



# Smithville Transportation Master Plan

Draft | April 2022





Little Platte Trailhead North



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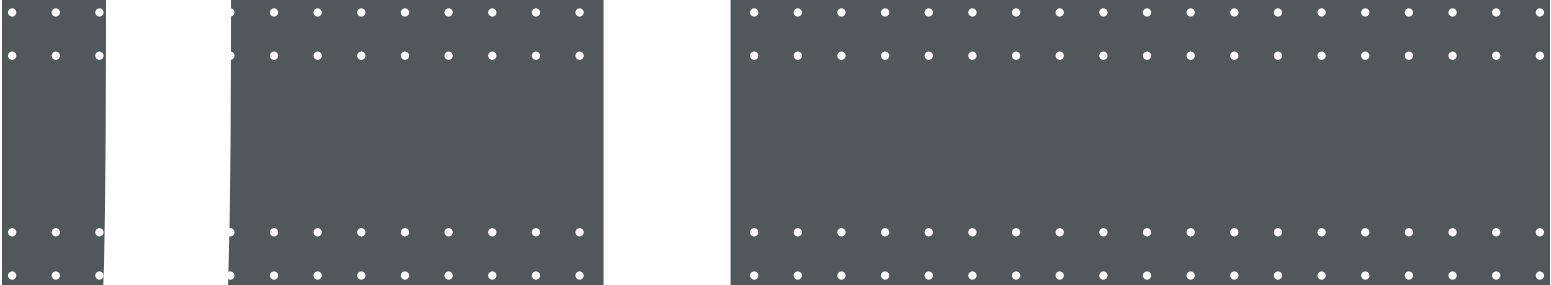
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# CHAPTER 01: INTRODUCTION

# 01





# Introduction

The Smithville Transportation Master Plan (TMP) sets the course for transportation in Smithville for the next 10 to 20 years. It outlines a future vision for community mobility and infrastructure, establishes guiding principles for network planning and investment, and provides recommendations for achieving this vision. This plan builds on the work of recent planning efforts including the Strategic Vision, Comprehensive Plan, and Parks and Recreation Plan. It is the result of collaboration and input from staff, elected officials, and citizens.

Smithville is a unique community of just over 10,000 located on the northern edge of the Kansas City metropolitan area in Clay County, Missouri. It has good access to major highways, significant recreational assets including Smithville Lake and several existing and planned trails, a thriving and walkable Main Street, strong schools, and both established and growing neighborhoods. It strives to be, as articulated in the Comprehensive Plan, “a modern community oasis designed for 2030”, a community that combines the best of small-town life with healthy economic growth and amenities.

## Why a Transportation Master Plan?

With Smithville’s significant growth over the past 15 years has come the need for greater strategic planning across all areas, including transportation and mobility, to ensure that city infrastructure and services can meet the demands of population and economic growth. The purpose of this TMP is to help Smithville make decisions, implement policies, and develop programs that will improve mobility for residents and visitors of all ages, abilities, and backgrounds. It addresses the needs of the transportation system’s multiple user groups including walkers, bicyclists, transit users, freight, and motor vehicles.

This Plan provides an overview of the current transportation network and outlines steps to improve connectivity and mobility for all. The Plan includes a summary of assets, goals, and strategies for use by city staff and public officials.



Comfortable walking conditions provide residents, visitors, and employees opportunities to explore downtown.



# Relationship to Other Plans

Smithville has undertaken several recent planning efforts that establish a vision, goals, and strategies for the community. This TMP builds on these earlier plans which are briefly summarized below:

## City of Smithville – A Modern Community Oasis Designed for 2030 (Vision and Strategic Action Plan-Adopted 2019)

The Vision and Strategic Plan for Smithville summarizes the planning process, vision, and strategic pillars that were developed for the City in 2019 through a significant community engagement process focused on defining a vision and priorities for the future. The Strategic Plan led to the development of both the city's Comprehensive Plan and the Park and Recreation Master Plan, both of which include principles rooted in the Strategic Plan.

## Comprehensive Plan 2030 (Adopted 2020)

The City of Smithville Comprehensive Plan 2030 illustrates a shared vision for the community's growth and development by outlining challenges facing the community, identifying and analyzing solutions, and providing guidance to local officials as they make decisions on where and how their city grows.

The Comprehensive Plan introduces the idea of establishing five distinct character areas throughout the City, including the North Residential Area, Downtown and Community Oasis Area, Hospital Bluff, US-169 Industrial Area, and US-169 South Area. Each Character Area has a unique set of conditions, vision, and opportunities to foster places to live, work, and play.

The Comprehensive Plan includes a transportation section that stresses the importance of balancing the vehicular roadway network with the multimodal, trail, and sidewalk networks to accommodate growing needs while still retaining the city's appeal. The plan recommends transportation efforts be guided by the need to:

- Ensure transportation networks can accommodate projected growth
- Enhance multimodal connectivity and continue to provide opportunities for people to explore, exercise, and engage in sustainable, healthy movement.
- Create additional multimodal transportation opportunities throughout Smithville to reduce reliance on vehicular travel.
- Improve US-169 experience through a series of dedicated gateways and placemaking efforts while ensuring new development along US-169 contributes to a high-quality corridor.
- Enhance the east-west roadway connections in Smithville, reducing reliance on US-169.

## Parks and Recreation Master Plan 2030 (Adopted 2021)

The Parks and Recreation Master Plan provides an in-depth analysis of Smithville's natural assets and strategies to maximize recreational options for those who live in Smithville and those who travel from around the region to enjoy the parks the city has to offer. The plan summarizes existing conditions of the city's parks and other recreational facilities. It also includes a 10-year growth plan and prioritization strategy.

This plan highlights the importance of public space. It includes suggestions for better connectivity through trails and other active transportation facilities where roads are not feasible, such as more redundancy in north-south routes and improved access between residential areas and schools.

## Complete Streets Design Guidelines (2022)

The Complete Streets Design Guidelines were developed as part of this TMP process and provide street design guidance for the city, developers, and others who impact the street right-of-way. The purpose of the guidelines is to create balance and equity for all roadway users through flexible street design and to ensure consistent design guidelines for all retrofit and new construction street projects. The Complete Streets Design Guidelines include a Complete Streets Policy and support the same vision outlined in this TMP.



CITY OF SMITHVILLE  
**PARKS AND RECREATION  
MASTER PLAN 2030**

PREPARED JUNE 2021



Parks and Recreation Master Plan 2030



CITY OF SMITHVILLE  
**COMPREHENSIVE PLAN 2030**

PREPARED OCTOBER 2020



Comprehensive Plan 2030



**Smithville Complete Street  
Guidelines**

Complete Street Guidelines



## Vision and Guiding Principles

The following vision and guiding principles for transportation in Smithville were developed with community, stakeholder, and staff input and with an understanding of Smithville's existing conditions and best practices in multimodal transportation.

***The City of Smithville will provide a safe, complete, and connected network of streets for residents and visitors of all ages, abilities, and backgrounds to walk or use wheelchairs, bike, and drive to reach destinations throughout the community. The needs of these users will be balanced with those of commercial freight movement and emergency responders. Smithville's multimodal streets will enhance Smithville's quality of life and strengthen the City's ability to remain a small-town community oasis that is prepared for the future. The City's transportation system will provide safe, reliable, affordable, and efficient choices for all.***

The following guiding principles support this vision and will guide the recommendations, policies, and priorities in this plan:

- Transportation for all: Serve all users, abilities, and backgrounds with convenient, affordable transportation choices.
- Safe Connections: Focus on providing safe transportation networks and crossings for all users
- Strong Community: Support placemaking and community identity through design
- Future Focused Investments: Promote sustainability and responsible transportation investments. Maintain infrastructure.

## Multimodal Transportation and Small-Town Character

Providing multimodal transportation options is essential to Smithville's small-town character and desired community identity. Throughout the public engagement process for this TMP and the earlier Strategic Plan, Comprehensive Plan, and Parks and Recreation Master Plan, the public expressed the desire to maintain Smithville's small-town feel and capitalize on its assets such as great neighborhoods, strong schools, and access to recreational opportunities. With this TMP, Smithville is in a strong position to provide transportation that addresses the needs of a variety of users and supports networks for both vehicular and active transportation. Safe and accessible transportation options are important for all types of trips. While many communities over the past 60 years focused on vehicular transportation needs, recent trends towards providing mobility options have resulted in a greater focus on other modes as well. Smithville has the opportunity through this plan to adopt this latest practice and use multimodal transportation to support the community's small-town character and sustainable, healthy, balanced mobility along with it.



A staff member at Eagle Heights serves as crossing guard for children walking to school



Downtown Festival

# Planning Process

This plan was developed through the efforts and input of community members, elected officials, staff, and other stakeholders. It reflects the Smithville of today and outlines a path to achieve the community's vision for the future. To ensure that this plan is tailored to community needs the following steps were taken to document and analyze existing conditions, reflect the community's vision, and identify strategies to achieve that vision:

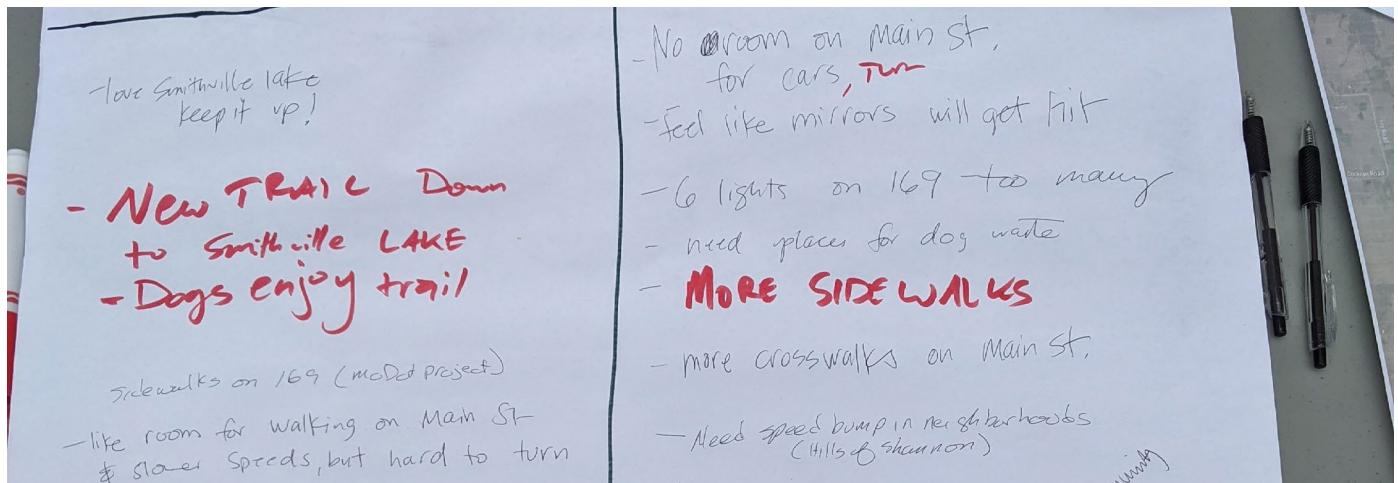
- **Engaging the Community:** Community engagement included an online portal with information about the plan, an online survey, a pop-up open house, and meetings with a steering committee designated to help guide the TMP development. The project team worked with these groups to develop the plan vision and guiding principles and to understand existing conditions and discuss potential solutions.
- **Review of Past Plans:** The project team reviewed existing plans including the Strategic Vision Plan, Comprehensive Plan, and Parks and Recreation Plan to understand existing conditions, and the community's broad vision and goals for the future.
- **Existing Conditions Analysis:** The project team observed existing conditions, participated in a city tour with staff, developed traffic forecasts for different development scenarios, analyzed gaps in connectivity for all modes, and conducted fieldwork.
- **Recommendations and Implementation:** Based on the community input, past plan review and existing conditions analysis, the project team developed recommendations and an implementation plan.



Pop-Up Meeting at Smithville Price Chopper



Smithville Lake is an important regional and local destination.



Pop-Up Meeting comments



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### Engagement Strategies

Key Engagement Strategies for the TMP included:

- 3 stakeholder meetings
- 1 pop-up meeting
- 1 online survey
- Conversations with city staff and leadership



<https://www.research.net/r/SmithvilleTransportation>

**Website:** Learn more about the project.

<https://lab2.future-iq.com/smithville-transportation-master-plan-project/>

Pop-Up Meeting flier



Bicycling event in Downtown Smithville

## Steering Committee

Three meetings were held with the project steering committee including:

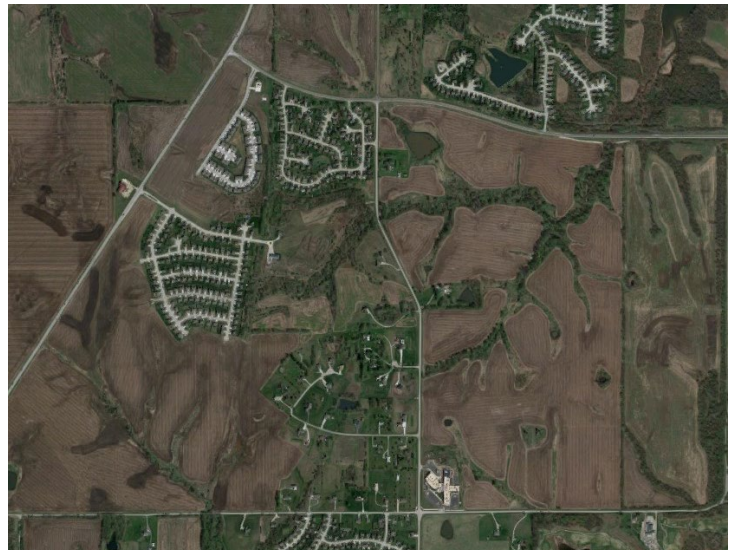
- A kick-off meeting to discuss existing conditions and plan vision and goals,
- A complete streets work session, and
- An overview of the project team's existing conditions analysis, public input from the pop-up and surveys, and a discussion of safe routes to school concerns

### Key take-aways from these meetings included:

- The city is experiencing growing pains: some residents are concerned about growing traffic, others think there's not much traffic in Smithville compared to other cities in the region.
- Neighborhood connectivity is lacking: It's easy to get around within a neighborhood, but hard to get from one neighborhood to another.
- Limited corridors exist for north-south and east-west travel by any mode: 169 and 92 are the only major roadways. This creates issues of connectivity, crossing challenges, and almost no alternatives if a major incident occurs along one of these roadways or emergency services are needed. Smithville Lake can also be a barrier to access.
- Some rural roads are no longer carrying rural amounts of traffic: They lack adequate space, turn lanes, and sidewalks.
- Roads are too autocentric and lack aesthetic enhancements.
- More multimodal options and enhanced street standards are desired.
- The TMP provides an opportunity to create redundancy in the roadway network, enhance connections, and facilitate safety and crossings.
- Complete streets policy and guidelines should be developed to address and balance the needs of all users, create greater consistency in street construction and clarify developers' responsibilities.
- Vehicular congestion around schools is an issue. More multimodal options are needed, along with education for all users.



Students wait to cross on their way to Eagle Heights Elementary



Suburban and rural development continues to stretch northward along US-169



US-169 is an important regional and local roadway, but also divides the community.



## Community Survey

The community survey was conducted as an online survey and was open for the period June to September 2021. The survey gathered significant data, and key highlights include:

- A total of 401 households took the survey.
- There was a good cross section of household types (20% retirees; 35% working adults; 41% School aged families).
- There was a broad range of how long people had lived in Smithville (30% less than 5 years; 13% 6-10 years; 25% 11-20 years; 30% more than 20 years).
- Nearly 93% of respondents live in a single-family home; and most respondents lives in Smithville (over 93%).
- Most of the respondents lived in the Northern Residential Character area, and the overall responses reflect the population distribution across the community.

While this survey was not designed to obtain a statistically valid sample, the response rate was high, and respondents reflect a good representative cross section of the community.



Residents can bike around their neighborhood, but it is difficult to find connections to other neighborhoods

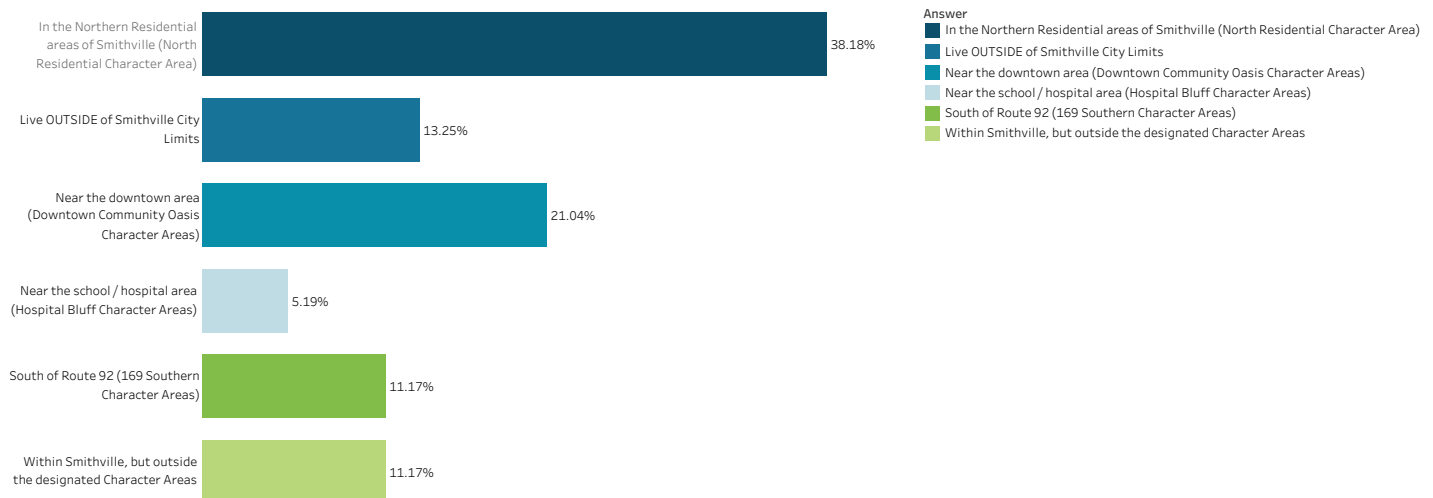


Recent Downtown Smithville Streetscape Improvements

## Figure 1. Public Survey: Character Areas

### CHARACTER AREA

Where in Smithville do you live? (select only one)





## Current levels of use and key destinations

The community survey explored levels of current use, and key transit destinations within the community. This information helps to understand what the existing use patterns are, and how these might change over time as the community develops and grows. Key results included:

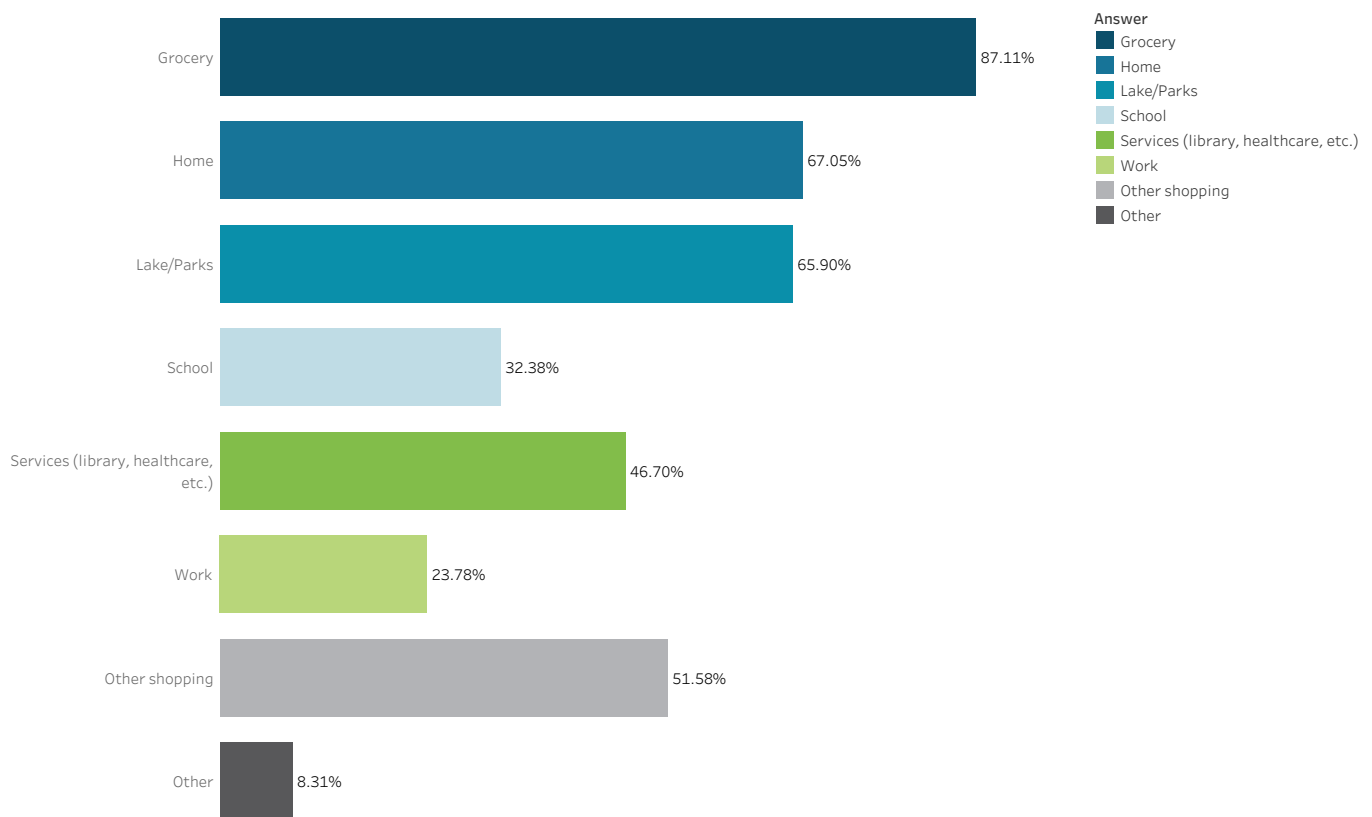
- The predominant use type was people driving alone or riding in car as a passenger.
- There is very little use of public transport (in survey respondents), and limited use of car-pooling.
- Walking and riding a bike showed moderate levels of use amongst respondents.

Key destinations within Smithville highlighted in the graph below included traveling to home, shopping, and recreation locations. These destinations are highlighted in locations such as the lake, downtown and the commercial area in the Hospital Bluff Character Area.

Figure 2. Public Survey: Destinations

### DESTINATIONS

What are the most important destinations that you travel to in Smithville? (Mark all that apply.)



## Transportation priorities and future investments

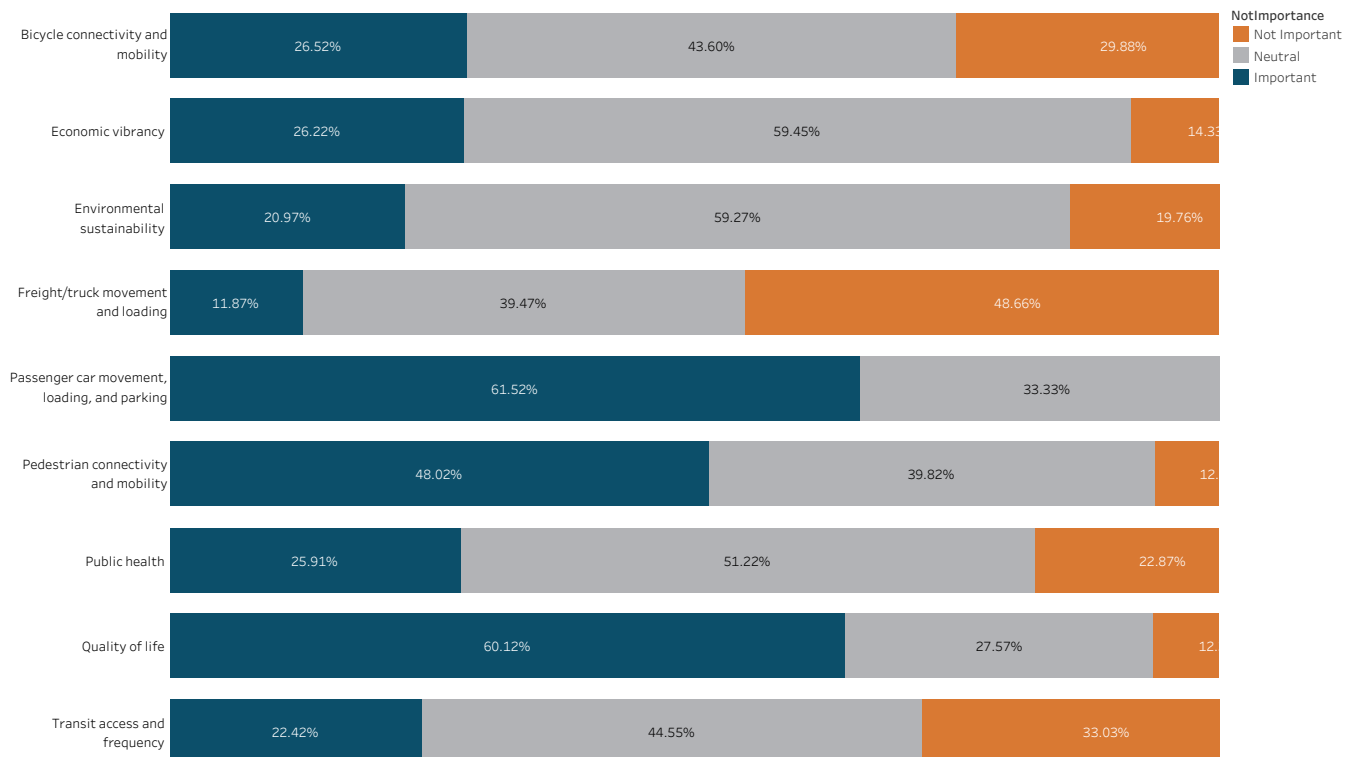
The survey asked a series of questions that explore future priorities and investments. The key results from the figure below included:

- Passenger car movement and use is the highest priority. Desired spending in this area was focused on the quality of the existing assets, as opposed to new roads. For example, there was strong appetite for repaving and widening existing roads.
- Quality of life was also cited as a key transportation priority.
- The US-169 corridor access and crossings are key areas of concern.
- The downtown area and associated traffic are a perceived current and future issue.
- Sidewalk condition and connectivity are key topics for many people. There appears to be consistent support for extending and improving the sidewalk and trail network and connectivity in core areas and across the community.

Figure 3. Public Survey: Transportation Priorities

### TRANSPORTATION PRIORITIES

Rank the following priorities for you and your family. Note that the priorities may be either dragged to the rank desired, or the arrows may be clicked up or down to rank each priority. (1 = most important; 9 = least important)





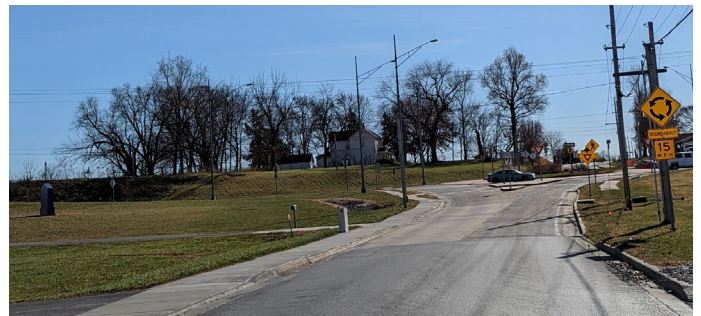
## Take-away messages

The community engagement work has highlighted several key issues. These are also consistent with, and build on, previous surveys conducted as part of the visioning, comprehensive planning and the Parks and Recreation Master Planning.

- Family safety and the family orientation is a key aspect within the community. This extends to topics such as road crossing, sidewalks, and road condition. A repeated survey theme is the desire for more safe sidewalks, trails, and biking routes.
- There is considerable interest in safe pedestrian access in the downtown and commercial areas; and having safe crossings for US-169. This is an important consideration, especially for a future crossing at the intersect of Main St and US-169, especially as more development occurs to the west of the highway.
- There is a future consideration, which is managing the likely increased congestion in the 'Downtown Community Oasis' area. This is where the convergence occurs of trail network and future retail, recreation, and social amenities. Planning for increased use will help avoid potential congestion issues and road / trail use conflicts.



Pedestrian crossings in Downtown Smithville



Roundabout at Route 92 and S Commercial Ave.



Children waiting to cross Eagle Parkway to Eagle Heights Elementary



## Pop-up Meeting

In addition to the engagement opportunities above, a pop-up meeting open to all members of the public was held at the Smithville Price Chopper on Saturday, June 26. At this meeting, members of the project team were available to meet with community members and visitors, share maps and information about the project, and hear community members concerns about and ideas for transportation



Notes were taken on a map of Smithville to gather public input at the Pop-up Meeting

### US-169

- US-169 is difficult to cross regardless of travel mode
- Long delays occur at US-169 and 180th/188th for east-west movements and turns
- It's difficult to access US-169 from Owens Avenue and neighborhoods north of downtown
- Sidewalk improvements are needed along the corridor and should be separated with a buffer from the roadway
- Six traffic signals on US-169 is too many. Need to balance north-south mobility with east-west crossing needs.

### Main Street

- Mixed reviews of traffic calming and curb extensions: It's great that there's more room to walk and slower speeds, but it can be hard to turn and can feel uncomfortable when driving, like mirrors will be hit
- Need more crosswalks

### Roadway Connections

- Need alternatives to US-169 and MO-92

### Transit

- Would be nice to have bus and/or commuter lot

### Walking/Bicycling

- More sidewalks are needed
- Need more trails
- Need shared use path on MO-92
- Traffic calming is needed in some neighborhoods

### School Connectivity

- Trail/pedestrian connections are needed to connect Eagle Heights Elementary School with neighborhoods to the south
- Safe connections to schools are needed (sidewalks, walk, bike)
- Need safe bike routes



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# CHAPTER 02: SMITHVILLE TODAY

# 02

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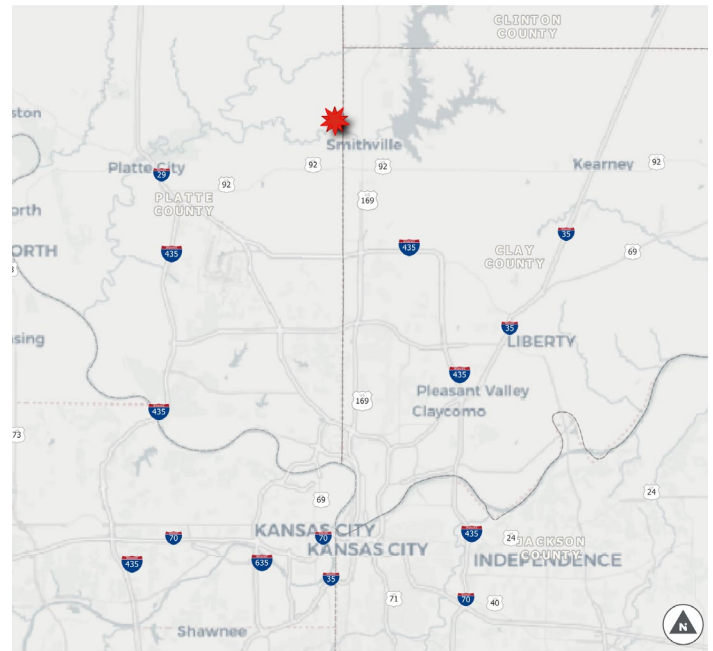
# Smithville Today

## Location and Context

Smithville is situated directly north of Kansas City along US-Highway 169 (US-169) on the edge of the metropolitan area. Map 1 illustrates Smithville's location in relationship to other cities in the metropolitan area. It is located in Clay County and bordered by Platte and Clinton Counties. The City is adjacent to one of the largest lakes in the Kansas City metro area, Smithville Lake, which is a regional draw for those looking for a getaway and recreational activity. Smithville takes pride in its small-town feel: the city has a population just over 10,000, has a charming downtown, and everyone unites under one middle and high school. Recent growth has put some strain on existing services and created a need for more strategic planning to accommodate both population and desired economic growth.

Smithville has unique topography, situated just west of Smithville Lake the city features intense hills and valleys that provide challenges to creating additional roadways, trails, and appropriate stormwater run-off. Though the topography provides challenges for planning, it is also one of the community's assets and opportunities will be sought to leverage viewsheds, trails, and other means of showcasing Smithville's natural beauty.

Map 1. Smithville Regional Context



Smith's Fork Park



Trails provide opportunities for transportation and recreation



Sidewalks provide an easy way to get around neighborhoods



# Demographics

## Population and Income

According to the 2020 Census, Smithville has a population of 10,406. This represents nearly a doubling of the city's population since the 2000 Census. Census data, shown in Figure 4, also indicates that Smithville has a greater percentage of younger people living in the community than is typical in the metro area overall or statewide. Compared to the metro area and the state overall, Smithville has a higher median household income.

Figure 4. Population and Income 2019

	Smithville, MO	Kansas City Metro	Missouri
Population	10,406	2,173,212	6,154,913
Population under 18	27.8%	24%	22%
Population 65+	12.2%	15%	17%
Median Household Income in 2019 dollars (2015-2019)	\$82,398	\$70,125	\$55,461

## Vulnerable Populations

Approximately 90% of Smithville's population is white, followed by nearly 6% who are two or more races, and nearly 3% are Asian. The median income is higher than that of the region and the state, however there is still a need to pay close attention to vulnerable populations in the community who may not have access to reliable transportation and greatly depend on walking, bicycling, transit, or rides from others to get to jobs, school, and essential services as part of this TMP.

- Population under 65 with a disability, 2015-2019: 7 percent
- Population living in poverty: 6 percent
- Zero vehicle households: 4 percent
- Hispanic/Latinx population: 1 percent

## Cars Per Household and Commuting Trends

### Cars Per Household

Only 4% of households do not have access to a vehicle as of 2019. This compares to 6.9% in Missouri and 3.8% in Clay County. Though this percentage is small, it represents nearly 400 households in Smithville that likely rely on walking, biking, or rides from others to complete necessary trips. In Smithville, it is most common to have 2 vehicles per household.



Students walk to Eagle Heights Elementary



Intersection of US-169 and Hospital Dr



## Mode split to work

Means of transportation data, displayed in Figure 5, from the Census 2019 American Community Survey indicates that most Smithville residents travel to work by driving alone or carpooling. It is important to note however, that data is not available regarding how Smithville residents travel for *non-work trips* such as school, recreation, errands, worship, visits, etc. leaving this analysis of mode split incomplete. Evidence from nationwide data indicates that short non-work trips are good candidates for shifting from driving to walking or bicycling.

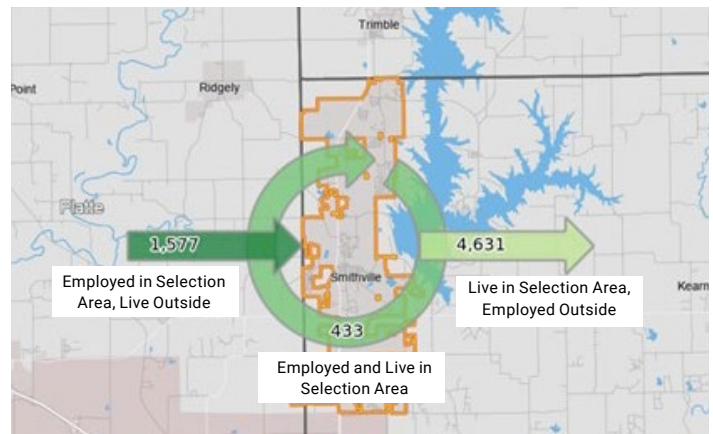
Figure 5. Means of Transportation to Work in Smithville

Total workers 16 years and over	5,147
Car, truck, or van	92%
Drove alone	86%
Carpooled	6%
Walked	1%
Bicycle	0%
Taxicab, motorcycle, or other means	2%
Worked from home	5%

## Commute Patterns

As of 2019, a majority of residents living in Smithville commuted outside of the city for work. As depicted on the map to the right, most workers are leaving on a regular basis, so access out of and back into the community has a significant impact on traffic patterns, especially morning and night. Over 1,500 commuters came from outside of Smithville into the city to work, and over 400 residents stayed in Smithville for their work. Within Smithville, most jobs are within 10 miles commute, and most people travel from the north to the south to work.

Map 2. Commute Patterns in Smithville



US 169 is one of the few north-south connections in Smithville.

# Existing Transportation Infrastructure

## Pedestrian, Bike, and Trail Networks

Pedestrian infrastructure in Smithville is comprised of sidewalks, trails, and sidepaths, in addition to curb ramps and crossings. (Sidepaths are 8-12 feet, run immediately parallel to the roadway and are shared by pedestrians and bicyclists). While sidewalk connectivity exists within many neighborhood developments, some neighborhoods lack sidewalks and pedestrian connectivity between neighborhoods and on arterials and collectors is often piecemeal or lacking altogether. In addition, crossing and traveling along major roadways such as US-169, MO-92, and others is a challenge for pedestrians. Even when sidewalks are provided along these roadways, they often lack a buffer between the roadway and pedestrian space resulting in an uncomfortable walking experience. Internal sidewalks within neighborhoods have typically been built by developers, however consistent requirements do not exist for construction of sidewalks along roadways between developments.

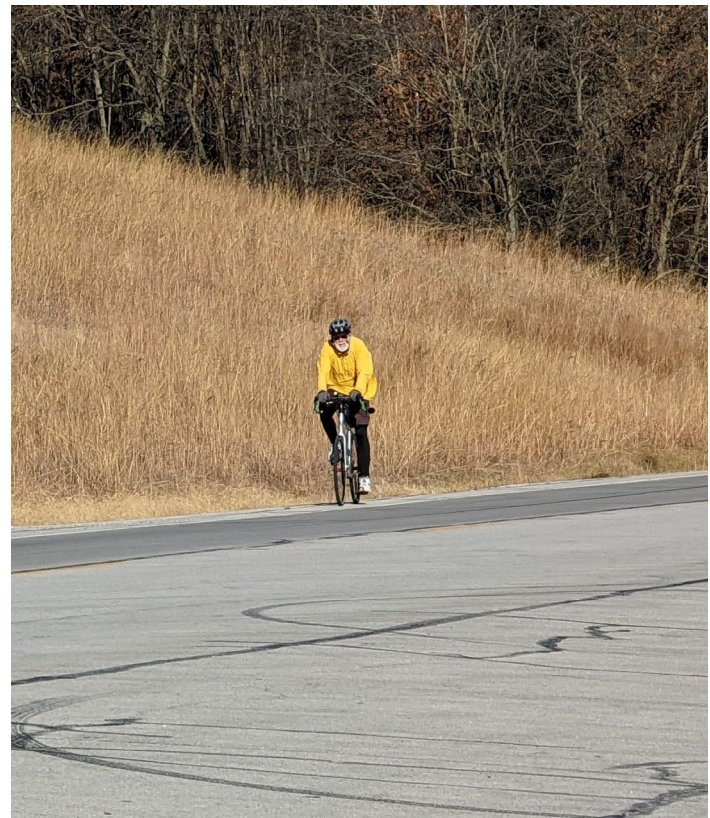
Current bike facilities largely consist of shared roadways, sidepaths, and trails. An unmarked bikeway is provided on US-169, however it is often unswept, is narrow, and, due to the high speeds and traffic volumes, on the roadway, largely unused. Sharing a roadway with motor vehicles is difficult on narrow roadways where traffic volumes are increasing, particularly where steep climbs often result in the need for motorists to pass slower climbing bicyclists on narrow roadways where oncoming traffic may be difficult to see.

