
72.2%	68.7%	Muscatine	
77.7%	74.9%	Muscatine County	
73.1%	71.5%	Iowa	

Renter-Occupied



	2010	2023	
27.8%	31.3%	Muscatine	
22.3%	25.1%	Muscatine County	
26.9%	28.5%	Iowa	

HOUSING AFFORDABILITY

% Cost Burdened Households, 2023



Renters	Owners
43.9%	29.1% Muscatine
40.0%	23.2% Muscatine County
43.5%	19.9% Iowa

HOUSING VALUES

Median Value



	2010	2023	
\$98.0k	\$146.9k	Muscatine	
\$120.3k	\$172.4k	Muscatine County	
\$119.2k	\$195.5k	Iowa	

Median Contract Rent



	2010	2023	
\$493	\$745	Muscatine	
\$482	\$741	Muscatine County	
\$489	\$775	Iowa	

VACANCY

% Vacant Units



	2010	2023	
7.1%	8.7% Muscatine		
7.7%	6.8% Muscatine County		
8.3%	8.6% Iowa		

Available Housing

Figures 4.2 and 4.3 show Muscatine's housing stock by year built and recent construction trends. The median year built for housing units is 1962.

Newer homes tend to be more expensive, making older homes a more affordable option. When it comes to increasing the availability of affordable housing, older housing stock plays a crucial role.

Figure 4.2: Year Units Built

Units	
Before 1900	340
1900 to 1939	3,390
1940 to 1969	2,021
1970 to 2000	1,345
After 2000	3,390
Median Year Built	1962

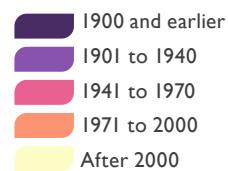
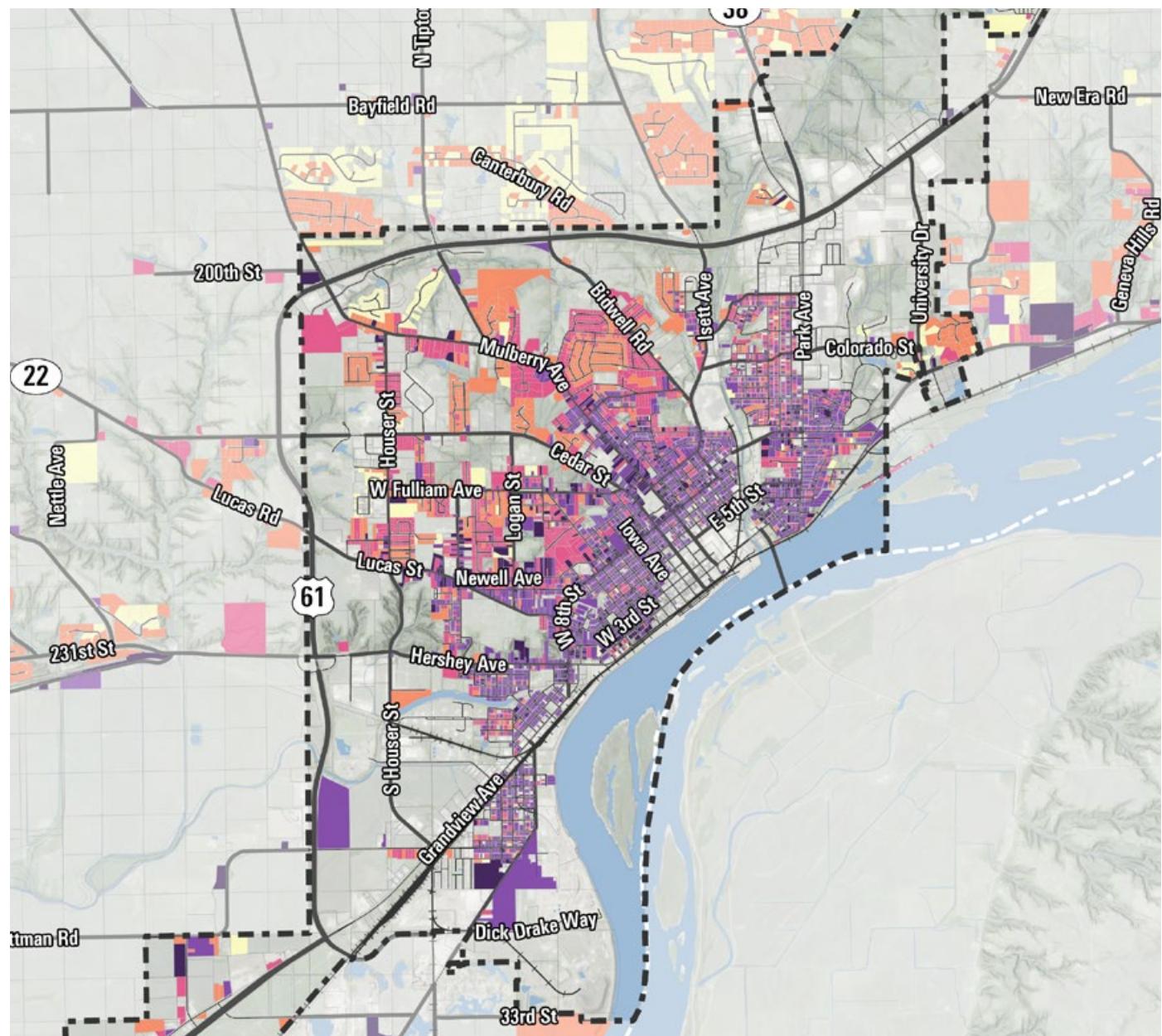


Figure 4.3: Historical Residential Construction



Source: RDG Planning & Design

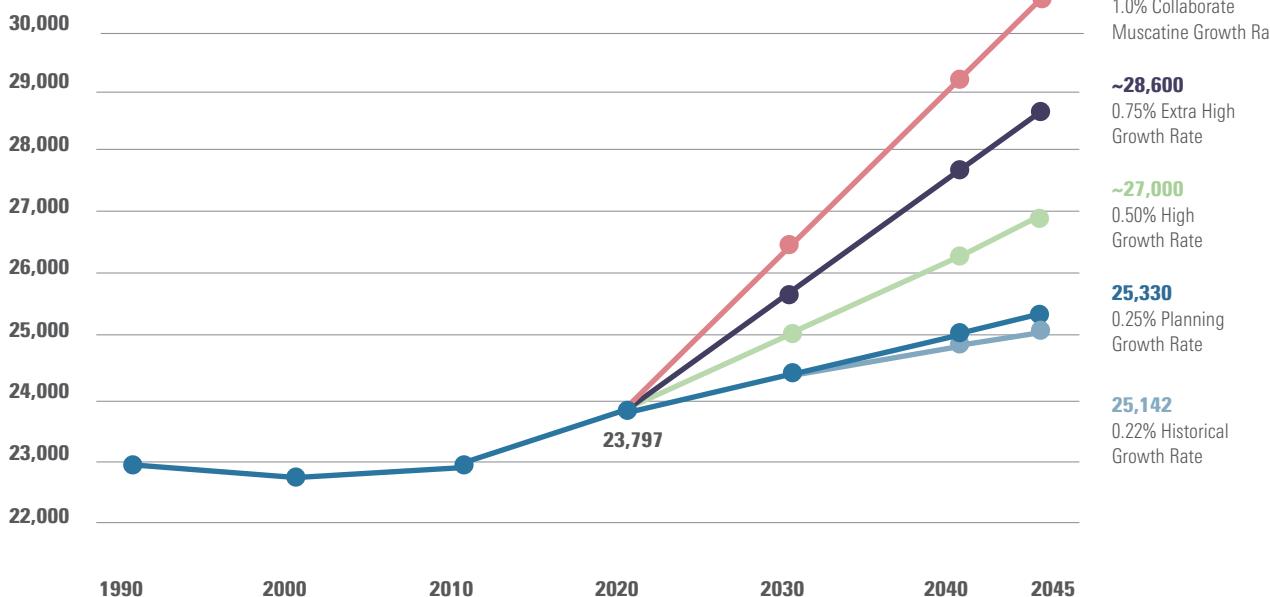
Housing Needs

Muscatine could grow by at least 1,350 people by 2045. Chapter 1 includes the methodology for Muscatine's future population growth and its implications for future land needs for residential use. Muscatine needs more housing and options to provide for this growth.

Collaborate Muscatine's initiatives aim to add 2,000 new housing units by 2033, encouraging in-commuters to become residents. This growth is directly tied to their goal of increasing Muscatine Community School District enrollment by 5%, reaching over 4,000 students. The dual targets emphasize the importance of housing development to encourage a growing population.

Housing frames Muscatine's past and is paramount for Muscatine's future to support growth. **The growth of neighborhoods in Muscatine spurs the need for more community services and housing to keep up with demand.** People in Muscatine express desire for more housing options, which is illustrated in the Future Land Use map. The context for how these homes get provided or sustained is critical for meeting the vision in other parts of the Plan.

Figure 4.4: Population Forecast, 2045



Source: RDG Planning & Design

Muscatine's greatest housing needs include:

- New Entrants to Homeownership
- Households with Children
- Older Adults
- Attainability for the Workforce

Like the Future Land Use Map, the policies to meet housing goals are multi-faceted. These policies allow more flexibility in the market. Muscatine will need to be flexible for how the market can fit into the community's vision for the future. Accommodating the market means accommodating new resident demands and existing resident needs, as well as the developer's ability to help meet those demands and needs.

Housing Projections

Residential Land Needs

Muscatine needs to convert at least 250 acres of land to residential use. Chapter 1 includes methodology for forecasting future land needs to support residential development. Based on the residential mix of housing types, a planning mix should include:

- 60% low density (average of 3 units/ acre)
- 20% medium density (average of 8 units/acre)
- 20% high density (over 14 units/acre)

Baseline projections in Make it Muscatine call for 250 acres of residential development, but achieving Collaborate Muscatine's aspirational goal of 2,000 new housing units by 2033 may require more land. This will depend on strategic land assembly, infill projects, and growth area expansions to provide needed diverse housing options.

Housing Demand

Housing demand to support future population growth indicates a need for 1,200 new units at minimum through 2045. This demand is based on the planning growth rate of 0.25%. If Muscatine grows at a faster rate, more units may be needed (see figure 4.6). The Make it Muscatine housing model anticipates that an annual average of at least 48 units will achieve this growth. This model assumes:

- Average household size will continue to shrink from 2.41 in 2020 to 2.31 by 2045 with the aging population.
- Vacancy rate will shrink from 8.7% to 6.8%, allowing some units to be reoccupied.
- Replacement of about 200 units over the next 20 years. There may be redevelopment opportunities to provide new, high quality units after removal of blighted units.

Collaborate Muscatine's ambitious goal of 2,000 new units by 2033 will require the construction of 200 units per year, far above the baseline need of 48 units per year. Reaching this benchmark will demand stronger policies, incentives, and expanded land supply to support this accelerated growth.

Figure 4.5: Housing Unit Forecasts at 0.25% Growth, Planning Growth

	2020	2035	2045	Total
Population at End of Period	23,797	24,705	25,330	
Household Population at End of Period	23,433	24,327	24,942	
Average Population Per Household	2.41	2.35	2.31	
Household Demand at End of Period	9,723	10,352	10,798	
Projected Vacancy Rate	8.7%	7.6%	6.8%	
Unit Needs at End of Period	10,650	11,201	11,589	
Replacement Need (Total Lost Units)		120	100	220
Cumulative Need During Period		701	488	1,189
Average Annual Construction Need		47	49	48

Source: RDG Planning & Design

Figure 4.5b: Housing Unit Forecasts at 0.75% Growth, Extra High Growth

	2020	2035	2045	Total
Population at End of Period	23,797	26,619	28,684	
Household Population at End of Period	23,433	26,193	28,225	
Average Population Per Household	2.41	2.35	2.31	
Household Demand at End of Period	9,723	11,146	12,219	
Projected Vacancy Rate	8.7%	7.6%	6.8%	
Unit Needs at End of Period	10,650	11,993	13,050	
Replacement Need (Total Lost Units)		120	100	220
Cumulative Need During Period		1,463	1,156	2,620
Average Annual Construction Need		98	116	105

Source: RDG Planning & Design

housing recommendations

Table 4.6 provides a summary of recommendations from previous studies that are relevant to this Plan. This Plan provides additional recommendations, which includes some crossover with past recommendations. These studies include:

- 2024 County Housing Study.** The 2024 Muscatine County Housing Analysis (2024 MCHA) includes a framework for future housing policy that applies to this comprehensive plan.
- 2017 City Housing Demand Study.** The 2017 Housing Demand Study (2017 HDS) provides several recommendations that are still relevant today.

The four Make it Muscatine housing goals are not meant to replace the findings of recent, detailed housing studies, but rather build upon and reinforce them. The four Make it Muscatine housing goals are:

- Support attainable housing options through partnerships, policy, and public incentives.**
- Offer a range of housing types to accommodate workers and residents in all stages of life.**
- Grow neighborhoods that create connected communities and not secluded streets.**
- Have quality existing neighborhoods with support to encourage reinvestment, conservation, and enhancement of existing housing.**

Table 4.6 shares the policies and strategies the Make it Muscatine housing goals are built upon, and have been the findings of previous recent studies.

Table 4.6: Housing Recommendations

Housing Policy/Strategy	Source*
1. Build 2,000 new housing units in the City of Muscatine by 2033.	Collaborate Muscatine
1a. Attract 10-20% of in-commuters (or other new workers) to reside in Muscatine by 2033.	Collaborate Muscatine
1b. Support population growth and attract new families to achieve a 5% increase in K-12 enrollment in MSCD by 2033.	Collaborate Muscatine
2. Invest in the existing housing stock: Improve existing units for current and future residents.	2024 MCHA
3. Incentivize new housing types: Encourage the private sector to develop missing middle housing.	2024 MCHA
4. Promote infill development: Build new units on existing lots to fill in depleted neighborhoods.	2024 MCHA
5. Expand educational opportunities for future homeowners: Increase outreach and funding of existing programs.	2024 MCHA
6. Create intentional planned developments: Design needed housing developments with functionality, connectivity, and affordability in mind.	2024 MCHA
7. Become investment ready: Establish policies, practices, and partnerships to prepare for future housing investment and development.	2024 MCHA
8. Plan transportation routes to enable future development, reserve rights-of-way in advance, and build with development as it occurs.	2017 HDS
9. Require a minimum amount of street connectivity to enable efficient service by fire and police. Limit the number of cul-de-sacs and dead-ends permitted.	2017 HDS
10. Growth should be contiguous to existing development to reduce the amount of infrastructure required.	2017 HDS
11. Be consistent with the Future Land Use Map contained in the Comprehensive Plan.	2017 HDS
12. Reinforce public features and amenities to encourage private market action.	2017 HDS
13. Maintain the housing stock in a good state of repair.	2017 HDS
14. Target property maintenance initiatives on properties with moderate infractions.	2017 HDS
15. For any structures that cannot be rehabilitated, the parcels should be targeted for infill development that respects the character of the surrounding neighborhood in terms of use, style, and density.	2017 HDS

Table 4.6b: Housing Recommendations (Continued)

Housing Policy/Strategy	Source*
16. For historic neighborhoods, continue to seek state assistance and historic status for neighborhoods of potential significance.	2017 HDS
17. Reinforce public features and amenities to encourage private market action.	2017 HDS
18. Often neighborhood deterioration occurs, in part, because of compatibility issues with adjacent land uses. These compatibility issues should be explored and the impacts should be mitigated through relocation of the use or an improved buffer between the land uses.	2017 HDS
19. Targeted land assembly and appropriate infill redevelopment.	2017 HDS
20. Target rehabilitation programs to blighted areas with the highest priority given to those homes with structural issues and a lower priority given to homes with aesthetic issues only.	2017 HDS
21. Target areas with high concentrations of vacant or underutilized land for acquisition, redevelopment, and/or rehabilitation.	2017 HDS
22. Solicit competitive proposals from the development community to generate the best reuse/redevelopment plan for strategic redevelopment opportunities.	2017 HDS
23. Consider an expedited review process for infill and redevelopment projects led by the private market.	2017 HDS
24. Explore creative financing and program applications to create a positive and concentrated impact on a neighborhood.	2017 HDS

**Wording is cited from some previous planning documents for consistency. For more detailed information, visit the referenced source.*

Guiding Principle: Support attainable housing options through partnerships, policy, and public incentives.

Base policies on the understanding that delivery of attainable units at lower price points requires public or community-based assistance to achieve economic feasibility. The 2024 Muscatine Submarket Analysis of the Muscatine County Housing Market Analysis identified significant gaps in housing availability across several income ranges. Recommendations include:

- **Update regulations to align with the Future Land Use Plan.** Adjustments to zoning regulations should encourage moderately priced housing forms in new developments and on infill lots. These forms include small lot single-family development, duplexes or two-unit structures that may include an owner-occupant, and smaller townhomes or rowhome structures.

- **Review and update ordinances and building codes, where possible, for barriers to housing diversity.** Traditional zoning ordinances value low density and separation of different land uses. The possibility of tiny homes, accessory dwelling units, lot sizes narrower than 50 feet in width, or other housing types should not require special approvals in most residential districts.
- **Coordinate with private developers to discuss barriers to building mixed-income developments.** Developers often have the best insight on the market, and can help identify issues with being able to provide lower price points. Often, this requires pooling funds from many sources for the greater good of the community. The public and private sectors should work together to identify additional barriers, and create a plan for how to overcome them.
- **Accommodate innovation.** Policy should encourage and moderate the risks of non-conventional or emerging forms of residential development that accommodate emerging markets but are unfamiliar to many conventional builders and developers.
- **Grow the number of affordable, builder-ready lots.** By making more land available for development, the community can attract builders and encourage the construction of housing at a lower cost. The cost to bring a lot up to "builder-ready" standards can significantly increase the price of the final product.
- **Build partnerships to share development risk.** The private market cannot meet the cost to build new at an affordable price point alone. Partnerships between private developers, government entities, and/or non-profit organizations will be necessary.
- **Continue to invest in first-time home-buyer programs.** Investment in first-time home-buyer programs helps Muscatine attract and retain young professionals and their families. These programs make homeownership more accessible by reducing financial barriers, such as down payments and closing costs.
- **Establish home buying incentives for target sectors.** These sectors could include education and health care workers. Incentives may include downpayment assistance and/or closing costs. These incentives may be organized by Collaborate Muscatine to incorporate their effort specifically targeting households in the 25 to 40 age range. Those most active in the workforce and most likely to have children enrolled in Muscatine schools, strengthening the labor force and community institutions.

Guiding Principle: Offer a range of housing types to accommodate workers and residents in all stages of life.

Young families and independent and active older adults in Muscatine each seek settings that provide them with the features they need in their stages of life. The 2024 Muscatine Submarket Analysis identified need for all housing types, including senior housing. Recommendations include:

- **Regularly review recent housing studies and update when necessary.** Recent housing studies done in Muscatine and Muscatine County help understand the underlying causes of housing shortages. Consistently reviewing recent housing studies ensures that the community tracks its progress on the goals, policies, and strategies, and can help identify the right time for necessary updates.

- **Consider Universal Design Standards for at least a portion of all units within a more substantial project or subdivision.** Closely tied to accessible design, Universal Design means that every aspect of a home from the bathroom to the garage is more convenient and comfortable to use for every individual, not labeled by age or ability.
- **Increase the availability of rental units at all price points.** In order to attract and retain a diverse population, Muscatine should strive to increase the availability of rental units across all price points. A wider range of rental options ensures that young professionals, families, and seniors can all find housing that meets their needs and budgets. A well-balanced rental market enhances community stability and can help prevent housing shortages, reducing financial strain on residents.
- **Encourage incentives for large scale projects to incorporate accessible design standards into at least a portion of units.** The City should review its codes as they relate to housing. Accessible design standards include features that are difficult to add later. Therefore, homes can easily be adapted for aging or physical disabilities and should be considered as requirements in certain developments.
- **Use data from the most recent Housing Submarket Analysis to develop and encourage policy that provides mixed-use neighborhoods.** Flexibility for mixed-use areas is integrated into the Future Land Use Map. Integrating complementary uses can help encourage activity at various times of day, increasing the security, vitality, and number of people using public spaces. Mixed-use developments also allow residents in them to receive some or all of their necessary goods and services without needing to drive. Policy should not discourage integrating services near and within neighborhoods.
- **Enhance mobility by expanding housing options.** Mixed-use neighborhoods provide walkable access to schools, parks, and essential amenities while offering retirees convenient, low-maintenance living. A diverse housing supply, including apartments, townhomes, and single-family homes within a neighborhood, ensures that residents can find suitable housing as their needs change over time.
- **Increase housing options for aging adults.** Adults over the age of 55 are the fastest-growing age cohort in Muscatine. To accommodate for their growth, and open up existing units for the next generation, new options should be made available.

Guiding Principle: Grow neighborhoods that create connected communities and not secluded enclaves.