The recently constructed Main Street Trail connects downtown Smithville to the Smith's Fork Sports Complex and Smithville Lake. Additional recreational trails exist adjacent to Smithville Lake.

Existing trails, sidewalks, and bicycle facilities are mapped in Map 3 on the next page.



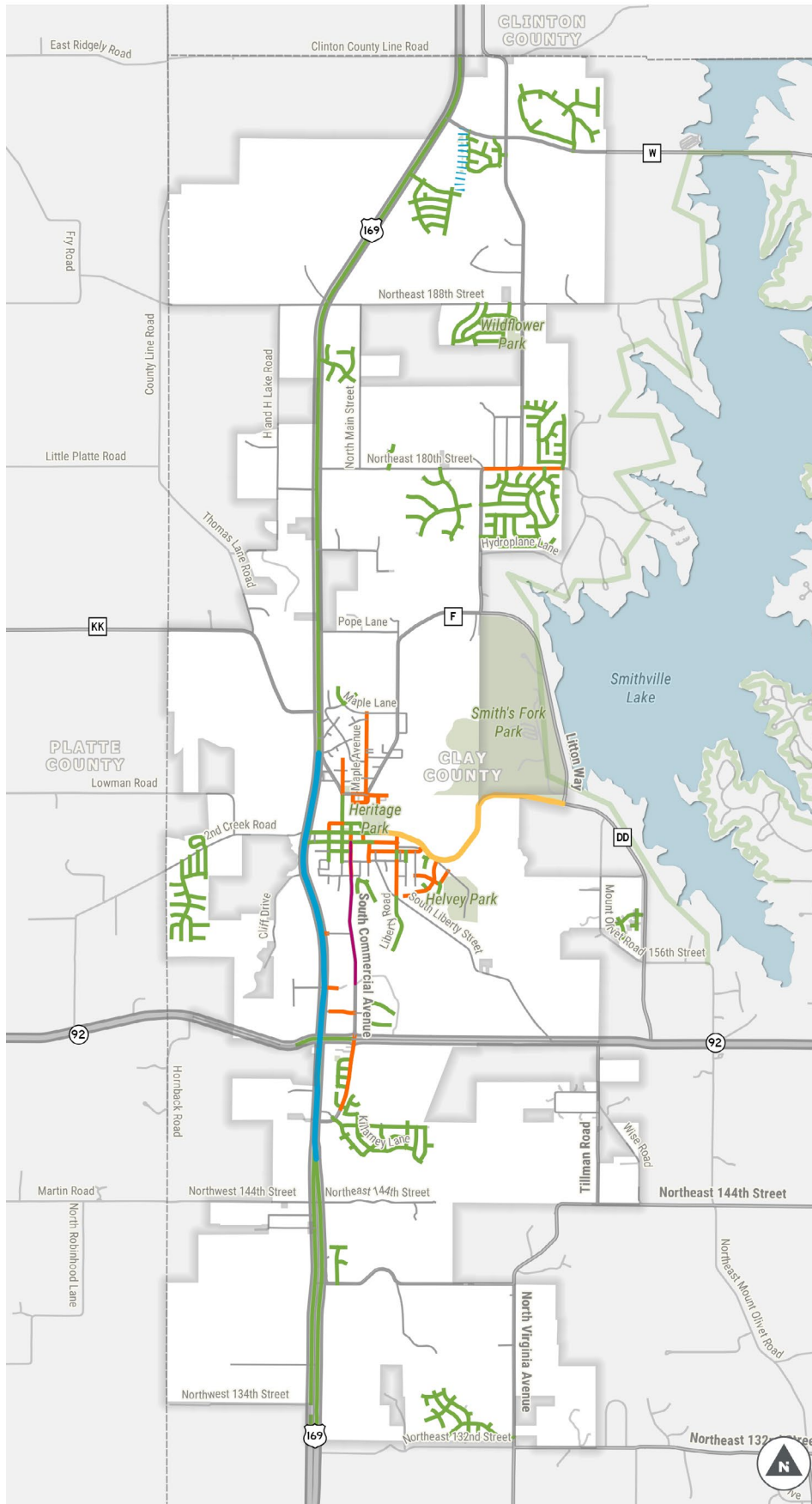
Main Street Trailhead



Cyclist on Litton Way



## Map 3. Existing Sidewalks, Trails, and Bicycle Facilities



### Trails

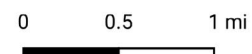
- Existing MetroGreen Trails
- Existing Smithville Trails

### Bike Facilities

- Shared Use Path
- Unmarked Bicycle Lane

### Sidewalks

- Both Sides
- None
- One Side
- Funded Sidewalk





## Existing Roadway Network and Functional Classification

The City of Smithville maintains 42 centerline miles of roadway in the city. The Missouri Department of Transportation (MoDOT) is responsible for maintaining US-169, MO-92, MO-W, and MO-KK roadways. Smithville's streets are categorized in the table below into a functional classification system which includes Freeway/Expressway, Principal Arterial, Minor Arterial, Major Collector, Minor Collector, and Local Streets (everything remaining). In general, local streets are lower-volume, lower-speed streets that facilitate direct property access; arterials are wider and move more traffic; and collectors connect arterials to local streets. Proposed changes to the street classification system can be found in Chapter 3. These classifications are maintained and updated by the Mid-America Regional Council and have implications for both design and funding.

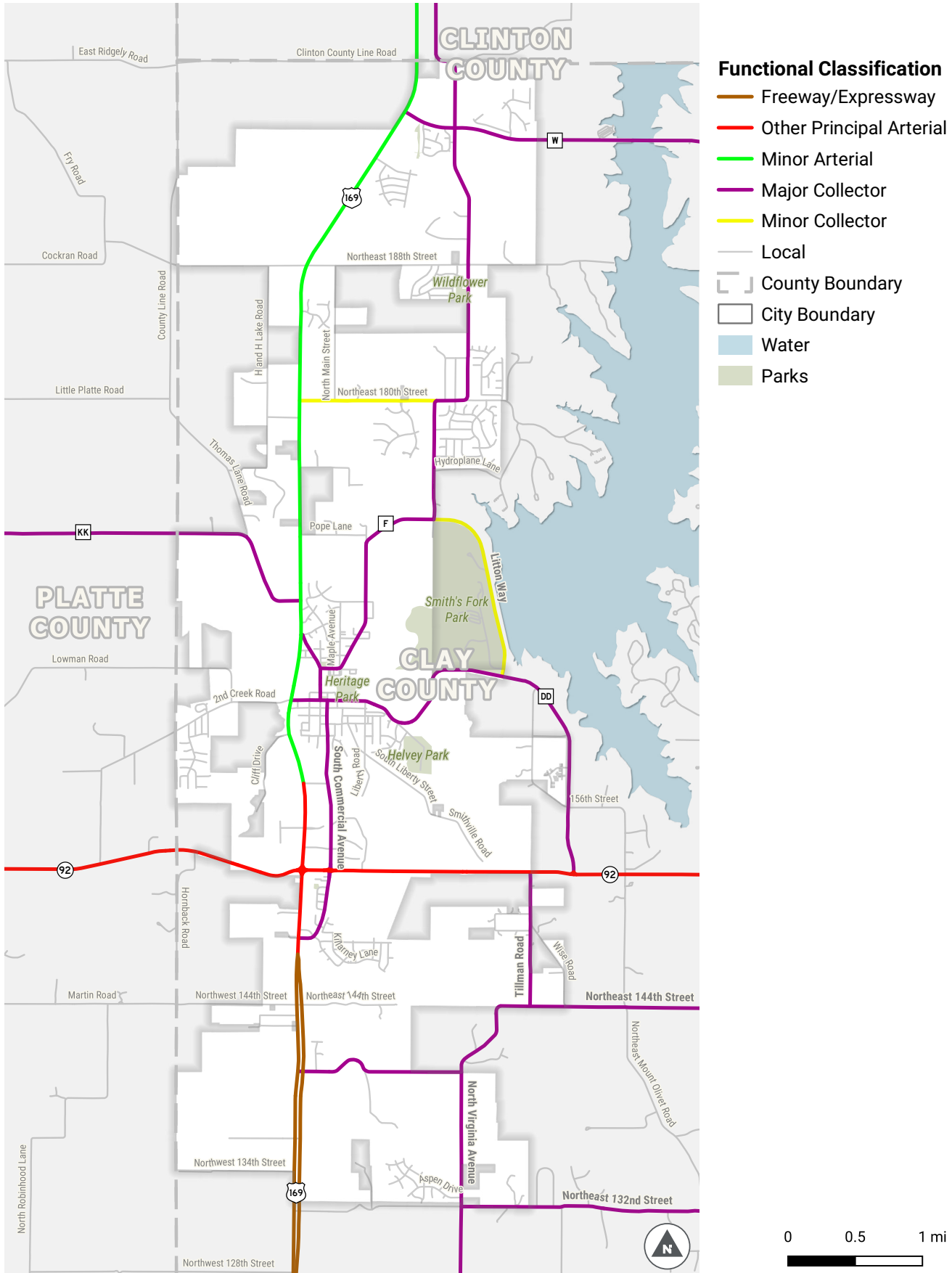


US-169 sidewalk

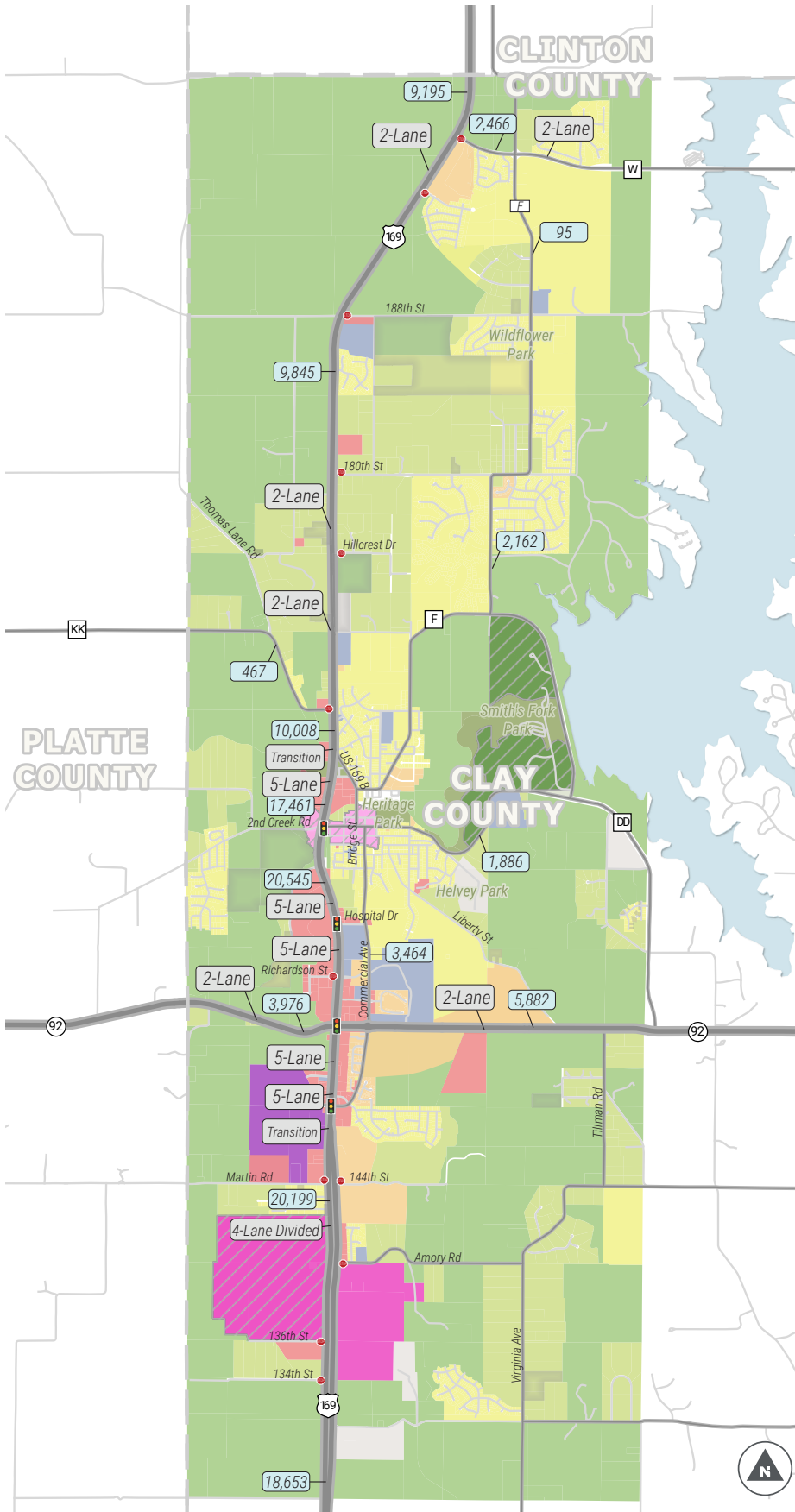
Figure 6. Roadway Functional Classifications

Roadway Class	Traditional Function	Smithville Roadways
Expressway	Directional travel lanes are separated by physical barriers with limited access and egress points. Adjacent land uses often are not directly served by roadway. Maximize motor vehicle mobility.	US-169 (MO River to Commercial Ave)
Principal Arterial	Serve centers of metropolitan areas. Connect activity centers. Provide high-capacity travel lanes deliver traffic generated from the expressway onto lower level roadways.	US-169 (Commercial Ave to MO-92)
Minor Arterial	Minor Arterials provide service for trips of moderate length, serve geographic areas that are smaller than their higher Arterial counterparts and offer connectivity to the higher Arterial system.	US-169 (MO-92 to Clinton County)
Major Collector	Serve primarily intra-county travel. Funnel traffic generated from local roads onto the arterial network. Connect local and arterial streets.	NE 132nd St Virginia Ave/Tillman Rd Name change in 2017 to/Main St Amory Rd Commercial St Bridge St First St. Spelman 172nd St. Old Jefferson hwy Eagle Parkway MO-KK/County Rd KK MO-W/County Rd W
Minor Collector	Provide less mobility at lower speeds and for shorter distances. They balance mobility with land access. Connect local and arterial streets.	Litton Way (Currently ineligible – outside of 2010 FHWA Urban Areas) *
Local	Residential Streets	

## Map 4. Existing Roadways and Functional Class



## Map 5. Existing Traffic Volumes



### Proposed Future Land Uses

- Agricultural
- Residential, Low Density-Agricultural
- Residential
- Residential, Moderate Density
- Mixed-Use Residential, High Density
- Mixed-Use, Downtown
- Commercial
- Institutional
- Industrial
- Park, Recreational, Open Space
- Utility, Transportation

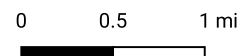
### Proposed Overlays

- 169 South Employment Center Overlay
- Downtown District Overlay
- Smith Fork Park North and South
- County Boundary
- City Boundary
- Water
- Parks

### Transportation Network

- 2020 Traffic Volume
- Traffic Signal
- Stop Sign

*\*Rural - Not eligible for federal funding per urbanized area boundary in 2010 census*





## Transit and Paratransit

Smithville is not currently served by regional transit. Columbia Missouri based transportation provider OATS serves seniors, those with special needs, and those with transportation disadvantages with transportation to shopping and medical services. OATS provides on demand rather than a fixed route service.

## Key Takeaways

While Smithville has many of the ingredients necessary for a strong multimodal transportation network, public input and the project team's assessment of existing conditions have identified a number of issues that need to be addressed to ensure Smithville can accommodate additional population and economic growth while still maintaining the qualities that make it a unique and desired place to live and recreate. The following key issues will be addressed by the recommendations in Chapter 3:

- Smithville's small-town feel should be preserved. The small-town community oasis pillar is one of the most important to the TMP. The provision of multimodal transportation infrastructure can greatly affect the sense of community which was identified as a high priority to the community.
- Community assets can be maximized through improved connections and balanced street design. Smithville has great assets such as the lake, the historic downtown, parks and trails, strong schools, growing businesses, good access to regional transportation networks, and more. Improving connections between these assets and ensuring a balance of transportation modes will be essential moving forward.
- The character areas identified in the comprehensive plan should be reinforced. The distinct character areas will require different approaches to street design based on their land uses.
- US-169 highway serves as a barrier for users of all modes. Accessing US-169 from east-west streets and crossing this roadway by automobile, foot, or bike is extremely difficult and as a result, this roadway serves as a divider in the community. Providing alternative north-south routes to reduce traffic on this roadway and improving connections across the roadway are essential. This roadway also needs to do a better job of providing safe and comfortable pedestrian and bicycle accommodations.



Traffic on US 169



Downtown bicycling festival



Smithville School Complex parking lot

- Main Street is an important connection for multiple modes. Recent developments along Main Street and in the downtown area have helped to revitalize this area and spur new economic growth. As a community draw and a popular route from US-169 to the lake, it will be important to balance the needs of various modes, provide clear wayfinding information, and employ strategies to reduce vehicular congestion in the future through multimodal transportation options.
- Growth will require redundancy in the roadway and trail networks. With continued population and economic growth, some additional roadway capacity and redundancy in the network is needed. It will be essential given the vision and guiding principles of this plan that additional roadways accommodate multiple users and that additional trail, sidewalk, and bikeway networks are part of the solution for providing additional north-south and east-west connections as well.
- Lack of school and neighborhood connectivity creates challenges. While internal neighborhood connectivity is good overall, Smithville lacks connections between individual neighborhoods and between neighborhoods and schools for all modes. Improving these connections was a common theme throughout the public engagement.
- Pedestrians and bicyclists need special attention paid to networks and crossings. Collector and arterial roadways often have piecemeal sidewalks and very few bikeways exist in Smithville. Strengthening these networks and identifying key crossing improvements will help reduce barriers to walking and bicycling.
- Topography creates challenges for building new roads and including sidewalks and bike lanes on existing roads. Smithville's topography contributes to its natural assets and beauty, but makes identifying new roadway corridors difficult and accommodating wide rights-of-way with space for multiple users challenging.
- Smithville lacks the policy tools needed to require developers to build multimodal infrastructure to serve growing transportation demands from all modes. This leads to inconsistent development and unnecessary burden on city finances.
- Design tools can help strengthen a sense of place in Smithville and enhance the visitor experience. Wayfinding, streetscaping and gateways may provide opportunities to communicate both visitor information and help strengthen Smithville's community identity.



Commercial St. west of US-169 a possible new roadway



Low traffic volume streets provide opportunities for cross country practice



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# CHAPTER 03: FUTURE SMITHVILLE

# 03

# Future Smithville

This chapter provides an overview of the network of facilities, projects, and programs that will serve the needs of Smithville in the future. These future network recommendations are based on an understanding of current needs and future development patterns and is intended to support the vision and goals outlined in Chapter 1 including multimodal options for all users of the transportation system, safety, placemaking, and sustainable investments for the future.

## Growth, Development, and Traffic Patterns

The Smithville Comprehensive Plan provides a map of future land use and three new overlay districts positioned to focus most commercial, mixed-use, and industrial/employment growth into Smith Fork Park, downtown, and the US-169 Industrial area respectively. The Comprehensive Plan also identifies five “character areas” with distinct identities as shown in Map 6. The overlay districts, character areas, and the development goals established in the comprehensive plan play an important role in determining future multimodal transportation needs. New developments (of all kinds) will generate more trips and developers are often expected to either build new transportation infrastructure or contribute to the funding of such infrastructure.



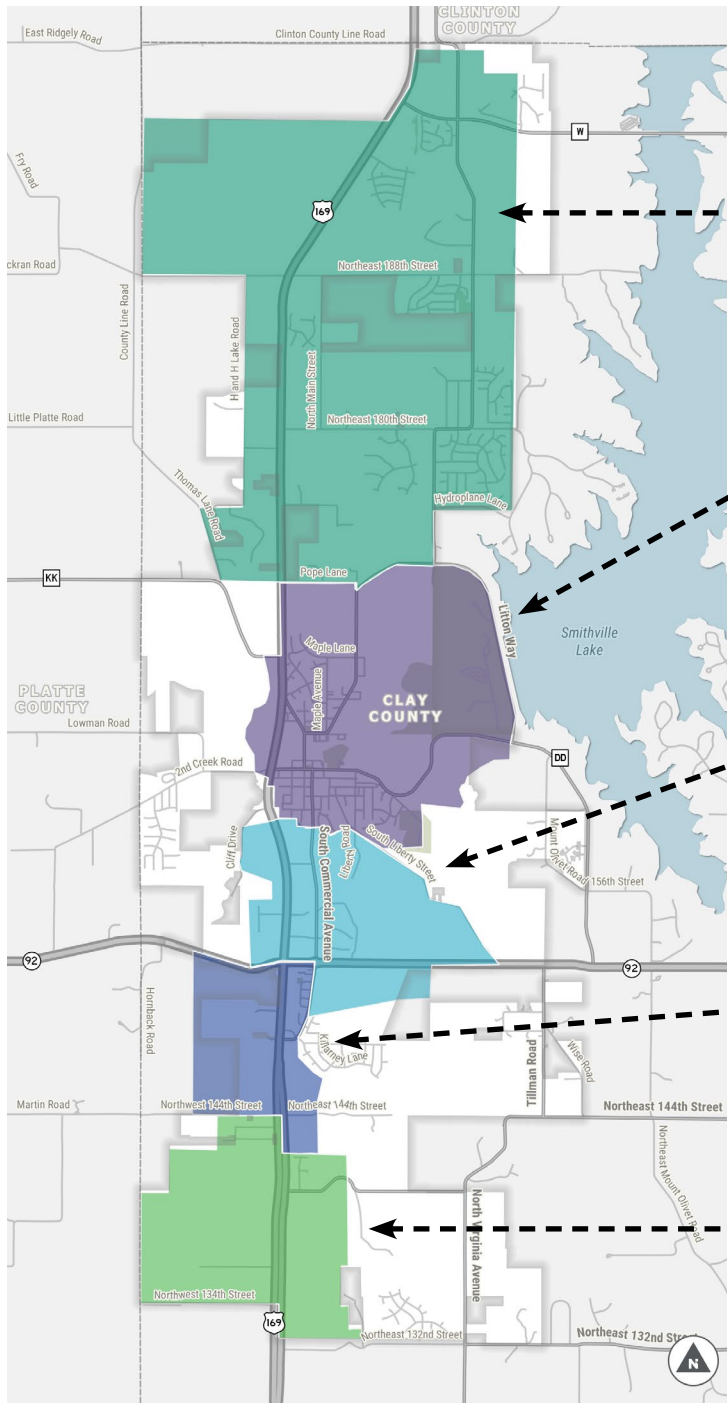
US-169 looking north



Example high visibility crosswalk treatment



## Map 6. Smithville's Character Areas



Smithville's **North Residential Character Area**, bound to the north by the municipality's boundary and to the south by E. Pope Lane, features a mix of rural fields and new subdivision neighborhoods.

The **Downtown Community Oasis Character Area** includes the City's historic Downtown, area adjacent to Smithville Lake, surrounding neighborhoods, and commercial establishments along US-169.

The **Hospital Bluff Character Area** spans the area adjacent to MO-92 connecting to Liberty Street, properties to the west of US-169. Saint Luke's North Hospital-Smithville, Mid-Continent Public Library - Smithville Branch, and Smithville's schools are notable social institutions in this Character Area.

Between 144th Street and MO-92, the **US-169 Industrial Character Area** features Smithville's planned industrial areas tucked behind commercial uses along US-169.

The **US-169 South Character Area** includes the southern most areas of the city, from the southern municipality boundary to 144th Street on the east and west sides of US-169.

As part of TMP planning process, the project team developed traffic forecasts and estimates of development timing and growth trends based on MoDOT traffic data, comprehensive plan priorities for density, Institute Traffic Engineering (ITE) trip generation rates, evaluation of existing infrastructure capacities, and discussions with the City of Smithville City Planning and Public Works regarding timing, community needs, physical and infrastructure constraints, and opportunities. Using a conservative estimate of how quickly the development goals identified in the Comprehensive Plan will occur (25% by 2030), the traffic forecasts and analysis determined that approximately 18,000 daily trips may be added to current traffic volumes in Smithville by 2030. A memo summarizing the full traffic analysis and assumptions is provided in Appendix C.



## Recommended Roadways and Roadway Classification Changes

When estimated future development related traffic is applied to the existing network, additional roadway capacity will be needed to accommodate these new trips. This plan recommends that Smithville take a multimodal approach to building capacity. This approach aligns with the vision and goals of this plan and the associated complete streets policy and design guidelines. This means that while new roadways will be necessary to accommodate the planned growth, the needs of all users of the transportation system must also be considered. It will be essential that the City's efforts to increase trip capacity include sidewalks, trails, and bike facilities in addition to new roadways with capacity for more motor vehicle trips. This not only provides greater choice for users, but also has the potential to reduce future reliance on motor vehicles and demand on the roadway system. A map of the proposed roadways is provided in Map 7 and a map of priority sidewalks, trails, and bike facilities is provided in Map 8. All new roadways should follow the rules of thumb in the call-out box below to ensure safe and convenient options for travel in Smithville by all modes.



Many roads in Smithville retain a rural feel





caption



N Bridge St.



Commercial Ave. outside of School Complex

## Rules of Thumb for Smithville Roadways

- **Consider Context:** When planning and designing new streets or retrofits, the city or developer should consider the needs of all users and use the Complete Streets Design Guidelines as guidance.
- **Construct Sidewalks:** All streets should be built with a minimum sidewalk of 5 feet on both sides of the street (6 feet on arterials and collectors) or a 10-foot minimum shared use path for use by both pedestrians and bicyclists on one side of the roadway and sidewalk on the other. Buffers between the sidewalk and the roadway are essential on arterials and collector to provide safety and comfort.
- **Moderate Target Speeds:** Target speeds on roadways adjacent to neighborhoods and commercial areas should be 30 MPH or below. Exceptions include highways US-169, MO-92 and select collectors.
- **Right-Size Roadways:** With a few exceptions, Smithville should not overbuild the roadway network with wide roadways. While new roadways are needed, roadways with 2 to 3 lanes (one lane in each direction plus turn lane) are most appropriate to maintain the small-town character of Smithville, to reduce barriers to pedestrians and bicyclists, and to maintain overall safety for all users. US-169 is the exception to this rule of thumb, however this roadway already creates a significant barrier within Smithville due to high volumes and speeds. Clear communication between Smithville and MoDOT regarding any future changes to the configuration of US-169 will be essential. Any widening effort would create significant negative impacts on Smithville and the city would prefer to see additional north-south roadways that create redundancy in the network to widening of US-169

Additional detail on street design can be found in the Smithville Complete Streets Guidelines.



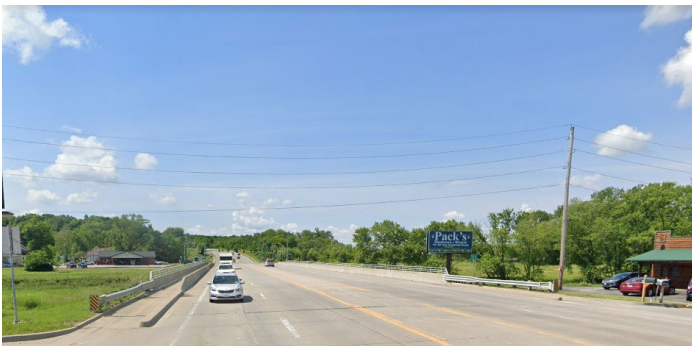
## New Arterials and Collectors

This plan focused on identifying new arterials and collectors and assumes that the need for new local roads will be determined through the subdivision process. The new arterials and collectors shown in the Map on the next page will support growth and provide overall redundancy in the network (more options for North-South and East-West travel.) This is important for:

- Emergency services and disaster response
- Congestion relief on high volume roadways such as US-169 and overall slack in the system
- New opportunities to provide multimodal accommodations such as buffered sidewalks and bike lanes
- Creating connections with existing interchanges on I-435 (Virginia/Woodland Ave & I-435 [east] and Cookingham/ Platte Dr Purchase & I-435 [west])



Topography on some roadways impacts the ability to provide high quality walking and bicycling facilities.



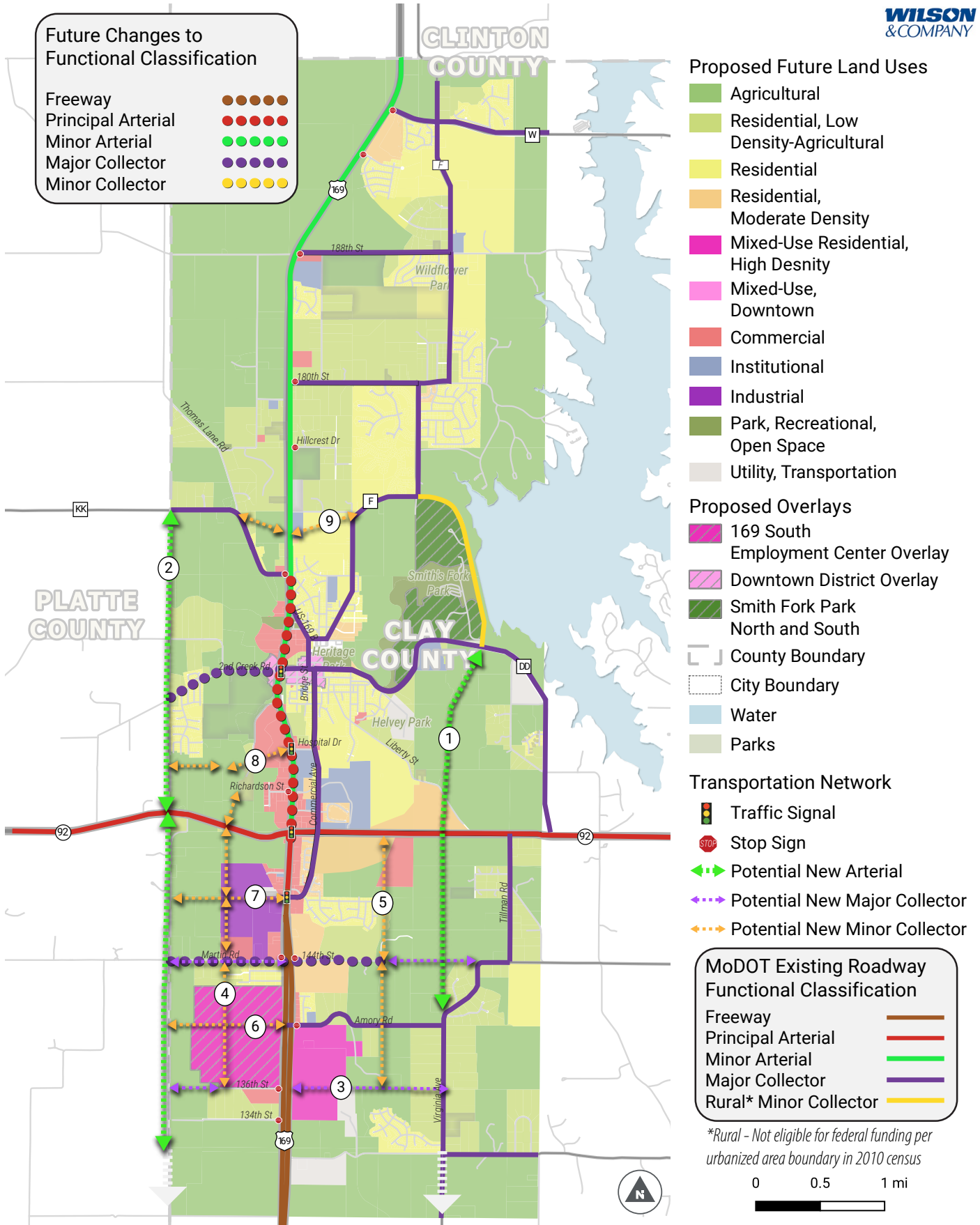
US-169 serves as the main thoroughfare in Smithville, but it can be a barrier in some parts of the community.



Satellite aerial of Smithville



## Map 7. Functional Class and Potential Roadways



Additional details regarding the purpose of each of the newly proposed roadways is provided in Figure 7 below:

Figure 7. Summary of Proposed Roadways, Class, and Purpose

Classification	New Roadway	Purpose
Arterial	1) I-435 & Virginia Ave north to MO-DD at southwest corner of Smith's Fork Park	Connect Virginia Ave to Smith's Fork Park
	2) I-435 & Cookingham / Platte Purchase Dr. north to KK following county boundary	Provide alternative north-south route on the western edge of the city
Major Collector	3) 136th (Platte County to Virginia Ave)	Connect mixed-use high density land use to US-169
Minor Collector	4) ½ mile west of US-169 – 136th north to MO-92	Connect the proposed 169 South employment district to industrial and commercial land uses west of US-169
	5) 1 mile east of US-169 – 136th north to MO-92	Connect mixed-use high density land use to MO-92 and commercial land uses
	6) Amory Rd – new county line arterial to US-169	Provide access through the proposed US-169 South employment district and connect US-169 to proposed new arterial along western city border
	7) ½ mile south of MO-92 – new county line arterial to US-169	Provide access through high density mixed land use and connect US-169 to proposed new arterial along western city border
	8) ½ mile north of MO-92 – new county line arterial to US-169	Connect commercial and institutional land uses to proposed arterial along western edge of the city
	9) Connection between MO-KK and 172nd St. (following Pope Lane (172nd St.) – avoiding transmission lines)	Provide an east-west connection between two major existing roadways

The design of all future roadways should follow the Complete Streets Design Guidelines developed as part of the TMP. This is a high-level plan for future roadways. Additional needs may be identified through changes to the expected development patterns, public engagement, field observations, and future staff analysis.

## Updates to Functional Class

As detailed in Chapter 2 and Appendix D, each roadway is assigned a functional class which has various implications for potential roadway funding, design, signalization, speeds, access management, and more. In addition to showing the rough alignment of future roadways in Smithville, Map 7 also shows proposed functional class updates for existing and future roadways. These changes should be coordinated with the Mid America Regional Council (MARC) who maintains the regional functional classification map. Opportunities to update MARC's current classification map occur twice annually. More detail is provided in Appendix D.



## Recommended Active Transportation Connections: New Sidewalks, Trails, and Bikeways

As discussed in previous chapters, a key guiding principle of this plan is to provide convenient, affordable transportation choices to users of all ages, abilities, and backgrounds. Providing for walking and bicycling with safe and comfortable sidewalks, trails, and bikeways is an important way to preserve Smithville's small-town feel and provide access to neighborhoods, downtown, schools, and recreational facilities. As stated above and in the Complete Streets Design Guidelines, all new streets should include a minimum 5-foot wide sidewalk on both sides of local streets (6+-feet on arterials and collectors) or a sidewalk on one side and shared use path on the other. However, there are also gaps in Smithville's existing active transportation network. Many of these locations have right-of-way or topography constraints and will be difficult to add sidewalk or bicycle facilities. The map on the following page shows the recommended sidewalk retrofit, trail, and bike facility network projects for Smithville.

The benefits and challenges of these active transportation projects are summarized below, along with a map of proposed improvements on the following page.

### New Sidewalks/Sidepaths:

While sidewalk/sidepaths on both sides of the roadway is the preferred option wherever possible, installing a 10-foot wide sidepath on one side of the following roadways that can accommodate both pedestrians and bicyclists is a suitable alternative. Each of the following recommendations would need further study and if a facility is only possible on one side of the roadway, the alignment should consider destinations and crossings.

#### 1. NE 188th St (Little North Trailhead to Woodruff Street):

Eagle Heights Elementary School should have more continuous sidewalks/sidepath to the east and west to plan for future residential development south of 188th and to connect the school and neighborhoods to the Little Platte North Trailhead and Lake trail system.

- Benefits: Connect school, trails, and adjacent neighborhoods; provide safe pedestrian connection between school and residences to the east; build upon existing sidewalk.

- Challenges: Constrained ROW, not many connections other than to/from school and trailhead, would need separation between sidewalk/sidepath and roadway.

#### 2. Eagle Pkwy and Old Jefferson Hwy (County Route W to Litton and Litton to 1st Street via 172nd/Spelman):

As residential development continues, this sidewalk/sidepath will improve north-south connectivity throughout the northern portion of Smithville. It stretches from County Route W to the northern edge of Smith Fork Park and continues south to 1st Street. This facility should be phased with residential development.

- Benefits: Creates key a pedestrian and bicycle connection north to south. Connection between the lake and the residential subdivisions to the north.
- Challenges: Intense topography, many driveways along this road creates a constrained ROW

#### 3. Missouri Highway 92 (MO-92) (Commercial Ave to Tillman Road):

This sidewalk/sidepath would run from Commercial Ave to Tillman Rd in east Smithville.

- Benefits: This sidewalk could connect the school complex to future growth areas in the southeast.
- Challenges: Crosses a stream, other topography issues, does not provide critical connection to key pedestrian destinations.