As Muscatine continues to grow into the neighborhood growth areas, the connection between the new neighborhoods and the existing community are vital. Neighborhoods should have several access points and allow for traffic, pedestrians, and bicyclists to move throughout them. Recommendations include:

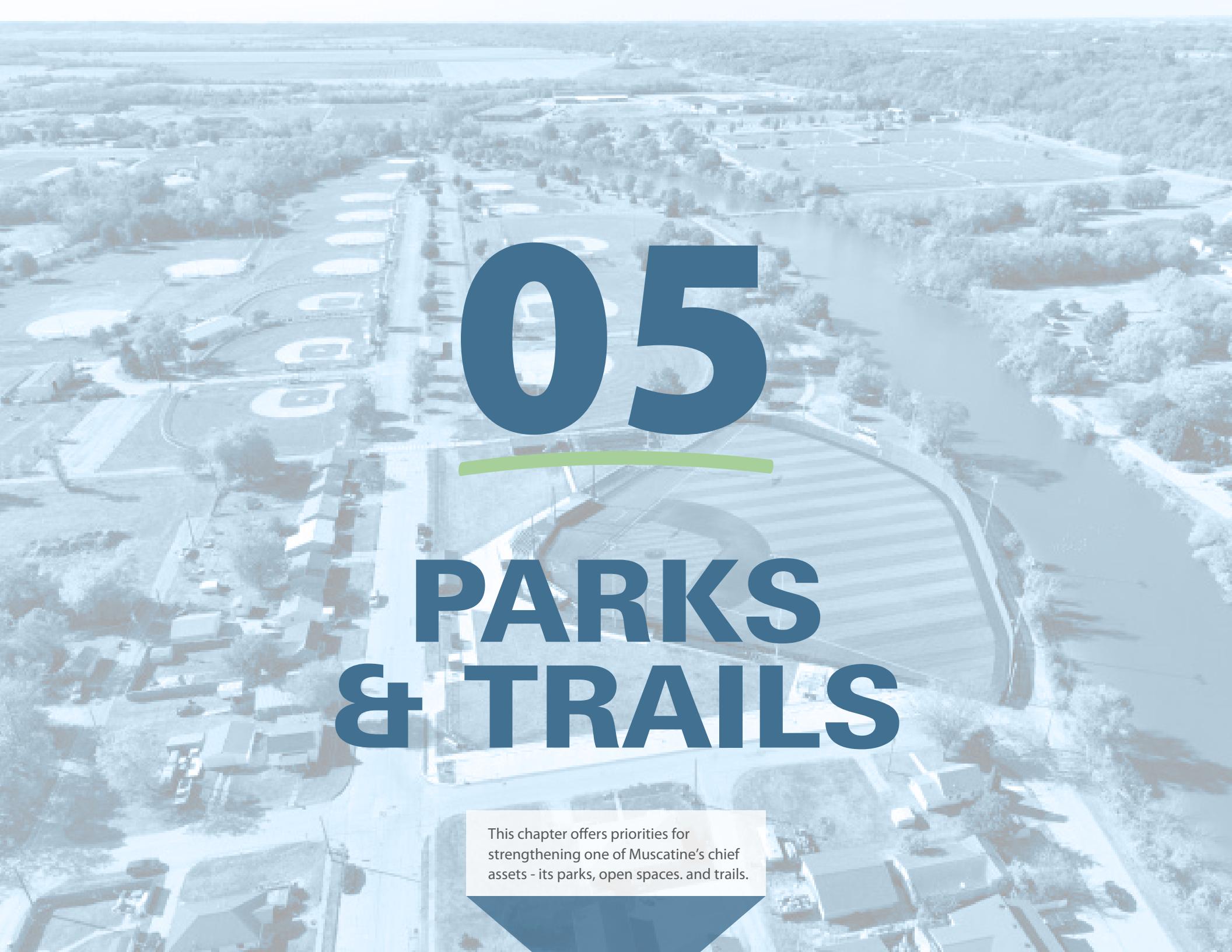
- Develop policy and strategies for infill development, ensuring incentives match needs/costs.** Demolitions often result in vacant lots that add to other vacant lots in the city that have not been developed for various reasons. A portion of new housing options to accommodate needs or to replace dilapidated housing should happen on these vacant infill lots. Infill development takes advantage of existing infrastructure, helps increase property values, and stabilizes neighborhoods.

- Prioritize infill development by creating streamlined approval processes for infill development proposals.** Infill development makes better use of existing infrastructure while addressing housing needs efficiently. By reducing hurdles, the community can encourage builders and developers to revitalize underused land, creating new housing options without the added costs of lot development.
- Follow the Future Mobility Plan in development of new and growth of existing neighborhoods.** Connection throughout and between neighborhoods is important for emergency vehicles and the general feeling of a community. Developments should limit use of cul-de-sacs and dead ends.

Guiding Principle: Have quality existing neighborhoods with support to encourage reinvestment, conservation, and enhancement of existing housing.

Muscatine's housing stock is aging, largely because Muscatine is such a historic community. Muscatine's oldest homes are more attainable from a price perspective than other parts of Muscatine. Recommendations include:

- Complete studies of core neighborhoods.** Specific neighborhood studies should identify where maintenance and rehabilitation funds can be most effective. These neighborhoods may benefit from already installed infrastructure and can have a similar home value on a per acre basis as new neighborhoods.
- Incentivize investment in rehabilitation of existing homes.** The existing housing stock in Muscatine is the lowest-cost housing in the community. Investing in their rehabilitation ensures they remain safe, functional, and appealing for residents.
- Invest in neighborhood engagement programs.** Investing in effective neighborhood engagement programs involves partnerships of the City, residents, and non-profit groups. Consider developing formal neighborhood associations that can help lead outreach and build social connections.
- Create micro reinvestment and enhancement programs for the most vulnerable neighborhoods.** Targeted reinvestment funding for neighborhoods in need can be more effective than broad, city-wide programs. Targeted reinvestment allows neighbors to see the results of new investment happening more easily than a city-wide program where the effects are more diffused.



05

PARKS & TRAILS

This chapter offers priorities for strengthening one of Muscatine's chief assets - its parks, open spaces, and trails.

05

Contents

The Parks & Trails Chapter includes the following elements:

- *Guiding Principles*
- *Existing Conditions*
- *Future Parks Plan*
- *Future Trails Plan*
- *Key Initiatives*

Guiding Principles

- *Adapt the recreation system with features that serve the community's changing needs.*
- *Ensure an inter-connected trail and sidewalk system, linking all major parks and community destinations.*
- *Maintain natural areas, parks, and open spaces that connect in and around the City, using trails as the primary routes.*
- *Celebrate and promote the parks and trail system as a signature asset to attract and retain people to the City.*

Existing Conditions

Parks and recreation spaces play an important role in community quality of life. Muscatine needs places that provide opportunities for exercise, relaxation, socialization, and connection with nature.

This chapter provides an overview of the parks and trails that are accessible to the people of Muscatine, and includes spaces that are managed by the City and affiliate organizations.

The City of Muscatine has 25 parks and recreation facilities. Figure 5.1 shows the overall acreage of parks in the City and compares it to the standards shared by the National Recreation and Park Association (NRPA).

Overall, the City exceeds the NRPA standard for acres of park space per 1,000 residents. Golf courses, the cemetery, and Pollinator Park are excluded from the calculations and represent ~274 acres in Muscatine.

Figure 5.2 shows the location of Muscatine's parks and service area rings. A quarter-mile to a half-mile ring is considered the range that residents are more likely to access a park by walking or bicycling. Barriers, such as Highway 61, influence the convenience of accessing parks. Most neighborhoods have convenient access to parks except for the northwest area near Mulberry Avenue.

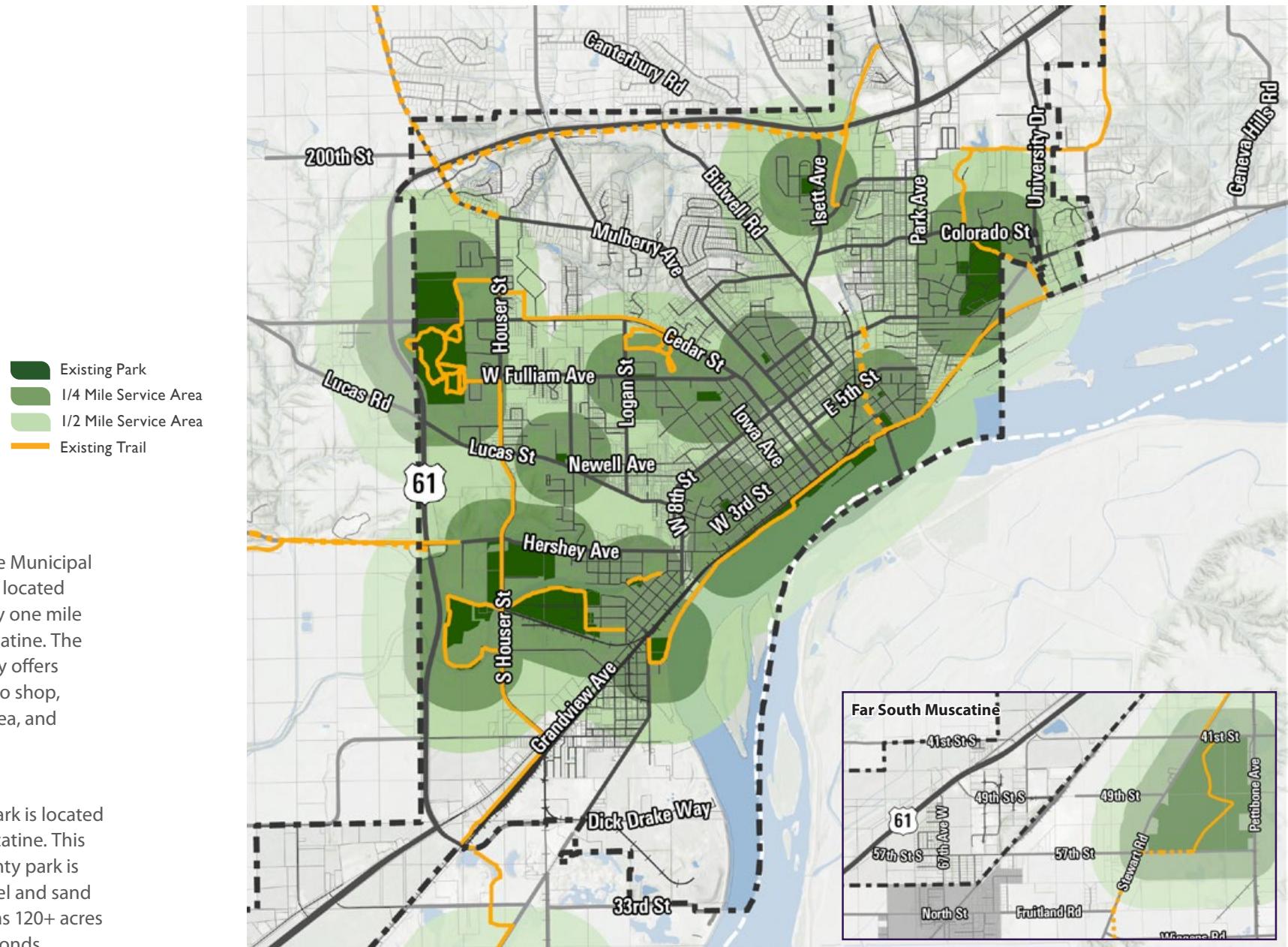


Figure 5.1: Park Acreage and Comparison

Existing Acreage	Acres Per 1,000 Residents	NRPA Standard (per 1,000 residents)
Community Park	~253	10.6
Neighborhood Park	~43	1.8
Mini Park	~11	0.5
Total	~308	12.9
		10 acres

Sources: NRPA, City of Muscatine, RDG

Figure 5.2: Existing Parks and Service Areas



Source: RDG Planning & Design, City of Muscatine

future parks plan

User preferences for parks and trails change throughout their lifetime and often follow lifestyle trends. A balanced park and recreation system should include both active and passive opportunities.



Policies

Key policies of the Plan include:

- Engage residents in the design of neighborhood and community parks.
- Reinvest into existing parks, adapting their program to serve residents. This may include changes in circulation, new equipment, and additional landscaping.
- Create park spaces that are diverse, accessible, and meet the needs of current and future residents.
- Ensure that developers dedicate land for parks and that the land provides functional space for the public use.
- Protect natural drainage ways and steep terrain for its ecosystem services, biodiversity, natural beauty, agriculture, and recreation.
- Identify maintenance costs for park improvements to ensure that investments are sustainable.
- Design a unified signage system as set forth in the adopted Wayfinding Plan.