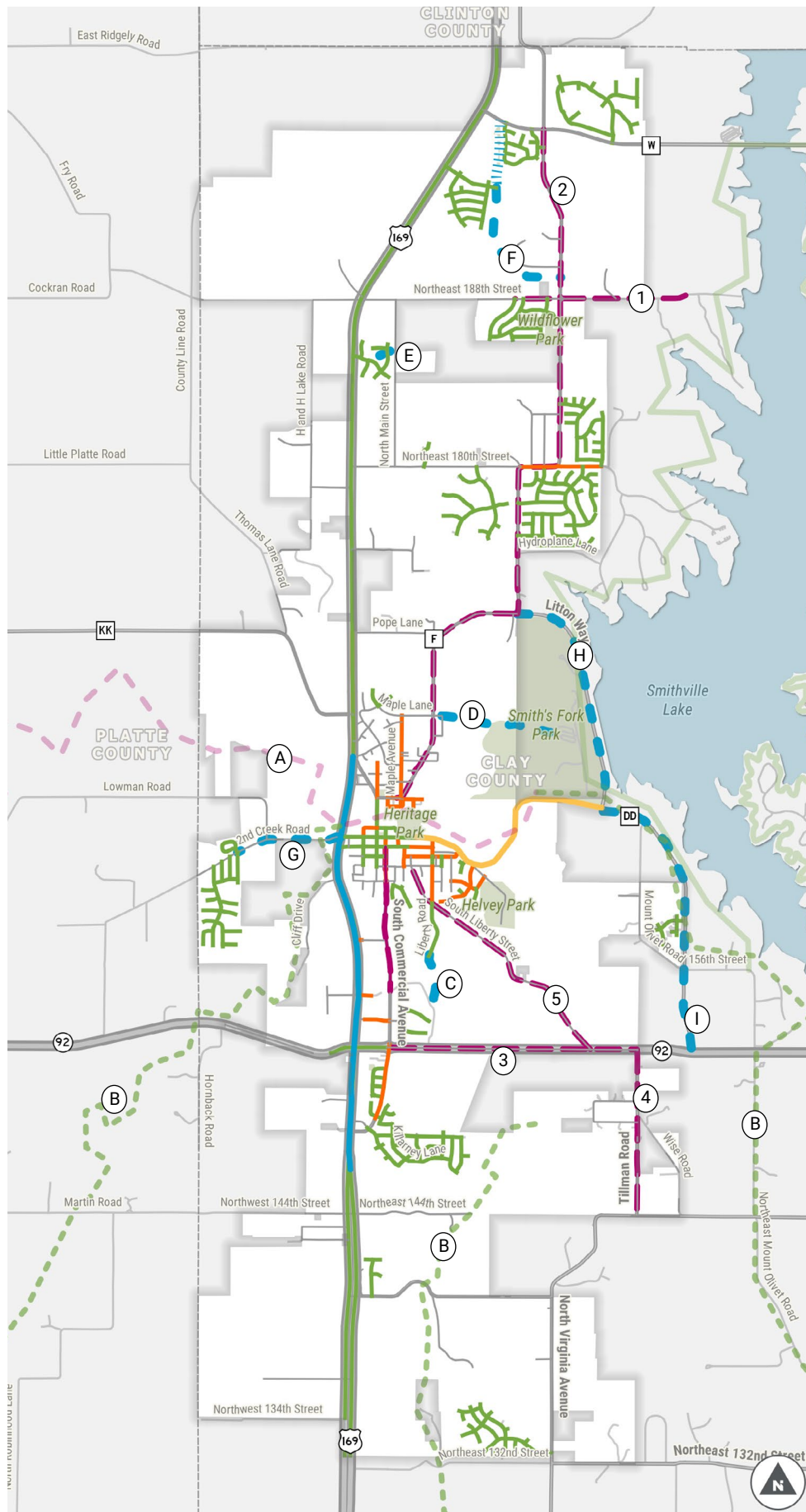
#### 4. Tillman Rd (MO-92 south to 144th St):

- Benefits: Would provide a north south pedestrian connection in the south of the city, creating better connectivity between subdivisions and estates.
- Challenges: many driveways, constrained ROW in some parts, topography issues.

#### 5. Liberty Street (MO-92 to Downtown):

- Benefits: This route will provide a connection between MO-92/south Smithville, future residential developments and downtown.
- Challenges: This corridor becomes more constrained as it gets closer to downtown.

## Map 8. Active Transportation Network Map



### Sidewalks

- Both Sides
- One Side
- New Sidewalk

### Bicycle Facilities

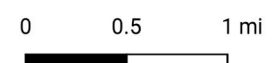
- Shared Use Path
- Unmarked Bicycle Lane

### Trails

- Proposed Little Platte River
- Existing MetroGreen Trail
- Proposed MetroGreen Trail
- Proposed MetroGreen Trail
- Existing Trail

### Short Trail Connections

- 2nd Creek Trail
- Dam Trail
- DD Trail
- 2nd Creek Trail
- Diamond Crest Trail
- Rock Creek Trail
- Liberty Road





## New Trails:

**A. River Walk Trail:** This trail would run from the west side of US-169 to Heritage Park and eventually to Smith's Fork Park along the new Main Street Trail.

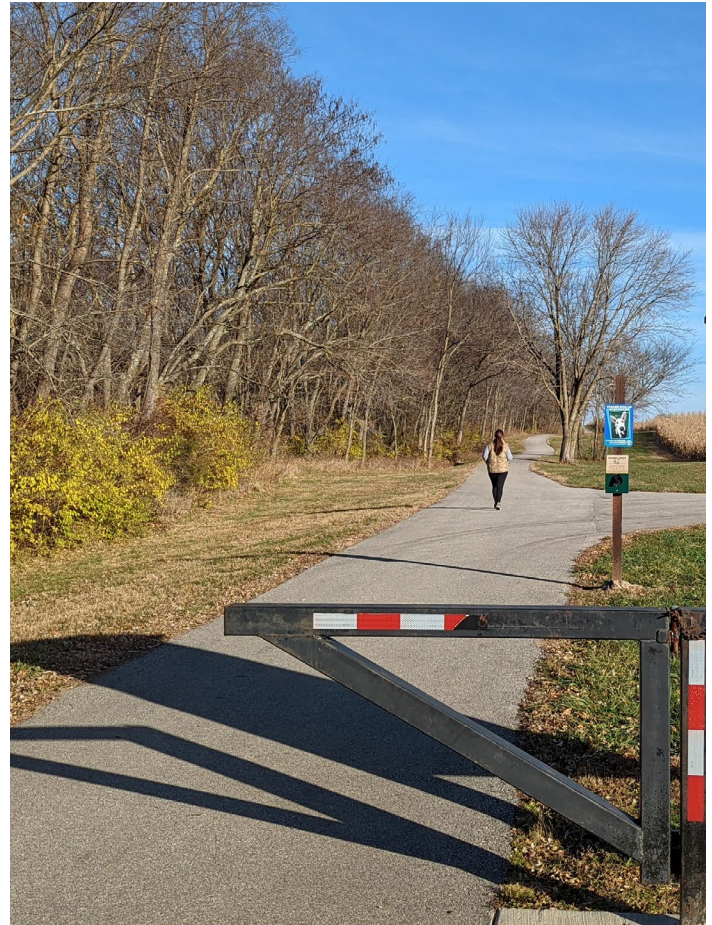
- **Benefits:** Activating this property with public art, playground, fitness stations, landscaping and possible river access will help create the Downtown as a destination location, as well as an economic hub for the Downtown community.
- **Challenges:** Connection under or across US-169.

**B. Metro Green Trail System:** A number of regional recreational trails are planned to pass through Smithville along river and stream beds as part of the Metro Green system. These are shown on the active transportation map and wherever possible, connections should be made to these facilities.

- **Benefits:** These trails would help preserve nature corridors as development occurs.
- **Challenges:** There's no organization or champion currently spearheading the development of this trail system.

**Short Trail Connections:** Several short trail connections are needed throughout Smithville to connect between neighborhoods and other destinations. These include:

- **C.** Connection between Liberty Road and the back of the Smithville School Complex at Commercial/MO-92.
- **D.** Maple Lane to Smith's Fork Park
- **E.** Rock Creek Neighborhood east to Main Street.
- **F:** Diamond Crest Trail
- **G:** 2nd Creek Trail
- **H:** Dam Trail
- **I:** DD TRAIL



Little Platte Trailhead North



Several bike races take place in Smithville

## Recommended Gateways and Roundabout Locations:

Gateways and roundabouts are important ways to create entry points to the city or placemaking points within the city. In addition to signaling that one is entering the city or a new character area, they can be used to signal to the driver that the nature of the roadway is changing and that a reduction in speed may be needed. Gateway treatments include traditional and nontraditional traffic control, such as enhanced signing, lane reduction, colored pavements, pavement markings, experimental striping, gateway structures, roundabouts, or other identifiable features. The recommended gateway and roundabout points are summarized on the following page.



Florence County, SC



El Dorado, AR



## Gateways

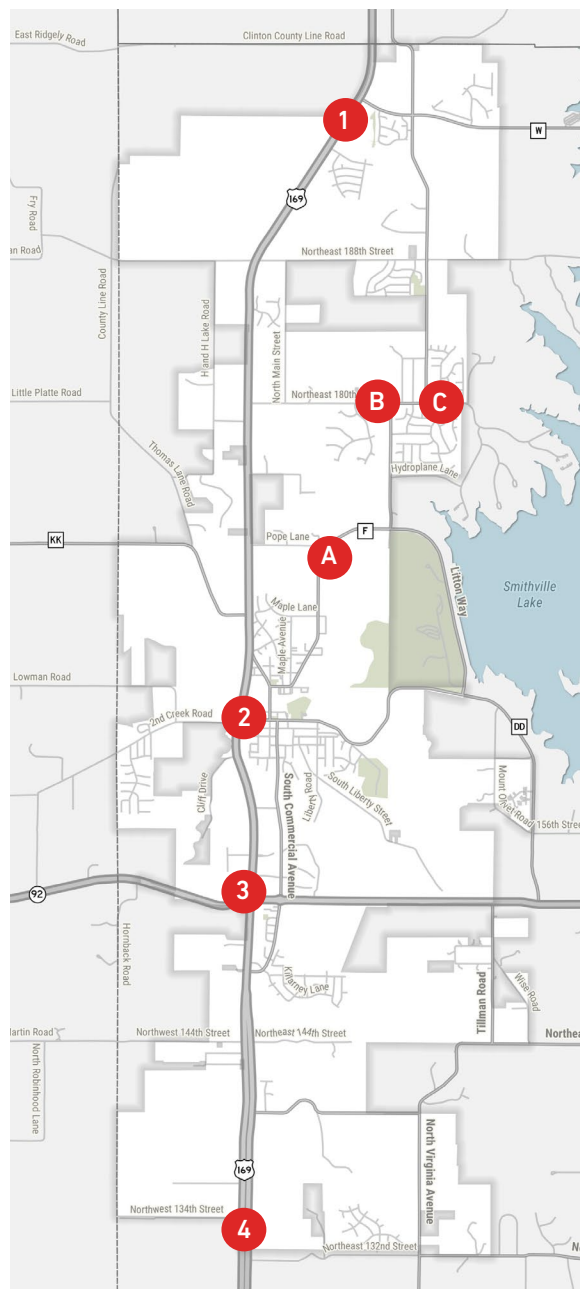
Smithville's linear city form and orientation along US-169 generate four critical moments, or key gateways, as one travels throughout the City. Future land use patterns spurred by new development may generate additional gateways. Each established gateway should be celebrated and prioritized over the next ten years. There are many possible gateway treatments appropriate to these areas including:

- 1) Northern Boundary Gateway:** As shown in the map below, the northern segment of Smithville along US-169 balances the area's rural character while also bringing more residential neighborhoods to this area. The gateway into Smithville from the north boundary should maintain the rural feel of Smithville.
- 2) Gateway into Smithville's Downtown:** Improving placemaking efforts at US-169 and W. Main Street will encourage more visitors to turn into Downtown, enhance awareness of the charming historic district, and expand the Downtown area. Significantly, with the pedestrian-scale of Downtown Smithville to the east of the gateway and proposed trail links from the west, future gateway and branding efforts should be appropriately scaled for vehicular drivers, bicyclists, and pedestrians alike.
- 3) US-169 & MO-92 Gateway:** As roadway and infrastructure improvements occur along MO-92, development patterns will likely follow. Industrial and flex developments may provide vehicular access onto MO-92 from the US-169 Industrial Character Area west of US-169. East of US-169, moderate density multifamily family and single-family residential neighborhoods and commercial fronting buildings will likely be oriented along MO-92 in the next ten to twenty years. The regional improvements to MO-92 will introduce more east-west traffic patterns through Smithville and bring new commuters and visitors through the City. Intersection improvements may be warranted at US-169 and MO-92, generating opportunities for enhanced placemaking and branding.
- 4) Gateway Entry into Smithville:** Entry into Smithville should celebrate the natural greenspace by preserving relief transitioning from Kansas City and introducing Smithville's small-town character. Enhancing the existing vegetation through landscaping efforts and enhanced signage and branding will accentuate these characteristics while being mindful of the gateway experience at the vehicular scale.

## Roundabouts

In addition to the gateway treatments above that might include roundabouts. The roundabouts displayed below are recommended internally with in Smithville to address challenging roadway alignment and signal changes in speed.

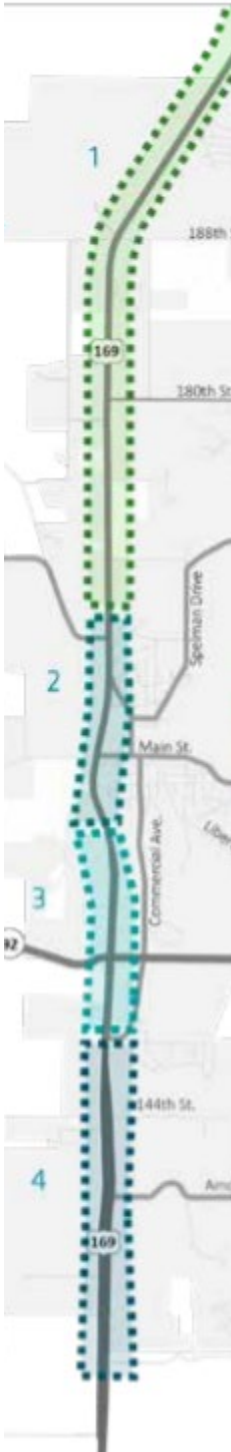
- A) Pope/Route F (Spelman/172nd)
- B) 180th/Old Jefferson
- C) 180th/Eagle Pkwy



Map 9. Recommended gateway and roundabout locations

## US-169 Experience

US-169 serves an essential connectivity and development function within the City of Smithville, but it also creates a barrier to east-west connectivity within the city for all modes. It is a particularly challenging corridor for travel by walking and bicycling. Smithville does not have jurisdiction over this roadway. It is essential that the city and MoDOT have regular communication regarding the character and function of this highway as it travels through Smithville. The City would like to see US-169 support the city's planned character areas and include safe, comfortable, and inviting facilities for active transportation. Smithville's Comprehensive Plan 2030 established the idea of a US-169 corridor experience that travels through different roadway character types based on adjacent land uses and transitions as summarized below.



1) Rural Character Area North of Downtown



2) Pedestrian-Focused Downtown Subarea



4) Balanced Mixed Use Development and Preserved Greenspace



**1) Rural Character North of Downtown:** The northern segment of US-169 north should preserve, retain, and celebrate the rural aesthetic and greenspace along Hwy US-169. To continue this aesthetic, commercial development fronting US-169 should be minimized, and parking lots should not be visible. Vegetated buffers and landscapes should be encouraged and enhanced to celebrate this corridor segment's character.

- Potential Future Signals: 188th, Pope Lane (172nd St)

**2) Pedestrian-Focused Downtown Subarea:** The US-169 experience in the Downtown Subarea transitions into a pedestrian oriented corridor to continue the Downtown character into the corridor, strengthening the district overall. New development should front US-169 with parking to the rear or side of buildings, reducing the view of parking from the corridor. Variations in facade design and materials should be encouraged to provide visual interest and scale appropriate at the lower vehicular speed in this segment. With the planned trails merging at the intersection of US-169 and W. Main Street, incorporating places for people with outdoor seating, plazas, or pedestrians and safe intersection crossing will foster enhanced placemaking efforts.

**3) Transitioning Boulevard:** A clear transition should be provided through with pedestrian and bicycle improvements along the section of US-169 that travels from Hwy KK to south of downtown and the vesicularly oriented southern segment of US-169. A well-balanced concept includes dedicated space for pedestrians, bicyclists, motorists, and landscaped elements.

**4) Balanced New Mixed-Use Development and Preserved Greenspace:** The southern segment of US-169, south of MO-92 to the municipality's boundary, is vesicularly oriented with higher traffic counts and faster speeds. Intentionally preserving greenspace and landscaped buffers between Kansas City and Smithville should be prioritized to provide clear demarcation, transition, and relief from Kansas City development. New development within this segment of Smithville's US-169 corridor should be encouraged with mixed-use frontage. New development should feature a high-quality facade and site design. Building frontage, setback, and orientation of new development will be critical in enhancing this corridor segment's quality.

- Potential New Signal: 144th



## Safe Routes to School

As part of the planning process, the project team examined traffic patterns and connections for all modes in around Smithville schools. The following recommendations are intended to reduce congestion, provide better walking and bicycling connections to schools, and make it safer for all modes.

### Eagle Heights Elementary School

Eagle Heights is located at the intersection of 188th and Eagle Parkway (Rte. F). Small sections of sidewalk are present immediately in front of the school on the north side of 188th Street east of Eagle Parkway and on the south side of 188th street between Eagle Parkway and Wildflower Street connecting the school to the neighborhood to the west. Traffic concerns at this school location include:

- Significant queuing along the south side of 188th Street at school drop-off and pick-up. To alleviate this, the school asks parents to drive west to the Little Platte Trailhead parking lot to turn around and then queue on the north side of the roadway.
- Queuing cars create potential conflicts with pedestrians at two points, the school driveway and the internal queue in the school parking lot
- The speed limit on Eagle Parkway is 45 MPH and the intersection is stop-controlled. A school staff member serves as crossing guard and crosses and handful of students across Eagle Parkway at one scheduled crossing in the morning and two scheduled crossings in the afternoon.



Eagle Heights Elementary School Staff member serving as crossing guard

### Proposed Improvements:

- Move the crossing that connects the sidewalk to the school entrance to a location with fewer potential conflicts. This might necessitate additional sidewalk on campus.
- Stripe any locations on the school driveway or parking lot where students are expected to cross to make these locations stand out to drivers.
- Consider raising crossing locations on the school campus to sidewalk height.
- Create a more convenient turn around location (small roundabout or wider spot along 188th with u-turn location) to facilitate cars turning around to queue on the north side of the roadway.



Traffic build up outside of Eagle Heights Elementary on 188th St.



A raised crossing treatment could provide safer crossings for children



## Maple Elementary School

This school is located at the intersection of Maple Lane and Maple Avenue between Spelman Drive and US-169. It is protected from high volumes and high-speed traffic due to its residential location however there are several issues that should be addressed to improve the ability for students to safely reach school by walking and bicycling:

- While sidewalk exists on the west side of Maple Avenue, there are no sidewalks on Maple Lane or providing access to the school.
- There are no crosswalks to access the school and signage is outdated.

### Proposed improvements:

- Install additional sidewalks on Maple Lane and east side of Maple Avenue
- Install marked crosswalks at desired crossing locations.
- Install school warning signs and reduced speed limit signs on Maple Lane
- Update all signage and follow MUTCD fluorescent green standards for school warning signs.



Safe Routes to School treatment in Austin, TX



Ensure all school warning signage is updated to current MUTCD standards with fluorescent yellow-green high visibility background.



Newly installed sidewalk near Eagle Heights Elementary

## Smithville School Complex (High, Middle, Horizon Elementary)

Smithville's High School, Middle School, and Horizons Elementary School are located together along with Smithville School District Administrative Offices north of MO-92 and east of Commercial Avenue. There are two entrances to the complex, one off of MO-92 and one from Commercial Ave. The following issues were observed related to school traffic and circulation.

- There is a lack of sidewalks leading up to the school complex and on the school site itself. The existing sidewalk south of the school on Commercial ends before it reaches the school grounds and there is no sidewalk north of the school. (A 6-foot sidewalk is funded for implementation from the school complex (south end) to Downtown (Meadow St). Limited sidewalks exist on campus.
- There are no direct connections between the adjacent Stonebridge Neighborhood south of the school and the Liberty Road neighborhood north of the school and the school campus, necessitating circuitous trips by car that could be short trips by walking or bicycling to the back side of campus.
- Overall circulation on campus is confusing with wide unmarked swaths of pavement and no clear pedestrian circulation between the parking lots stadium/ concessions and school buildings.

### Proposed improvements:

- Acquire right-of-way and build short trail connections between existing and future neighborhoods that facilitate more walking and bicycling to school.
- Install sidewalks within the school campus to facilitate pedestrian movement. These sidewalks should connect to the new sidewalks the city is building.
- Install internal crossings, pavement markings, and signage to better organize internal circulation.



Accessibility could be improved by adding sidewalks



School Complex parking lot features limited pavement markings



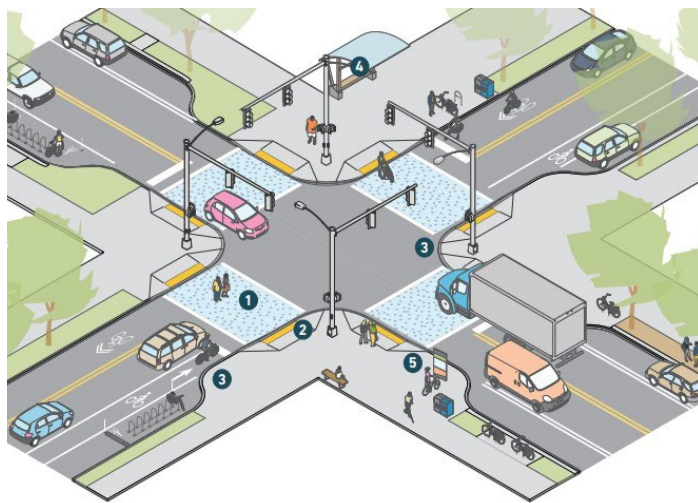
Sidewalks recommended for Commercial Ave. entrance



## Recommended Coordination, Policies, and Programs

In addition to the infrastructure recommendations above, it will be important to adopt policies that facilitate future transportation planning, design, funding, and implementation.

- Adopt the Complete Streets Policy and Design Guidelines.** A complete streets policy and design guidelines were developed as part of the TMP process and should be adopted to facilitate the development of a future transportation network that considers the needs of all users and modes. The Complete Streets Design Guidelines include design guidance for all aspects of new and retrofit street design. The guidelines also include guidance on such topics as traffic calming and access management.
- Implement traffic impact study requirements and best practices in development districts/impact fees.** As new development occurs, developers should be required to conduct traffic impact studies to estimate the development's impact on existing transportation infrastructure. In addition, the city should utilize impact fees or benefit districts that require that developers to pay for or contribute to the cost of the transportation (and other) infrastructure that supports their development. More details on best practices for traffic impact studies and fees/districts is provided in Appendix E.
- Update current subdivision code to encourage connected active transportation networks.** Current code states that "local streets shall be so designed to discourage through or non-local traffic." While this language can help prevent non-local motor vehicle traffic, it also often has the unintended effect of limiting pedestrian and bicycle circulation as well. Consider revising the code so that it states that local street design—not local street networks—can be designed to calm traffic speeds. The use of traffic calming treatments such as curb extensions, traffic circles, chicanes, and pedestrian islands can discourage their use by through-traffic but still allow pedestrian and bicycle connections. In addition, consider adding language stating that a path of minimum 10 feet, within an easement of 20 feet, may be required at the end of the cul-de-sac to connect cul-de-sacs to schools, churches, parks, shopping areas, or other cul-de-sacs or residential areas.
- Build and strengthen relationships with MoDOT, MARC, and Clay County.** This work has already started, but efforts should be made to coordinate and regularly update MoDOT, MARC, Clay County and other regional city and partners to ensure regional roadway and trail networks are coordinated.
- Conduct ongoing coordination with planning, parks, and schools.** As a small city, internal coordination is relatively straight forward, however institutionalizing coordination between city departments and with the school district will be even more important as the city continues to grow.
- Develop parking policies for new commercial development that include consideration of how active transportation can reduce parking needs.** The city should proactively develop parking policies and guidance for developments that includes a role for active transportation.
- Begin developing policies for electric vehicles, bike share, scooter share and other new mobility alternatives.** The city should also proactively develop policies for future alternative transportation.



Complete Street intersection

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# **CHAPTER 04: PRIORITIZATION, FUNDING, AND IMPLEMENTATION**

# 04



# Prioritization

With limited resources, it will be important for Smithville to prioritize the projects recommended in Chapter 3 and to look for opportunities to utilize innovative funding sources and partner with local and regional partners and developers. To help prioritize projects, the project team evaluated which of the overall guiding principles of this TMP each project contributes to, how immediate the need for additional infrastructure will be based on the current best understanding of the market for development, and the political will and public interest in specific projects. Given that development patterns and the availability of various funding sources may shift, these priorities should be reevaluated on an annual basis to see if updates are needed to the prioritization.

Some of these projects will take longer than others to complete. A designation of Short-Term (1-2 years), Mid-Term (3-7 years) and Long-Term (8-20 years) has been given to each project, but it should be noted that in most cases groundwork for these projects such as right-of-way acquisition, regional coordination, additional studies, engineering and data collection, and determining funding should be started right away.

## High Priority Projects

The following projects should be started right away to meet the needs of Smithville residents and visitors, to provide safe connections, build community, and plan for the future.

Project Type / Location	Prioritization Criteria/ Guiding Principles				Time Frame	Possible Funding Sources
	Transportation for All	Safe Connections	Strong Community	Future Focused		
New Roadway: ½ mile south of MO-92 – new county line arterial to US-169 (#7 on Map 7/Figure 7)	x	x		x	Mid-Term	Developer, City, MARC
New Roadway: Connection between MO-KK and MO-F following Pope Lane (172nd St.) - avoiding transmission lines (#9 on Map 7/Figure 7)	x	x	x	x	Mid-Term	Developer, City, MARC
New Roadway: Amory Rd – new county line arterial to US-169 (#6 on Map 7/Figure 7)	x	x	x	x	Mid- to Long-Term	Developer, City, MARC
Sidewalk/Sidepath: NE 188th St (Little North Trailhead to Woodruff Street)	x	x		x	Short-Term	City, MARC
Trail: River Walk Trail	x	x	x		Mid-Term	City, MARC
Trail: Short Trail Connections (Miscellaneous as indicated on Map 8)	x	x	x	x	Short to Mid-Term	City, MARC
Roundabout at Pope Lane (172nd St) / Spelman/172nd	x	x	x		Short Term	City, MARC
Roundabout 180th/Old Jefferson	x	x	x		Mid-Term	City, MARC
Downtown Gateway			x			



### Remaining Projects

Project Type / Location	Prioritization Criteria/ Guiding Principles				Time Frame	Possible Funding Sources
	Transportation for All	Safe Connections	Strong Community	Future Focused		
½ mile west of US-169 – 136th north to MO-92 (#4 on Map 7 / Figure 7)	x	x	x	x	Mid- to Long-Term (alternative routing may be needed)	Developer, City, MARC
1 mile east of US-169 – 136th north to MO-92 (#5 on Map 7/ Figure 7)	x	x	x	x	Mid- to Long-Term (alternative routing may be needed)	Developer, City, MARC
New Roadway: ½ mile north of MO-92 – new county line arterial to US-169 (#8 on Map 7/Figure 7)	x	x	x	x	<u>Mid- to Long-Term (physical constraints)</u>	Developer, City, MARC
New Roadway: I-435 & Virginia Ave to north to MO-DD at southwest corner of Smith's Fork Park (#1 on Map 7/Figure 7)	x	x		x	Long-Term (Currently lacks other utilities)	Developer, City, MARC
New Roadway: I-435 & Cookingham / Platte Purchase Dr. north to KK following county boundary (#2 on Map 7 / Figure 7)	x	x		x	Long-Term (Currently lacks other utilities)	Developer, City, MARC
New Roadway: 136th (Platte County to Virginia Ave) #3 on Map 7 / Figure 7	x	x		x	Long-Term (physical constraints, alternative routing may be needed)	Developer, City, MARC

Project Type / Location	Prioritization Criteria/ Guiding Principles				Time Frame	Possible Funding Sources
	Transportation for All	Safe Connections	Strong Community	Future Focused		
Sidewalk/Sidepath: Eagle Pkwy and Old Jefferson Hwy (County Route W to Litton and Litton to 1st Street via 172nd/Spelman):	x	x		x	Long-Term	Developer
Sidewalk/Sidepath: Tillman Rd (MO-92 south to 144th St)	x	x		x	Mid-Term	City, MARC
Sidewalk/Sidepath: Liberty Street (MO-92 to Downtown)	x	x		x	Mid-Term	Developer
Sidewalk/Sidepath: Missouri Highway 92 (MO-92) (Commercial Ave to Tillman Road)	x	x		x	Long-Term	MoDOT
MetroGreen Trails		x	x	x	Long-Term	City, MARC
Roundabout: 180th/Eagle Pkwy		x		x	Mid-Term	City, MARC
Remaining Gateways: Northern Boundary, Hwy 169/92, and Southern Boundary Gateway			x		Mid-Term	City, MARC

## Implementation

The implementation of these projects will require the time and commitment of city staff, support of the community, and city leadership. As Smithville continues to grow, priorities may need to shift to respond to changes in the market and unforeseen circumstances, but the priorities above will provide an overall structure to guide city investment. Roadway projects will require additional alignment studies and partnerships and creative funding opportunities should be pursued where possible. City staff will be responsible for including TMP recommendations in budget proposal requests, applying for grant and other funding for planning efforts included in the TMP, coordinating with MARC, MoDOT, the County, and other regional partners as well as project implementation. The Board of Aldermen will ultimately decide which policies, plans, and projects to advance.



# Appendices

- A. Public Survey Results**
- B. Complete Streets Policy Memo**
- C. Traffic Forecast Memo**
- D. Functional Class Changes Memo**
- E. Traffic Impact Studies and Fees/Development Districts**
- F. Smithville Complete Streets Design Guidelines**

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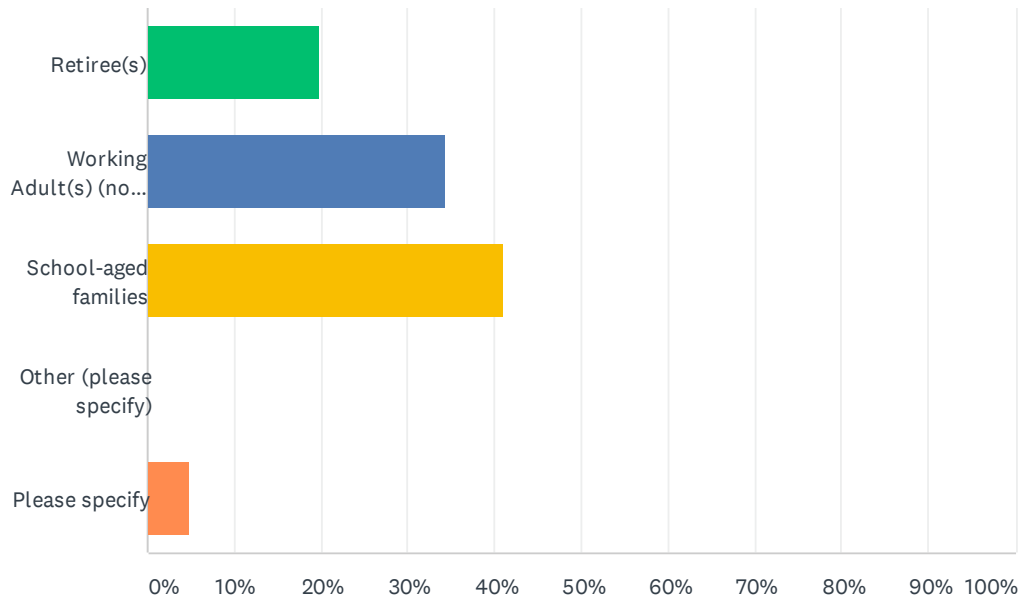
# APPENDIX A: PUBLIC SURVEY RESULTS





## Q1 TYPE OF HOUSEHOLD: Which description best suits your household?

Answered: 393 Skipped: 0



ANSWER CHOICES	RESPONSES	
Retiree(s)	19.85%	78
Working Adult(s) (no dependent children)	34.35%	135
School-aged families	40.97%	161
Other (please specify)	0.00%	0
Please specify	4.83%	19
<b>TOTAL</b>		<b>393</b>

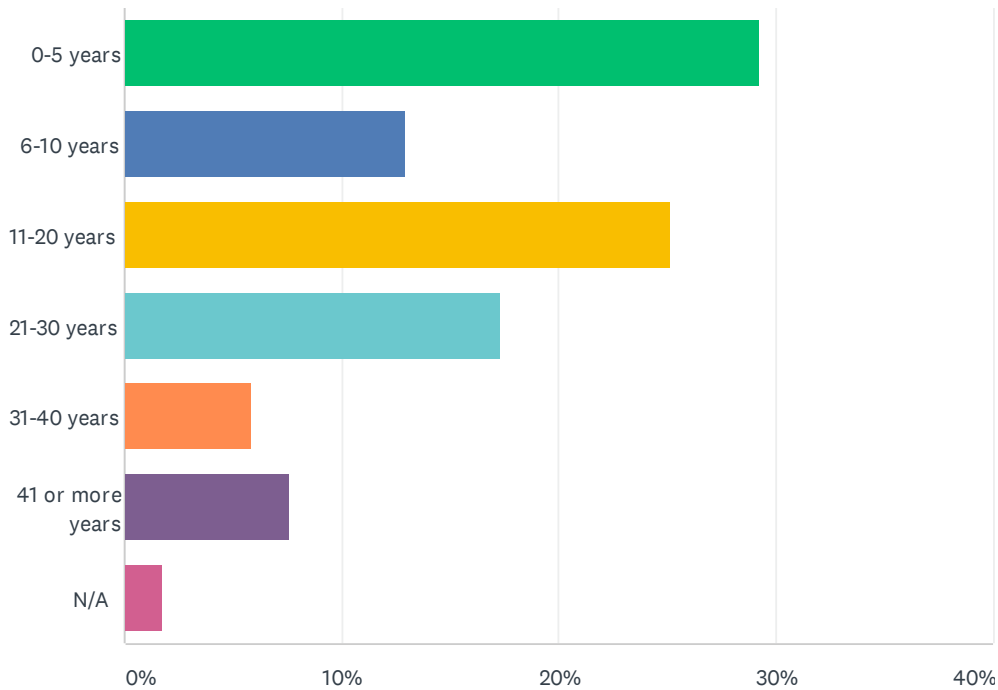
#	PLEASE SPECIFY	DATE
1	Working adults with a handicapped adult son	8/11/2021 12:39 PM
2	Toddler aged family	8/7/2021 9:37 AM
3	Working adults young children	8/5/2021 10:10 PM
4	married couple	8/5/2021 5:18 PM
5	As	8/5/2021 8:54 AM
6	Working Adult, Working Child, Toddler	8/3/2021 9:40 PM
7	Working adults w/ toddler	7/6/2021 6:33 PM
8	Physically Handicapped WC bound	7/6/2021 4:30 PM
9	Disabled Retiree	7/6/2021 4:29 PM
10	College Student living with parents	7/1/2021 9:31 AM
11	No	6/26/2021 2:44 PM

## Smithville Transportation Master Plan - Community Survey #1

12	All of the above	6/24/2021 10:44 PM
13	Working adults with young child	6/24/2021 6:08 AM
14	Working adults with children	6/24/2021 5:23 AM
15	Family, 2 parents working, 1 adult child working, 1 dependent child/adult age in college	6/23/2021 5:23 PM
16	Adult and adult kids. 18 and up. Haven't moved out. Barely working	6/23/2021 3:28 PM
17	2 adults and children under 3	6/23/2021 1:00 PM
18	2 working adults, one college student	6/23/2021 8:47 AM
19	Two working 1 retired people	6/23/2021 8:18 AM

## Q2 TIME IN SMITHVILLE: How long has your household lived in the Smithville area?

Answered: 393 Skipped: 0

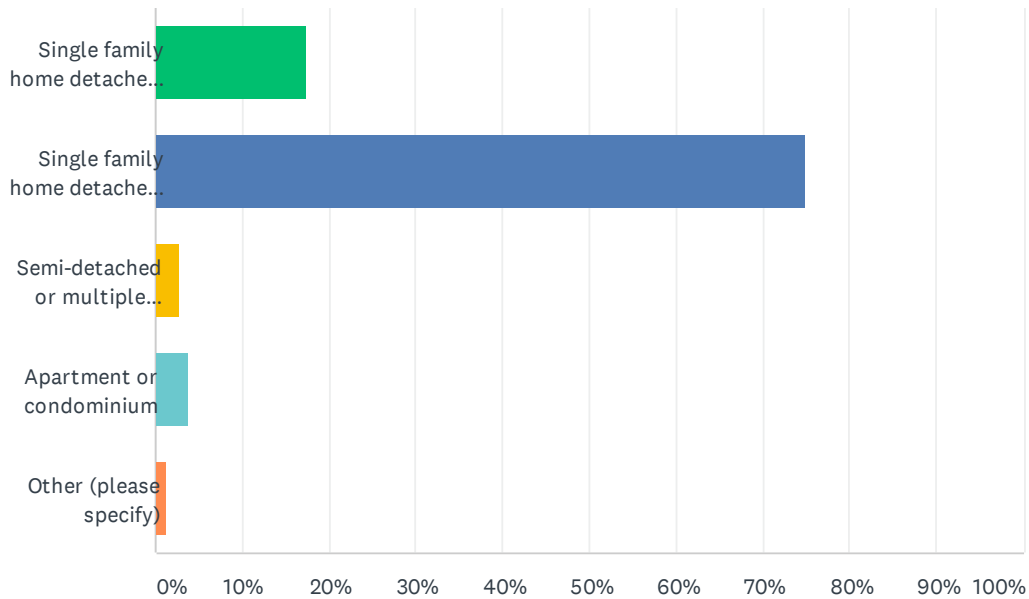


ANSWER CHOICES	RESPONSES	
0-5 years	29.26%	115
6-10 years	12.98%	51
11-20 years	25.19%	99
21-30 years	17.30%	68
31-40 years	5.85%	23
41 or more years	7.63%	30
N/A	1.78%	7
TOTAL		393