Priorities

The Plan includes recommendations for improving individual parks shown in Figures 5.3a-5.3c. More detailed study is necessary to fully understand each park's unique needs. A key priority of this Plan is to **prepare a Parks & Recreation Comprehensive Plan**. The City should initiate a

Parks & Recreation Comprehensive Plan that inventories the condition of each park, ADA accessibility, and replacement needs. The plan should also include benchmarking standards to other communities and designs for parks and trails enhancements. Launching this plan should occur before any new parks are incorporated into the system.

Implementation Tools

- **Conservation easements.** Conservation easements are legal mechanisms for landowners to place voluntary restrictions on the future use of their land.
- **Public acquisition.** In certain instances, the City may have the opportunity to acquire land in sensitive flood or drainage areas.
- **Subdivision regulations.** Regulations can require buffers, typically maintained in outlots that work with vegetation to improve water quality and water management. These preserved areas may be able to double as community parks or gathering spaces.

Figure 5.3: Park Priorities

	Park Name	Schedule			Priorities
		<10 Years	10-20 Years	20+ Years	
1	Brook Street Park 0.4 acres			●	Replace Playground
2	Deep Lakes Park Owned by County	Owned by County			
3	Discovery Park Owned by County			●	Owned by County
4	Duncan Park 2 acres	●	Decommission Park		
5	Eversmeyer Park 1.9 acres		●	●	Replace Playground Enhance Shelter Add Water/Electric
6	Fourth Street Park 1.9 acres	●		●	Replace Playground Add Shelter
7	Fuller Park 53 acres	●	●	●	Improve Parking Lot Improve Stormwater Management Update Restrooms Continue Trail Connections
8	Greenwood Cemetery 80 acres	●	●		Improve Water Utility Infrastructure Add Columbarium Erosion Management Complete Chapel Maintenance
9	Iowa Field 5.6 acres			●	Implement Stormwater Basin for Flash Flood Relief
10	Kent-Stein Park 66 acres	●	●	●	Expand Maintenance Building Add Miracle Baseball Field Add Trail Connection to Taylor Park Renovate Slough and Bank Replace Restroom/Concessions

Figure 5.3b: Park Priorities

	Park Name		Priorities		
		Schedule	<10 Years	10-20 Years	
11	Longview Park 2 acres		●	●	Replace Fence/Lighting Reforestation
12	Lucas Street Park Owned by Utility 2 acres		●	●	Replace Baseball Fields Improve Shelter Update Parking
13	Mad Creek Greenway 1.1 acres		●	●	Replace Trail Connections to River Continue Trail Connections
14	Mark Twain Overlook Owned by State 3 acres		●	●	Acquire from the State Prepare Master Plan for Site
15	McKee Park 9 acres		●	●	Prepare Park Master Plan Enhance Natural Areas
16	Municipal Golf Course 164 acres		●	●	Replace Clubhouse Prepare Master Plan for Course
17	Muscatine Dog Park 6 acres		●	●	Add Restroom Continue Trail Connections
18	Soccer Complex 39 acres		●	●	Expand Maintenance Facility Upgrade Concessions & Admin
19	Musser Park 11 acres		●	●	Improve Stormwater Management Replace Playground Replace Skate Park

Figure 5.3c: Park Priorities

Park Name	Schedule			Priorities
	<10 Years	10-20 Years	20+ Years	
20 Oak Park 6 acres	● ● ●			Replace Shelter Improve Stormwater Management Update Restroom ● Replace Playground ● Add Splashpad
21 Riverside Park 31 acres	●	●		Implement Riverfront Plan
22 Taylor Park 3 acres				Continue Maintenance
23 Weed Park 64 acres		●		Prepare Park Master Plan ● Upgrade Aquatics Center
24 Woodland Park <i>Proposed New Park</i> (see page 78) ~38 acres	● ● ●			Property Aquisition (<10 years) Commission Park (<10 years) Continue Trail Connections (<10 years) Prepare Park Master Plan (<10 years)
25 MUSCO Sports Center and the Dome ~3 acres	●			Complete Facility (2025) Continue Maintenance
26 Kruse Memorial Park	●			Complete Facility Continue Maintenance

Muscatine boasts an exceptional park system which should continue evolving to meet emerging trends.

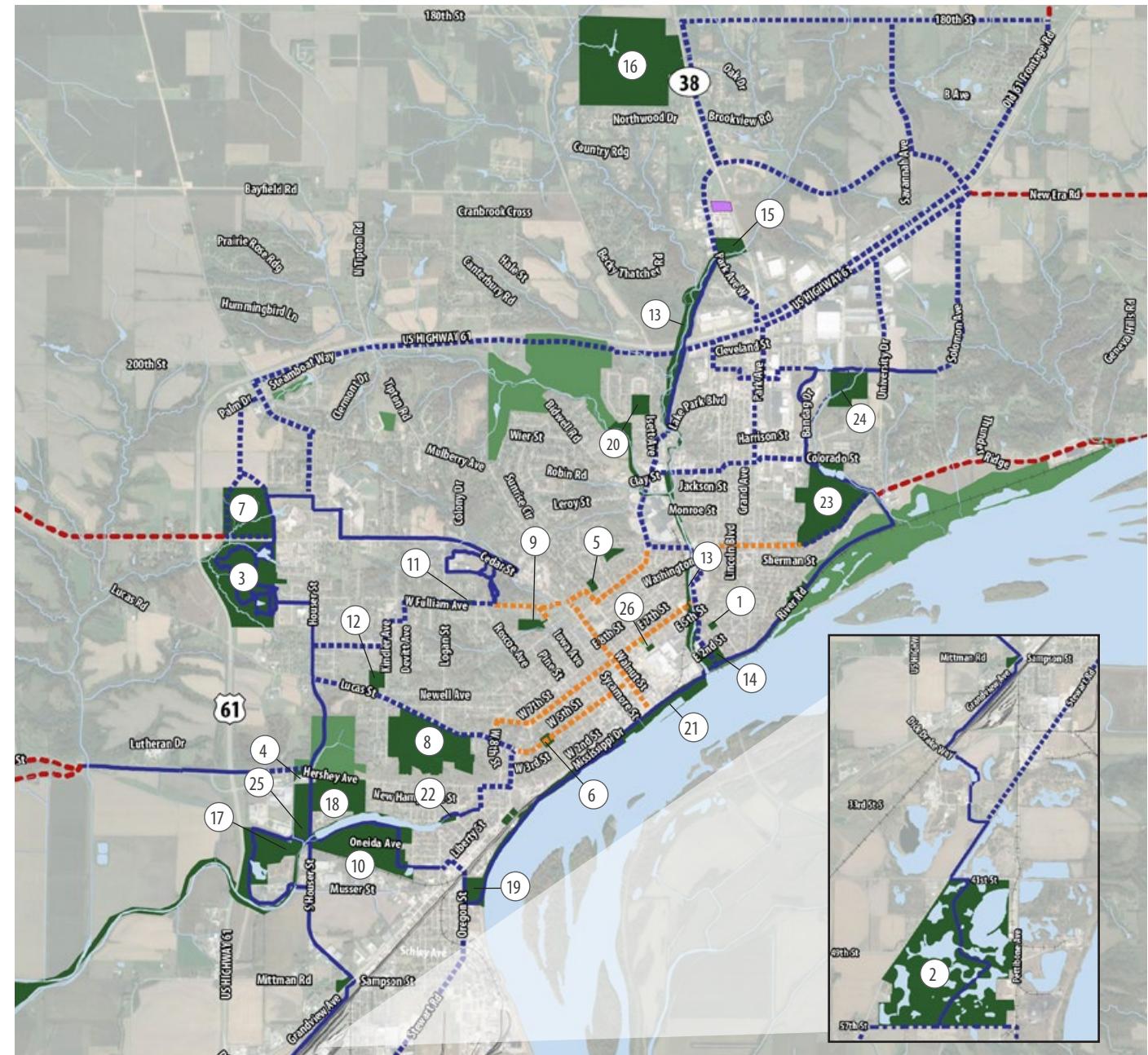
Growing enthusiasm for soccer and pickleball in Muscatine highlight the opportunity to enhance and expand recreational spaces.



Figure 5.4: Future Parks Plan

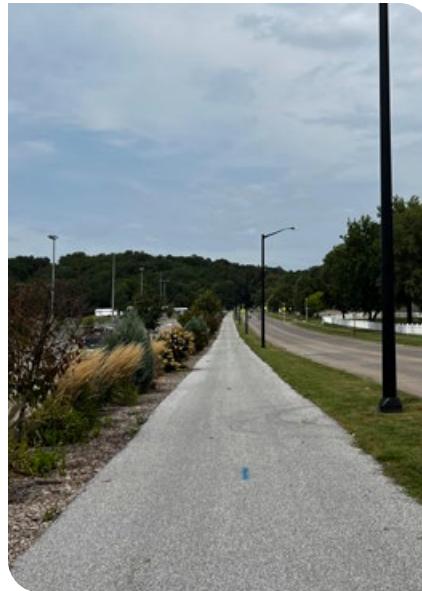
- 1 Brook Street Park
- 2 Deep Lakes Park (County Park)
- 3 Discovery Park
- 4 Duncan Park
- 5 Eversmeyer Park
- 6 Fourth Street Park
- 7 Fuller Park
- 8 Greenwood Cemetery
- 9 Iowa Field
- 10 Kent-Stein Park
- 11 Longview Park
- 12 Lucas Street Park
- 13 Mad Creek Greenway
- 14 Mark Twain Overlook
- 15 McKee Park
- 16 Municipal Golf Course
- 17 Muscatine Dog Park
- 18 Muscatine Soccer Complex
- 19 Musser Park
- 20 Oak Park
- 21 Riverside Park
- 22 Taylor Park
- 23 Weed Park
- 24 Woodland Park
- 25 MUSCO Sports Center and the Dome
- 26 Kruse Memorial Park

- Existing Park
- Proposed Park
- Other Greenspace (Golf/Cemetery)



future trails plan

The City of Muscatine maintains over 13 miles of paved multi-use trails. Connecting individual trail segments together will begin to form a network where users can choose different routes and access multiple locations in the community.



Trail Demonstration



Improved Pathway Demonstration



Advisory Shoulder Demonstration

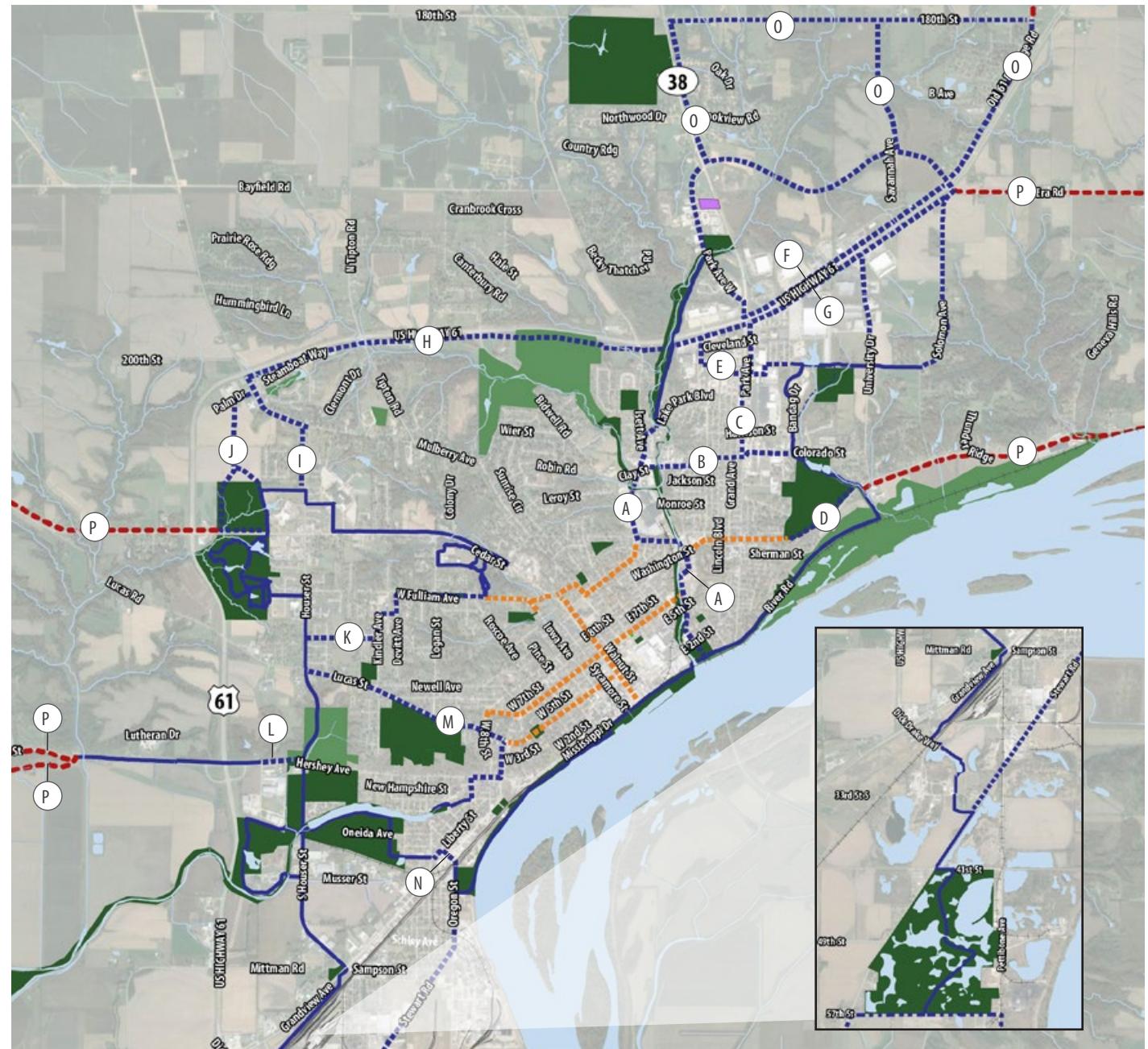
Figure 5.5 identifies a complete network of trails and include various types of application, including:

- **Trail.** Trails should be 10' minimum and should include mile-markers so users are aware of their location in the event of reporting an emergency.
- **Proposed Improved Pathways.** For the purpose of this plan, "Improved Pathways" are intended to be shared routes that require a custom design to support slower modes of transportation - pedestrians and bicyclists. The amount of right-of-way is often constrained, making the design of a trail or wide sidewalk challenging. These pathways are most often located near downtown.
- **Advisory Shoulder.** For the purposes of this plan, Advisory Shoulders are roads that have a 6' (minimum) shoulder, up to 10'. This supports slow moving vehicles, including tractors and bikes.

Policies

- Create a network of trails by linking them together and connecting them to destinations.
- Implement the Bike & Pedestrian Plan (2022).
- Ensure that trails are a minimum of 10' wide.
- Provide parking for trail users near key access points.

Figure 5.5: Future Trails Plan



Source: RDG Planning & Design

Priorities

The Future Trails Plan identifies a complete network of pathways that offers choices for users. Constructed and expanded trails should contribute to providing a safe network throughout the community. Building the network will take time and will be built incrementally.

Currently, trails are located in the right-of-way and separated from the road. Users prefer this design, yet to achieve a complete network, other facility types must be considered, such as bike lanes.

Top priorities for Muscatine to complete the local trail network include:

- **Connect Kent-Stein Park to Musser Park.** Completing the trail segment (~2,000 feet) between Kent-Stein Park and Musser Park will connect the City's premier trail with its premier park, while also connecting it to the western trail network.
- **Complete the Mad Creek Greenbelt Trail.** Completing the Mad Creek Greenbelt Trail will create a north/south spine route that connects Riverfront Park to areas north of Highway 61.
- **Complete the Highway 61 Trail.** Building a trail along Highway 61 from Mad Creek Trail



to University Drive will improve access to businesses (commuters and patrons). Extending the trail along University Drive to Keener Road would close a loop in the trail network.

- **Add Amenities to Trails.** Adding mile markers, benches, trail heads, water fountains, trash cans, and lighting are all features that should be considered for new and old trails. The Parks & Recreation Department should budget for these amenities as they see appropriate.
- **Complete the Cedar Street Path.** Adding a wide path along Cedar Street will improve the connection between downtown and Discovery Park, which also

connects to the western trails. The condition of the sidewalks along Cedar Street are in various condition, have ADA issues and obstructions, and are sometimes missing. Any street improvement project should include a new sidewalk and consider rebuilding the street to modify the placement of the curb, lane striping, and burying overhead utilities.

Projects

Many trail segments are proposed in this plan and are equally important to achieving a complete network. These trail segments are identified on page 73.

- Mad Creek Greenbelt Trail.** Trail that connects Riverside Park to Highway 61. Project may need to be built in phases.
- Clay/Colorado Neighborhood Trail.** Sidepath along Clay and Colorado Streets that connects the Mad Creek Trail to Weed Park.
- Park Avenue Trail.** Sidepath along Park Avenue that extends to the proposed Highway 61 Trail.
- Washington Street Trail.** Trail along the south edge of Weed Park, following Washington Street and connecting to the Running River Trail.
- Running River Trail Extension.** Extension of the Running River Trail that follows Ford Avenue from the Bridgestone Bandag Learning Center, crossing at Park Avenue, and continuing west to 2nd Avenue, and then follows 2nd Avenue north to close a loop with the Highway 61 Trail.
- Highway 61 Northside Path.** Continuous path that follows the northside of Highway 61 between Park Avenue and New Era Road. The alignment may shift to connect to business frontages or remain parallel to the highway.
- Highway 61 Trail Phase 1.** Trail that follows the southside of Highway 61 between Park Avenue and New Era Road.

Figure 5.6: Park Avenue and Cleveland Crossing Node



New pathways setback from Park Avenue with connections to business entrances.

- H. **Highway 61 Trail, Phase 2.** Trail along Highway 61 between Park Avenue and Mulberry Avenue.
- I. **Saulsbury Trail, Phase 1.** Widening of the sidewalk along Mulberry Avenue and Houser Street, ultimately connecting to the High School.
- J. **Palms Drive Sidepath.** Trail that connects Mulberry Street (proposed Saulsbury Trail) and future west growth area. The trail should include a connection to the High School.

Reference names for trails were created by the author and are not considered the formal name.

- K. **Dawson Street Connection.** Widened pathway between the Houser Street Trail and Kindler Avenue that connects the Junior High to the trail network.
- L. **Hershey Avenue Trail.** Complete the 1,200' gap from Houser Street to Newcomb Boulevard.
- M. **Lucast Street Sidepath.** Trail along Lucas Street that connects the existing Houser Street Trail to Kent-Stein Park by way of Main and Mill Streets.
- N. **Musser Park to Kent-Stein Park Trail.** Trail from Kent-Stein Park, beginning at Roby Avenue to Liberty Street to Warren Street,

crossing Grandview Avenue and ending at Musser Park. This trail should include improved railroad crossings for pedestrian and bicycle safety.

- O. **Northeast Growth Area Trail Network.** Ensure that development proposals envision a trail network that connects into the City's overall trail system.

- P. **Advisory Shoulders.** Improvements to rural roads should include a 6' (minimum) shoulder up to 10'. This supports slow moving vehicles, including tractors and bicyclists.

Q. Proposed Widened Sidewalks.

Recommendation is to widen sidewalks from 4' to 6-8'. These routes provide important east/west connections in the heart of the City and include:

- » 4th Street Widened Sidewalk. East/west connection between Mad Creek Greenbelt Trail and Lucas Street.
- » 5th Street Pathway. East/west connection with fewer complications than 4th Street.
- » 11th Street Pathway. East/west connection that ties together multiple proposed trails.

National Trail Network

The Muscatine Riverfront Trail is a component of two federally recognized trail systems, including:

- Mississippi River Trail.** Mississippi River Trail (US Bicycle Route 45) follows the Mississippi River from Minnesota to Louisiana.
- American Discovery Trail.** The American Discovery Trail crosses the nation from San Francisco to Delaware. The closest connection passes through the Quad Cities, Davenport and Bettendorf.

The Iowa Department of Transportation prepared several studies for the alignment of these trails and are included in the Iowa Bicycle and Pedestrian Long Range Plan (2020) and Iowa's Mississippi River Trail Plan (2003). Both identify routes for the overall system. Actions to complete the missing segments for Muscatine include:

- Connect to the Quad Cities with a trail.** The City should collaborate with the Quad Cities MPO and County to realize this project. The completion of this trail benefits the entire region of the State. Alternative routes to Highway 22 should be considered due to the roadway's constraints.

Figure 5.7: National Trail Network



Source: Adventure Cycling

- Design a trail route from Deep Lakes Park to the City of Burlington.** The alignment of the Mississippi River Trail is not formally designated beyond following the Mississippi River. This Plan supports any initiative by the State or supporting agencies to complete this project.

Regional Trail Network

More local regional trail initiatives that would benefit local recreation include connections to regional recreation areas and parks, including:

- Saulsbury Bridge Recreation Area
- Muscatine Izaak Walton League
- Deep Lakes Park
- Wildcat Den State Park
- City of Blue Grass

The City and trails committee should collaborate with the Quad Cities MPO and County to adopt a policy that any roadway improvements to corridors between the City and the aforementioned destinations include the design and construction of a advisory shoulders or a trail.

Key Initiatives



RIVERSIDE PARK

Riverside Park has been the focus of numerous studies, most recently in 2017 as an update to its original 1997 plan. As a signature destination, the park continues to draw visitors to the city, offering stunning river views and a variety of recreational activities. Ongoing enhancements will further strengthen its appeal, attracting more visitors for special events and boosting consumer spending at local businesses. Priorities include:

1. Completing the amphitheater by 2030.
2. Initiating design and construction of the Great Lawn.
3. Initiating design of the trailhead of Mad Creek Greenbelt and Running River Trail.

Key Initiatives



TRAIL SYSTEM

The Bike and Pedestrian Master Plan (2022) identifies a complete network of trails that connect neighborhoods and destinations. Priorities include:

1. Completing the Mad Creek Greenbelt Trail from Riverside Park to Highway 61 through phases.
 - » The north segment of the Mad Creek Greenbelt trail is planned as part of the reconstruction of Isett/Cypress project.
 - » Securing funding to connect trail to Isett/Cypress project
 - » The trail from 5th Street to the riverfront should be built as a premier segment of Muscatine's overall trail system that includes points of interest and public art.
 - » The confluence of the Running River Trail and Mad Creek Trail should include a new trailhead.
2. Connecting Kent-Stein Park to Musser Park and Taylor Park.
3. Completing Highway 61 Trail.