## Q3 TYPE OF HOUSE: What type of property does your household live in? (select only one)

Answered: 393 Skipped: 0

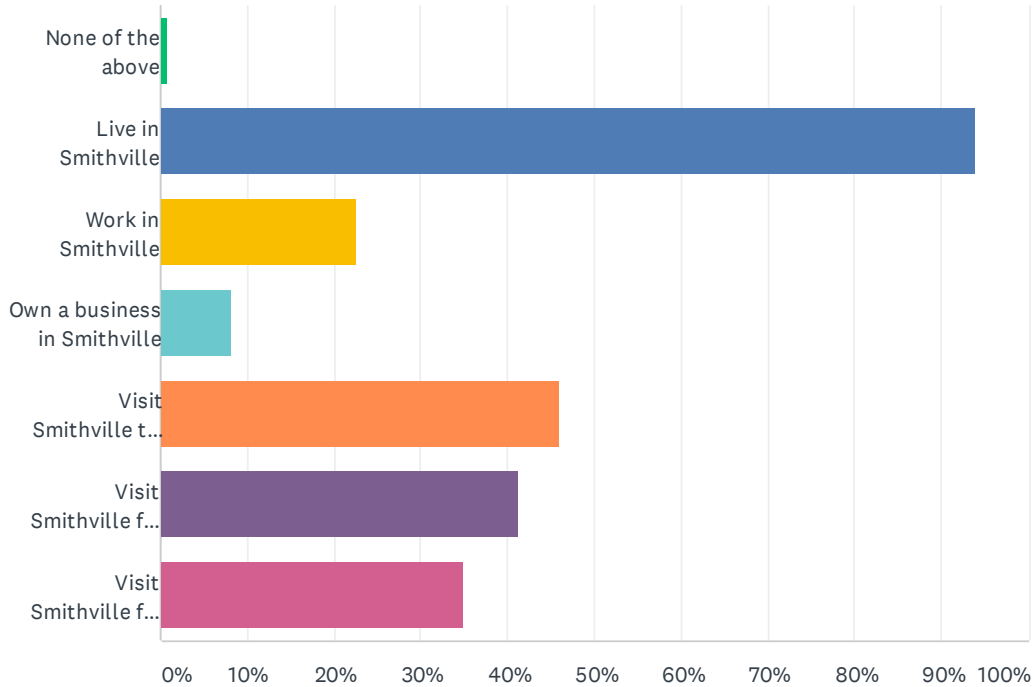


ANSWER CHOICES		RESPONSES	
Single family home detached house on large land area or farm		17.30%	68
Single family home detached house in a neighborhood or housing development		74.81%	294
Semi-detached or multiple housing complex		2.80%	11
Apartment or condominium		3.82%	15
Other (please specify)		1.27%	5
TOTAL			393

#	OTHER (PLEASE SPECIFY)	DATE
1	Townhome	8/11/2021 6:02 PM
2	?	8/5/2021 5:18 PM
3	7	8/4/2021 1:56 PM
4	1 acre , attached garage	8/1/2021 10:29 AM
5	Low income garden apartments	7/6/2021 4:30 PM

## Q4 I currently.....(Mark as many as apply)

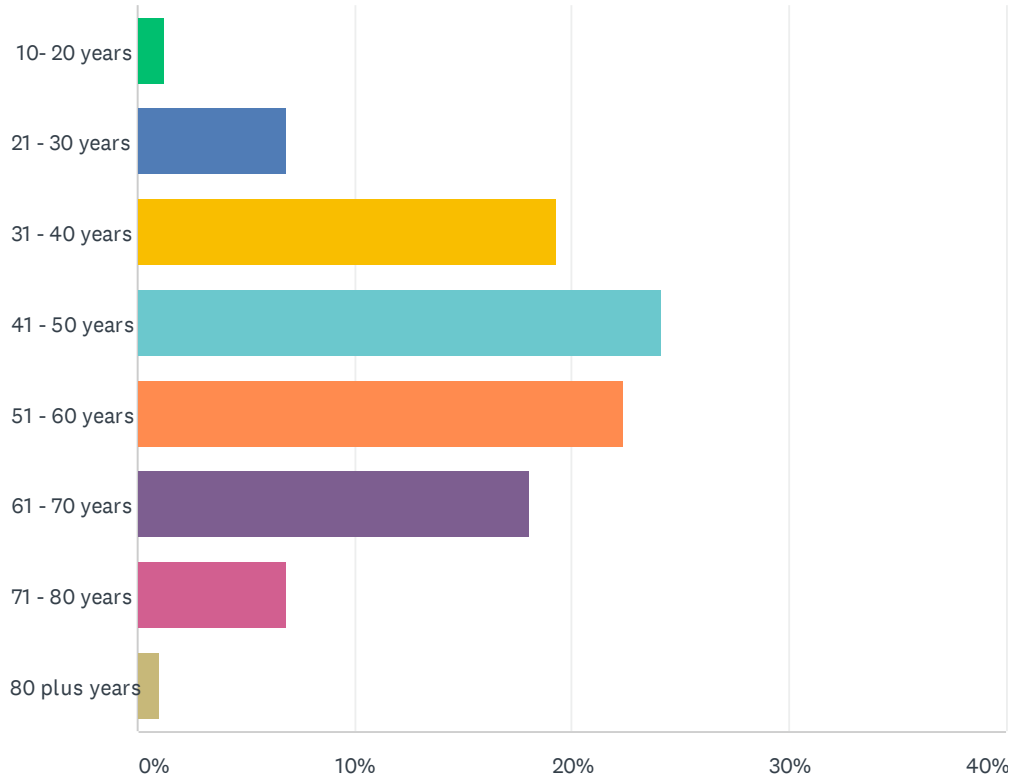
Answered: 393 Skipped: 0



ANSWER CHOICES	RESPONSES	
None of the above	0.76%	3
Live in Smithville	93.89%	369
Work in Smithville	22.65%	89
Own a business in Smithville	8.14%	32
Visit Smithville to shop	46.06%	181
Visit Smithville for recreation	41.22%	162
Visit Smithville for entertainment	34.86%	137
Total Respondents: 393		

## Q5 AGE RANGE: Which age range are YOU in?

Answered: 393 Skipped: 0

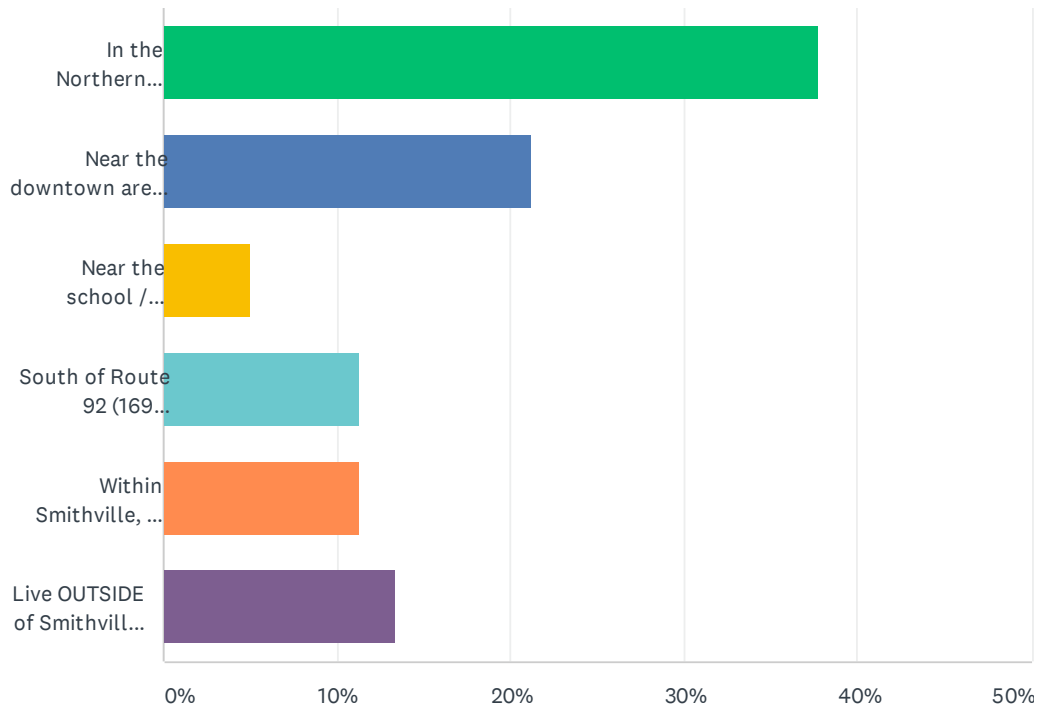


ANSWER CHOICES	RESPONSES	
10- 20 years	1.27%	5
21 - 30 years	6.87%	27
31 - 40 years	19.34%	76
41 - 50 years	24.17%	95
51 - 60 years	22.39%	88
61 - 70 years	18.07%	71
71 - 80 years	6.87%	27
80 plus years	1.02%	4
TOTAL		393



## Q7 CHARACTER AREA: Where in Smithville do you live? (select only one)

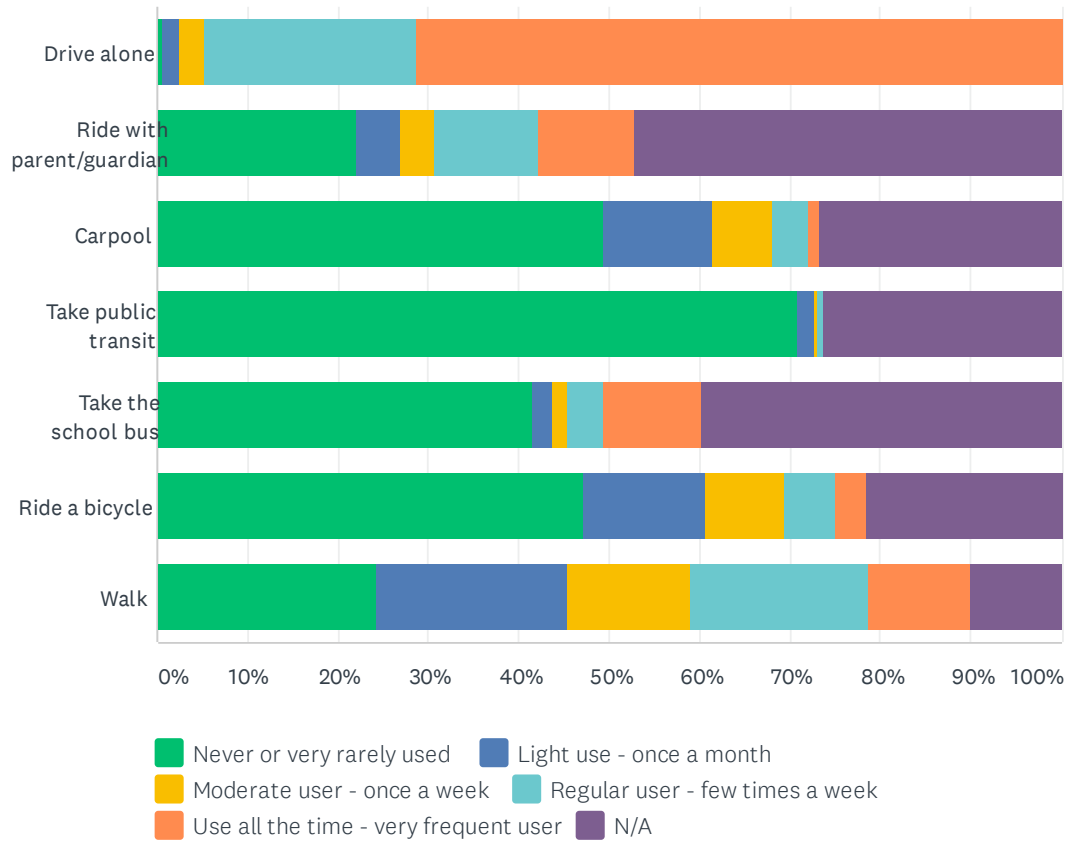
Answered: 381 Skipped: 12



ANSWER CHOICES	RESPONSES	
In the Northern Residential areas of Smithville (North Residential Character Area)	37.80%	144
Near the downtown area (Downtown Community Oasis Character Areas)	21.26%	81
Near the school / hospital area (Hospital Bluff Character Areas)	4.99%	19
South of Route 92 (169 Southern Character Areas)	11.29%	43
Within Smithville, but outside the designated Character Areas	11.29%	43
Live OUTSIDE of Smithville City Limits	13.39%	51
TOTAL		381

## Q8 LEVEL OF CURRENT USE: In terms of Transportation, how would you describe your household's typical use levels of the following forms of transportation?

Answered: 346 Skipped: 47



	NEVER OR VERY RARELY USED	LIGHT USE - ONCE A MONTH	MODERATE USER - ONCE A WEEK	REGULAR USER - FEW TIMES A WEEK	USE ALL THE TIME - VERY FREQUENT USER	N/A	TOTAL	WEIGHTED AVERAGE
Drive alone	0.58% 2	1.74% 6	2.91% 10	23.55% 81	71.22% 245	0.00% 0	344	4.63
Ride with parent/guardian	22.15% 70	4.75% 15	3.80% 12	11.39% 36	10.76% 34	47.15% 149	316	2.69
Carpool	49.38% 159	12.11% 39	6.52% 21	4.04% 13	1.24% 4	26.71% 86	322	1.58
Take public transit	70.85% 226	1.88% 6	0.31% 1	0.63% 2	0.00% 0	26.33% 84	319	1.06
Take the school bus	41.56% 133	2.19% 7	1.56% 5	4.06% 13	10.94% 35	39.69% 127	320	2.02
Ride a bicycle	47.20% 152	13.35% 43	9.01% 29	5.59% 18	3.42% 11	21.43% 69	322	1.79
Walk	24.32% 80	20.97% 69	13.68% 45	19.76% 65	11.25% 37	10.03% 33	329	2.70

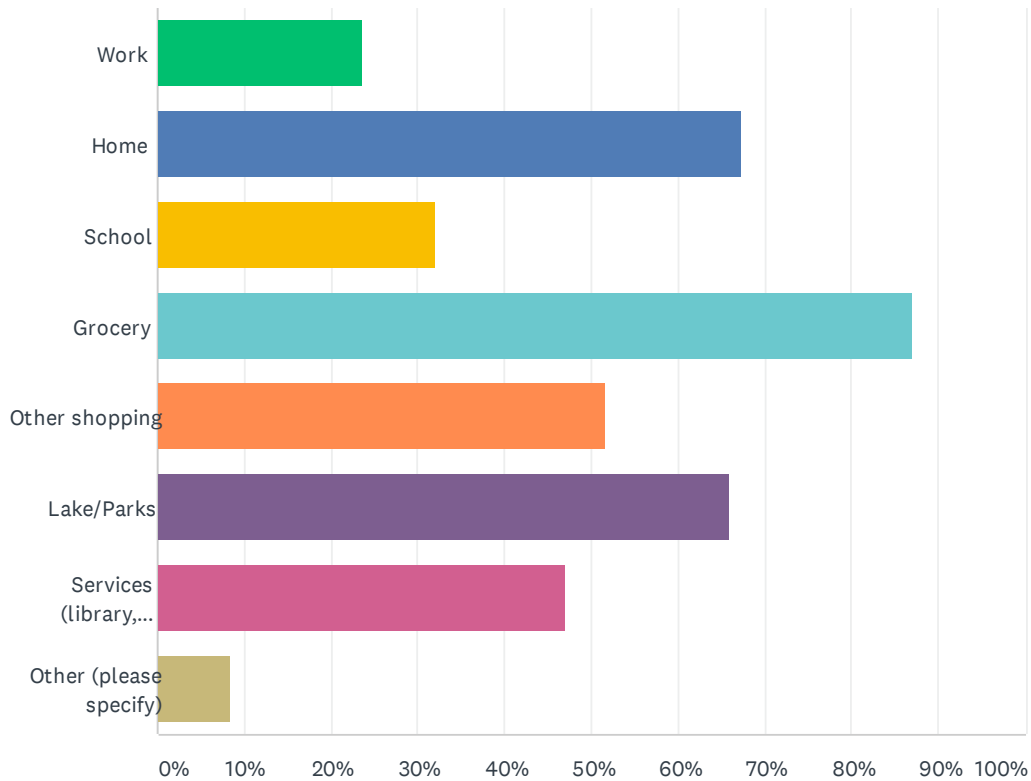
# Smithville Transportation Master Plan - Community Survey #1

#	OTHER (PLEASE SPECIFY)	DATE
1	I can't walk out of the neighborhood as there are no sidewalks. Also the traffic is to busy and is dangerous to walk.	8/12/2021 7:32 AM
2	Ride with Husband	8/11/2021 5:40 PM
3	Walk on side walks short distance	8/11/2021 4:30 PM
4	My handicapped adult son pays for Uber to work at Price Chopper in Smithville for 4-6 hours 2-3 times a week.go t	8/11/2021 12:43 PM
5	Bought a bike. Just waiting for better weather to use it.	8/4/2021 3:58 PM
6	I think it is important that we get a pedestrian walk bridge from North neighborhoods of downtown to downtown. The Platte River is very large and bath and there is nowhere to cross other than on Bridge Street. I would like more access to the lake from the north neighborhoods other than via downtown.	7/8/2021 10:18 AM
7	Wheelchair	7/6/2021 4:50 PM
8	Wheelchair	7/6/2021 4:40 PM



## Q9 DESTINATIONS: What are the most important destinations that you travel to in Smithville? (Mark all that apply.)

Answered: 346 Skipped: 47



ANSWER CHOICES	RESPONSES	
Work	23.70%	82
Home	67.34%	233
School	32.08%	111
Grocery	86.99%	301
Other shopping	51.73%	179
Lake/Parks	65.90%	228
Services (library, healthcare, etc.)	47.11%	163
Other (please specify)	8.38%	29
Total Respondents: 346		

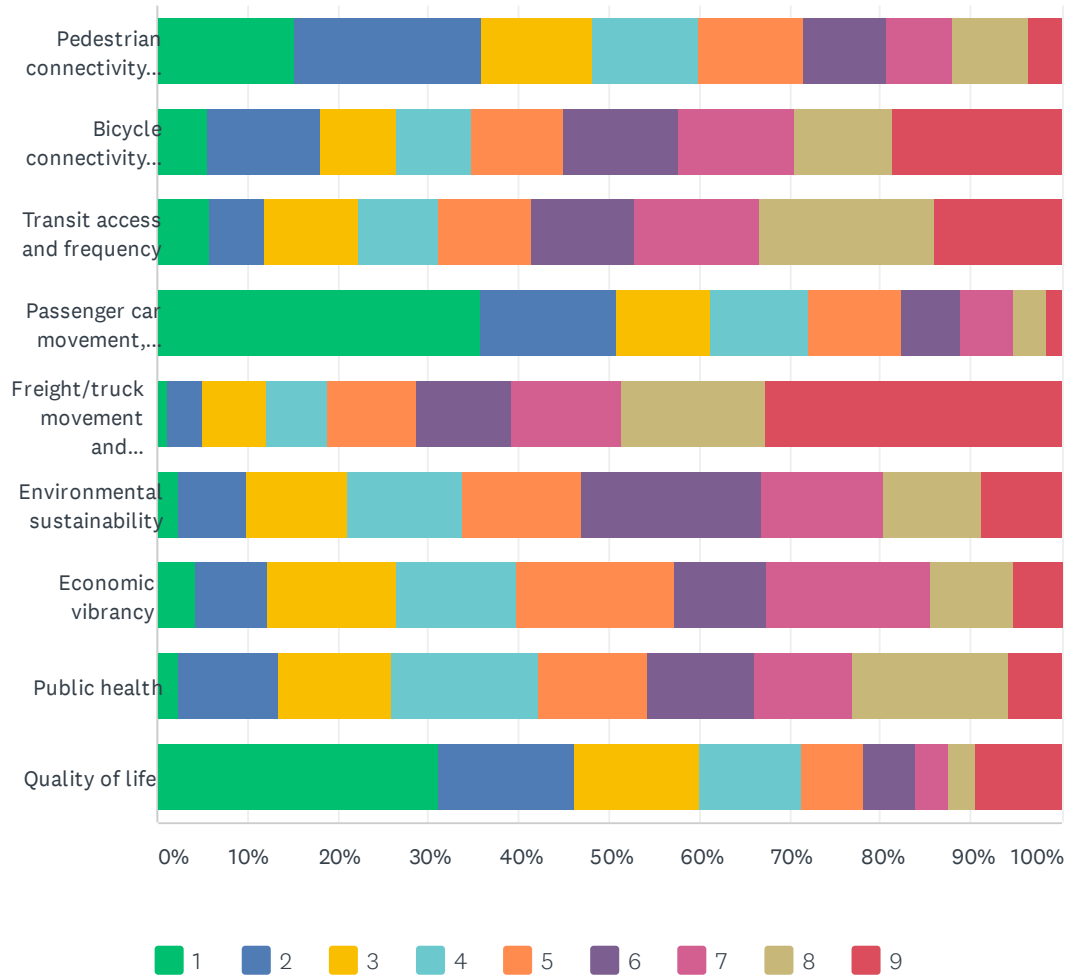
#	OTHER (PLEASE SPECIFY)	DATE
1	Quiktrip and Chops BBQ	8/14/2021 11:31 AM
2	Used to go downtown but since the narrowing of the roads so much the congestion makes it too unpleasant	8/13/2021 9:59 AM
3	Gym	8/12/2021 9:54 AM

# Smithville Transportation Master Plan - Community Survey #1

4	None	8/11/2021 5:18 PM
5	Entertainment	8/11/2021 4:22 PM
6	Sports Events	8/11/2021 3:01 PM
7	Restaurants	8/8/2021 10:31 AM
8	Friend's home	8/8/2021 10:01 AM
9	Post office, restaurants, hardware stores	8/4/2021 3:58 PM
10	Church/Scouts my	8/4/2021 1:58 PM
11	Doctor appointments	8/4/2021 1:54 PM
12	Church	8/4/2021 1:19 PM
13	Restaurants	8/4/2021 12:01 PM
14	Foodservice	8/4/2021 11:51 AM
15	Gas stations	7/15/2021 1:15 PM
16	Theatre	7/12/2021 2:09 PM
17	Church	7/8/2021 11:43 AM
18	Church, friends homes	7/7/2021 2:23 AM
19	Dr appointments. Barry road. Labs.	7/6/2021 7:17 PM
20	None on Smithville	7/6/2021 5:08 PM
21	Church	7/6/2021 4:50 PM
22	Church	7/6/2021 4:40 PM
23	Gas and Restaurants, Goss Cemetery, Dog Park	7/6/2021 4:36 PM
24	Dinning	6/28/2021 7:50 PM
25	Bars restaurant	6/23/2021 3:36 PM
26	Pick up my grandson from home or school and drop him off	6/23/2021 11:42 AM
27	Gym, tanning	6/23/2021 10:29 AM
28	Sports - baseball and gymnastics	6/23/2021 9:56 AM
29	None	6/22/2021 3:50 PM

**Q10 TRANSPORTATION PRIORITIES:** Rank the following priorities for you and your family. Note that the priorities may be either dragged to the rank desired, or the arrows may be clicked up or down to rank each priority. (1 = most important; 9 = least important)

Answered: 346 Skipped: 47



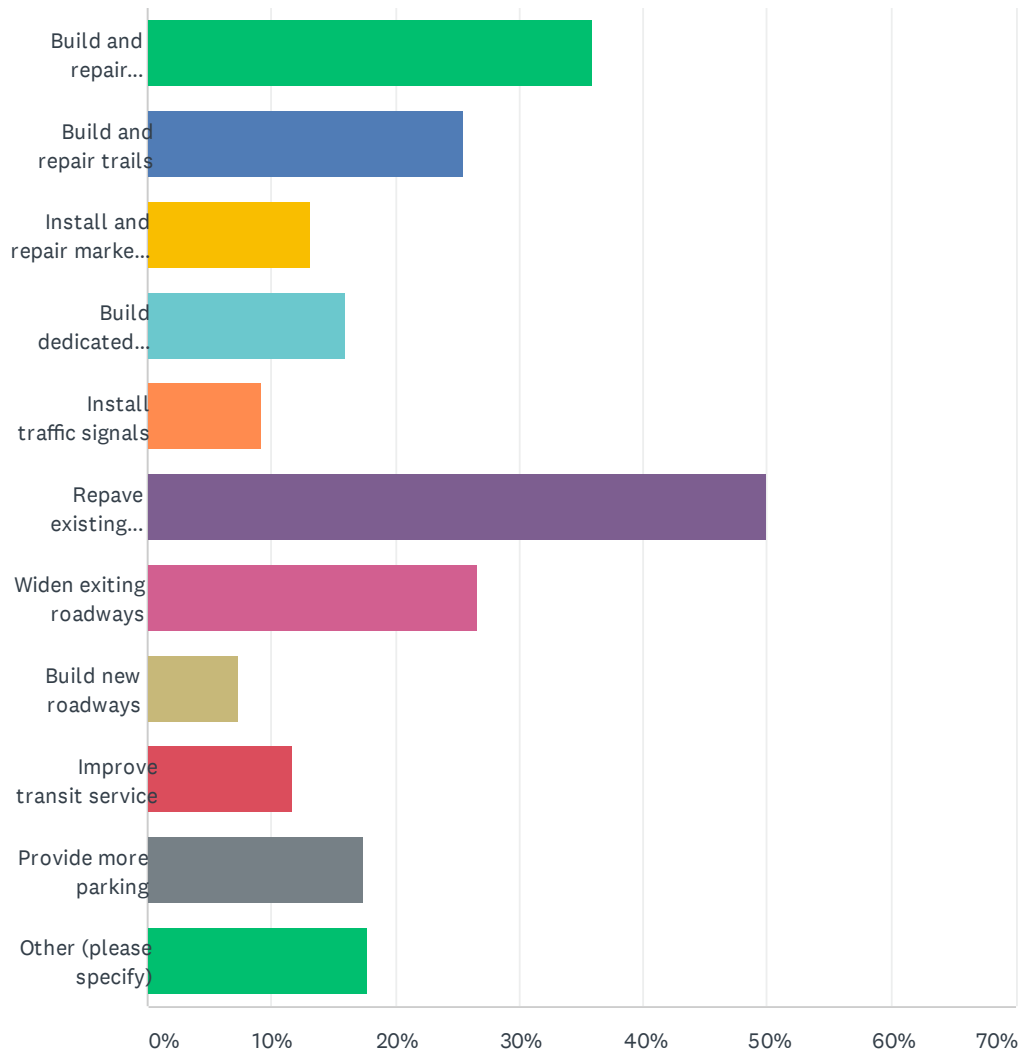


# Smithville Transportation Master Plan - Community Survey #1

	1	2	3	4	5	6	7	8	9	TOTAL	SCORE
Pedestrian connectivity and mobility	15.34% 50	20.55% 67	12.27% 40	11.66% 38	11.66% 38	9.20% 30	7.36% 24	8.28% 27	3.68% 12	326	5.96
Bicycle connectivity and mobility	5.54% 18	12.62% 41	8.31% 27	8.31% 27	10.15% 33	12.62% 41	12.92% 42	10.77% 35	18.77% 61	325	4.39
Transit access and frequency	5.81% 19	6.12% 20	10.40% 34	8.87% 29	10.09% 33	11.62% 38	13.76% 45	19.27% 63	14.07% 46	327	4.18
Passenger car movement, loading, and parking	35.78% 117	14.98% 49	10.40% 34	11.01% 36	10.09% 33	6.73% 22	5.81% 19	3.67% 12	1.53% 5	327	6.84
Freight/truck movement and loading	1.20% 4	3.89% 13	6.89% 23	6.89% 23	9.88% 33	10.48% 35	12.28% 41	15.87% 53	32.63% 109	334	3.24
Environmental sustainability	2.45% 8	7.36% 24	11.35% 37	12.58% 41	13.19% 43	19.94% 65	13.50% 44	10.74% 35	8.90% 29	326	4.52
Economic vibrancy	4.31% 14	8.00% 26	14.15% 46	13.23% 43	17.54% 57	10.15% 33	18.15% 59	9.23% 30	5.23% 17	325	4.88
Public health	2.46% 8	11.08% 36	12.31% 40	16.31% 53	12.00% 39	12.00% 39	10.77% 35	17.23% 56	5.85% 19	325	4.75
Quality of life	31.07% 105	15.09% 51	13.91% 47	11.24% 38	6.80% 23	5.92% 20	3.55% 12	2.96% 10	9.47% 32	338	6.49

## Q11 INVESTMENT: If you were Mayor for a day, how would you distribute \$1,000 towards transportation? (Mark all that apply.)

Answered: 326 Skipped: 67



# Smithville Transportation Master Plan - Community Survey #1

ANSWER CHOICES	RESPONSES	
Build and repair sidewalks	35.89%	117
Build and repair trails	25.46%	83
Install and repair marked crosswalks	13.19%	43
Build dedicated bikeway	15.95%	52
Install traffic signals	9.20%	30
Repave existing roadways	50.00%	163
Widen exiting roadways	26.69%	87
Build new roadways	7.36%	24
Improve transit service	11.66%	38
Provide more parking	17.48%	57
Other (please specify)	17.79%	58
Total Respondents: 326		

#	OTHER (PLEASE SPECIFY)	DATE
1	Build pedestrian bridge by housing authority so we can walk to heritage park from Maple Elementary area.	8/16/2021 7:58 PM
2	Stop light install at 169 & 144th Change speed limit South of Commercial on 169 back down to 45mph!	8/14/2021 11:34 AM
3	Provide more parking Downtown!! The apartments is a HORRIBLE idea!!	8/13/2021 10:04 AM
4	No free Metro Bus Service to allow homeless to wonder Smithville area, no no no	8/12/2021 8:38 AM
5	That is not enough money to make an improvement for any of the above. Unless you are talking a couple areas.	8/12/2021 7:40 AM
6	People riding bikes still use the streets and highways so building more bikeways is a waste of money.	8/11/2021 10:26 PM
7	Take out the stupid bump outs	8/11/2021 8:13 PM
8	I live in cedar lake estate. Selfishly I want our neighborhood to have access to 169 and downtown. Second creek road is very bad for pedestrians both walking and riding bicycles.	8/11/2021 5:02 PM
9	No	8/11/2021 4:42 PM
10	Provide affordable transportation for the handicapped & elderly from Smithville homes to Smithville locations with exceptions being hospitals and doctor visits	8/11/2021 12:50 PM
11	I have you ever	8/10/2021 8:20 AM
12	The streets in Hills of Shannon have become very wavy (hard to describe but if you drive through the subdivision you will know what I mean) and need repair. Also in front of our house there is a wide crack that spans from one side of the road to the other that needs repaired.	8/10/2021 5:57 AM
13	The renovated streets downtown are very nice, but they are just so narrow. Turns at intersections are sometimes problematic.	8/8/2021 10:47 AM
14	Additional main road access in and out of Greyhawk Subdivision	8/7/2021 5:26 PM
15	Spend more time working the roads and less time working on sidewalks	8/6/2021 3:00 PM
16	180th street and Hwy 169 is deadly! Those of us in the northland have to now take Hwy F through town to avoid the traffic at 180th and Hwy 69. Downtown is now a nightmare with the	8/6/2021 11:51 AM



## Smithville Transportation Master Plan - Community Survey #1

bump-outs. They should NEVER have been installed. Downtown is beautiful with the red bricks but the bump-outs need to go!

17	More fun and interesting businesses incentives for downtown, fewer ins offices and atty offices or business of that nature on main streets downtown.	8/6/2021 9:38 AM
18	Build bikelane or sidewalk down highway DD south of the damn before highway 92.	8/4/2021 4:26 PM
19	Smithville is such a small town... a full transit service like KC wouldn't be appropriate. Perhaps "trolley stations" in different parts of town would be good. Sort of like a bus stop...but more "local" and small town appeal.	8/4/2021 4:04 PM
20	I don't think 1,000 would do much. I would say fix damaged road area.	8/4/2021 3:25 PM
21	Intersection improvement at 188th st and 169	8/4/2021 2:35 PM
22	I'd like transportation to doctors outside of Smithville.	8/4/2021 1:57 PM
23	I'm pretty sure \$1000 wouldn't go very far to do much for any of these options!	8/4/2021 1:23 PM
24	Fix the downtown intersections that were just redone and make it so hard to turn downtown if any other cars are around.	8/4/2021 12:07 PM
25	Upgrade streetlights to energy efficient LED lighting, which would help with night driving.	8/4/2021 11:55 AM
26	Have stop signs in difficult visibility areas. Ex Stop sign on Commercial at Summit. Turn lane at 169 and 180th.	8/3/2021 9:47 PM
27	\$1000 wouldn't cover any of the above	8/1/2021 10:35 AM
28	Take care of the old section of town	7/27/2021 5:01 PM
29	Reduce size of bumpouts downtown.	7/15/2021 1:30 PM
30	Widen streets downtown so people can safely travel	7/9/2021 8:32 AM
31	Pedestrian cross way over platte river other than bridge street	7/8/2021 10:19 AM
32	Make the west side of 169 accessible via pedestrian bridge. (Maybe at Hospital drive?)	7/7/2021 10:39 PM
33	Install turn lanes on highway	7/7/2021 9:10 AM
34	More and morr green space, public pool,	7/6/2021 8:30 PM
35	\$1000 wouldn't do much. Come up with a better question. I would not spend \$1000 on a survey about a matter that really doesn't mean anything to this city. Try again.	7/6/2021 8:21 PM
36	Clearing of snow/ice on sidewalks and trail paths in winter.	7/6/2021 7:56 PM
37	Handicap excitability. Handicap has been forgotten.	7/6/2021 7:17 PM
38	Install roundabouts at 180th and F Hwy	7/6/2021 6:45 PM
39	\$1000 would not cover the planning of any of these projects much less the projects mentioned.	7/6/2021 5:35 PM
40	Get rid of that stoplight by new Price Chopper. Has ANYONE calculated the man hours, gallons of gas, and exhaust fumes (EXCESS) added by that single light?????????	7/6/2021 4:43 PM
41	F hwy falling apart. Downtown roads terrible. 169 needs widened all the way to Trimble to 4 lanes. Lights at 180th and 169. Speed needs slowed to 45 to trimble.	7/6/2021 4:31 PM
42	hope 92 from mt olivet to 169 opens soon also hoping there is a bike lane on it that would be wonderful!	6/28/2021 8:59 AM
43	Storm drains	6/24/2021 5:59 PM
44	Remove the bump outs downtown.	6/24/2021 4:23 PM
45	Get rid of the stupid bump outs	6/24/2021 11:26 AM
46	Especially downtown	6/23/2021 8:05 PM
47	Paint center lines on roadway. Currently not painted or marked well.	6/23/2021 6:28 PM

## Smithville Transportation Master Plan - Community Survey #1

48	Speed bumps on roads near neighborhoods where people speed excessively and it's dangerous. Other city's do it so I know it can be done.	6/23/2021 11:48 AM
49	Tear out bump outs !	6/23/2021 11:32 AM
50	Don't like the bikes on the road.	6/23/2021 9:48 AM
51	More parking downtown, the new sidewalks look nice but have made the roads way to narrow and downtown is very congested now. Traffic lights out north would be nice. 180th and 188th off 169 hwy can be terrible to get on and off. Accidents are happening here.	6/23/2021 9:48 AM
52	Don't need any more Stop Signs and bump outs	6/23/2021 9:05 AM
53	,	6/23/2021 8:59 AM
54	look at correcting intersections that are difficult to see when turning.	6/23/2021 8:47 AM
55	Put a solar powered warning light at the intersection of 188th street and 169 to warn of oncoming traffic from the north.	6/23/2021 8:41 AM
56	Build a community rec center and pool	6/23/2021 8:23 AM
57	More parking downtown, and widen roadways in dangerous areas	6/23/2021 8:05 AM
58	We	6/23/2021 7:51 AM

## Q12 Please describe the location of any transportation issues you would like to see addressed (Be as specific as possible - for example, better pedestrian connections needed across Highway 169 at library.)

Answered: 192    Skipped: 201

#	RESPONSES	DATE
1	Build pedestrian bridge and sidewalk by housing authority so we can walk to Heritage Park and downtown from Maple Elementary area.	8/16/2021 7:58 PM
2	There needs to be a way to get across 169 at 169 and Hospital way and also at Main and 169. Could a pedestrian/bike bridge be built? Public transit to Airport or River market would be nice. It's hard to live without a car in this community.	8/16/2021 12:28 AM
3	See #11 And a stop light at 169 and Amory	8/14/2021 11:34 AM
4	Intersection of 188th and US 169 is terrible.	8/13/2021 1:35 PM
5	Pedestrian walkway from the neighborhoods down 2nd creek road into town. It's a matter of time til a kid gets hit walking down that road.	8/13/2021 12:42 PM
6	Bigger shoulders on Spelman and 172nd st. There's no room for runners or bikers.	8/13/2021 10:04 AM
7	169 from town all the way to W	8/12/2021 9:55 AM
8	We need a stop light or something by 180th street and 169 hey to entrance to lake so homeowners can get out safely to 169. With the new growth there is a lot of traffic both ways and is getters no more dangerous!	8/12/2021 7:40 AM
9	Any type of transportation for people that don't have a car	8/12/2021 6:45 AM
10	I know of no transportation issues. Mainly being retired i do not drive on a daily basis much of any distance.	8/11/2021 10:54 PM
11	Widen 169 from hwy kk to hwy w,4 lane	8/11/2021 9:30 PM
12	Turn lanes and widen 169 North of town	8/11/2021 8:29 PM
13	Downtown so you can get boats and campers and trailers through	8/11/2021 8:13 PM
14	Shoulders especially on 92	8/11/2021 6:10 PM
15	Turn lanes on 169 north of town. Bike access to price chopper.	8/11/2021 5:51 PM
16	It is a pain to drive through Downtown, Hard to make turns and parking is terrible. You should get rid of the bump-outs in the roads,	8/11/2021 5:46 PM
17	Corners are very tight downtown on the square. Hard to turn large trucks.	8/11/2021 5:36 PM
18	See above	8/11/2021 5:02 PM
19	Establish public transportation	8/11/2021 4:43 PM
20	Turning right from N Bridge Street onto Owens Ave is an area that needs some work. There is an iron street drain that appears to have a 3 to 4 inch drop in the pavement. When a vehicle hits it, it's very hard on the right front steering, tires and overall understructure of the vehicle.	8/11/2021 4:42 PM
21	nothing i can think of	8/11/2021 4:08 PM
22	Highway 169 and 180th need a light or something there so people can turn out to 169 safely	8/11/2021 3:23 PM
23	Change 180th and Eagle Parkway to 3 way stop. Same change to 180th and Old Jefferson.	8/11/2021 2:57 PM
24	lights at the post office library intersection	8/11/2021 2:42 PM
25	Need to provide affordable transportation to handicapped & elderly	8/11/2021 12:50 PM



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26	Access to Highway 169 needed at 180th St.	8/11/2021 7:52 AM
27	169 gets busy during rush hour. Are the lights timed to keep the traffic moving?	8/10/2021 3:45 PM
28	Sidewalks up and down commercial Ave. Sidewalks around Maple Elementary rehabbed	8/10/2021 10:24 AM
29	Greyhawke needs a 2nd entrance. There are too many houses for the single entrance on 180th	8/10/2021 9:33 AM
30	Corners downtown are a driving nightmare when two vehicles meet and wish to turn.	8/10/2021 8:20 AM
31	I think maintenance of existing roadways should be a priority. Vehicles cost as much as houses used to and bad roads are hard on them.	8/10/2021 5:57 AM
32	Repair or build existing sidewalks in the downtown and South Commercial Ave area	8/9/2021 4:31 PM
33	Amory and 169 South. I fear for my adult driving children whenever they try and turn south on 169. People come blasting over the hill, ignoring the flashing 45 mph sign. Even if a patrol car posted up there occasionally might deter some of it. I don't have a radar gun, but I'd estimate some of them are doing 70 or better. In my 26 years living here in this same house, I've only seen a patrol car sitting near there a handful of times. Seen them plenty on the east side of the hwy a little further south watching people come into town. Worst case, a signal there, which might also help the strip mall businesses behind our house. We live in the woods court subdivision. Thank you!	8/9/2021 1:15 PM
34	Widen 180th from Hwy 169 to golf course	8/9/2021 12:38 PM
35	Left turns onto 169 around Quick Trip can be hazardous. Intersection of 188th and 169 needs attention, there is very little sight distance.	8/9/2021 7:49 AM
36	1.sidewalks on Commercial Ave from McDonalds to 92 Hwy. 2. Pedestrian bridge over 169 either at the library or further north at DD Hwy.	8/8/2021 10:07 AM
37	Repair large pot holes along Village Lane and Sunset Dr	8/7/2021 10:27 AM
38	Restore the name F Highway and drop the confusing multiple names assigned a few years age. Reduce downtown street corner curbs so traffic can make turns without cutting into on-coming lane.	8/6/2021 8:32 PM
39	Repair Main Street by Heritage Park	8/6/2021 6:03 PM
40	The roads heading towards heritage park where their has been major street or sewer/water repair need to be completely redone and this should take priority over other project like sidewalks	8/6/2021 3:00 PM
41	Repave the streets and stop the garbage with downtown and those stupid trails	8/6/2021 12:43 PM
42	Older or transportation challenged residents have a hard time getting to the grocery store now that it has moved to the top of a giant hill. Free public shuttle to the grocery store and pharmacy/ hospital would be amazing.	8/6/2021 12:19 PM
43	180th street and Hwy 169	8/6/2021 11:51 AM
44	Sidewalks for all. Older areas have too many cars driving and parked in narrower streets and yet is only place for elderly to walk and kids to play and ride bikes. A lot of pet lovers have to walk dogs in streets and believe more people would do more walking to and from businesses if had sidewalks that could take you there. A lot of people walking to work risking traffic due to no sidewalks.	8/6/2021 9:38 AM
45	Several roads are sorely in need of repair. Commercial is okay, though the patch work is very uneven/wavy. other roads leading off Main Street are rough.	8/5/2021 11:38 PM
46	Bump outs at intersections downtown. Dangerous.	8/5/2021 10:47 PM
47	Dedicated turn lanes at highway 169 and 180th and 188th streets. Accidents are an issue at these intersections.	8/5/2021 10:19 PM
48	Lines need to be painted all along 169. Traffic lights need to be more in sync with flow of traffic. The side wall construction should not interfere with rush hour traffic and backing up traffic for miles. Could be done at night.	8/5/2021 7:31 PM
49	Repaving 180th and downtown streets	8/5/2021 6:07 PM

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50	Better connection to 169 south at Meadow street.	8/5/2021 5:30 PM
51	A safe bike path from the northern neighborhoods to the downtown area would be a huge benefit to families. A bike path over the dam would be useful too.	8/5/2021 11:22 AM
52	Eco Devo based for light industrial.	8/4/2021 11:58 PM
53	Cross Walks for roundabout.	8/4/2021 6:32 PM
54	a light at the post office for sure	8/4/2021 4:44 PM
55	No bike paths on south side of lake connecting camp branch to Litton. My Oliver road is dangerous to bike on..	8/4/2021 4:26 PM
56	Absolutely better pedestrian connections across 169 Hwy at the library and where other services are...such as dental. A stop light at the Library with cross walk would be a blessing.	8/4/2021 4:04 PM
57	Congestion issue on 169, north of Main street	8/4/2021 3:47 PM
58	NE 188th St and 169hwy, when on 188th facing East/West that area is extremely difficult to see oncoming traffic.	8/4/2021 2:46 PM
59	Better flow of traffic in downtown area maybe make some streets one way	8/4/2021 2:37 PM
60	Better line of sight needed turning on to 169 from 188th	8/4/2021 2:37 PM
61	Intersection improvement at 188th st and 169. There need to be a turn land both ways to access 188th street	8/4/2021 2:35 PM
62	Widen the road from Main Street to the dam Better access to get across 169 when not at a stoplight	8/4/2021 2:02 PM
63	- When there isn't construction, the roundabout at MO-92 and Commercial Ave. If you're on Commercial, good luck getting through there. There's typically constant traffic coming through on MO-92. I don't know what to do, but the different types of roads converging causes a lot of issues.	8/4/2021 1:42 PM
64	Sidewalk connection to little platte park off of 180th. Seen too many people walking or riding on road to get to the park. I know this is a county issue but the city should take the lead on getting the sidewalk connected.	8/4/2021 1:35 PM
65	Pedestrian access to the trail and dog park on HWY F -180th to the bridge, plus bike lane to the marina on 180th - any other connecting trails to downtown.	8/4/2021 1:25 PM
66	Stop light at 169/KK.	8/4/2021 1:23 PM
67	Commercial St. on the North side of the high school	8/4/2021 12:36 PM
68	Repave, widen, eliminate hills on 180th. Repave Jefferson Highway. Eliminate entire downtown streetscape project.	8/4/2021 12:17 PM
69	Corner of woods and winner- there is a huge ripple in the road making it very uneven and unsafe	8/4/2021 12:15 PM
70	Fix downtown intersections that built foolish cincrete barriers that make it hard to turn.	8/4/2021 12:07 PM
71	Pedestrian and bike paths along south 169 from Amory to north	8/4/2021 12:00 PM
72	Road flooding during heavy rains south of 92 on 169 Hwy, and also on the curve by the winery on old F Hwy. Also need to restripe 169 through town, as when it rains, it is difficult to see lane lines.	8/4/2021 11:55 AM
73	Better pedestrian access from the school campus	8/4/2021 11:46 AM
74	Bus transportation to/from Smithville to downtown or NKC.	8/3/2021 9:47 PM
75	Stop light between post office and library	7/27/2021 5:01 PM
76	Make sure roads are able to handle traffic before new subdivisions are approved. Improve safety at 169 Highway and !88th St.	7/15/2021 1:30 PM
77	Downtown parking areas left as is. Bump outs have caused loss of business and street parking.	7/12/2021 2:12 PM

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78	More choices for north/south roads, about all we have is hwy. 169. We need another 4 lane road, like a blvd. or parkway. Very difficult I'm sure, but it won't get easier or less expensive and this would ease congestion on hwy. 169 and promote new growth. Also, when the new 2nd Creek bridge was put in, why wasn't there a bike/pedestrian walkway installed like the one on DD, over by Helvey Park? At some point we need the nice wide sidewalks installed between Cedar Lake sub-division and hwy. 169. Right now it's dangerous for kids to ride to town using 2nd creek road. The pedestrian bridge would have helped in the future when we do have funding for this walkway. What the city has done with the wide sidewalks, trails and downtown area are great along with our recent retail growth. We are proud to be a part of our community!	7/10/2021 10:06 AM
79	More bike and foot trails connecting all Smithville subdivisions.	7/9/2021 12:12 PM
80	When redoing streets, make the intersections wide enough for cars to turn without running over the curb. I have not traveled to the downtown area because of this issue in over 4 months.	7/9/2021 8:32 AM
81	Downtown is hard to drive in since those things that stick out have been put in. It is hard to turn.	7/8/2021 11:50 AM
82	Again I live in wooden Heights neighborhood on Highland Drive I have small children our neighborhoods are not very walkable I would love to have some way to cross the bridge other than Bridge Street getting from my neighborhood to downtown is very dangerous once I'm in downtown it's lovely it's just getting to there and back is a bit much for three children	7/8/2021 10:19 AM
83	It would be nice to be able to be able to walk to post office. That's risky with out a pedestrian bridge to bypass walking across 169. Also it would be nice to have a viable taxi service.	7/7/2021 10:39 PM
84	There is no safe option for children to walk to Eagle Heights Elementary if they don't live in the Wildflower subdivision, nor a way to walk to the Little Platte North trailhead. The old F highway corridor is only vehicle friendly yet there are people traveling by bike and running and jogging it all the time. Make it safe.	7/7/2021 10:21 PM
85	more affordable taxi service for seniors	7/7/2021 2:43 PM
86	More bike and pedestrian access to the lake area from other parts of town	7/7/2021 2:24 PM
87	East Main is in awful shape. Hopefully resurfacing this road is part of the Main Street Trail plan. The amount of traffic that goes toward the lake, to uses the parks, etc, it should be a priority.	7/7/2021 12:48 PM
88	The road leading out of downtown heading to the lake needs widend at the curve going around the church.	7/7/2021 11:56 AM
89	Better transition/turn lane from 1st street onto 169	7/7/2021 11:01 AM
90	Get rid of those horrible bump outs downtown! They are ugly and in the way!	7/7/2021 9:52 AM
91	Turn lanes needed in both directions North on 69 to Hwy W	7/7/2021 9:10 AM
92	Better lit streets. Specifically on 169 from McDonalds to Smithville Marina.	7/7/2021 7:47 AM
93	Traffic signal lights at the intersection of 169 & 180th st. Also the intersection of 180th & F hiway needs to be reconstructed into a true 3 way stop or light. The curve is very dangerous.	7/7/2021 2:30 AM
94	Better and safer bike to lake/park on bikes from Greyhawke. 180 and. FF are a little scary on a bike. Rather specific area problem but very busy with lake road traffic and narrow. Hard to cross to dog park from Greyhawke across FF at this time	7/7/2021 12:09 AM
95	Safer transit through downtown. The recent "window dressing" updates are dangerous.	7/6/2021 10:27 PM
96	Repave and widen 180th Street and Old Jefferson Highway	7/6/2021 9:58 PM
97	Sidewalks and bike trails everywhere!	7/6/2021 9:12 PM
98	Stop light at w, shorten the concrete median in front of sonic,	7/6/2021 8:30 PM
99	You obviously support better pedestrian connections. Considering the vast, vast majority of our citizens live outside of downtown and in residential communities, this is a dumb survey.	7/6/2021 8:21 PM
100	Bridge and f intersection	7/6/2021 8:10 PM
101	Clearing of sidewalks and trails of snow and ice in winter. Many people walk or bike year round	7/6/2021 7:56 PM



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for transportation or leisure and have no access because it doesn't get cleared all winter. Specifically along Highway 169 which is the main/safest way to get anywhere in Smithville for work or shopping.

102	Roads are in poor condition. Clay County maintenance is poor. Smithville needs to use their "clout" to pressure Clay County to better maintain inside and outside city limits.	7/6/2021 7:51 PM
103	Transportation to and from medical facilities. Barry road, even Overland Park. I got my covid shot on Overland Park but had to have someone take us. Even down town kc or river market, maybe Westport area. Airport would be another nice option.	7/6/2021 7:24 PM
104	Handicap crosswalk safety signals at major crosswalks and intersections.	7/6/2021 7:17 PM
105	Better pedestrian connections on Liberty Road and better sidewalks around the schools for children to walk to/from school and down to the downtown area, parks, ball fields, etc.	7/6/2021 7:10 PM
106	Signals along Hwy 169 at 180th St and W Hwy	7/6/2021 6:54 PM
107	The intersection of 180th street and Hwy F - leading to the entrance of the lake/ Paradise Point golf course. These are strange 3 way intersections with one a stop one way. This is a high traffic area, but would be great candidates for a roundabout. It would slow traffic through the adjacent neighborhoods and would minimize confusion.	7/6/2021 6:45 PM
108	No 4 way stops anywhere	7/6/2021 6:40 PM
109	Wider sidewalks in main areas. i.e. downtown, 169. Hwy	7/6/2021 6:37 PM
110	Look at the possibility of making some downtown streets one way	7/6/2021 6:29 PM
111	169 needs a traffic signal at the library. And also at full features and at amory rd.	7/6/2021 6:13 PM
112	I would like to see a safer old Jefferson Highway for people to walk or ride bikes from lake to downtown.	7/6/2021 6:07 PM
113	I would like commercial to be fixed. I would also like DD to be fixed between downtown and the new bridge.	7/6/2021 6:04 PM
114	We need parking for commercial vehicles. The closest places to park are Platte City or Kearney right now.	7/6/2021 5:29 PM
115	Currently there is an issue with navigating through the square from the lake to 169. There lanes are too narrow and at times too congested for all of the lake traffic. The narrow lanes do not leave enough room for pulling campers, boats, and utility trailers	7/6/2021 5:15 PM
116	Better walking/bicycle connectivity from Cedar Lake Estates to down. Build a trail or sidewalks. I would love to be able to walk/ride downtown with my family, but there's no safe way to do that.	7/6/2021 4:59 PM
117	Light at 169 and 180th to cut down on traffic accidents	7/6/2021 4:50 PM
118	Fix the Sidewalks from Main to 169 Hwy on Bridge Street. I slab sticks up so far that I hit it with my wheelchair and it knocked me out onto the ground. It's not easy to knock me out of a wheelchair as I've been in it for 18 years and know how to navigate these streets.	7/6/2021 4:45 PM
119	lake remote trails	7/6/2021 4:43 PM
120	See above. Also, fix rush hour traffic on 169. Way too busy for our small town. Second route? This is what happens when you build 99 housing developments between downtown Smithville and Clinton County line. Poor planning. Also, some of our streets need repaved. Newport is cracked like crazy.	7/6/2021 4:43 PM
121	Sidewalk along northern 169 highway	7/6/2021 4:41 PM
122	RE PAVE THE DAMN ROAD GOING THROUGH DOWNTOWN AND UP TO TOWARDS THE LAKE.	7/6/2021 4:33 PM
123	more connectivity for bike/pedestrian access to highway/retail services. For example, the library, St. Luke's and retail south of the library are all nearby but not connected in any sensible way except by car. A pedestrian bridge or tunnel connecting St. Luke's/library with the retail on the west side of 169 would make it easier to reach on foot or by bike. Also, the MODOT stretch of 169 north of 179th St is badly outdated in comparison to the population growth in	7/6/2021 4:33 PM

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that area. It needs significant safety upgrades to mitigate accidents and account for pedestrian/bicycle safety.

124	Widening and addition of turn lanes at Commercial and 169. Additional access streets for Hills of Shannon subdivision.	7/6/2021 4:31 PM
125	Downtown.	7/6/2021 4:19 PM
126	We have a huge problem at Main and Liberty Rd where the new trail crosses to the parking lot. It's very difficult to see cars coming From downtown. I won't let my kids go alone. We need a stop sign or light!	7/6/2021 4:19 PM
127	I would like to see a traffic light for the stops by Kozaks and the Library, as well as by the sonic. I think anywhere that is hard to make turns and gets backed up easily should be addressed.	7/1/2021 9:39 AM
128	Connect Trails to the North part of 169 (Build and connect trails from Rollins, Harborview, Greyhawke to the trails that go into town).	6/29/2021 10:52 AM
129	Expand the ability to move vehicles more efficiently, especially on 169 Hwy. built roundabouts at key intersections.	6/28/2021 7:52 PM
130	traffic signal at mt olivet and 92 hwy	6/28/2021 8:59 AM
131	Speed limit on Amory Road needs lowered. Too much speeding.	6/26/2021 3:54 PM
132	Widen DD/main street east of commercial st	6/26/2021 3:06 PM
133	Please do not make it harder for me to get to and from work, thanks.	6/26/2021 2:47 PM
134	Repair DD/Main St from the new bridge near Grace to downtown	6/26/2021 7:22 AM
135	There needs to be a sidewalk in front of the school and the sidewalk going down Commercial is not in great shape.	6/24/2021 8:17 PM
136	Sidewalk on South Commercial Ave-from high school to downtown. Very unsafe!!!	6/24/2021 7:19 PM
137	The light leaving downtown only recognizes a solo vehicle turning south on 169. Going to Second Creek Road you have to wait until a vehicle pulls in the turning lane, then the light will change.	6/24/2021 4:23 PM
138	Public transportation (bus)	6/24/2021 1:22 PM
139	Potholes and get rid of downtown bumpouts	6/24/2021 11:26 AM
140	New road added connecting to Martin road from Barton heights or thru northbound 169 Sidewalks alongside 169 to neighborhoods	6/24/2021 10:17 AM
141	Intersection of 169 & 188 (increase safety), and 169 & 180.	6/24/2021 9:37 AM
142	Widen 169 north of town for both north and south bound traffic.	6/24/2021 8:48 AM
143	Repave neighborhood roads. Mine has not been done since before we moved here in 2006.	6/24/2021 8:26 AM
144	N/a	6/24/2021 6:01 AM
145	Smithville has needed to have the road paved correctly for years.	6/24/2021 5:31 AM
146	Connect trails	6/24/2021 5:02 AM
147	The area turning north out of Sonic general area is dangerous and congested	6/23/2021 10:06 PM
148	Downtown	6/23/2021 9:41 PM
149	Fix road that goes past Harbortown. Highway 92 has no access and the road to get to Mount Olivet has substantial dips, holes and broken up concrete. This road can tear up a car easily.	6/23/2021 8:49 PM
150	Any turn offs along 169 north need turning lanes added or extended. Esp. for southbound traffic making left turns. Also, W Hwy and 169 needs a right turn lane area added at the stop. Folks already do so, but no turn lane is present.	6/23/2021 8:34 PM
151	Better pedestrian walk to schools on Commercial Ave	6/23/2021 8:12 PM
152	Stoplight at 188th and 169..	6/23/2021 7:53 PM

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153	Widen the intersection at 169 & W Hwy. To handle boat/camp traffic.	6/23/2021 5:31 PM
154	Remove curbs downtown	6/23/2021 5:03 PM
155	although 169 traffic is MDOT the traffic lights need to accommodate current issues like the sidewalk bonndoggle south of 92 highway	6/23/2021 2:53 PM
156	A fix to eagle heights drop off/PU situation where parents are now driving down and having to turn around somewhere because there isn't enough space by the school to line up without blocking F hwy.	6/23/2021 2:21 PM
157	169 highway north made into 4 lanes.	6/23/2021 1:19 PM
158	Allow UTV's & golf carts in town. You have the streets so narrow down there, they can easily get around. With all the stop signs in place, it's not like there's a lot of opportunities for speeding No more trails are needed. There are plenty for people to use in this area. Don't waste any more money on them. You seem to want everyone on a bicycle. Is it just a coincidence that the Mayor owns a bike shop?	6/23/2021 1:18 PM
159	Need turn lanes on 169 better marked or created from McDonald's to downtown Smithville. Have seen to many near accidents in front of QT and Strip Mall where Topsy's is.	6/23/2021 1:15 PM
160	Potholes and bumps on Liberty Road	6/23/2021 1:05 PM
161	Better coordinate construction projects. Don't shut down 3 main roadways at the same time.	6/23/2021 1:01 PM
162	Better traffic movement near strip mall and library and W hwy left turn on to 169 north. Many vehicles that want to turn that way back view of car in line to turn right. It's seems the housing increase is driving this as a busy spot.	6/23/2021 11:57 AM
163	Safer access onto 169 hwy from cross-street intersections, North from KK to Hwy W. Widening 169 would be the preferred option, continue 4 lane north to county line with crossover at major intersections, 180th, 188th & W.	6/23/2021 11:46 AM
164	Bump outs in Downtown need to go!	6/23/2021 11:32 AM
165	pedestrian traffic between downtown and large parking areas	6/23/2021 11:19 AM
166	N/A	6/23/2021 11:03 AM
167	Too much construction at one time. With part of 92 closed and the road work on 169 North, it's a pain to get into town. We live in forest oaks, and every possible way into town is either blocked or has a huge traffic issue due to construction of some kind. This makes us go to other towns to shop because of the inconvenience.	6/23/2021 10:43 AM
168	I would like to see farm utility vehicles allowed on main road ways.	6/23/2021 10:32 AM
169	Intersection of 180th & 169	6/23/2021 10:08 AM
170	Urgent- Fix the MT Olivet curve where it connects to DD. Nonurgent- Replace main street through town toward the dam. Fill potholes in the highschool parking lot.	6/23/2021 9:58 AM
171	Better parking downtown. Traffic lights north at 180th and 188th off 169 hwy.	6/23/2021 9:48 AM
172	Fix the roads downtown and widen. Add parking downtown.	6/23/2021 9:23 AM
173	No more stop lights	6/23/2021 9:05 AM
174	I would like to see The intersection 180th street and 169 addressed for safety and accessibility.	6/23/2021 9:03 AM
175	Road Repavement, DD highway between downtown and Grace Community Church	6/23/2021 8:59 AM
176	During school months, the corner of Hospital and Commercial needs better traffic control. It gets super backed up, and promises to get worse as the homes are built just south of the school.	6/23/2021 8:52 AM
177	188 needs a better way to view oncoming traffic. I agree that there desperately needs a better way to cross 169 at the library. a metered light for pedestrians would be a nice installment, similar to what is next to Casey's and the old price chopper.	6/23/2021 8:47 AM
178	Put a solar powered warning light at the intersection of 188th street and 169 to warn of	6/23/2021 8:41 AM



## Smithville Transportation Master Plan - Community Survey #1

oncoming traffic from the north. And have police sit or patrol the section of 169 from the stoplight at Main north to the old dollar general (dance studio now) for people speeding through there. It's a dangerous section of 169 and I always see a lot of vehicles flying on the section of 169. Going in and out of town.

179	Parking at local parks is horrible. Repave and mark with parking spots	6/23/2021 8:37 AM
180	A bike/walking path next to F hwy, heading north from town would be beneficial for everyone	6/23/2021 8:28 AM
181	Sidewalk or trail from the schools to the subdivisions. I have seen kids riding their bikes to and from school on Eagle Parkway and it is dangerous for them.	6/23/2021 8:19 AM
182	180th street and 169 hwy. there should be a traffic light there. Too many cars get in accidents or pull out when turning left from 180th in front of fast moving vehicles	6/23/2021 8:10 AM
183	Downtown parking for trucks	6/23/2021 8:06 AM
184	I'd like to see 169 widened all the way north to Trimble.	6/23/2021 8:03 AM
185	Widen 169 north of town	6/23/2021 8:01 AM
186	Sidewalks and use of sidewalks. Made accesible to people in motorized chairs and people walking	6/23/2021 8:01 AM
187	We need safe trail access from the north to the city.	6/23/2021 7:54 AM
188	Sidewalks on second creek road at least to the neighborhoods so kids could walk on them instead of the street when walking downtown.	6/23/2021 7:53 AM
189	Allow the use of golf carts, Atvs, etc. as other cities our size alliw	6/23/2021 7:51 AM
190	4 way stop at entrance of upper playground at heritage	6/23/2021 7:51 AM
191	Main Street and DD hey replaced.	6/23/2021 7:50 AM
192	Roads near downtown repaved	6/23/2021 7:38 AM

## Q13 IMPACT OF COVID: How has the Covid-19 pandemic changed your household's use and interest in transportation options in Smithville? Do you think any of these changes will be long term?

Answered: 172    Skipped: 221

#	RESPONSES	DATE
1	Stop the mask mandates in school!	8/16/2021 7:58 PM
2	No.	8/16/2021 12:28 AM
3	None	8/14/2021 11:34 AM
4	Yes. Work from home now	8/12/2021 9:55 AM
5	It appears the lake, golfing and the trails for biking and walking are perfect. So we need to account for traffic lights or something for safer options for people. And sidewalks yo connect neighborhoods by 180th street as people like to walk or take bike to get to trails. The outdoors is what we need to think about. Getting people out and about to stay healthy instead of being in there homes.	8/12/2021 7:40 AM
6	Don't get out like used to	8/12/2021 6:45 AM
7	it has not changed how we travel. yes, i think changes will be long term	8/12/2021 5:43 AM
8	It hasn't changed anything to our household's use and interest in transportation options.	8/11/2021 10:54 PM
9	No	8/11/2021 9:30 PM
10	No	8/11/2021 8:29 PM
11	Not	8/11/2021 6:10 PM
12	We do not go anywhere except to. Doctors or to get food., Yes, I think it will be long-term, covid is not going anywhere, with everyone spreading it around not wearing masks, and not getting shots.. Why does Smithville not mandate masks at least.	8/11/2021 5:46 PM
13	No impact	8/11/2021 5:36 PM
14	Probably not at all.	8/11/2021 5:02 PM
15	Traveled less Probably won't travel as much as previously	8/11/2021 4:43 PM
16	None. No.	8/11/2021 4:42 PM
17	no change	8/11/2021 4:08 PM
18	We stay in Smithville more now and no this will not change long term	8/11/2021 3:23 PM
19	None	8/11/2021 3:01 PM
20	None	8/11/2021 2:57 PM
21	don't think it will be long term.	8/11/2021 2:42 PM
22	Much harder for my handicapped adult son to get an Uber and cost has gone up	8/11/2021 12:50 PM
23	No	8/11/2021 7:52 AM
24	More trips around the lake. Started doing bicycle trails at the lake. Exploring various lake access spots.	8/10/2021 3:45 PM
25	N/A	8/10/2021 9:33 AM
26	No	8/10/2021 8:20 AM

# Smithville Transportation Master Plan - Community Survey #1

27	No to both.	8/10/2021 5:57 AM
28	None	8/9/2021 4:31 PM
29	It has increased usage of the trail system around Smithville Lake, because of this I feel like pedestrian trails are more important than ever.	8/9/2021 12:52 PM
30	N/A	8/9/2021 7:49 AM
31	More focus on how can I get somewhere in town my walking, biking leading to a more active lifestyle and less exposure to groups of people in close quarters.	8/8/2021 10:07 AM
32	Did not travel as much. Will not be long term	8/7/2021 10:27 AM
33	Work from home so shop more in Smithville	8/6/2021 6:03 PM
34	Substantial increase in internet usage with having to work from home due to my office being closed and now restrictions back in place. The city needs to partner with internet provides to provide better service. Its nice to for some that have the opportunity take advantage of another provider (united fiber) but for those that don't have access at this time, its incredibly frustrating that we can't get better internet services in the city of Smithville. Every time I have spoken with a provider, we are too far north for them to bring another hub closer to town to provide better (faster) service. And yes, I believe these changes will be long term.	8/6/2021 3:00 PM
35	None	8/6/2021 12:43 PM
36	No changes to this household.	8/6/2021 12:19 PM
37	Stayed at home	8/6/2021 11:51 AM
38	It definitely has. Would prefer to walk when can and private vehicle otherwise but relied on public transportation a lot when younger. Perhaps a park and ride into KC that meets up with other public transport but keep them OUT of downtown. Too congested the way it is with all the activities. (Which we LOVE and is one of reasons we moved here) Build a stop and a lot with bike racks and parking spots to catch a train or bus into downtown KC, stops along the way. Perfect.	8/6/2021 9:38 AM
39	Work from home will continue somewhat, but quick and smooth access to 169 is important as not every day we work from home.	8/5/2021 11:38 PM
40	Back to mostly self isolation due to uncertainty of latest variant. Yes I believe this will be long term as long as people resist vaccination.	8/5/2021 10:47 PM
41	No long term changes.	8/5/2021 10:19 PM
42	Not at al	8/5/2021 7:31 PM
43	We use them more often	8/5/2021 7:08 PM
44	It hasn't	8/5/2021 6:09 PM
45	Less commuting to downtown KC due to working from home	8/5/2021 6:07 PM
46	I don't go anyplace unless it's an absolute necessity. If Covid ever gets over with I hope to get out and about.	8/5/2021 5:30 PM
47	I use to carpool with neighbors when shopping since the Covid-19 pandemic I prefer driving alone. I believe this will be long term.	8/5/2021 9:33 AM
48	COVID is over	8/5/2021 7:18 AM
49	It has not changed any of our use or interest.	8/4/2021 11:58 PM
50	I do pretty much as i always have, have not visited friends like before Pandemic. I have not travel out of local area since Covid but I don't think that it will be a long term thing.	8/4/2021 6:32 PM
51	NA	8/4/2021 5:26 PM
52	It hasn't changed.	8/4/2021 5:26 PM
53	NOTHING we still need to live	8/4/2021 4:44 PM
54	We drive alone... With nobody else.	8/4/2021 4:26 PM



## Smithville Transportation Master Plan - Community Survey #1

55	Because of covid and the variants... even though I'm fully vaxed, I would NOT get on any form of public transport because of the possibility of infection. I am personally aware of people who are fully vaxed and have gotten very sick. I sure hope this isn't long term. It's pretty much under the virus's control.	8/4/2021 4:04 PM
56	None	8/4/2021 3:47 PM
57	None	8/4/2021 2:37 PM
58	NA	8/4/2021 2:37 PM
59	We use the sidewalks and trails much more now.	8/4/2021 2:02 PM
60	Zero	8/4/2021 1:35 PM
61	We love Smithville, anything that improves the mobility and ease of use is long term helpful. I would take the bus downtown to go to shop, eat or farmers market, connect with friends on trails.	8/4/2021 1:25 PM
62	We spend more time using the walking and biking trails than we did before. Yes....these changes will be long term!	8/4/2021 1:23 PM
63	We're outdoors people before/during/after covid.	8/4/2021 12:36 PM
64	None	8/4/2021 12:17 PM
65	NA	8/4/2021 12:15 PM
66	None	8/4/2021 12:07 PM
67	Less travel with COVID-19. More local shopping	8/4/2021 12:00 PM
68	No, and No.	8/4/2021 11:55 AM
69	Less commute. Changes will likely be long term	8/3/2021 9:47 PM
70	No change	7/27/2021 5:01 PM
71	Just didn't go anywhere unless absolutely necessary. Used the option of food from local restaurants being delivered to vehicles for pick-up or to home. Still don't go into crowded places without a mask. As virus variants are under control, will go out more often.	7/15/2021 1:30 PM
72	Unfortunately, Covid is just the precursor of unwanted changes.	7/12/2021 2:12 PM
73	For us, not much changed, I worked from home much of last year and then retired. Getting more people vaccinated for Covid 19 will go a long ways in curbing this. Smithville needs to have a vaccination drive to protect ourselves and help stimulate the economy.	7/10/2021 10:06 AM
74	Unchanged.	7/9/2021 12:12 PM
75	None.	7/9/2021 10:25 AM
76	No	7/8/2021 11:50 AM
77	The trail system is my prozac. I love the new trail connecting downtown with Smiths Fork Park.	7/7/2021 10:39 PM
78	My family is constantly walking on all the trails around the lake and Smithville since the pandemic started. We've put literally a thousand miles in the last year on these trails. We have continued to and will keep waking a lot.	7/7/2021 10:21 PM
79	No impact	7/7/2021 2:24 PM
80	We drive a lot less now, but go to the grocery store and visit downtown more often.	7/7/2021 12:48 PM
81	One of us stays home now with two children so we take advantage of the public areas more. It would be very nice to have a sidewalk from Diamond crest to eagle Heights....this change for us will be longer term.	7/7/2021 11:56 AM
82	We walk more	7/7/2021 11:01 AM
83	None	7/7/2021 9:52 AM

## Smithville Transportation Master Plan - Community Survey #1

84	It has not changed any interests of mine. I am not fearful of the virus.	7/7/2021 9:37 AM
85	It hasn't	7/7/2021 9:10 AM
86	Stayed home. Only left for necessities.	7/7/2021 8:27 AM
87	It hasn't.	7/7/2021 7:47 AM
88	It hasn't impacted us at all.	7/7/2021 2:30 AM
89	It hasn't.	7/6/2021 10:27 PM
90	No impact	7/6/2021 9:58 PM
91	COVID didn't change our transportation needs very much.	7/6/2021 9:12 PM
92	Yes, no it has not.	7/6/2021 8:30 PM
93	I almost died. Transportation in Smithville had nothing to do with how well I handled Covid.	7/6/2021 8:21 PM
94	Yes. We used the trails and sidewalks more frequently to be able to get outside and exercise while social distancing appropriately. I would make it a long term change if we could use the trails and sidewalks safely year round.	7/6/2021 7:56 PM
95	No change	7/6/2021 7:51 PM
96	We're just older and are limited as to where we go because of transportation.	7/6/2021 7:24 PM
97	Yes! Covid has had an impact. Public transportation could violate covid regulations and/or restrictions. With the new covid D, things have the possibility of making things worst.	7/6/2021 7:17 PM
98	My husband and I both work from home now and have our children home instead of before and after school care. We will be working from home long term and live next to the school on Liberty Road. Now we are home so much more, I have noticed how the pedestrian walkways are severely lacking and wish there was a safer way for my kids to get to and from school on foot. We also are limited on how far we can go on walks because the sidewalks are so erratic and also in poor shape in some areas. I have 3 small children and safety is #1 for us especially because we have strollers and bikes anytime we go out walking!	7/6/2021 7:10 PM
99	We are much more interested in walk/ bike ability of our area. Would love to be able to walk to school, Main Street area etc from the northland residential district.	7/6/2021 6:45 PM
100	None	7/6/2021 6:40 PM
101	Love seeing the newfound love for trails and parks, hopefully it continues.	7/6/2021 6:38 PM
102	Didn't change much	7/6/2021 6:29 PM
103	Not at all.	7/6/2021 6:13 PM
104	My son is visually impaired and unable to drive himself. Unless his parents or grandparents are available he has no way of getting around especially when it comes to work.	7/6/2021 6:07 PM
105	It hasn't changed a thing.	7/6/2021 5:29 PM
106	The pandemic has not changed my use or interest in transportation options. I will always drive a vehicle where ever I need to go. I do not expect this to change.	7/6/2021 5:15 PM
107	N/A	7/6/2021 4:59 PM
108	None	7/6/2021 4:50 PM
109	No	7/6/2021 4:46 PM
110	I hope all the changes will be long-term	7/6/2021 4:45 PM
111	No change, really.	7/6/2021 4:43 PM
112	More use of trails. Yes	7/6/2021 4:41 PM
113	NO	7/6/2021 4:33 PM
114	It's incredibly difficult to navigate most retail safely in Smithville along the highway corridor/especially on foot. Hopefully, the 92 Hwy sidewalk improvement will help, but it's worth	7/6/2021 4:33 PM

## Smithville Transportation Master Plan - Community Survey #1

rethinking how we can strike a better balance on the highway corridor that might encourage more pedestrian traffic.

115	no impact	7/6/2021 4:31 PM
116	COVID 19 really has made us go out more often and so their really wasn't too big of a change there. The change of going out more often will probably stay the same, unless things go back to normal and everyone is at work almost all day.	7/1/2021 9:39 AM
117	We use the trails more often.	6/29/2021 10:52 AM
118	None	6/28/2021 7:52 PM
119	i drove as usual to town so covid did not change anything for me why is there no community center in smithville or ymca facility for swimming etc.?	6/28/2021 8:59 AM
120	Covid existed?	6/26/2021 2:47 PM
121	It hasn't	6/26/2021 7:22 AM
122	There wasn't a significant impact in our home other than finding more biking routes. I will continue to bike to Kansas City from Smithville.	6/24/2021 8:17 PM
123	None	6/24/2021 4:23 PM
124	None	6/24/2021 1:22 PM
125	No change	6/24/2021 11:26 AM
126	None	6/24/2021 10:17 AM
127	No change	6/24/2021 9:37 AM
128	No	6/24/2021 8:48 AM
129	No change.	6/24/2021 8:26 AM
130	N/a	6/24/2021 6:01 AM
131	Didn't change my household	6/24/2021 5:31 AM
132	N/A	6/24/2021 5:02 AM
133	We Started using the trails more. I hope it's long term 😊	6/23/2021 10:15 PM
134	No	6/23/2021 7:53 PM
135	N/A	6/23/2021 5:31 PM
136	No	6/23/2021 5:03 PM
137	no	6/23/2021 2:53 PM
138	It hasn't changed our use as we live on the north side and the only realistic option is driving our own vehicles.	6/23/2021 2:21 PM
139	None	6/23/2021 1:19 PM
140	None really. I missed no work due to COVID. Would like to see options available for the elderly & low income residents without cars.	6/23/2021 1:18 PM
141	We now work from home so it has drastically cut down on our driving.	6/23/2021 1:15 PM
142	No and no.	6/23/2021 1:01 PM
143	Non	6/23/2021 12:09 PM
144	No	6/23/2021 12:00 PM
145	Traffic light by QT. This is important to all as our fire station is there and there are multiple accidents there. Speed bumps down Spelman Drive, especially in front of my house.	6/23/2021 11:48 AM
146	No changes	6/23/2021 11:46 AM
147	Non	6/23/2021 11:32 AM

# Smithville Transportation Master Plan - Community Survey #1

148	it hasn't and no	6/23/2021 11:19 AM
149	I stay home more & work from home. Love it..no problem. Our sidewalk is narrow & cracked in our older neighborhood, in front of my home. A bit of an eyesore but not a high priority.	6/23/2021 11:03 AM
150	N/A	6/23/2021 10:32 AM
151	More walking and biking outdoors	6/23/2021 10:08 AM
152	Na	6/23/2021 9:58 AM
153	Nothing	6/23/2021 9:48 AM
154	No	6/23/2021 9:48 AM
155	N/a	6/23/2021 9:23 AM
156	Have no interest in downtown Smithville since all your fancy improvements no place to park and stop every block get ride of bump outs	6/23/2021 9:05 AM
157	Hasn't affected me but yes I do think it will be long term	6/23/2021 9:03 AM
158	Less daily commute, more running around commute	6/23/2021 8:59 AM
159	Hasn't changed transportation options at all.	6/23/2021 8:52 AM
160	covid has helped more people than ever utilize the trails and our beautiful bike paths and park system. More bikers are on the road, I feel like some places are dangerous for bikes and that we should look into either a designated bike path, either extended or separate from the road. I think it would be a long-term change that would prove to be very beneficial for both bikers, runners, and drivers.	6/23/2021 8:47 AM
161	Love riding the new trail I will continue to do that	6/23/2021 8:40 AM
162	I have used the trails a lot more and stay local more. I think this will continue long term.	6/23/2021 8:19 AM
163	Covid contributed to less frequent trips to shop and transporting kids to functions. No. It seems back to almost normal now.	6/23/2021 8:06 AM
164	Looking for more accessible destinations in town. For example we have explored more areas around the lake by car and spent more time in downtown smithville. We will probably continue to use our personal cars for transportation.	6/23/2021 8:05 AM
165	I no longer work so don't drive daily. Husband no longer travels, but works from home. No idea if this is long term. We just don't drive in to town unless we need to because it takes so long.	6/23/2021 8:03 AM
166	I work from home now	6/23/2021 8:01 AM
167	Hasnt	6/23/2021 8:01 AM
168	It hasn't.	6/23/2021 7:54 AM
169	It hasn't.	6/23/2021 7:53 AM
170	Covid-19 was not a real pandemic. It was used to spread fear. It was the flu!	6/23/2021 7:52 AM
171	No change	6/23/2021 7:51 AM
172	NA	6/23/2021 7:38 AM



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# APPENDIX B: COMPLETE STREETS POLICY MEMO

# B

## MEMORANDUM

November 10, 2021

To: Chuck Soules, Director of Public Works  
Organization: City of Smithville, MO  
From: Tammy Sufi  
Project: Smithville Transportation Master Plan

**Re: Draft Complete Streets Policy**

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The following DRAFT Complete Streets Policy for the City of Smithville is based on a review of national and regional best practices, as well as Complete Streets guidance from the Mid-America Regional Council and BikeWalkKC. The DRAFT policy also incorporates feedback from the Transportation Master Plan Steering Committee meeting on June 22, staff comments, and preliminary survey results. Please review this DRAFT policy and provide your comments. After we incorporate your feedback, we would like to share this document with the Steering Committee for comment.