Key Initiatives



THE SLOUGH

The slough is one of Muscatine's urban water features that links Kent-Stein Park, Taylor Park, and Soccer Complex. The City should prepare a master plan for all improvements. Priorities include:

1. Improving the water quality to support recreation and fishing.
2. Improving the surrounding landscape and creating spaces to engage the water, such as fishing platforms, seating overlooks and educational spaces.
3. Building a trail around the slough that connects all of the parks and creates a continuous loop for recreation.
4. Assembling property along the northside of the slough to create unified public space between parks.

Key Initiatives



NEW WOODLAND PARK

The plan recommends creating a new nature park east of the Bridgestone Bandage Learning Center. The rolling landscape has a labyrinth of primitive pathways hidden in a forested area. The area's proximity to the Learning Center and Running Riv-Trail System make it an ideal location to formalize this trail system into a community park, similar to Brown's Woods in Des Moines, Iowa. Priorities include:

1. Adopting the land into the park system.
2. Preparing a Master Plan for the park.



06

FACILITIES

This chapter reports on known needs for public facilities, ensuring that future development is appropriately served.

06

Contents

The Facilities Chapter includes the following elements:

- *Guiding Principles*
- *Public Facilities*
- *Sanitary Sewer Service*
- *Water service*

Guiding Principles

- *Maintain facilities in a state of good repair to prolong the life of facilities and equipment.*
- *Grow with incremental extensions of infrastructure that limits added service costs per resident.*
- *Ensure that future subdivision growth, within and on the fringe of city limits, may be able to connect to future infrastructure.*
- *Responsibly invest in public facilities and infrastructure that strategically encourages private-sector investment.*
- *Deliver emergency services effectively, particularly for future growth areas.*

Existing Conditions

The scope of this comprehensive plan does not include a technical evaluation for each public facility and service, but rather identifies needs based on interviews with facility managers.

Future initiatives are identified for each facility and service and a schedule is provided for tracking purposes. In some instances, the Plan recommends additional study because the managers of those facilities recognize that a future study requires its own process and scope of services. Content in this chapter is organized by public facilities and utilities.

Public Facilities

Figure 6.1 identifies the public facilities managed by the City and Figure 6.2 shows their location. Facilities managed by the County and School District are excluded from Figure 6.1.

Generally, the City does not have any immediate needs for making substantial investments.

Utilities

Figures 6.3-6.5 identifies the existing service lines for sanitary sewer, water and stormwater. The maps show areas that require further investigation for improvement and possible origin locations for extending services into growth areas. The Plan does not provide a schedule for improvement, but rather acknowledges that facility managers will provide guidance to decision-makers for when projects should be commissioned.



Public Safety Building



Musser Public Library

Figure 6.1: Public Facility Future Initiatives

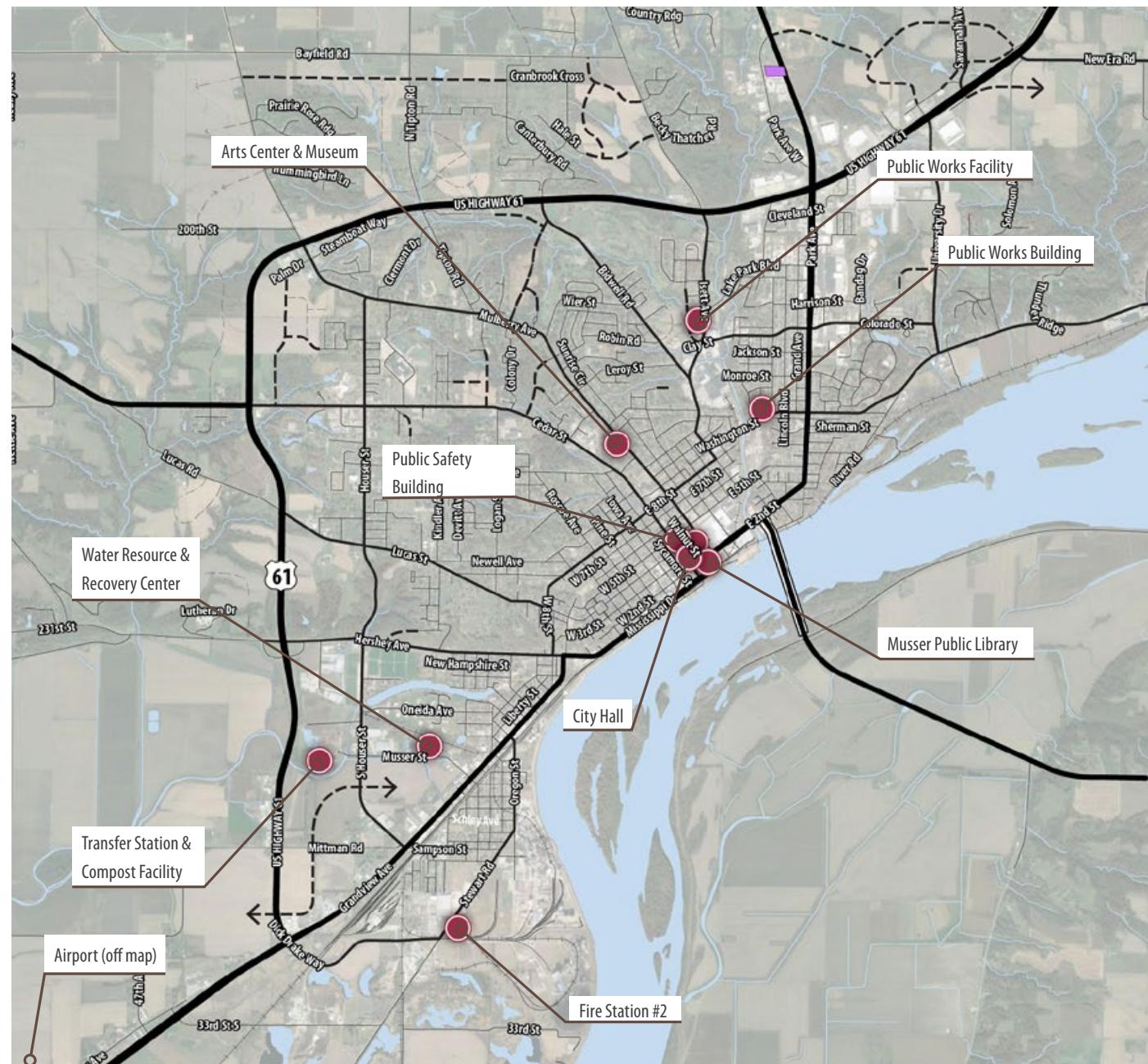
Facility	Schedule			Priorities	Notes
	<10 Years	10-20 Years	20+ Years		
City Hall 215 Sycamore Street	●			Prepare a space needs analysis to assess adequacy.	
Musser Public Library 408 E 2nd Street	●			Continue routine maintenance. The library opened in 2018. Implement plans for future outdoor patio.	
Public Works Building 1459 Washington Street			●	Continue routine maintenance	The Public Works Department has ~75 employees and 10 divisions, making it the largest city department.
Public Works Facility 1459 Washington Street			●	Continue routine maintenance.	
Arts Center & Museum 1314 Mulberry Avenue			●	Explore opportunities for expansion of space and/or services.	The Muscatine Art Center is funded in part by the Iowa Arts Council, a division of the Iowa Department of Cultural Affairs and the National Endowment for the Arts.
Public Safety Building					
Fire Station #1 312 E. 5th Street		●		The building (30,000 sf) supports police, fire, rescue unit and civil defense personnel.	
Fire Station #2 2124 Stewart Avenue		●		Continue routine maintenance.	
Future Fire Station #3 East of Mad Creek		●		As the City grows, the fire protection services should be studied to determine if a new fire station should be built to provide more coverage or replace an existing fire station.	
Transfer Station & Compost 1000 S. Houser Street			●	Continue routine maintenance.	
Water and Resource Recovery Facility 1202 Musser Street		●		Continue to update and implement the CIP as it relates to the Water and Resource Recovery Facility.	
Airport 5701 US-61		●		Continue to update and implement the CIP as it relates to the Airport.	
Possible Port of Muscatine	●	●	●	Collaborate with State, Regional and County to understand feasibility of the facility, and scenarios for ownership and operation of the Port of Muscatine.	

facilities

Figure 6.2 Public Facilities identifies the public facilities that are managed by the City of Muscatine. Other public uses within the community that are managed by other organizations include:

- Muscatine Community School District.** The Muscatine Community School District serves approximately 4,800 students, providing primary and secondary education to Muscatine, Fairport, Montpelier, and parts of the rural areas of Letts and Blue Grass. Since 2013, enrollment has dropped from about 7,600 students, a decrease of 2,800. The school district operates independently from the City, so this plan does not include recommendations.
- County Facilities.** The Muscatine County Courthouse, jail, and administration buildings are all located in downtown. Other county facilities include parks and wildlife areas. County facilities provide services to Muscatine residents, but are not maintained by the City, and thus this plan does not include recommendations.

Figure 6.2: Public Facility Map



sanitary sewer

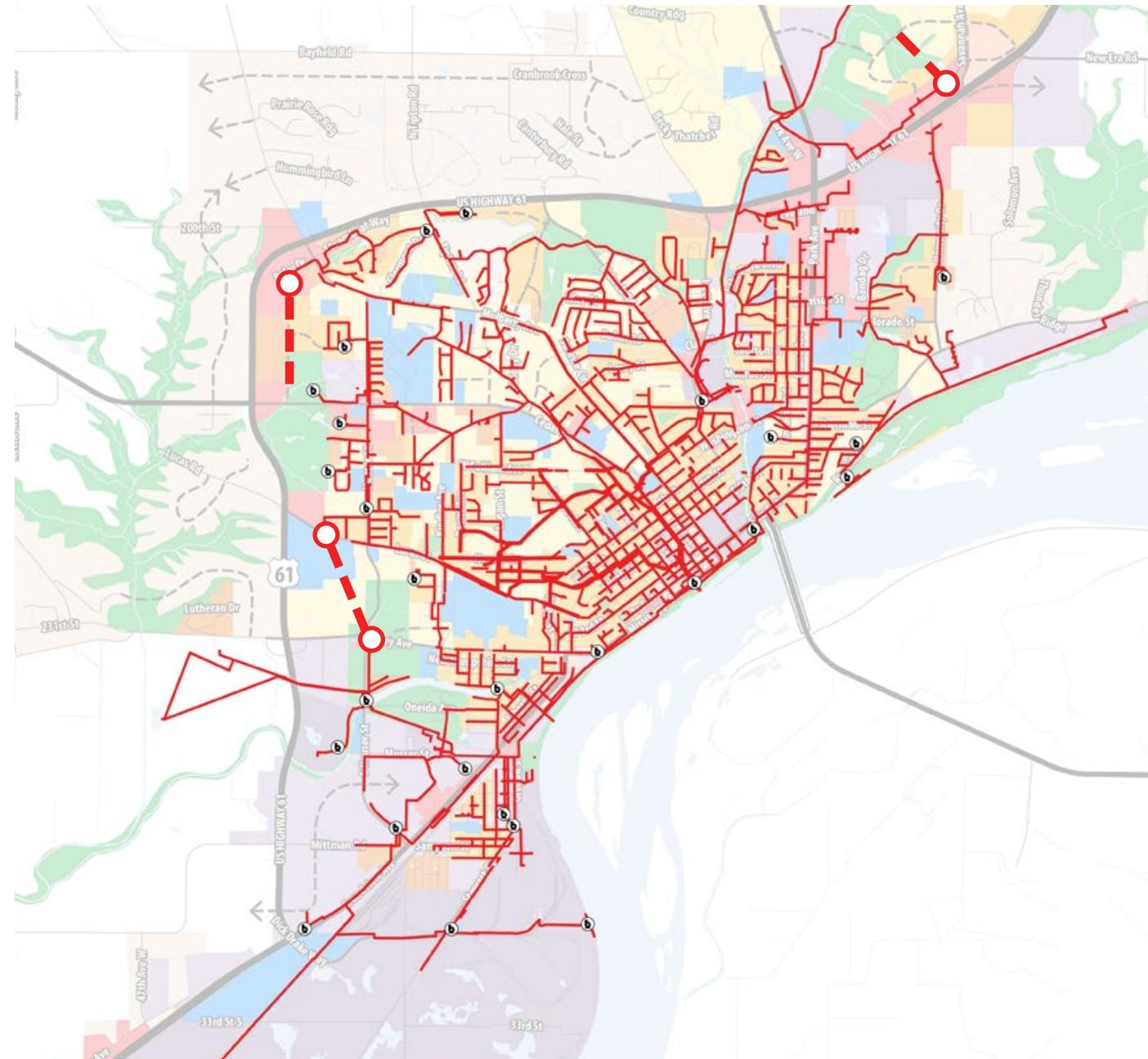
Figure 6.3 Sanitary Sewer Service Map shows existing sanitary sewer lines that serve the City of Muscatine.