### Complete Streets Vision

*The City of Smithville shall develop a safe, complete, and connected network of streets for residents and visitors of all ages, abilities, and backgrounds to walk or use wheelchairs, bike, drive, and use future transit to reach destinations throughout the community. The needs of these users will be balanced with those of commercial freight movement and emergency responders to further support Smithville's Comprehensive Plan Vision, Strategic Pillars, and Goals. Smithville's multimodal streets will enhance Smithville's quality of life and strengthen the City's ability to remain a small-town community oasis that is prepared for the future. The City's transportation system will provide reliable, affordable, and efficient choices for all.*

### Policy Application: All Phases and All Projects

Due to right-of-way and funding constraints, this Complete Streets Policy recognizes that not all streets will be able to provide dedicated facilities for each mode, however, decision-makers shall use this policy to routinely consider the diverse set of users listed above in all city-owned transportation projects including new construction, reconstruction/retrofit, resurfacing, repaving, restriping and rehabilitation transportation projects in the public right-of-way including, but not limited to, streets and all other connecting pathways. These projects shall be designed, constructed, operated, and maintained so that all modes of transportation may move safely, comfortably, and conveniently.

## **Consideration of Complete Streets Guiding Principles and Land-Use Context**

As part of the City's Complete Streets Design Guidelines under development, the City of Smithville will develop a set of Complete Streets guiding principles that will serve as factors in multimodal infrastructure decision making. In addition to guiding principles such as safety, equity, connectivity, health, etc., the City's physical, economic, and social setting will be considered as well. The context-sensitive approach will include a range of goals and give significant consideration to stakeholder and community values.

## **Exceptions to Accommodation**

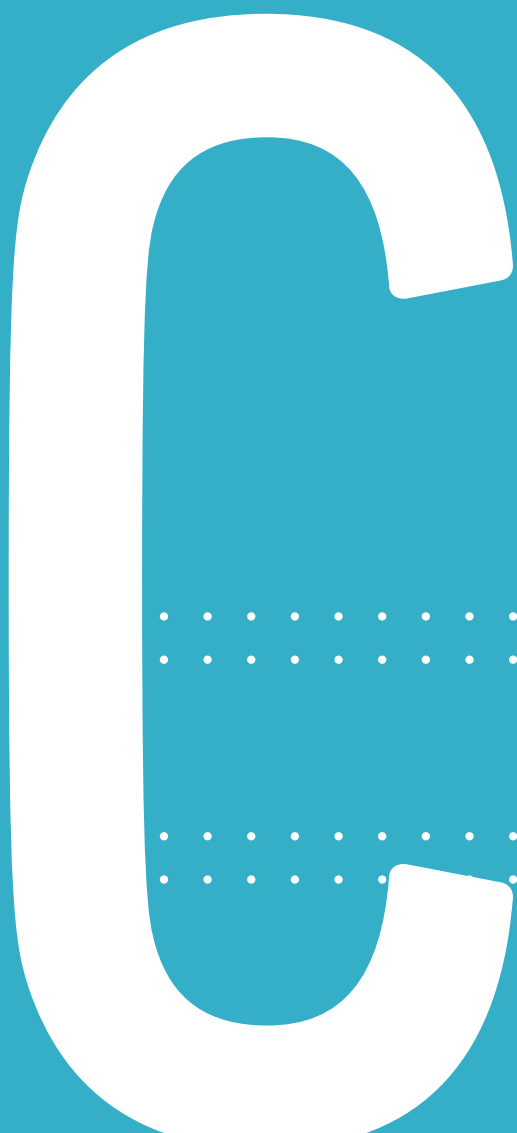
The City of Smithville Board of Alderman may approve the exclusion of transportation infrastructure where documentation and data indicate that the costs or impacts of accommodation are excessively disproportionate to the need or probable use or future use.

## **Implementation**

The City of Smithville will incorporate the Complete Streets policy herein into appropriate plans, manuals, checklists, decision trees, rules, regulations, and programs and develop criteria for when projects require a public engagement component. Complete Streets Guiding Principles and Design Guidelines will be developed as part of the Smithville Transportation Master Plan.



# APPENDIX C: TRAFFIC FORECAST MEMO





September 28, 2021

Chuck Soules  
Director of Public Works  
City of Smithville, MO  
From: Drew Pearson, Wilson & Company; Tammy Sufi, Toole Design  
Project: Smithville Transportation Master Plan

Re: Smithville Traffic Forecast  
Attached: Traffic Forecast PDF; Existing Functional Class PDF; Signal Spacing PDF

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## Smithville Traffic Forecast Memo

This memo outlines the process and findings of the traffic forecasting effort and recommends next steps for the Smithville Transportation Master Plan.

Traffic forecasts were calculated through a multistage process due to limited data availability. The Mid America Regional Council (MARC) Year 2050 travel demand model was used to understand regional trip generation, roadway traffic demands, and associated distribution for the study area. It was determined that the resolution of available Transportation Analysis Zone (TAZ) model data was at too large of a scale for use. This is typical for many communities located on the fringe of the MARC TAZ network. A more substantial process was implemented which included an evaluation of growth trends, MoDOT traffic data, related comprehensive plan priorities for density, Institute Traffic Engineering (ITE) trip generation rates, evaluation of existing infrastructure capacities, and discussions with the City of Smithville City Planning and Public Works staff to understand development timing, community needs, physical constraints, and opportunities.

The subsequent findings outline the system needs required to facilitate development and ultimately the vision established in the *2030 Smithville Comprehensive Plan*.

## Calculated Assumptions

In order to determine the transportation system's needs, various assumptions were used to calibrate forecasted traffic volumes more accurately in line with planned infrastructure investments and development patterns.

## 2030 Comprehensive Plan Dwelling Units (DU)

Via the approved 2030 Comprehensive Plan for the City, a dwelling unit density range was established for each residential district at varying densities. The following values depict the base dwelling unit per acre rates by development type using the median value of the range established in the approved plan:

- 3 Single Family DU per Acre
- 10 Moderate Density Single Family DU per Acre
- 25 High Density Multi-family DU per Acre

## ITE Daily Trip Generation Rates

The ITE trip generation manual (10<sup>th</sup> edition) was the basis established for trip generation rates for residential dwelling units. The values below represent common uses and their associated daily trip generation rates. For single family development, the average dwelling unit generates 9.4 trips per day compared with 5.4 trips being generated for moderate and high-density development.

- 9.4 Single Family Detached per DU
- 5.4 Multifamily Mid-Rise per DU

## Development Timing Considerations

The development goals pattern established in the 2030 comprehensive plan will likely take several decades to realize their ultimate vision, potentially beyond year 2030. While development may be planned out several years into the future, establishing development patterns decades into the future is more challenging. Before discussing with the City departments, an effort was undertaken to evaluate development patterns over the previous 30 years. It was shown that the majority of development occurred from the mid-1990's to 2010 – most of which was single family residential.

Conservatively, it was established that by 2030, only around 25% of the development goals outlined in the 2030 plan would be realized based on the assessment of previous patterns and known constraints to development created by sewer systems and other utility infrastructure. Subsequently, these values can be extrapolated out using an increment of 25% of the plan per decade. These build out rates would correlate to the following years as follows:

- 25% build out by 2030
- 50% build out by 2040
- 75% build out by 2050

The future traffic growth rates by area were calculated by using the 2020 MoDOT traffic counts and adding in the new development dependent traffic as follows:

$$[Existing/future\ traffic] + ([Acres] [DU\ per\ Acre] \times [ITE\ Rate] \times [Timing\ Decade])$$

So, for a multifamily project developing on a 100-acre site in 2040 on an example roadway with 10,000 ADT, the calculation would include:  $10,000\ ADT + (100\ Acre\ site \times 10\ DU \times 5.4\ trips \times 50\%\ 2040\ build\ out)$

Based on this approach, it is estimated that an additional 2,700 new trips would be generated and additive to the existing roadway with 10,000-ADT resulting in 12,700 total daily trips. We can use this value to estimate future facility investment needs in order to support the anticipated development.

## Traffic Study Planning Thresholds

For gaining an understanding of when and where future investments will need to be considered, a list of traffic dependent planning thresholds was established. These values indicate when additional study should be undertaken to understand to better understand vehicular capacity needs and to verify potential growth assumptions for a corridor using current information. These thresholds do not necessarily indicate that additional capacity or signals are required, however, used in conjunction with the forecasted development-dependent traffic, they help to gauge potential roadway capacity and traffic control needs. The planning-level triggers for studying the need for additional traffic control and capacity take place at 80% of the threshold\* are as follows:

- Signal conversion warrant analysis study at 10-12k VPD
- 2-lane supports 12,000 VPD, study additional capacity around 10,000 VPD
- 3-lane supports 16,000 VPD, study additional capacity around 13,000 VPD
- 4-lane supports 28,000 VPD, study additional capacity around 22,500 VPD

The traffic thresholds above may be mitigated with improvements to intersections such as turn lanes, roundabouts, or other complete street elements. These thresholds are solely for planning and road capacity can be added with appropriate design elements at intersections without the need to construct an entire lane throughout the road section. Traffic studies should be conducted to understand the appropriate level of capacity for all road users and to inform a conversation about trade-offs related to additional number of lanes and lane widths and how that may positively or negatively affect non-motorized users such as bicyclists and pedestrians and other impacts to the community

## Findings

When proposed future development related traffic is applied to the existing network – even with just the 25% buildout by 2030 – many of the existing roadways with existing geometry reach their capacity. Based on the anticipated level of development in the Comprehensive Plan, US-169 is not anticipated to be able to handle the traffic generated from this future land use at build-out. The current focus for development is surrounding the downtown area at 2<sup>nd</sup> St south to Martin Rd/ 144<sup>th</sup> St where a new sanitary line is being constructed along with a pump station at 144<sup>th</sup> St to enable development south of 144<sup>th</sup>.

If a network of additional roadways is not developed, congestion has the potential to limit development potential – especially near the intersection of MO-92 and US-169. Additionally, redundancy of the traffic network is vital to support basic emergency services such as fire and medical rescue.

Multimodal facilities will help reduce some vehicular trips, but likely will not be able to reduce enough trips to mitigate considerable congestion from new planned development in Smithville, primarily due to the limited available transportation network that is in place today. However, there is a great latent demand for bike and pedestrian accommodations around the city. A robust network of safe sidewalks, bikeways, and trail accommodations will help improve safety, choice, and quality of life for residents and will support the development vision.

## Recommendations

Per the traffic forecast findings, a future network of roadways is recommended to support the city's development vision. These roadways should be planned considering the future development phasing, public works investments such as sanitary sewer, the functional classification and right-of-way needs, and the ability for the City to utilize impact fees and other funding sources over time to offset infrastructure costs imposed by the City. The city should carefully consider the needs of all roadway users when determining the number of lanes and lane width for any new or retrofit roadways.

## Preliminary Assessment of Future Traffic Network General Needs

Our preliminary assessment of traffic network needs for the City of Smithville based on traffic forecasts include the following. Additional needs will be identified through public engagement, field observations, and consultation with staff:

- A new periphery network of arterials to support internal traffic network. Specifically, to assist with:

- EMS/ disaster response redundancy
- Traffic congestion & flow (slack in the system)
- Provide user options including multimodal accommodations such as buffered sidewalks and bike lanes
- Connect with existing interchanges on I-435 (Virginia/Woodland Ave & I-435 [east] and Cookingham/ Platte Dr Purchase & I-435 [west])
- An internal network of new collectors to assist with traffic congestion and flow
- Principal Arterial Signalization, minimum distance of ½ -mile spaced signals on arterials, 1-mile preferred for at this time.
  - 144<sup>th</sup> – Major collector, signal planned from development
  - 136<sup>th</sup> – Major collector, needs signal and to head east and west
- Multimodal needs
  - Enhanced on-street and trail connections throughout the city
  - 5' minimum sidewalks with buffer for safety, comfort, and utility access local residential streets. On arterials and collectors 6' minimum sidewalks should be provided or a combination of 6' sidewalk on one side of the street and 10'-12' sidepath to accommodate bikes and pedestrians where high volumes exist
- Roadway typical section considerations
  - to be determined as part of complete street guidelines
- New road facilities in general
  - Future centerline roadway location alignment studies needed before design can occur
  - Plan for flexibility of system through functional class and bonding ROW
  - New roads 2-lane, plan for expansion down the road

## Functional class

- Functional classification in general (*see the attached functional class PDF for more detail*) Set up system to blend with existing network
- Plans out future ROW needs to support vision as development occurs
- Relate functional class to impact fees
- As development occurs, consider applying for collector classification on 2<sup>nd</sup> Creek Rd, St 180<sup>th</sup>, and 188<sup>th</sup> St where currently none exists.
- Signal spacing (*see the attached signal spacing PDF for more detail*)
  - Major roadway – principal arterials signal spacing – ½ mi to 1 mile between signals
  - Minor roadway – Minor arterials and collectors signal spacing – ¼ mile minimum to ½ mile maximum between signals
- New Major Arterial facility draft alignments (*see the attached traffic forecast PDF for more detail*)
  - I-435 & Virginia Ave to north to MO-DD at southwest corner of Smith's Fork Park



- I-435 & Cookingham/ Platte Purchase Dr north to KK following county boundary
- New Major Collector draft alignments
  - Martin Rd/ 144<sup>th</sup> St – Platte County line to Tillman Rd
  - 136<sup>th</sup> – Platte County line to Virginia Ave
- New Minor Collector draft alignments
  - ½ mile west of US-169 – 136<sup>th</sup> north to MO-92
  - 1 mile east of US-169 – 136<sup>th</sup> north to MO-92
  - Armory Rd – new county line arterial to US-169
  - ½ mile south of MO-92 – new county line arterial to US-169
  - ½ mile north of MO-92 – new county line arterial to US-169
  - Connection between MO-KK and MO-F (following Pope Lane - avoiding transmission lines)

## Conclusion

To support the vision of the approved 2030 Comprehensive Plan, the City of Smithville should consider investing in a network of arterials and collector roadways to support and enable a variety of desired development densities. As development centered around the US-169 & MO-92 intersection extends south, traffic on existing roads will increase rapidly. Without additional optional roadways to use to support this growth, roadways such as US-169 and MO-92 will reach peak capacity and become congested from new development. In addition to site development creativity and multimodal facilities to reduce the amount of automobile trips, it is critical to traffic needs for there to be a redundancy of safe, convenient, and accessible routes for all modes. The city should consider establishing potential/planned roadway centerlines to address specific anticipated needs so appropriate right-of-way can be adequately preserved for these future transportation investments.

# Smithville - 2030 Traffic Forecast

## 2030 Comprehensive Plan Dwelling Units (DU):

- 3 Single Family DU per Acre
- 10 Moderate Density Single Family DU per Acre
- 25 High Density Multi-family DU per Acre

## ITE Daily Trip Generation Rates:

- 9.4 Single Family Detached per DU
- 5.4 Multifamily Mid-Rise per DU
- 10 Hardware Store per 1000 sqft GFA
- 100 Grocery Store per 1000 sqft GFA
- 100-300 Restaurant per 1000 sqft GFA
- 500-1000 Fast-food per 1000 sqft GFA
- 1500 Gas Station per 1000 sqft GFA

## Considerations:

- Signal conversion at 10-12k VPD
- 2-lane supports 12,000 VPD
- 3-lane supports 16,000 VPD
- 4-lane supports 28,000 VPD
- Development build out: 25% by 2030; 50% by 2040; 75% by 2050

## Proposed Future Land Uses

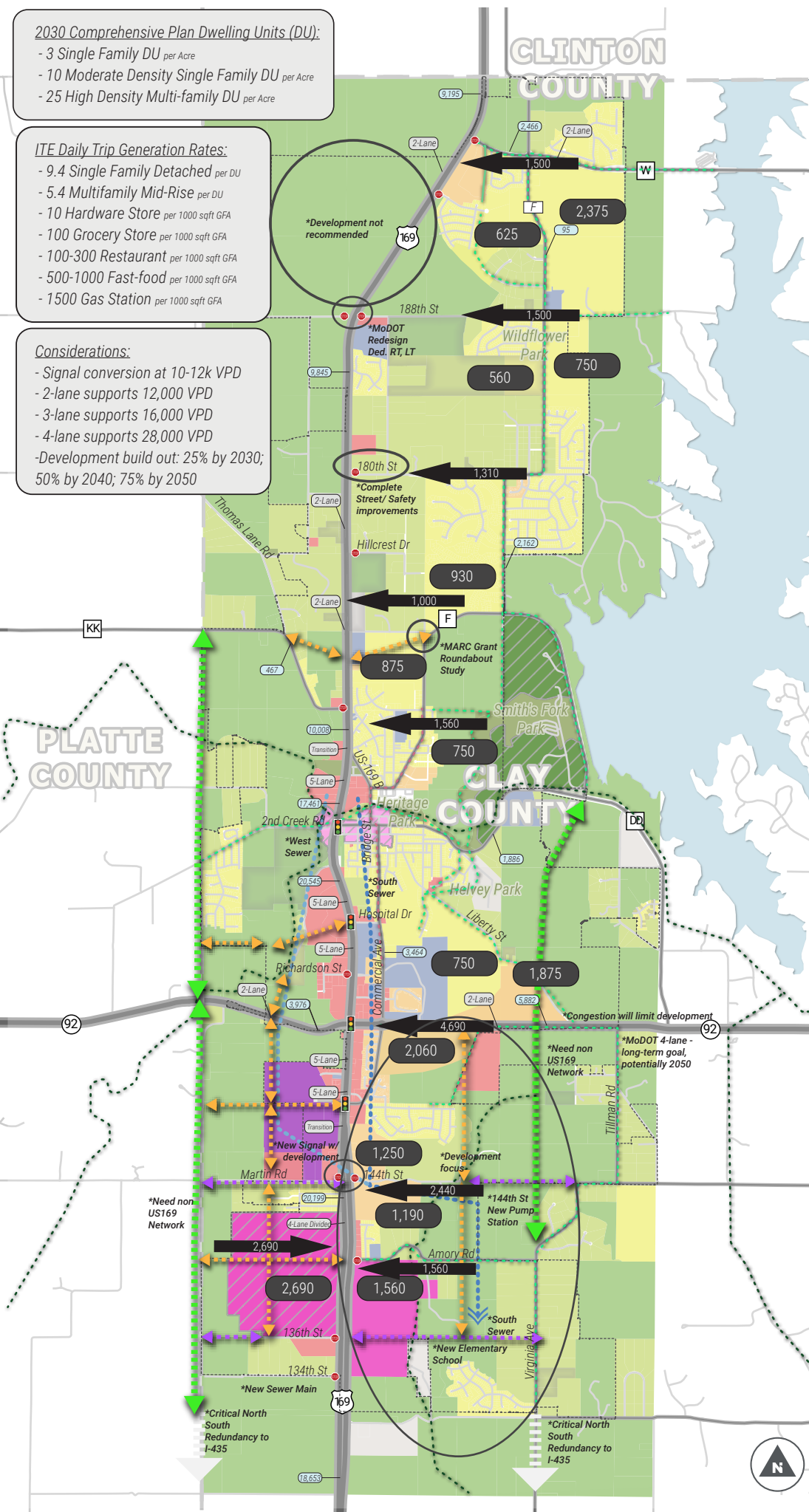
- Agricultural
- Residential, Low Density-Agricultural
- Residential
- Residential, Moderate Density
- Mixed-Use Residential, High Density
- Mixed-Use, Downtown
- Commercial
- Institutional
- Industrial
- Park, Recreational, Open Space
- Utility, Transportation

## Proposed Overlays

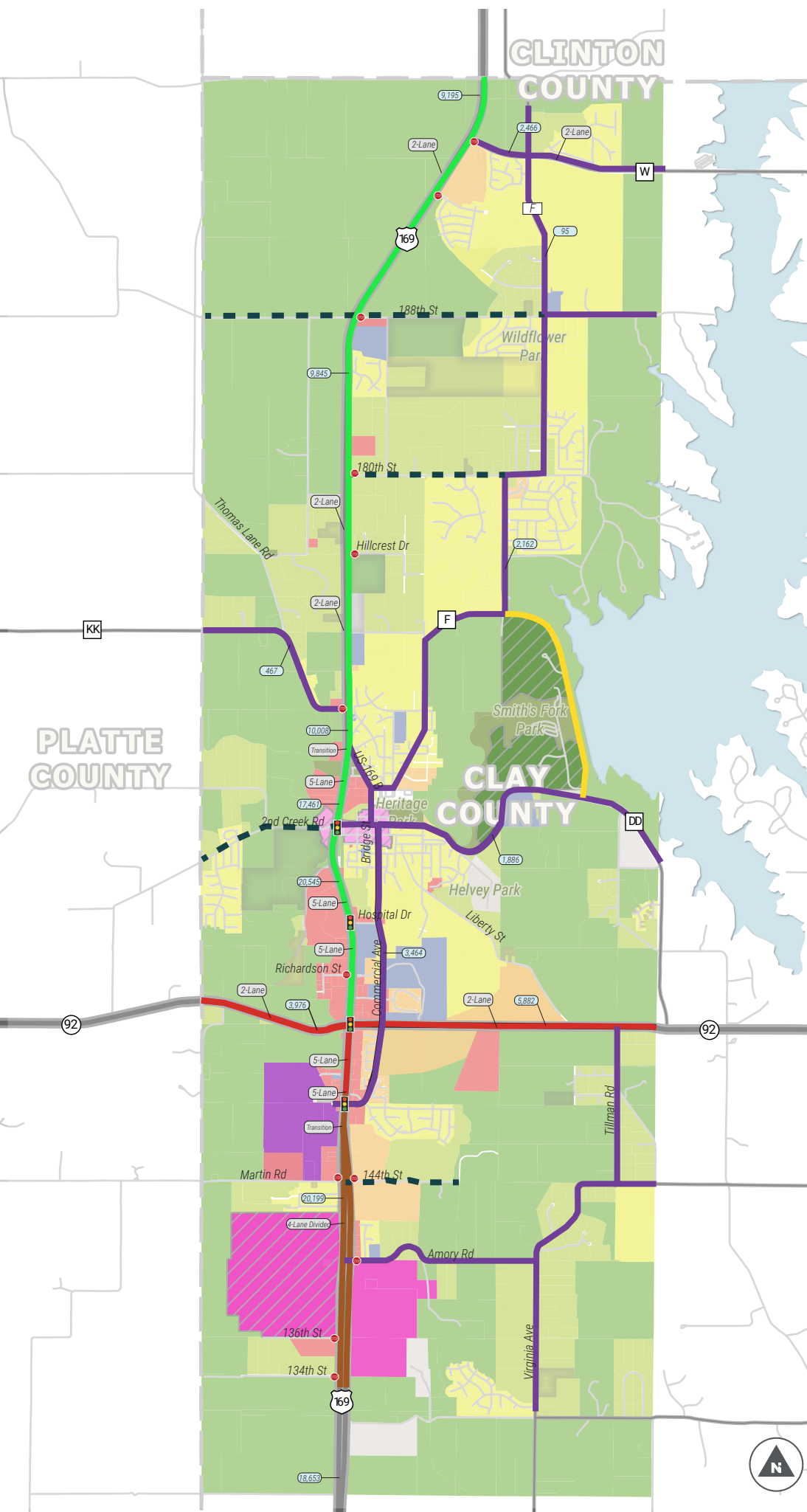
- 169 South Employment Center Overlay
- Downtown District Overlay
- Smith Fork Park North and South
- County Boundary
- City Boundary
- Water
- Parks

## Transportation Network

- 2020 Traffic Volume
- Traffic Signal
- Stop Sign
- 2030 New Development Trips
- 2030 New Trips
- Potential New Arterial
- Potential New Major Collector
- Potential New Minor Collector
- Existing Trail
- Proposed Trail
- MetroGreen Planned Trail
- Proposed Sidewalk Project



0 0.5 1 mi



## Proposed Future Land Uses

- Agricultural
- Residential, Low Density-Agricultural
- Residential
- Residential, Moderate Density
- Mixed-Use Residential, High Density
- Mixed-Use, Downtown
- Commercial
- Institutional
- Industrial
- Park, Recreational, Open Space
- Utility, Transportation

## Proposed Overlays

- 169 South Employment Center Overlay
- Downtown District Overlay
- Smith Fork Park North and South
- County Boundary
- City Boundary
- Water
- Parks

## Transportation Network

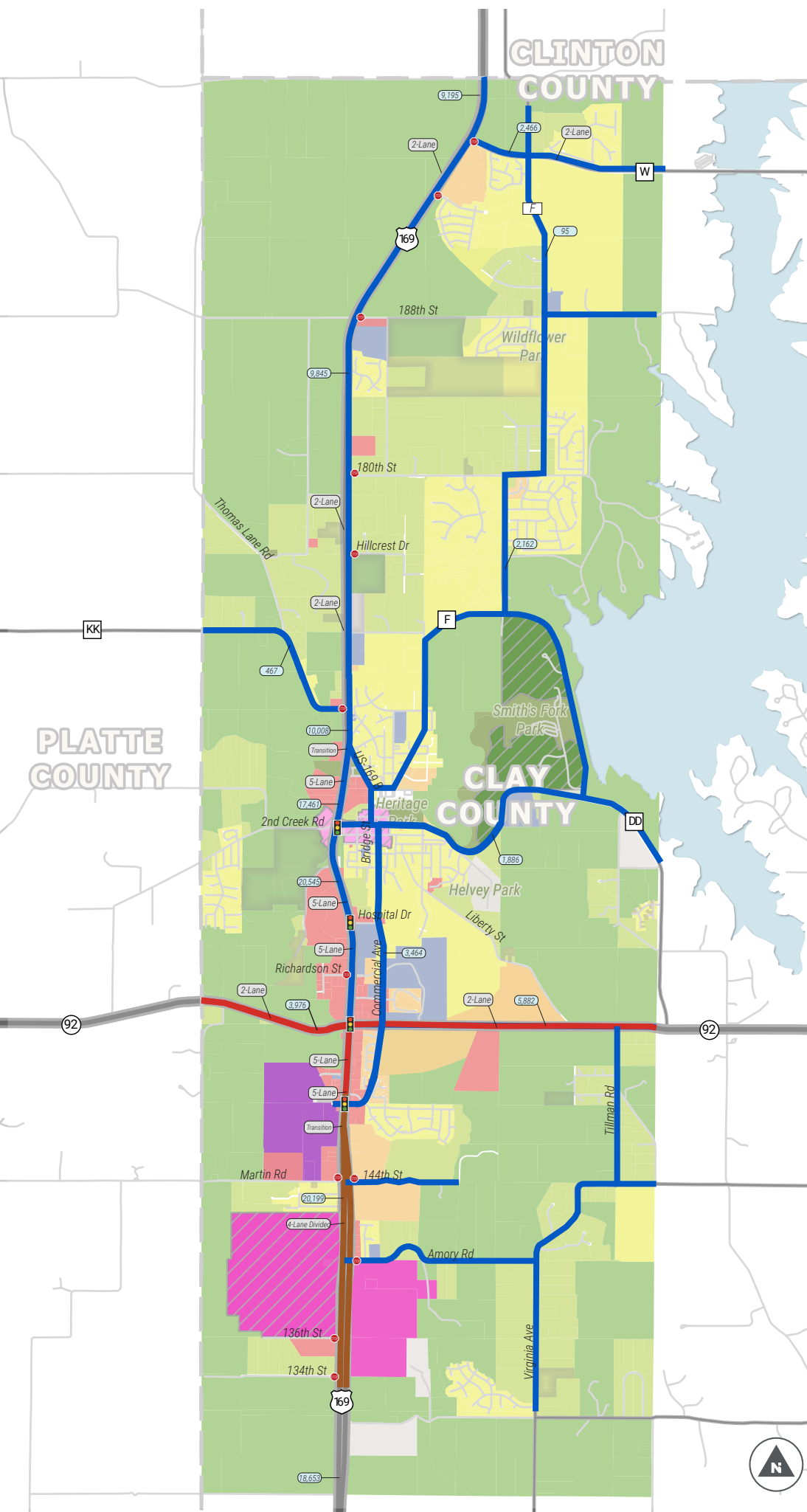
- 2020 Traffic Volume
- Traffic Signal
- Stop Sign

## MoDOT Existing Roadway Functional Classification

- Freeway
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Recommended

0 0.5 1 mi





## Proposed Future Land Uses

- Agricultural
- Residential, Low Density-Agricultural
- Residential
- Residential, Moderate Density
- Mixed-Use Residential, High Density
- Mixed-Use, Downtown
- Commercial
- Institutional
- Industrial
- Park, Recreational, Open Space
- Utility, Transportation

## Proposed Overlays

- 169 South Employment Center Overlay
- Downtown District Overlay
- Smith Fork Park North and South
- County Boundary
- City Boundary
- Water
- Parks

## Transportation Network

- 2020 Traffic Volume
- Traffic Signal
- Stop Sign

## MoDOT Minimal Signal Spacing Requirements

Freeway	(Prohibited)	<span style="display: inline-block; width: 20px; height: 5px; background-color: #8b4513; border: 1px solid black;"></span>
Major Road	(1/2 - 1 mi)	<span style="display: inline-block; width: 20px; height: 5px; background-color: #ff0000; border: 1px solid black;"></span>
Minor Road	(1/4 - 1/2 mi)	<span style="display: inline-block; width: 20px; height: 5px; background-color: #0000ff; border: 1px solid black;"></span>

0 0.5 1 mi





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# APPENDIX D: FUNCTIONAL CLASS CHANGES

D

### Future Changes to Functional Classification

Freeway  
Principal Arterial  
Minor Arterial  
Major Collector  
Minor Collector



2021 MARC Approved

2021 MARC Rejected

Resubmit in 2022 from MO-92 to US-169 B








2021 MARC Rejected

Coordination With Platte County Required




### Proposed Future Land Uses

-  Agricultural
-  Residential, Low Density-Agricultural
-  Residential
-  Residential, Moderate Density
-  Mixed-Use Residential, High Density
-  Mixed-Use, Downtown
-  Commercial
-  Institutional
-  Industrial
-  Park, Recreational, Open Space
-  Utility, Transportation

### Proposed Overlays

-  169 South Employment Center Overlay
-  Downtown District Overlay
-  Smith Fork Park North and South
-  County Boundary
-  City Boundary
-  Water
-  Parks

### Transportation Network

-  2020 Traffic Volume
-  Traffic Signal
-  Stop Sign

### MoDOT Existing Roadway Functional Classification

-  Freeway
-  Principal Arterial
-  Minor Arterial
-  Major Collector
-  Rural\* Minor Collector

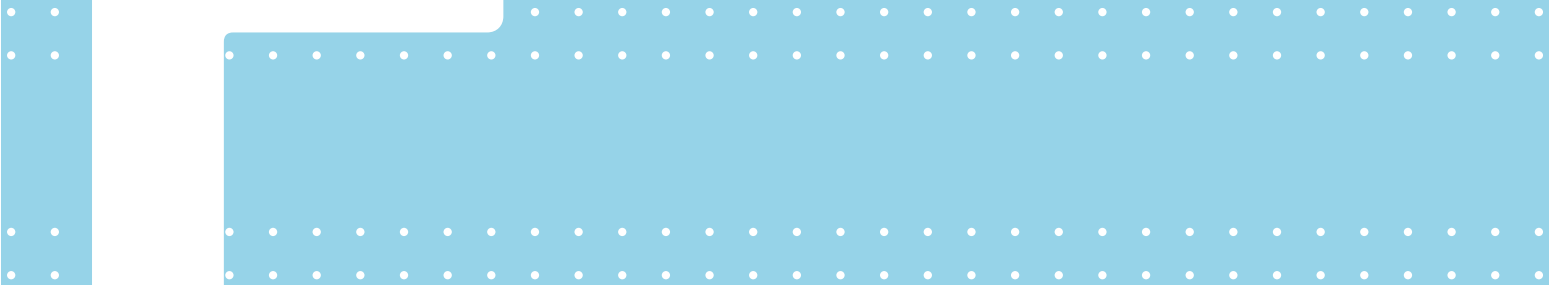
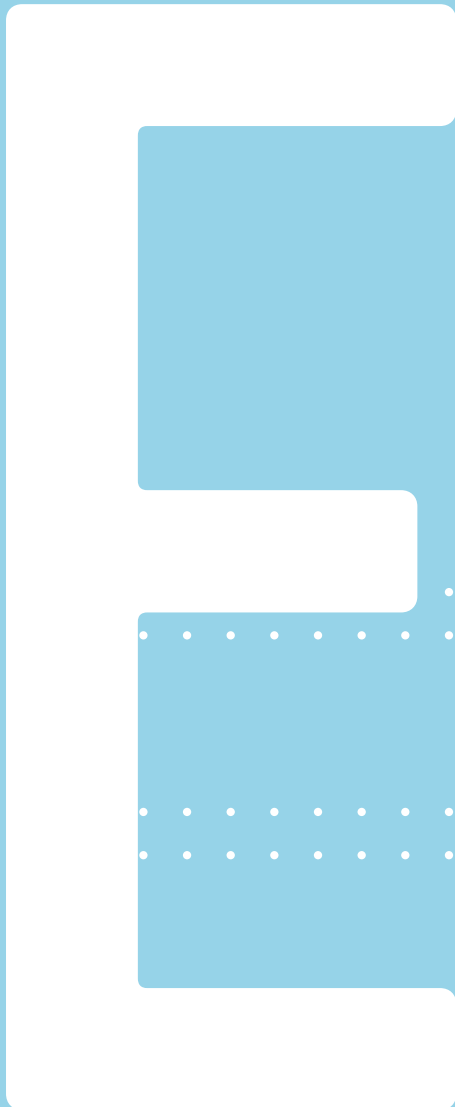
\*Rural - Not eligible for federal funding per urbanized area boundary in 2010 census

0 0.5 1 mi



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# APPENDIX E: TRAFFIC IMPACT STUDIES AND FEE/DEVELOPMENT DISTRICTS



## Traffic Impact Studies

Traffic Impact Studies (TIA) typically estimate traffic volumes that a proposed project may generate and compare the operating conditions of nearby intersections or roadway segments with and without the additional traffic. A TIA may also estimate potential traffic queues, examine any outstanding safety issues, and assess the impact of the project on freight, pedestrian, and bicycle facilities. The City should consider adopting a policy to require a TIA to be conducted for all new development proposals along existing and future Arterials and Collectors and identify how impacts will be mitigated and the responsible party.

TIAs should be conducted for any development generated more than 50 peak hour trips; 500 daily trips; or in cases where developers are requesting a variance of design standards, or variance from Comprehensive Plan/Transportation Master Plan/Parks Master Plan recommendations. Approval of the peak hour generation exemption must be agreed upon by the City of Smithville for the exemption to be accepted. Smithville should also consider when it may be appropriate to repurpose the level of service analysis to leverage non-automotive network improvements as mitigation in lieu of capacity increasing roadway improvements.<sup>1</sup>

The following outlines the Traffic Impact Study contents:

### Project Description:

- Location of project (map and description)
- Proposed land use and scale of project (description)
- Study Area (It is very important that this is agreed upon before the study is performed.)
- Description of surrounding land uses
- Identification of community features such as schools, parks, multiuse paths within ½ mile of the proposed development
- Document review
  - Consistency with Comprehensive Plan
  - Consistency with Transportation Master Plan
  - Consistency with Parks Master Plan

### Existing Conditions:

- 24-hour traffic counts, usually not more than 1 year old. If there has been a lot of recent development, then the counts must be current.
- Peak hour turning movement counts for subject and adjacent intersections – must be current. If this is a larger development, then typically recommended to go beyond one intersection, but is determined depending upon the site location. (See “Study Area” above.)
- Roadway geometry (dimensions, lanes, curb/gutter or ditch, turn lanes, access/driveway/intersection locations) for study area o Intersection control (stop, yield, signals) within study area
- Traffic distribution (%north, %east, %south, %west)
- Any other major traffic contributors that should be noted

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<sup>1</sup> More information on multimodal traffic impact analysis is available in the [Multimodal Transportation Impact Analysis for Site Development \(MTIA\)](#) published by the Institute of Transportation Engineers (ITE)



- Any major traffic intersections (arterial intersections, freeway ramps, etc.)
- Graphic illustrating peak hour turning movements and segment 24-hour traffic volumes
- Existing traffic operations (level of service conditions within study area)
- Comprehensive Plan (land use and transportation component) plans (widen road, future bike path, etc.)
- Existing bicycle and pedestrian accommodation (paths, sidewalks, crossings, etc.)
- Existing transit stops (if applicable)
- Review of traffic safety/collision data

**Proposed Development:**

- Proposed Land Use
- Development size (include map)
- ITE Trip Generation code(s)
- ITE Trip Generation (typically done in a table format with development type, size, daily traffic for generator and peak hour traffic for generator)
- Trip Distribution (where is the traffic coming from/going to from this proposed development)
- Identify other new/proposed developments and include that traffic (as a separate graphic)
- Peak Hour and Daily traffic volumes for proposed development only (graphic – this identifies segment and turning movement volumes)
- Peak Hour and Daily traffic volumes for proposed development and any other related new/proposed approved developments that are not constructed but have provided a traffic study
- Access locations
- Identification of inconsistencies between proposed driveway and traffic control spacing with the City/State Access Management Guidelines.
- Peak Hour and Daily traffic volumes (Existing plus proposed developments combined) Future Conditions
- Peak Hour level of service for study area
- Identification of network and intersection impacts
- Identification of pedestrian and bicycle improvements and accommodation
- Identification of proposed bicycle parking areas
- Identification of proposed safety mitigation
- Consistency with Comprehensive Plan

**Recommendations:**

- Description of recommendations to mitigate traffic impacts
- Description of multimodal enhancements/accommodation
- Description of how mitigations align with values of Comprehensive Plan, Complete Streets Guidelines, and Transportation Master Plan (Trade-Offs between the first two bullets may be necessary and these plans will help guide those decisions)
- Map that clearly indicates the limits of Study Area with proposed geometric improvements consistent with the recommendations

**Appendices to include:**

- Turning Movement Counts

- 24-hour Counts
- Existing Conditions Level of Service evaluation output
- Future Conditions Level of Service evaluation output

### Impact Fees

An impact fee can be a useful tool to ensure funding the maintenance and development of public infrastructure alongside new developments. The use of an impact fees tied to Traffic Impact Studies (TIS) can help facilitate planned community developments and ensure infrastructure needs such as safety, congestion, and quality are being addressed as the population and new developments increase. A lack of an impact fee with planned community development could establish long-term burdens as the infrastructure would not meet the needs of the population. The fee would be a local government decision and vote due to Missouri being a home rule state, there are no state level requirements or implementations on impact fees.

The impact fee is based on a “rough proportionality” test. This test is one that is based on a fair share formula that bases the fee off the demand or impacted the development places on the existing public infrastructure or facilities. There are several basics for the impact fee’s proportionality test:

- Should not affect pre-existing negative impacts in the level of service
- Should not charge a new development multiple times
  - Other taxes and contributions in the future will be used for the same purpose

There are several strategies that should be considered with the usage of an impact fee:

- Keep the process and regulations simple and transparent
- Maintain a strict policy on fee usage for basic facilities and infrastructure
- Utilize a generalized fee schedule for ease of policy transfer with new or anticipated land use changes
- Effect new development almost exclusively to simplify the administrative process and protect the existing residents and businesses

There are two ways to implement an impact fee:

- A flat rate based on the size of the development
- A percentage of the project cost

In Kansas City, there is an Arterial Street Impact Fee that is imposed on new developments that was adopted in 2001. This fee is proportionate to the cost burden on the city to establish arterial streets to serve the new development at the same level of service for the existing arterial street facilities ([KCMO, Ord. No. 011258, § 1](#)). This impact fee schedule varies between North Kansas City and South Kansas City; however, the basis is on a generalized land use typology that determines the flat fee that is multiplied by the net cost/unit (rooms, square feet, acres, etc.).

In Lee's Summit, they base their [impact fee](#) off a generalized land use typology as well. They utilize a percentage (anywhere from 0.35 to 0.5%) of the project's construction valuation. They have different percentages for existing and new developments.

### **Transportation Development Districts**

Cities like Smithville have also established Transportation Development Districts (TDD). A TDD is a separate political board that is established and approved by voters to fund, promote, approve, and maintain one or more transportation related projects. Lee's Summit, Parkville, and Harrisonville have TDD's in place to help maintain and fund transportation projects in specific districts. One area that could utilize a TDD in Smithville, is US-169. Based on the proposed functional classification changes mentioned previously, a TDD being put in place for a district around US-169 would involve a special assessment based on voter approvals and could place a sales tax increase or a property tax increase based on the findings up for vote.

### **Pro-Rata Share Districts (PSDs)**

Another variation, a Pro-Rata Share District (PSD) is a geographic area defined for the purpose of securing needed improvements to transportation facilities in that area. Developers in the district are required to pay toward the cost of those improvements in proportion to how much they create the need for those improvements.

While Special Assessment Districts (SADs) of various types have existed for some time, PSDs, also known as impact fee districts, are a more recently applied approach. They are distinguishable from other SADs primarily by the fact there is a reasonable relationship, a rational nexus, between the impact of a new development on the infrastructure and the fee paid.

When to consider creating a PSD:

- Areas experiencing or expected to experience sudden growth, where the unified planning effort associated with a district can better assess impacts
- Areas with large infrastructure needs, where a district can serve to focus developer contributions where they are most needed and as appropriate, to supplement them with public funds
- Areas with developments of varying sizes, where a district can assure that costs are distributed more equitably
- Areas with concurrency requirements, where a district may be a desirable alternative to allow the creation of denser development within the district and ease pressure on rural areas outside the district.

### **Conclusion**

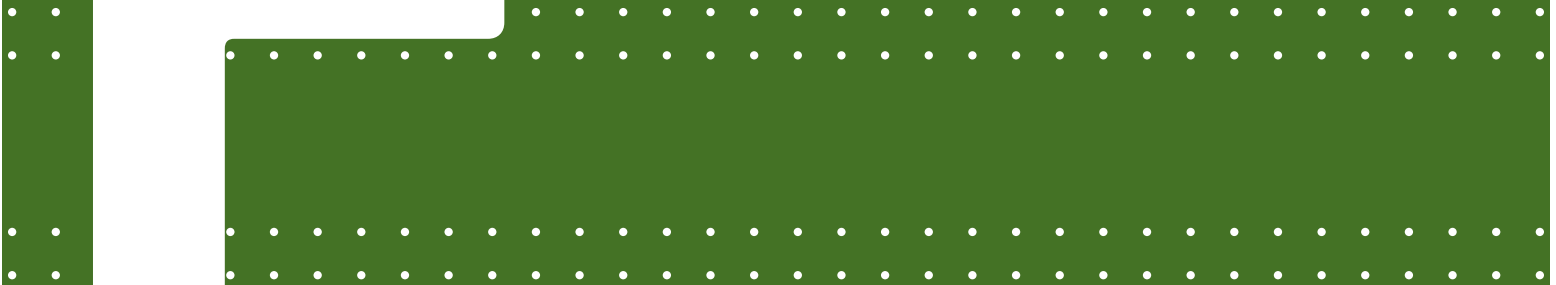
As development centered around the US-169 & MO-92 intersection extends south, traffic on existing roads will increase rapidly. Without additional optional roadways to use to support this growth, roadways

such as US-169 and MO-92 will reach peak capacity and become congested from new development. In addition to site development creativity and multimodal facilities to reduce the amount of automobile trips, it is critical to traffic needs for there to be a redundancy of safe, convenient, and accessible routes for all modes. The city should consider establishing potential/planned roadway centerlines to address specific anticipated needs so appropriate right-of-way can be adequately preserved and ROW dedication be a condition upon which development may occur along each of the proposed roadway corridors for future transportation investments.



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# APPENDIX F: SMITHVILLE COMPLETE STREETS DESIGN GUIDELINES





# Smithville Complete Streets Design Guidelines

Draft | February 2022

**TOOLE**  
DESIGN





# ACKNOWLEDGMENTS

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## PREPARED BY

Toole Design Group

Wilson & Company

Future iQ



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D

1

# CHAPTER 1: PURPOSE AND PRINCIPLES



# PURPOSE OF COMPLETE STREETS GUIDELINES

The purpose of the Smithville Complete Streets Design Guidelines is to provide resources and guidance for city staff, design professionals, developers and consultants to better consider and accommodate the diverse needs of roadway users of all ages and abilities including motorists, freight, pedestrians, bicyclists, wheelchair users, scooters, and more. These guidelines include a Complete Streets Vision and Policy developed by city staff and the Transportation Master Plan steering committee. The guidelines are based on national best practices in Complete Streets design and are intended to provide flexibility in design criteria to reflect adjacent land uses. This document touches on all aspects of street design, however, where necessary, the document refers to additional city or national design guidance or standards. These guidelines will help ensure greater consistency in street design in Smithville for all retrofit and new construction projects moving forward.

In all cases, street design will be subject to staff approval based on their professional judgment and interpretation of these guidelines.

## Relationship to Smithville Transportation Master Plan

This plan builds on the Smithville Transportation Master Plan, and follows the goals and objectives of that plan. The complete streets guidelines will assist the city in delivering high quality public space. Previous planning efforts in Smithville have found that defining public space as social infrastructure is a valuable way to cultivate greater civic identity, social cohesion, and a sense of belonging in a community.



# Smithville Complete Streets Policy

The complete streets policy for the City of Smithville was written with input from city staff and a committee of stakeholders appointed to guide the development of the Master Transportation Plan. It is based on a review of national and regional best practices, as well as Complete Streets guidance from the Mid-America Regional Council and BikeWalkKC. The policy states:

*“The City of Smithville will provide a safe, complete, and connected network of streets for residents and visitors of all ages, abilities, and backgrounds to walk or use wheelchairs, bike, and drive to reach destinations throughout the community. The needs of these users will be balanced with those of commercial freight movement and emergency responders. Smithville’s multimodal streets will enhance Smithville’s quality of life and strengthen the City’s ability to remain a small-town community oasis that is prepared for the future. The City’s transportation system will provide safe, reliable, affordable, and efficient choices for all.”*



An example of a multiuse facility that is accessible for people of all ages and abilities

## Policy Application: All Phases and All Projects

Due to right-of-way and funding constraints, this Complete Streets Policy recognizes that not all streets will be able to provide dedicated facilities for each mode, however, decision-makers shall use this policy to routinely consider the diverse set of users listed above in all city-owned transportation projects including new construction, reconstruction/retrofit, resurfacing, repaving, restriping and rehabilitation transportation projects in the public right-of-way including, but not limited to, streets and all other connecting pathways. These projects shall be designed, constructed, operated, and maintained so that all modes of transportation may move safely, comfortably, and conveniently.

## Consideration of Complete Streets Guiding Principles and Land-Use Context

As part of the Transportation Master Plan, the City of Smithville developed a set of Complete Streets guiding principles that will serve as factors in multimodal infrastructure decision making. In addition to these guiding principles shown on the following page, the City’s physical, economic, and social setting will be considered as well. The context-sensitive approach will include a range of goals and give significant consideration to stakeholder and community values.

## Exceptions to Accommodation

The City of Smithville Board of Alderman may approve the exclusion of transportation infrastructure where documentation and data indicate that the costs or impacts of accommodation are excessively disproportionate to the need or probable use or future use.

## Implementation

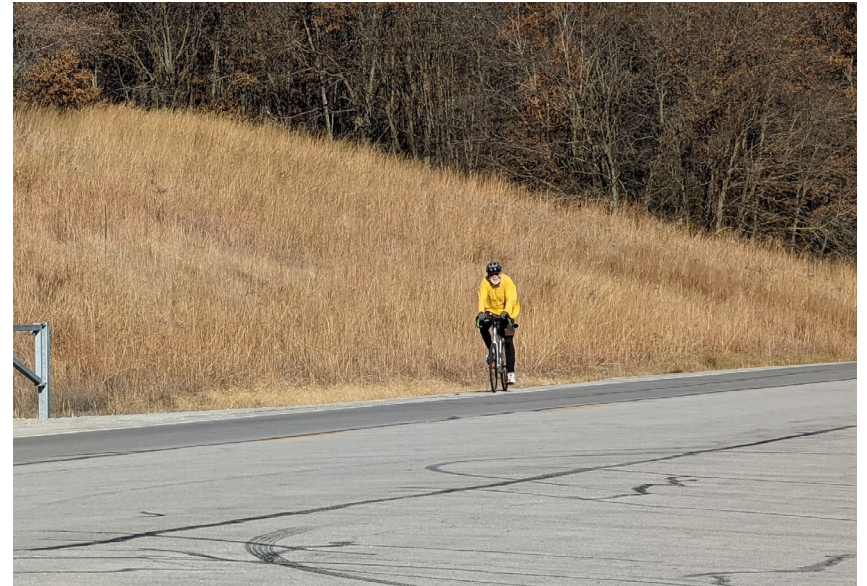
The City of Smithville will incorporate the Complete Streets policy herein into appropriate plans, manuals, checklists, decision trees, rules, regulations, and programs and develop criteria for when projects require a public engagement component.



## Guiding Principles

### Transportation in Smithville will feature

- **Transportation for all:** Serve all users, abilities, and backgrounds with convenient, affordable transportation choices.
- **Safe Connections:** Focus on providing safe transportation networks and crossings for all users
- **Strong Community:** Support placemaking and community identity through design
- **Future Focused Investments:** Promote sustainability and responsible transportation investments, and maintain infrastructure



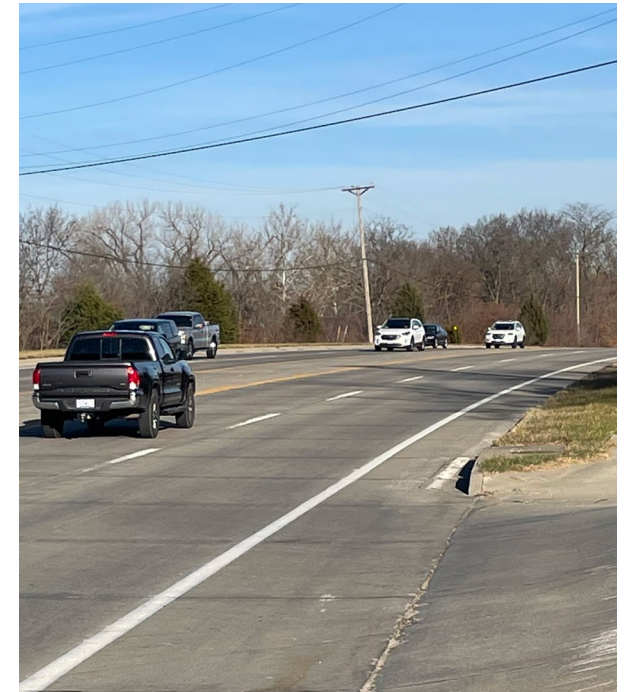
A bicyclist on Litton Way



A crossing guard ensures safe crossing for children on their way to Eagle Heights Elementary



Pedestrians gather at a festival in Downtown Smithville



US-169 is a major roadway connecting Smithville from the north to the south





# 2

## CHAPTER 02: STREETS

# Street Types

In Smithville, there are three street types: arterials, collectors, and local streets. Street types not only refer to the amount of vehicle traffic, but also to the width, depth, number of lanes, adjacent land use, and non-motorized facility characteristics. This section provides photos, a description of each street type and detailed street design drawings for developers and contractors designing and building streets in Smithville.

## Arterial Streets



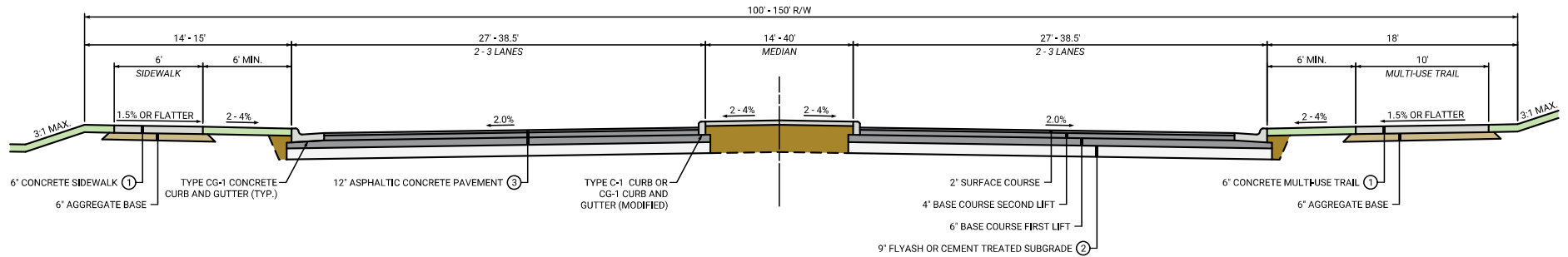
An urban (with curbs) 5-lane section of US Highway 169 north of Route 92



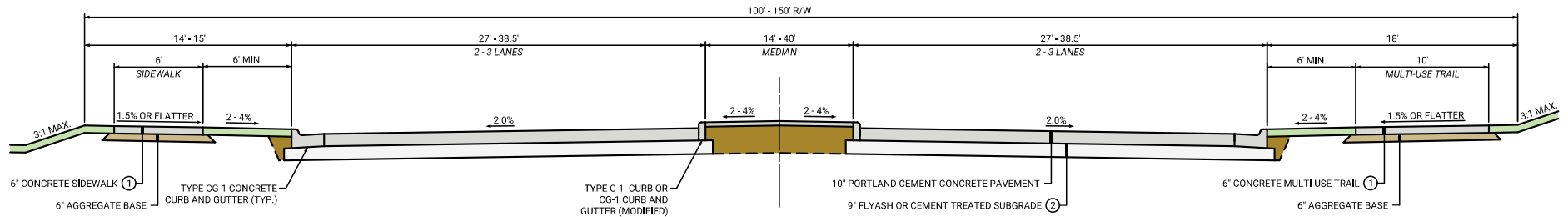
A rural (without curbs) 2-lane section of US Highway 169 on the north side of Smithville

Arterial streets carry the most amount of traffic, and adjacent land uses tends to be commercial. In Smithville US Highway 169 and Route 92 are classified as arterial streets, with future north-south arterials planned on the western boundary from Route KK to the south and on the east side of town between Virginia Avenue and Smith's Fork Park. Arterial streets are the widest streets with two to six lanes of traffic. Their paved depth is 10" to 12" due to heavy vehicle and freight traffic. Walkways and bikeways should be separated from vehicular traffic with a physical barrier for improved safety and comfort.

## Typical Section: Principal Arterial



**ASPHALTIC CONCRETE - TYPICAL SECTION**  
(PRINCIPAL ARTERIAL)

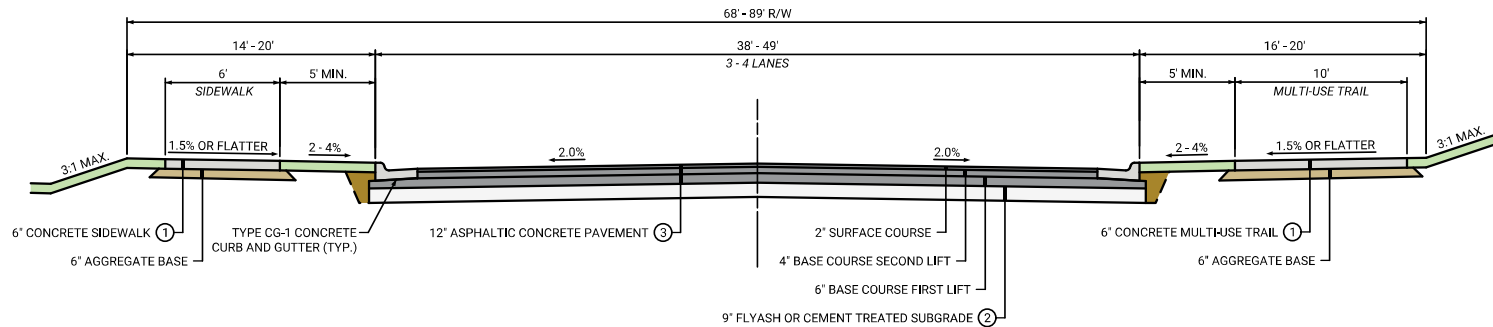


**PORTLAND CEMENT CONCRETE - TYPICAL SECTION**  
(PRINCIPAL ARTERIAL)

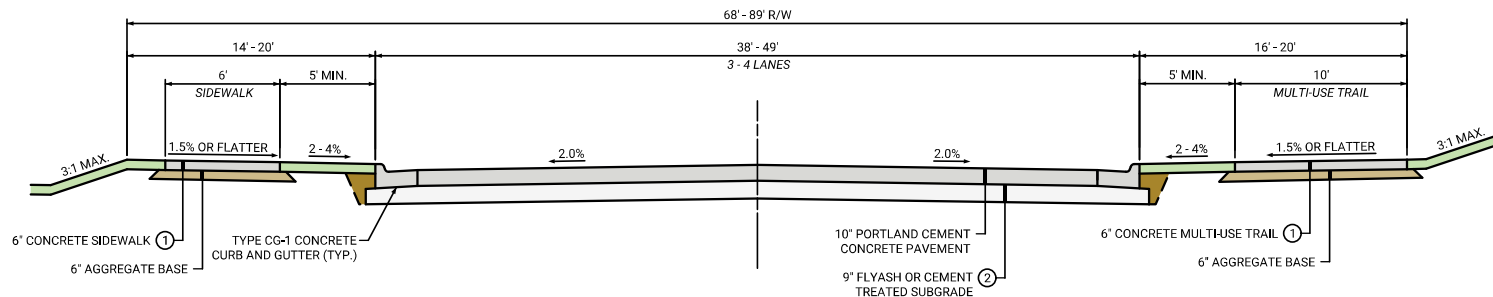
### NOTES:

- ① Sidewalks shall be a minimum of 4 inches thick. Sidewalks 6 feet or wider shall be 6 inches thick. Where a driveway crosses a sidewalk, the sidewalk will be 6 inches through the driveway. The abutting sidewalk slabs will be doweled with ½ inches rebar. All sidewalks will meet KCMMB 4000 psi durable aggregate mix design.
- ② Subgrade shall be 9 inches Fly Ash or 6 inches AB-3, compacted to a minimum density of 95% of standard proctor. Subgrade Stabilization shall extend 1 foot beyond the edge of pavement.
- ③ Asphalt cement shall conform to the Performance Graded (PG) system. The asphalt oil used for residential, collector, and arterial streets shall be PG 64-22 for all types of AC mixes. Recycled asphalt pavement (RAP) shall be processed such that 100% will pass the 1-1/2 inch sieve and shall be free of debris and foreign material. RAP shall only be used in base courses at a maximum rate of not greater than 15% by volume. The top course shall be 100% virgin material unless a waiver has been granted by the City Engineer to use recycled asphalt. Tack oil shall be SS-1, SS-1H, CSS-1 or CSS-1H grade oil. Alternative materials must be submitted for approval by the Engineer prior to submitting a bid on a project. Certification shall be submitted to Engineer.

## Typical Section: Minor Arterial



**ASPHALTIC CONCRETE - TYPICAL SECTION**  
(MINOR ARTERIAL)



**PORTLAND CEMENT CONCRETE - TYPICAL SECTION**  
(MINOR ARTERIAL)

### NOTES:

- ① Sidewalks shall be a minimum of 4 inches thick. Sidewalks 6 feet or wider shall be 6 inches thick. Where a driveway crosses a sidewalk, the sidewalk will be 6 inches through the driveway. The abutting sidewalk slabs will be doweled with ½ inches rebar. All sidewalks will meet KCMMB 4000 psi durable aggregate mix design.
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## Collector Streets

Collector streets carry a moderate amount of traffic, and adjacent land uses are a relatively even mix of commercial and residential. In Smithville most lettered routes (i.e. Main St., Spellman Rd., Route KK, Route W) are collector streets, along with 180th Street, 188th Street, Amory Road, Commercial Avenue, Tillman Road, and Virginia Avenue. Future east-west collector streets are planned along:

- Pope Lane connecting Spellman Rd. and Route KK
- 2nd Creek Road west of US-169
- A new street ½ mile north of Route 92 between the western boundary and US-169
- A new street ½ mile south of Route 92 between the western boundary and US-169
- Martin Road and 144th Street between the western boundary and Virginia Avenue
- Amory Road west of US-169
- 136th Street between the western boundary and Virginia Avenue

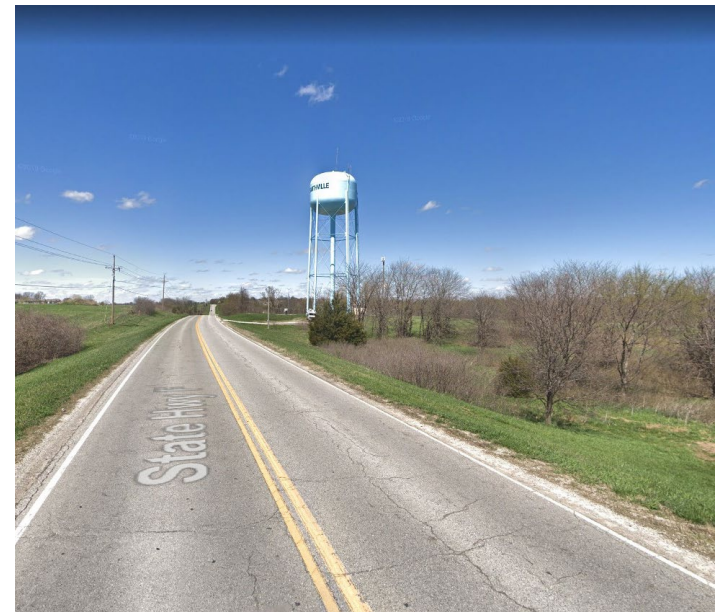
Future north-south collector streets are planned along:

- A new street ½ mile west of US-169 between Richardson Street and 136th Street
- A new street ¾ mile east of US-169 between Route 92 and 136th Street

Collector streets are typically not as wide with two or three lanes of traffic. Their paved depth is 8" to 10" due to moderate amounts of vehicle and freight traffic. When present walkways should be separated from vehicular traffic with a physical barrier for improved safety and comfort. Bikeways may be combined with a walkway (resulting in a multi-use path) or run next to the curb at street level in lanes that flow with the direction of traffic.

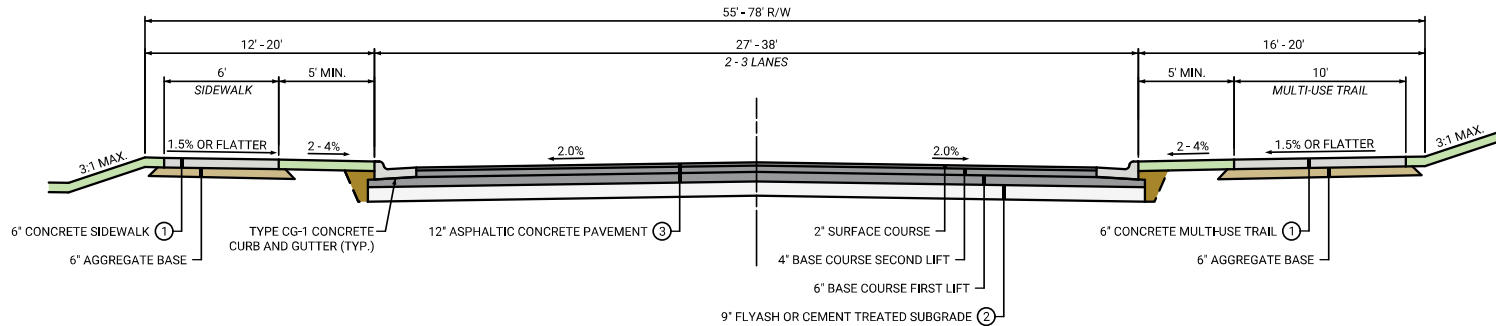


An urban (with curbs) 2-lane section of Commercial Avenue

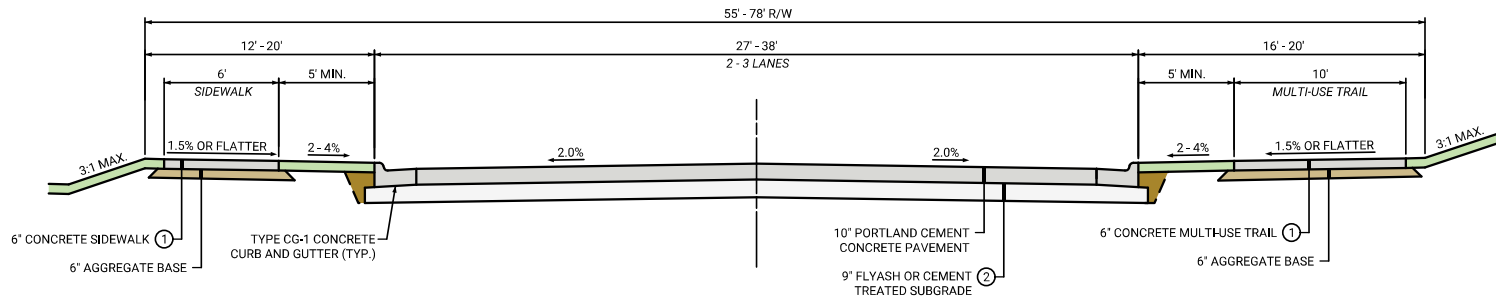


A rural (without curbs) 2-lane section of Spellman Rd

## Typical Section: Major Collector



**ASPHALTIC CONCRETE - TYPICAL SECTION**  
(MAJOR COLLECTOR)

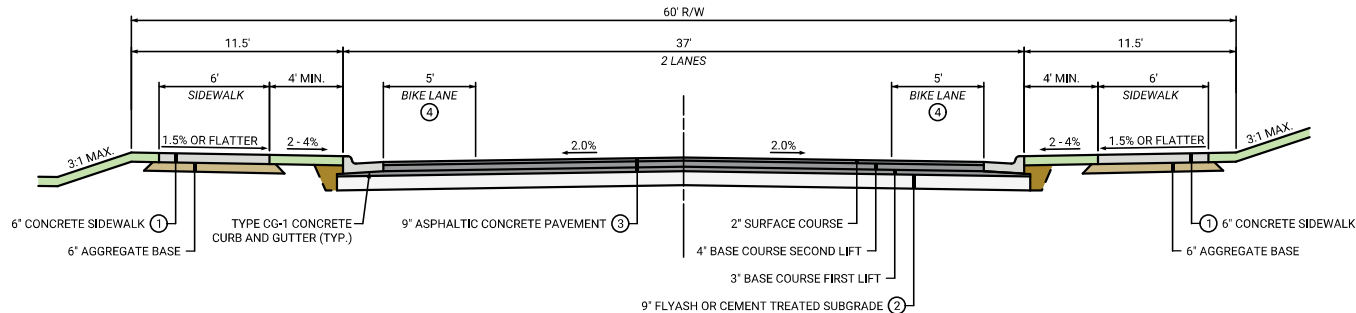


**PORTLAND CEMENT CONCRETE - TYPICAL SECTION**  
(MAJOR COLLECTOR)

### NOTES:

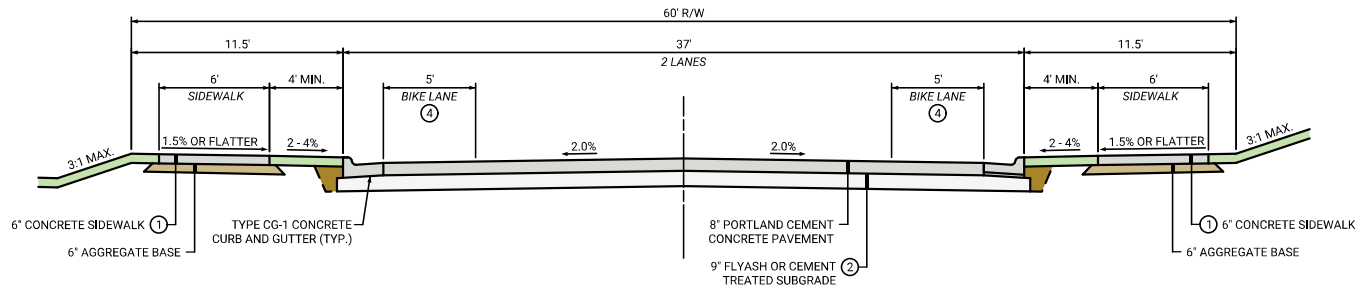
- ① Sidewalks shall be a minimum of 4 inches thick. Sidewalks 6 feet or wider shall be 6 inches thick. Where a driveway crosses a sidewalk, the sidewalk will be 6 inches through the driveway. The abutting sidewalk slabs will be doweled with ½ inches rebar. All sidewalks will meet KCM MB 4000 psi durable aggregate mix design.
- ② Subgrade shall be 9 inches Fly Ash or 6" inches AB-3, compacted to a minimum density of 95% of standard proctor. Subgrade Stabilization shall extend 1 foot beyond the edge of pavement.
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## Typical Section: Minor Collector



### ASPHALTIC CONCRETE - TYPICAL SECTION

(MINOR COLLECTOR)



### PORTLAND CEMENT CONCRETE - TYPICAL SECTION

(MINOR COLLECTOR)

#### NOTES:

- ① Sidewalks shall be a minimum of 4 inches thick. Sidewalks 6 feet or wider shall be 6 inches thick. Where a driveway crosses a sidewalk, the sidewalk will be 6 inches through the driveway. The abutting sidewalk slabs will be doweled with ½ inches rebar. All sidewalks will meet KCM MB 4000 psi durable aggregate mix design.
- ② Subgrade shall be 9 inches Fly Ash or 6" inches AB-3, compacted to a minimum density of 95% of standard proctor. Subgrade Stabilization shall extend 1 foot beyond the edge of pavement.
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- ④ A multi-use trail is a suitable alternative to bike lanes on a minor collector street.



## Local Streets

Local streets carry the least amount of traffic, and adjacent land uses tend to be residential. All streets that are not arterial or collector streets are local. Local streets are typically the narrowest with two lanes of traffic, although lanes are typically not marked. Their paved depth is 8" due to lesser amounts of vehicle traffic and a typical lack of freight traffic. Walkways (i.e. sidewalks) may be separated from vehicular traffic with a landscape buffer for improved safety and comfort, although some local streets are comfortable for sharing due to extremely low traffic volumes and speeds. Dedicated bikeways are typically not located on local streets due to lesser traffic volumes and speeds.



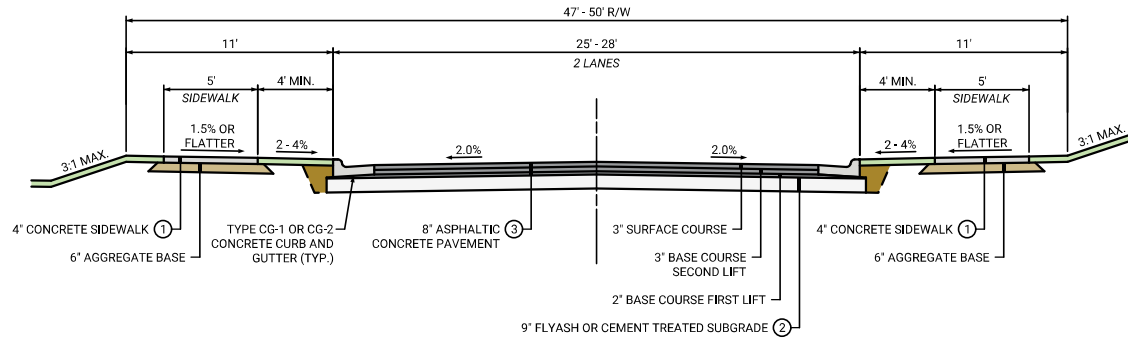
A local street without sidewalks, where people driving and walking share the street



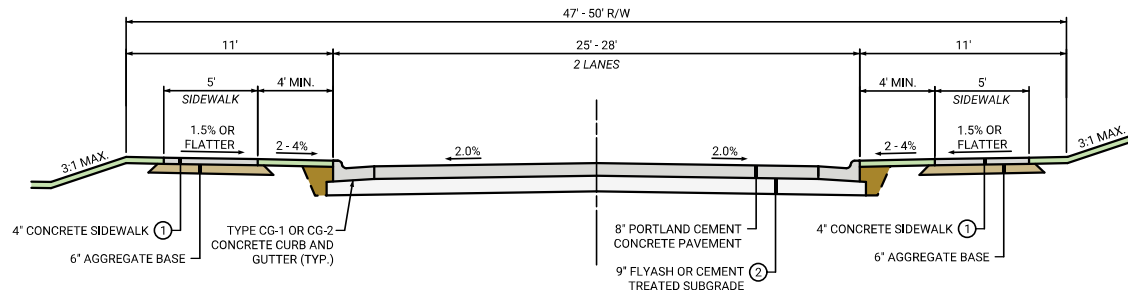
A local street with sidewalks



## Typical Section: Local



**ASPHALTIC CONCRETE - TYPICAL SECTION**  
(LOCAL)



**PORTLAND CEMENT CONCRETE - TYPICAL SECTION**  
(LOCAL)

### NOTES:

- ① Sidewalks shall be a minimum of 4 inches thick. Sidewalks 6 feet or wider shall be 6 inches thick. Where a driveway crosses a sidewalk, the sidewalk will be 6 inches through the driveway. The abutting sidewalk slabs will be doweled with ½ inches rebar. All sidewalks will meet KCM MB 4000 psi durable aggregate mix design.
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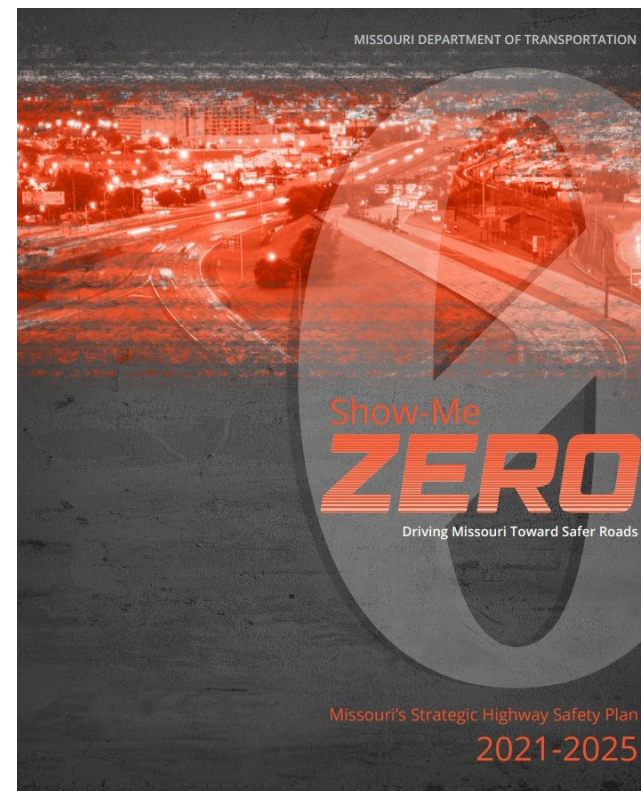
# Safety

When streets are being designed for construction, safety should be a top priority. The Missouri Department of Transportation's Show-Me Zero Safety Plan<sup>1</sup> is a guide for eliminating traffic-related fatalities and reducing serious injuries. It contains a multi-faceted approach toward improved traffic safety, with a recommendation that "agencies should consider a 'safe systems' approach. This philosophy recognizes human error still exists and aims to create a roadway environment that is more forgiving should a crash occur." One strategy for cities to achieve this approach is the implementation of safety improvements in infrastructure projects.

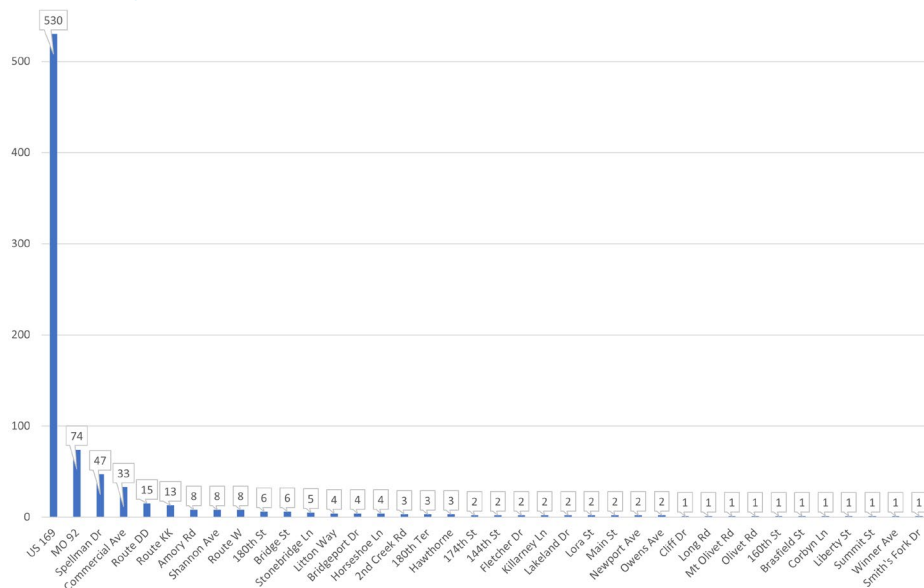
According to the Missouri State Patrol's Statewide Traffic Accident Records System (STARS), approximately 800 traffic-related crashes involving injuries took place in Smithville between 2011 and 2020. 75% of those occurred on arterial streets (i.e. US-169, MO-92), with the remaining 17% taking place on collectors and 8% on local streets. Chart 1 shows the location of each crash. As Smithville adds arterial and collector streets to its network, design should incorporate the "safe systems" approach with the greatest focus on arterial followed by collector streets.