The figure shows possible extensions of the system to serve future growth areas.

Policy recommendations for sanitary sewer service include:

- **West Growth Area.** Construct an interceptor within the Muscatine Slough watershed to minimize lift stations, which will allow for more growth.
- **Northeast Growth Area.** Update the feasibility study to extend services to the northeast growth area based on the land use plan and upon any proposed development. Hawkeye Engineering prepared an initial study of the "The North East Corridor Project" in 2014.

Figure 6.3: Sanitary Sewer Service Needs

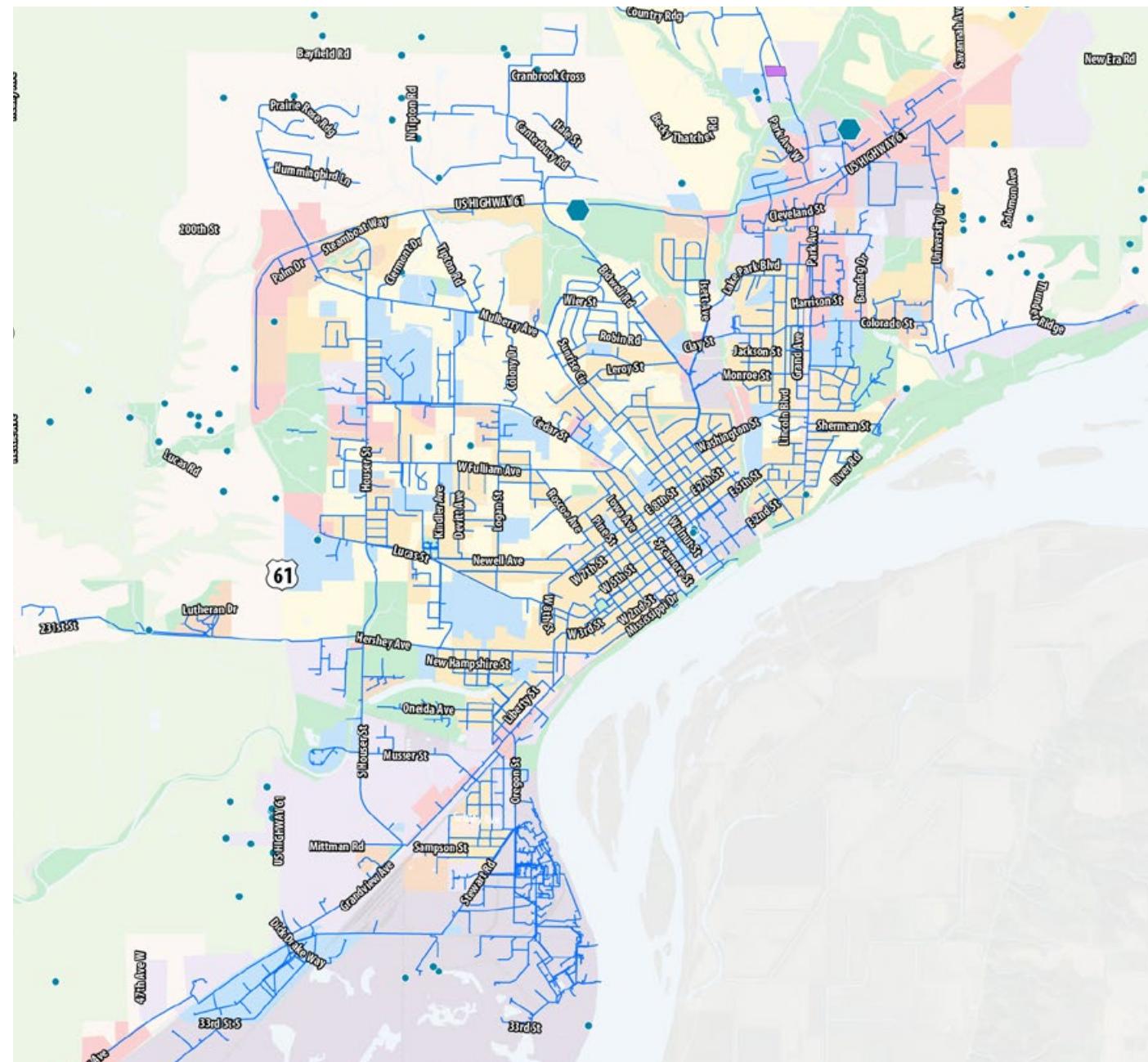


water service

Figure 6.4 Water Service Map shows existing water lines managed by Muscatine Power and Water (MPW), a non-profit water, electric and communications utility that serves ~13,000 customers.

The figure shows existing infrastructure, and future extensions will be determined by the MPW Board.

Figure 6.4: Water Service Needs



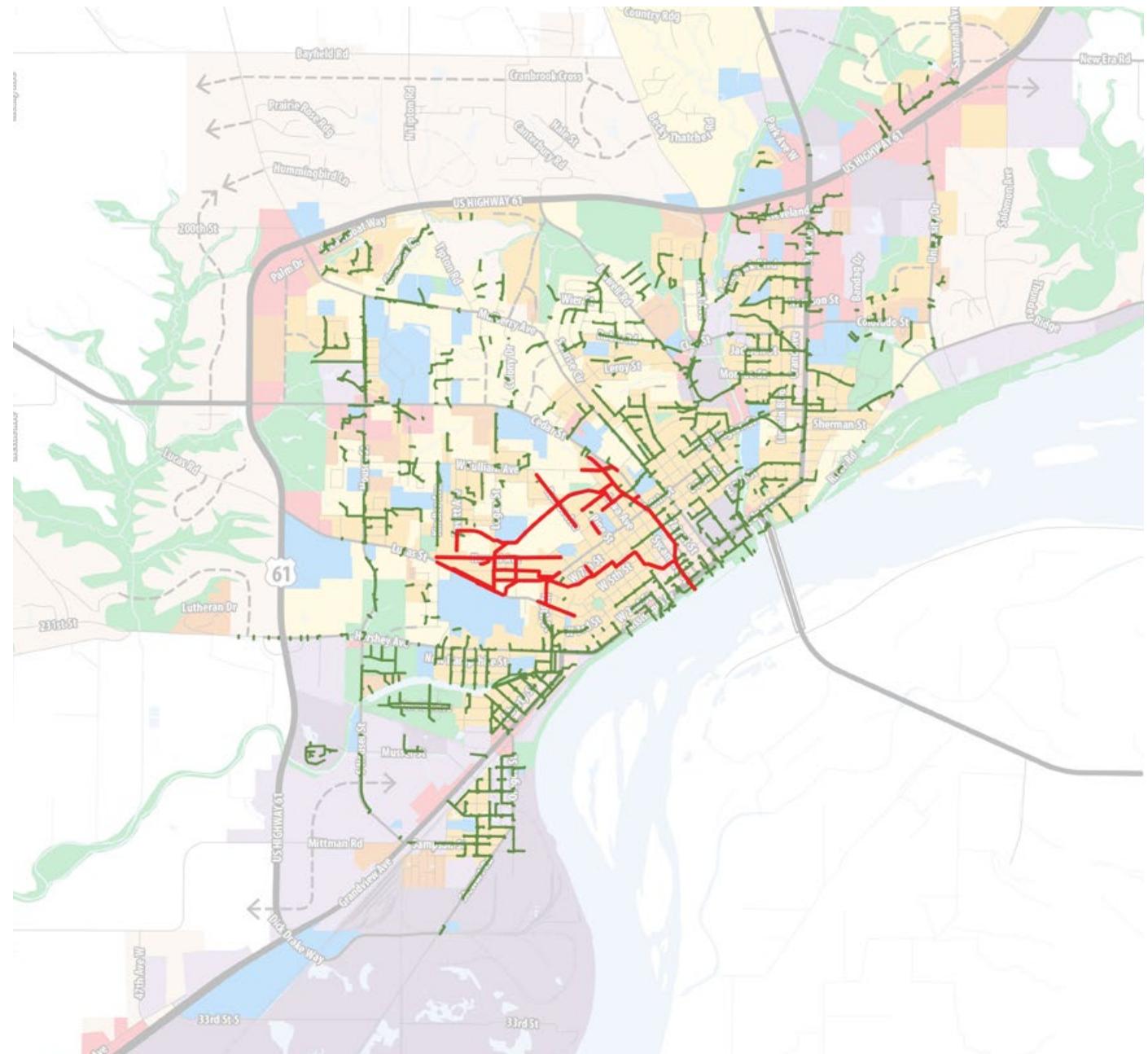
storm water

Figure 6.5 Storm Water Map shows existing lines. The Map identifies locations that reportedly experience issues during high rainfalls.

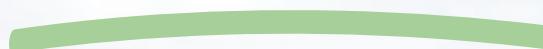
Policy recommendations for stormwater service include:

- **Prepare a stormwater management plan for the City.** Elements of the plan should consider methods for intercepting water before draining into the City's stormwater system.

Figure 6.5: Water Service Needs



A1



APPENDIX



Figure A.1: Environmental Constraints

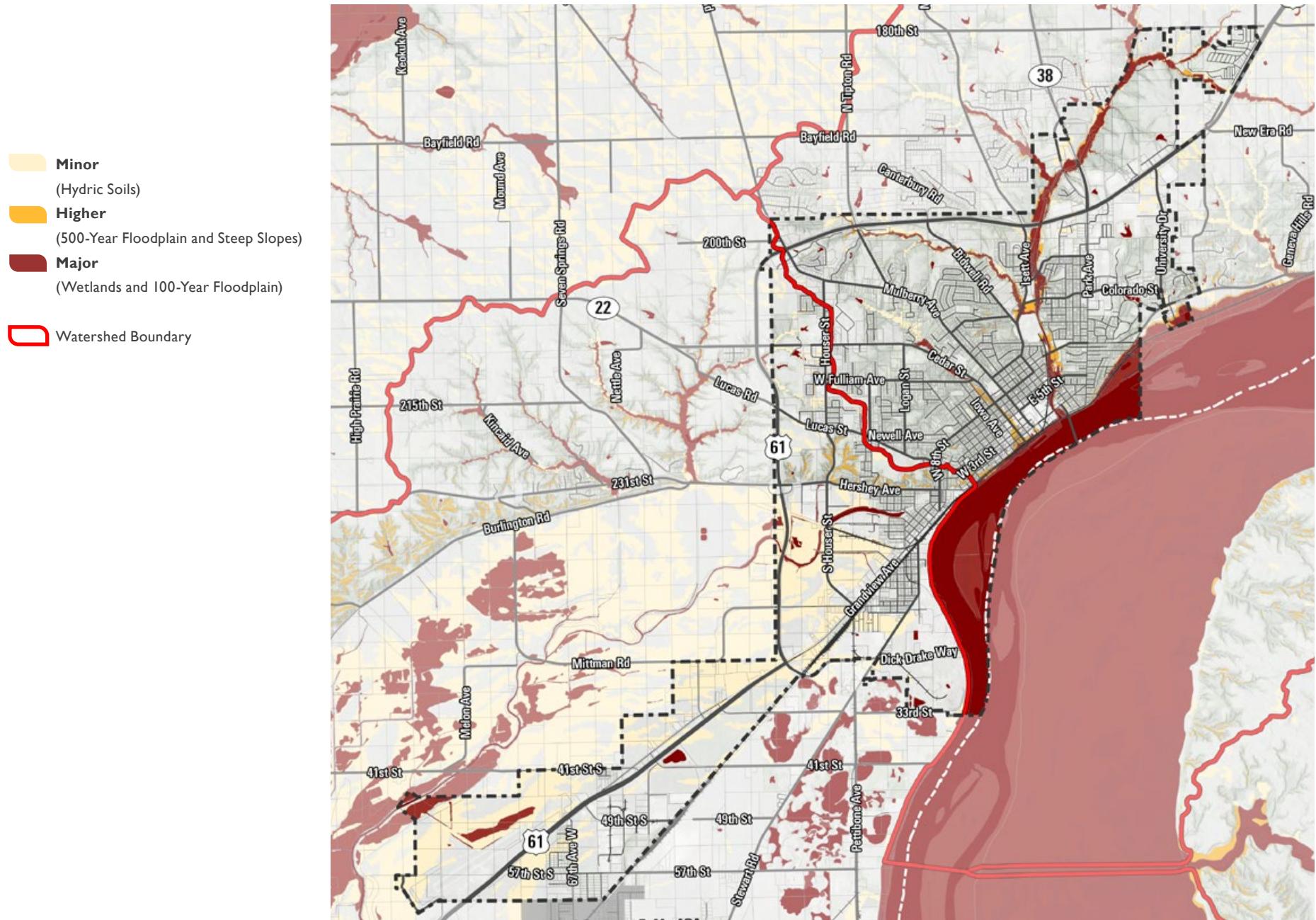


Figure A.2: Floodplain and Wetlands

- 500-Year Floodplain
- 100-Year Floodplain
- Regulatory Floodway
- Wetlands

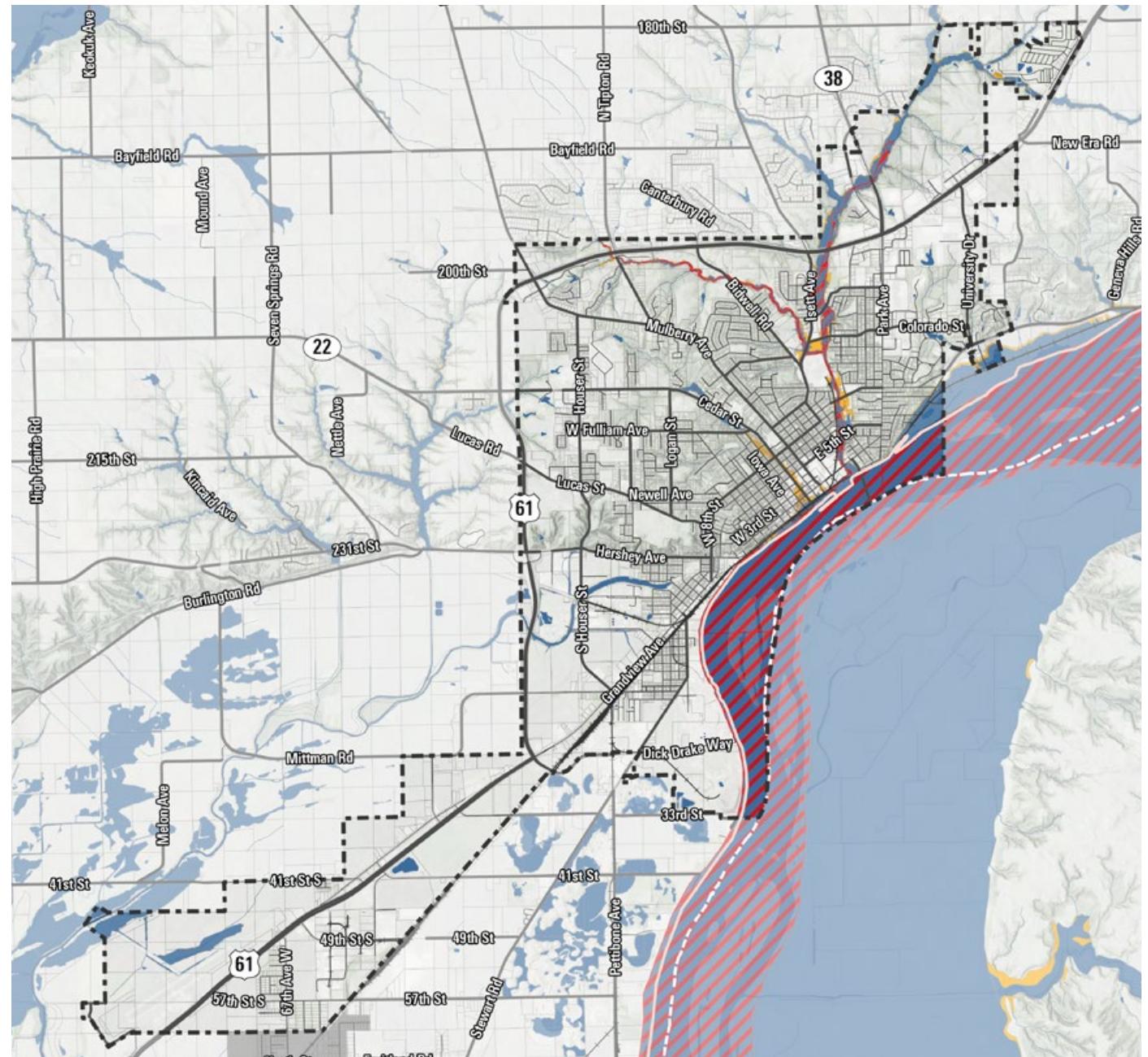


Figure A.3: Steep Slopes

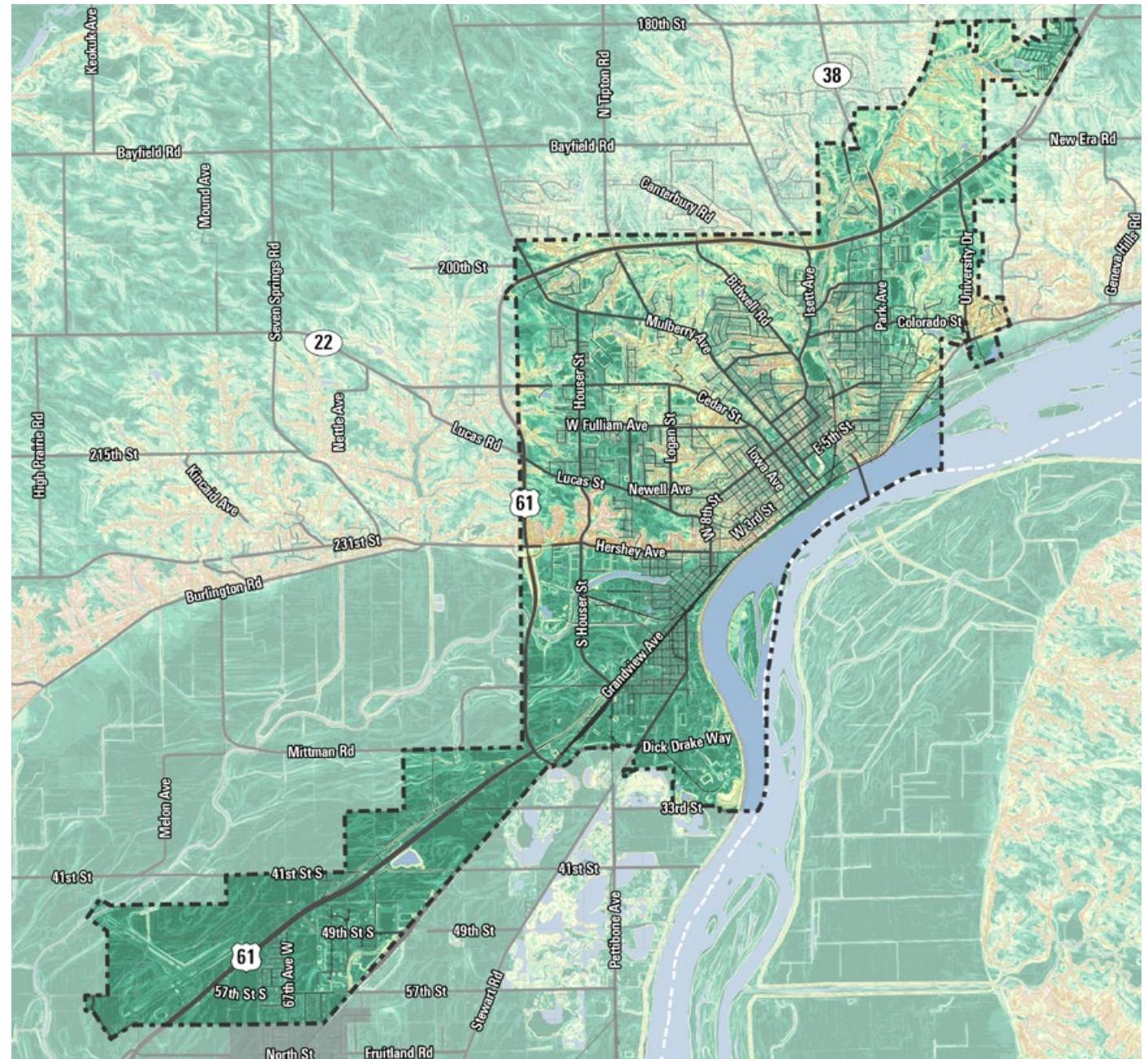
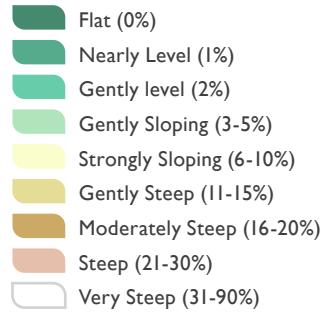


Figure A.4: Watersheds