Most fatalities and injuries involve a motor vehicle in transport, as opposed to crashes involving fixed objects, overturning, pedestrians, animals, and bicyclists, as shown in Chart 2. The main circumstance for these crashes were led by none, failed to yield, distracted/inattentive, following too close, too fast for conditions, alcohol, and speed exceeded limit, as shown in Chart 3.

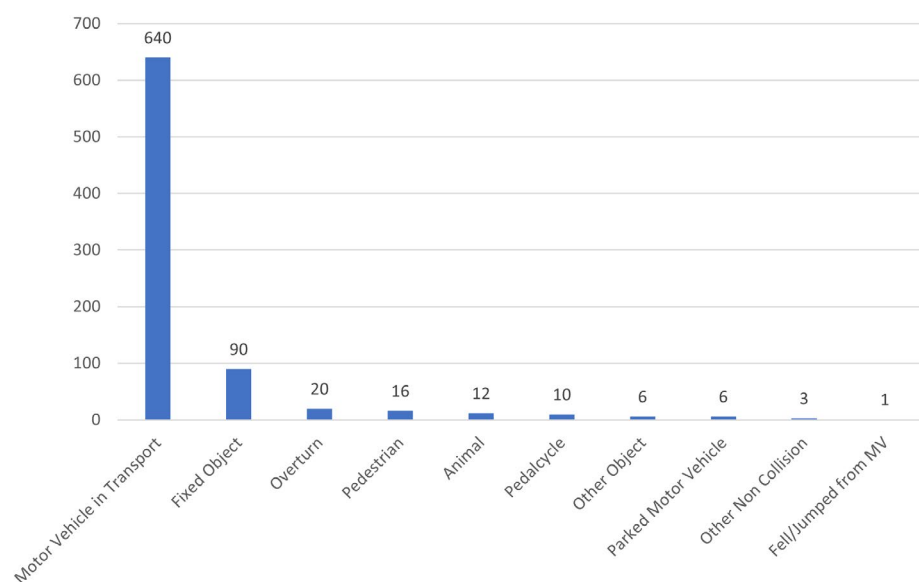
Another strategy in the Show-Me Zero Safety Plan is to adopt design standards that encourage alternate modes of travel and enhance safety for pedestrians and bicyclists. According to the STARS database, of the 26 pedestrian- and bicycle-related crashes involving an injury in Smithville between 2011 and 2020, 10 took place on arterial streets, 12 on collectors, and 4 on local streets, as shown in Chart 4.



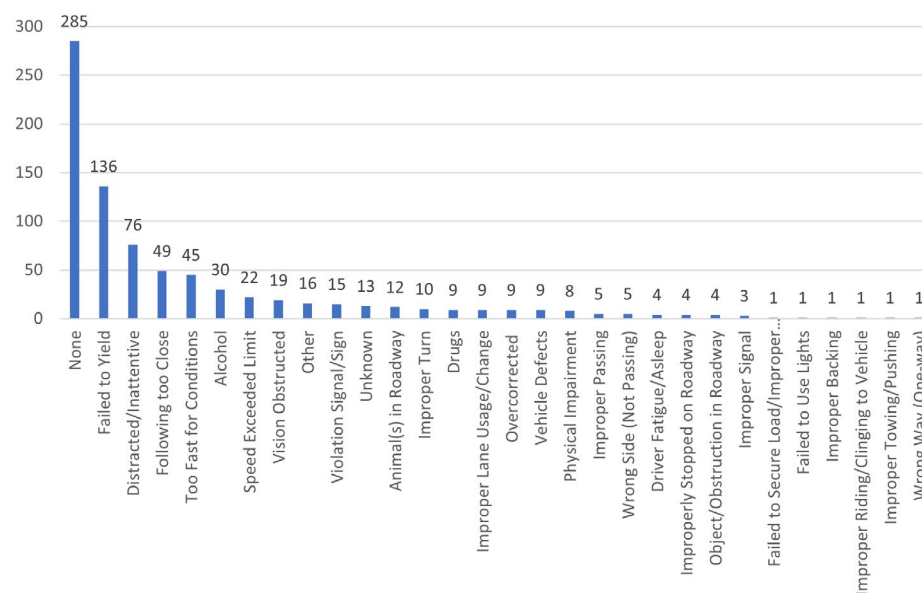
**Chart 1. Reported Main Circumstance of Smithville Crashes Involving Fatalities or Injuries (2011-2020)**



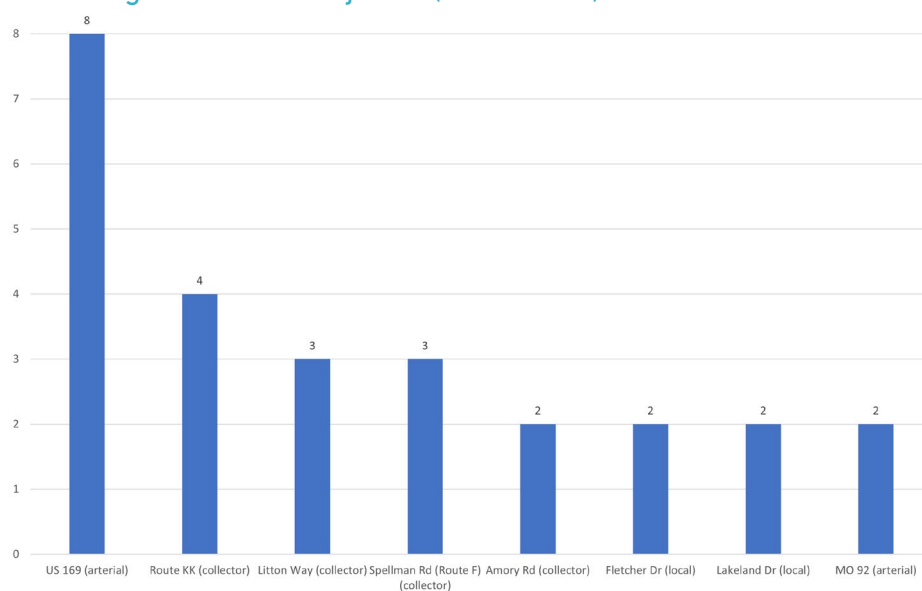
**Chart 2. Reported Type of Smithville Crashes Involving Fatalities or Injuries (2011-2020)**



**Chart 3. Reported Main Circumstance of Smithville Crashes Involving Fatalities or Injuries (2011-2020)**



**Chart 4. Reported Location of Pedestrian/Bicyclist Crashes Involving Fatalities or Injuries (2011-2020)**



## Safe Speeds

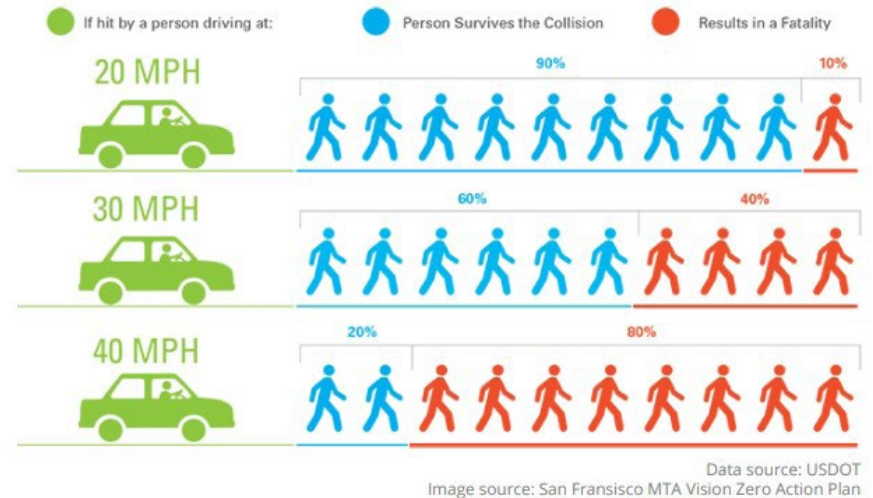
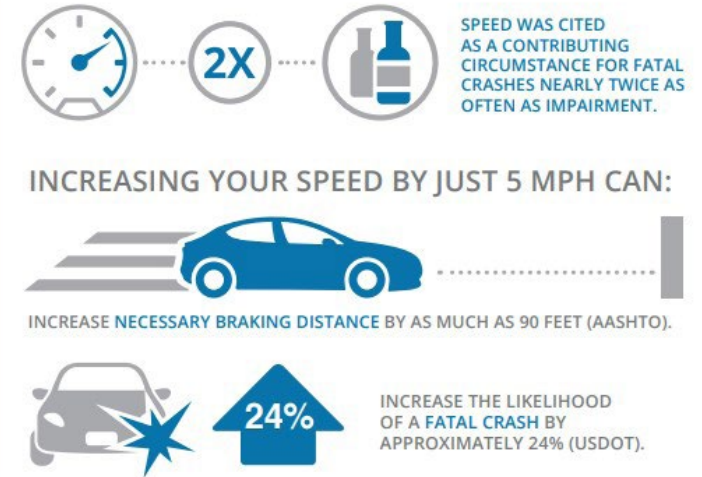
A key component of complete streets is creating an environment where users of all modes can feel comfortable. Streets should operate at speeds that are comfortable, not only for motor vehicles, but also for bicyclists of various ages and abilities. The goal of designing for safe speeds is to create an environment that encourages speeds appropriate for the street type and context. Street designs should aim to limit excessive speeding, and target design speeds should be appropriate for the street type and context of surrounding land uses. New streets should be designed to produce operating speeds that match the target design speed, which should also match the posted speed limit. On existing streets with excessive speeds, traffic calming measures may be considered in conjunction with enhanced law enforcement to reduce speeds to improve safety and comfort for all users. Lowering posted speed limits without addressing street design generally does not reduce speeding and, in turn, does not improve safety.

Pedestrians and bicyclists are particularly vulnerable in the event of a crash with a motor vehicle. The severity of a pedestrian injury in the event of a crash is directly related to the speed of the vehicle at the point of impact. For a pedestrian involved in a crash with vehicles driving at 20 mph, there is a 10% likelihood of fatality or serious injury, that percentage increases to 80% when the driving speed is increased to 40mph.



Implementing safe speeds throughout Smithville will improve mobility for all road users

### SPEED AND AGGRESSIVE DRIVING ARE THE MOST COMMON CONTRIBUTING CIRCUMSTANCES FOR FATAL CRASHES IN MISSOURI.



Source: <https://www.modot.org/sites/default/files/documents/Show-Me%20Zero%20Plan>



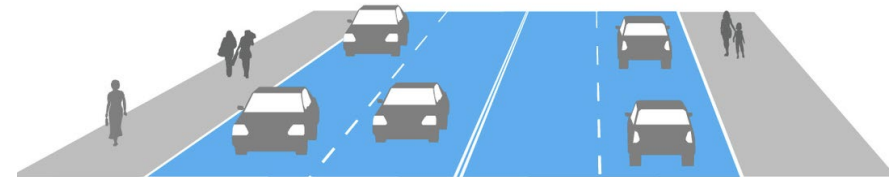
# Rules of Thumb for Smithville Roadways

**Consider Context:** When planning and designing new streets or retrofits, the city or developer should consider the needs of all users and use the Complete Streets Design Guidelines as guidance.

**Construct Sidewalks:** All streets should be built with a minimum sidewalk of 5 feet on both sides of the street (6 feet on arterials and collectors) or a 10-foot minimum shared use path for use by both pedestrians and bicyclists on one side of the roadway and sidewalk on the other. Buffers between the sidewalk and the roadway are essential on arterials and collectors to provide safety and comfort.

**Moderate Target Speeds:** Target speeds on roadways adjacent to neighborhoods and commercial areas should be 30 MPH or below. Exceptions include highways US-169, MO-92 and select collectors.

**Right-Size Roadways:** With a few exceptions, Smithville should not overbuild the roadway network with wide roadways. While new roadways are needed, roadways with 2 to 3 lanes (one lane in each direction plus turn lane) are most appropriate to maintain the small-town character of Smithville, to reduce barriers to pedestrians and bicyclists, and to maintain overall safety for all users. US-169 is the exception to this rule of thumb, however this roadway already creates a significant barrier within Smithville due to high volumes and speeds. Clear communication between Smithville and MoDOT regarding any future changes to the configuration of US-169 will be essential. Any widening effort would create significant negative impacts on Smithville and the city would prefer to see additional north-south roadways that create redundancy in the network to widening of US-169.



**Higher Speed Street**



**Lower Speed Street**



Medians can encourage drivers to slow down and pay closer attention to their surroundings

# Traffic Calming

Traffic calming is an aspect of speed management and is implemented in places where there is a conflict between speeding vehicles and non-motorized traffic. Common traffic calming elements include vertical deflection in the form of raised crosswalks, and horizontal deflection in the form of bump outs and neighborhood traffic circles. Traffic calming measures are ideal for slowing traffic in residential neighborhoods, downtown business districts, and near parks and schools. These measures not only make crossing the street safer for pedestrians, but they also increase safety for drivers by slowing traffic and reducing the risk of injuries. The following guidance will ensure that safe speeds are encouraged through traffic calming:

- **Raised crosswalks**, should have a smooth leading edge, a parabolic rise, and be engineered for a speed of 20 to 30 mph. They should also be clearly marked with reflective markings and signs. An example is provided to the right and in Figure 1. on the following page.
- **Bump outs** shorten crossing distances and increase visibility between roadway users. Waiting pedestrians can better see approaching traffic and drivers can better see pedestrians waiting to cross the street. This treatment is particularly valuable in locations with high volumes of pedestrian traffic or where there are demonstrated pedestrian safety issues. Bump outs may provide space for Americans for Disabilities Act (ADA) compliant, directional curb ramps where sidewalks are narrow.
- **Neighborhood traffic circles** slow speeds at intersections and provide an opportunity for green space. As shown to the right and in Figure 2, they should be sized in proportion to the size of the intersection.



**Raised Crosswalk**



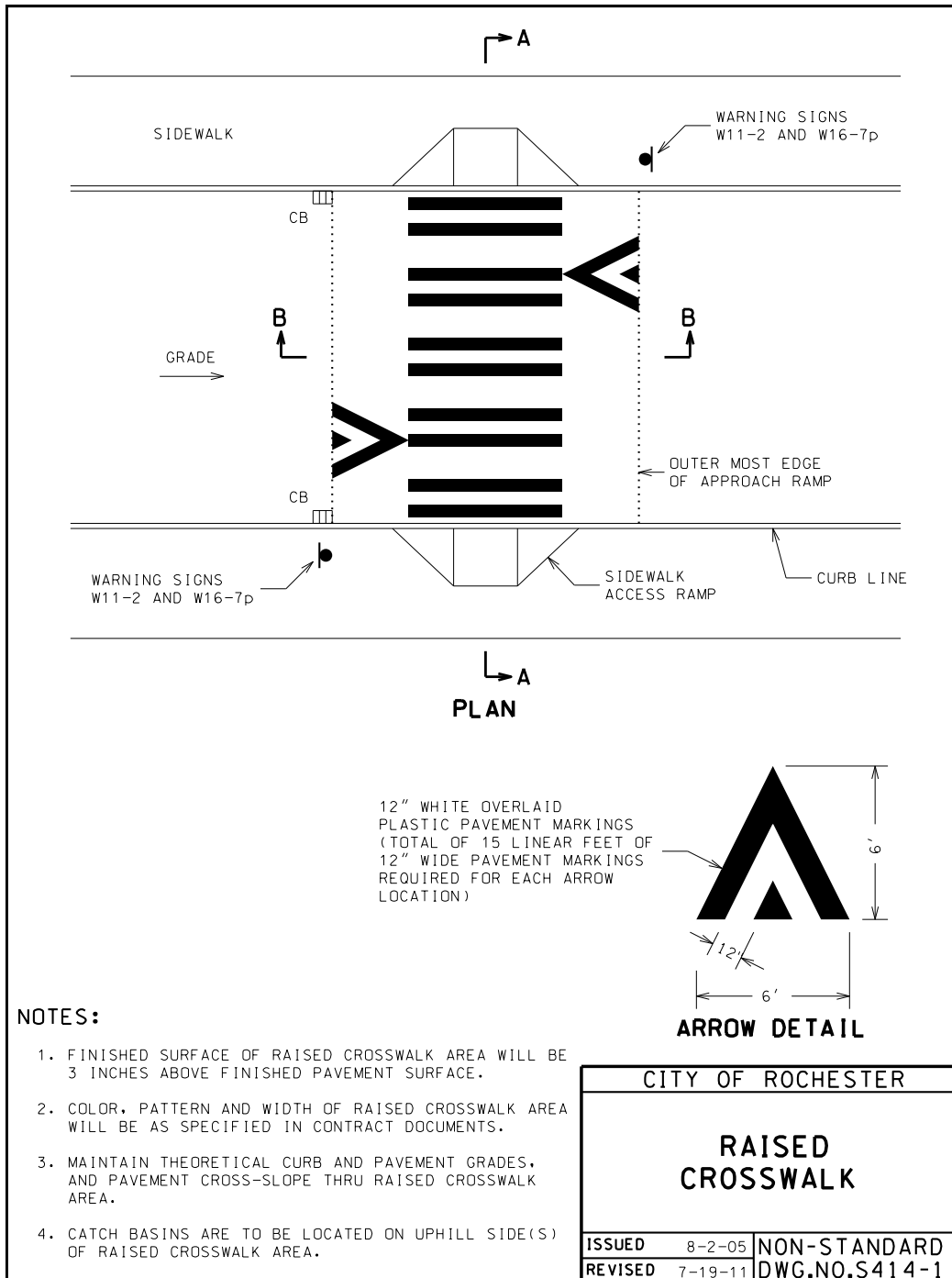
**Bump Outs**



**Neighborhood Traffic Circle**

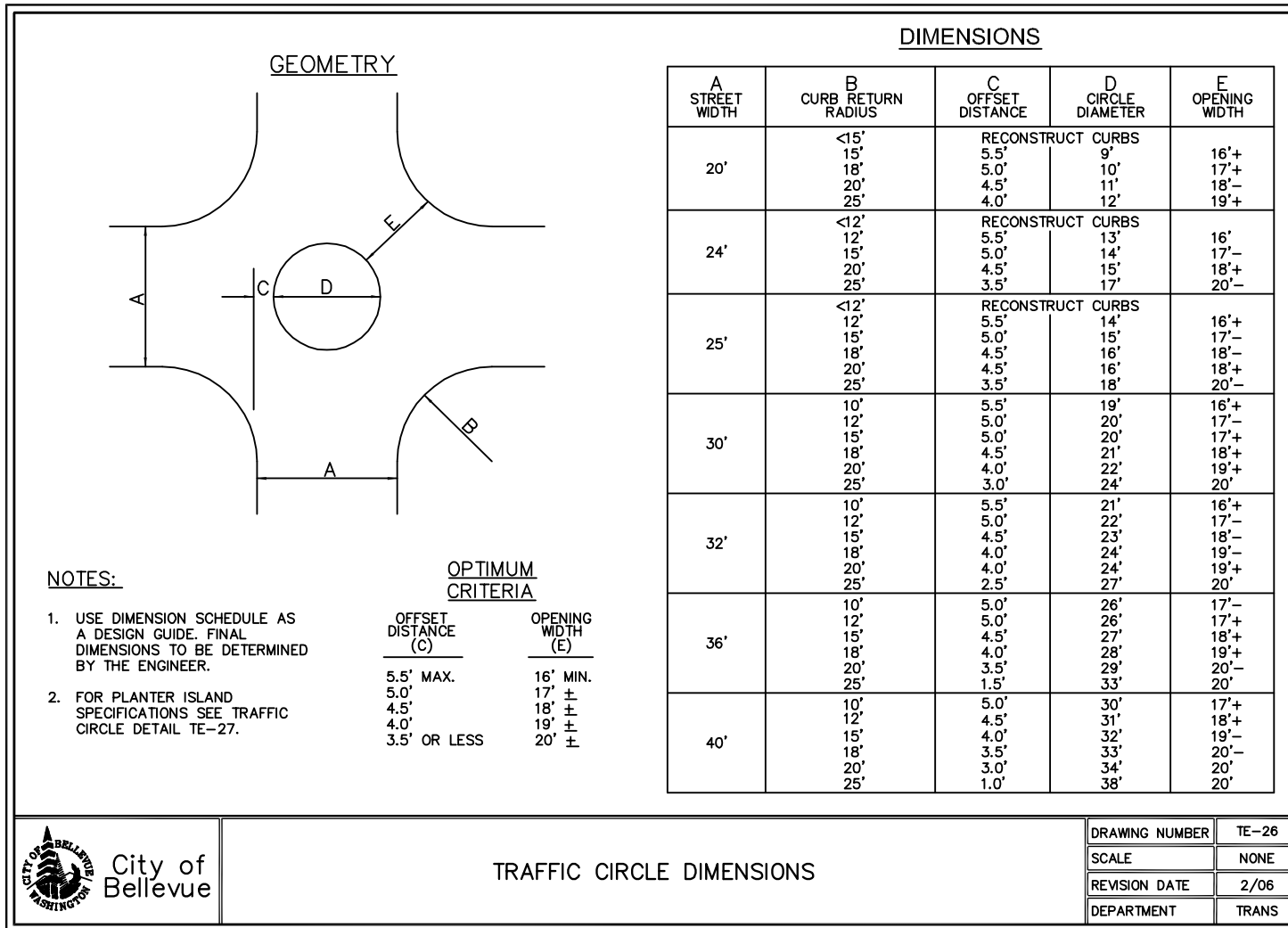
## Design Standard Example for Raised Crosswalks

Figure 1. Credit: Rochester, New York



# Design Standard Example for Neighborhood Traffic Circles

Figure 2. Credit: Bellevue, Washington





## Lane Width

Lane widths are an important design element that impacts comfort and safety for vulnerable users such as pedestrians and bicyclists. Narrowing lane widths frees up space for additional elements such as wider sidewalks and buffers, multi-use paths, and bike lanes.

Additional benefits include:

- Lower speeds
- Fewer, less severe crashes for all users
- Reduced crossing distance for pedestrians
- Reduced footprint of the roadway, resulting in better use of land and reduced run-off

Traditionally, across the US, 12 feet has been the standard for motor vehicle travel lane width but the AASHTO “Green Book” allows 10-foot travel lane widths in low-speed environments (45 mph or less). Narrower lane widths have been avoided in the past due to concerns about vehicle occupant safety and congestion, especially on arterials. However, research has shown that in most cases, travel lane widths between 10 and 11 feet on arterials and collectors do not negatively impact overall motor vehicle safety or operations, nor do they have a measurable effect on capacity. A Transportation Research Record study found one exception where 10-foot wide travel lanes should be used with caution—on four-lane, undivided arterial roadways<sup>2</sup>. Designers should use lane widths at the lower end of the acceptable range whenever possible.



Narrow lane widths on Main St. help provide space for a safe and comfortable walking environment

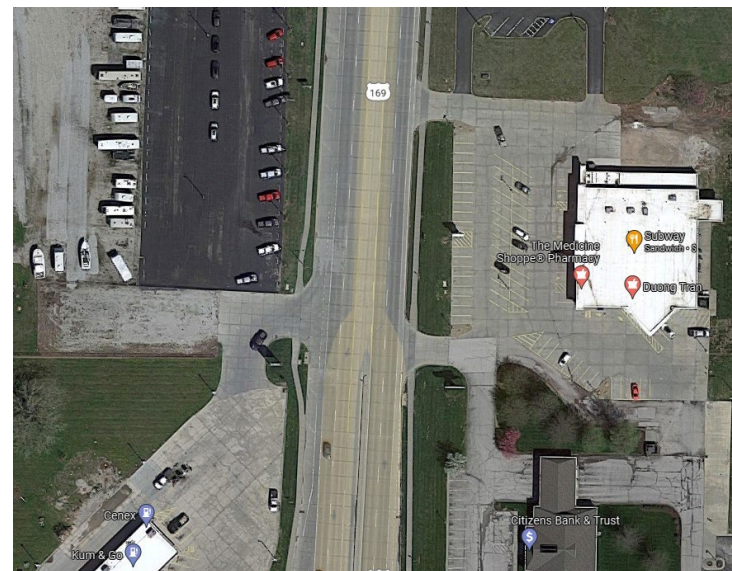
2 Potts, Ingrid B., Douglas W. Harwood, and Karen R. Richard. “Relationship of Lane Width to Safety on Urban and Suburban Arterials.” Transportation Research Record, Issue 2023 (2007): 63–82.

# Access Management

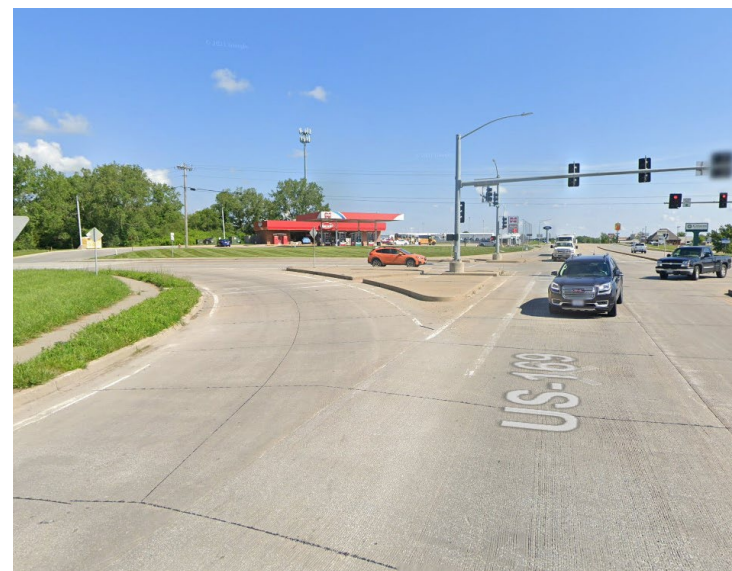
Access Management is the management of vehicular access in and out of land parcels adjacent to roadways and is critical for maintaining the balance between mobility and access. Correct access management supports the safe and efficient use of the transportation network. It is typically applied to arterial and collector streets.

Considerations of access management should occur at the corridor level when designing roadway facilities, as well as the planning process of accepting new developments along roadways. The Federal Highway Administration describes the essential techniques of access management as:

- **Access Spacing:** Increasing the distance between traffic signals improves the flow of traffic on major arterials, reduces congestion, and improves air quality for heavily traveled corridors.
- **Driveway Spacing:** Fewer driveways spaced further apart allows for more orderly merging of traffic and presents fewer challenges to drivers.
- **Safe Turning Lanes:** Dedicated left- and right-turn, indirect left-turns and U-turns, and roundabouts keep through-traffic flowing. Roundabouts represent an opportunity to reduce an intersection with many conflict points or a severe crash history (i.e. T-bone crashes) to one that operates with fewer conflict points and less severe crashes (i.e. sideswipes) if they occur.
- **Median Treatments:** Two-way left-turn lanes (TWLTL) and nontraversable, raised medians are examples of some of the most effective means to regulate access and reduce crashes.
- **Right-of-Way Management:** Right of way reservation for future widenings, good sight distance, access location, and other access-related issues.



Driveway consolidation results in fewer conflict points for motorists



Dedicated turn lanes are present at most major intersections along US-169

### RIGHT-IN / RIGHT-OUT TURNING RESTRICTIONS:

Right-in / right-out (RIRO) turning restriction is an access management technique that refers to a street or driveway where only right turns are permitted. RIRO configurations improve safety by reducing the number of conflict points between all roadway users. Research shows that approximately 72 percent of crashes at a driveway involve left-turning drivers. These crashes are primarily due to outbound vehicles turning left across through traffic and to inbound, left-turning vehicles conflicting with opposite direction through traffic. RIRO intersections may be established either by medians in the centerline of the roadway or by channelization medians (sometimes referred to as “pork chops”) in the entrance. Medians in the roadway are highly effective while medians in entrances are frequently disregarded by people in bicycles and cars.

### MEDIANS:


Similar to RIRO turning restrictions, roadway medians can also be used to prevent left turns into and/or out of driveways. They may also provide space for landscape features and pedestrian islands at crossing locations meeting certain criteria. Medians are most applicable within intersection influence areas and where there are high numbers of crashes associated with turning vehicles. Medians may be a good strategy to pursue along corridors targeted for pedestrian safety improvements.

### DEVELOPMENT PROJECTS:

Properties should typically be restricted to one vehicular entrance (driveway) on each street frontage, and no more than two on any street frontage should be permitted without clear documentation of the vital need. The effort to consolidate or eliminate driveways should be made wherever possible. Site planning standards for any development should encourage or require internal circulation between parcels that directs motor vehicles to locations with appropriate traffic control. Fewer driveways result in more space available for other elements that can enhance the streetscape such as street trees, landscaping and pedestrian amenities.

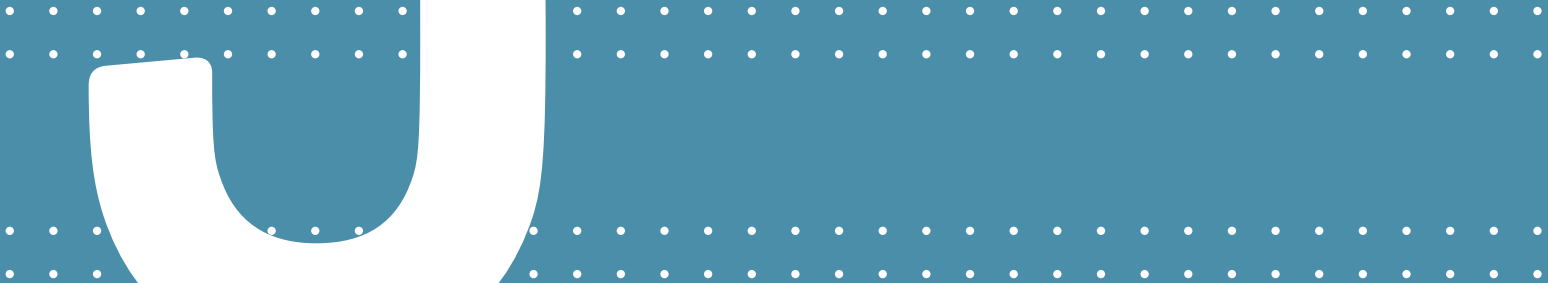


Medians can provide space for landscaping



# 03

## CHAPTER 03: PEDESTRIAN FACILITIES





# Sidewalks

Sidewalks provide pedestrians with an area to walk that is physically separated from motor vehicles. Typically built with concrete and separated from driving areas with a vertical 6-inch curb, sidewalks are the safe and accepted standard for providing walking facilities along a roadway.

A buffer between the sidewalk and roadway should be provided to enhance safety and comfort of people walking, particularly on roads with higher motor vehicle traffic speeds and volumes. Buffers vary by context and can include, but are not limited to, a parking lane, landscaped strip, and/or a bicycle facility. In a constrained right-of-way, the value of providing a buffer should be weighed in conjunction with requirements for other cross section elements.



Sidewalk with buffer leading to Eagle Heights Elementary on NW 188th St.



All newly constructed and rebuilt sidewalks must meet city standards



The city should prioritize filling in the gaps in the sidewalk network in areas with high pedestrian activity



# Streetscape

The purpose of streetscape is to lend a walkable, pedestrian-friendly atmosphere to a Downtown area and similar business districts. Extending from curb to building face or property line, streetscape includes sidewalks, street trees, street furniture, signs, green infrastructure, streetlights, and bicycle racks. Streetscape is typically divided into three usage zones: the frontage zone (next to buildings or property lines), the pedestrian zone (where people walk), and the amenity zone (for street trees, signs, landscaping, streetlights, bicycle racks). The following guidelines will ensure that the full streetscape realm functions well:

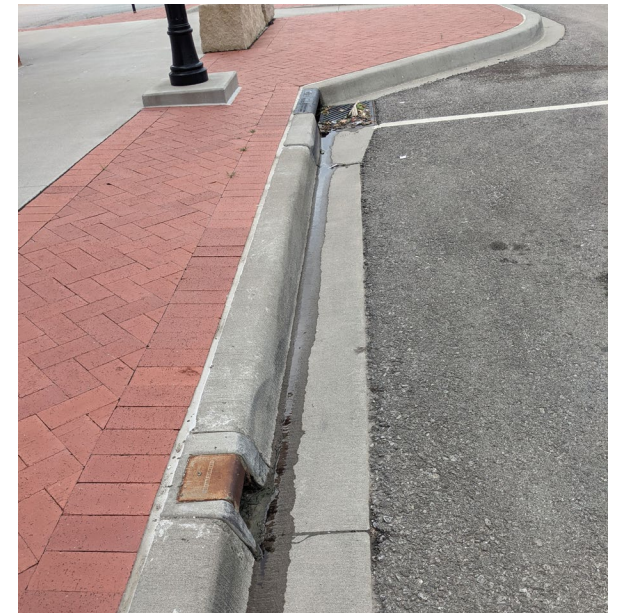
- The frontage zone may be 2' to 6' wide and appropriate uses are door swings, awnings, sidewalk cafe seating, retail signs, building projections, fences, and benches.
- The pedestrian zone is 5' to 8' and is clear of any fixed obstacles. It is meant for pedestrian travel only.
- The amenity zone may be 5' to 8', but may require greater widths for stormwater management plantings. Contrasting colors may help to distinguish the amenity zone from the pedestrian zone.



The pedestrian oriented streetscape in Downtown Smithville is perfect for community events



High quality pedestrian facilities provide for an easy walk to and from destinations around Downtown



Recent streetscape improvements Downtown have given the area a fresh look.

## Shade and Street Trees

Trees add to the aesthetic of a place while providing practical benefits creating sustainable habitats for wildlife and improving air quality. Street trees provide shade to pedestrians, creating a more pleasant and comfortable walking environment. Trees have been found to reduce stress and improve concentration; tree lined retail corridors tend to do better than their treeless counterparts. Trees also improve safety for vulnerable road users, providing a physical barrier from auto traffic and creating an environment where drivers pay closer attention to their surroundings.

- Clusters of like trees are encouraged in appropriate spaces; however groupings should be spaced to minimize effects of possible disease or infestations.
- Shade trees should be spaced approximately one tree for every 30-40 linear feet on center.
- Ornamental trees should be specified where overhead utilities are present. Smaller ornamental trees should be spaced approximately 20 feet apart feet on center.
- As street trees mature, they must be limbed up to a height of 7 feet from finished grade in order to provide clearance for pedestrians.



Older neighborhoods in Smithville feature beautiful mature trees.



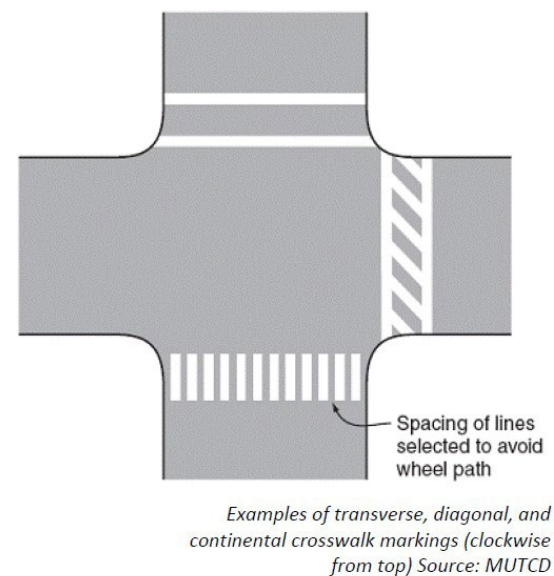
# Crosswalks

Marked crosswalk improvements should be prioritized in areas with high levels of pedestrian traffic. Marked crosswalks communicate to drivers that pedestrians may be present. Creating more awareness of their surroundings will make not only pedestrians safer, but decrease the risk of crashes as well. Marked crosswalks also provide indicators to pedestrians where it is safest to cross the street. They are necessary to create an accessible and comfortable environment for families, children, and seniors. The following guidelines will ensure Smithville creates consistent crosswalk design:

- Crosswalks should be at least 8 feet wide and should be designed with the neighborhood scale and context in mind.
- Ladder, continental, or bar pair crosswalk striping in retroreflective paint.
- Pedestrian crossing warning signs (sign W11-2 in the MUTCD) on each approach to the crosswalk; and School Crossing signs (sign S1-1) when appropriate.
- Parking restrictions on all crosswalk approaches to provide adequate sight distance (Minimum setback of 20 feet where speeds are 25 mph or less, and 30 feet between 26 mph and 35 mph).
- Appropriate level of lighting (10 to 15 feet in advance on both sides).



High visibility crosswalk treatments on Main St.





## Crossing Islands

Crossing islands are raised areas that serve as a pedestrian refuge and allow for more accessible crossings. Islands can be implemented at the centerline of a street, as roundabout splitter islands, or where right turn slip lanes are present. Crossing islands should be a minimum of 6 ft with a preferred width of 10 feet when feasible. Curb ramps are required at pedestrian entrances to the crossing island, and a 4-foot minimum separation between ramps is necessary to allow wheelchair users to navigate the island with ease. Level-cut throughs are recommended for narrow islands that cannot accommodate the 4-foot separation. These islands should be considered for undivided crossings of four or more lanes with speed limits of 35 mph or greater and/or average daily traffic of 9,000 or greater. They may also be a candidate treatment for uncontrolled pedestrian crossings on 3-lane or 2-lane roads, especially where the street is wide and/or where vehicle speed or volumes are moderate to high.



## Curb Ramps

When a pedestrian facility meets a roadway crossing, curb ramps must be provided. Curb ramps are also required at railroad crossings, mid-block crosswalks, median islands, and ADA accessible on-street parking spots. The maximum running slope allowable for ramps is 8.33 percent. Reconstruction projects are an alteration which require retrofitting the roadway with ADA accessible curb ramps.



## Rectangular Rapid Flashing Beacon

Rectangular rapid flash beacons consist of a pedestrian warning sign, diagonal downward arrow plaque, and user-activated light-emitting diodes (LEDs) using an irregular flash pattern. This signal treatment is recommended on roads where it has been proven drivers do not always yield to pedestrians.


- The Federal Highway Administration has issued Interim Approval 21 (IA-21) for the use of the RRFB. State and local agencies must request and receive permission to use this interim approval before they can use the RRFB.
- Particularly effective at multi-lane crossings with speed limits less than 40 mph.
- Consider the PHB instead of RRFBs for roadways with higher speeds (over 40 mph)




## Pedestrian Hybrid Beacons

Pedestrian hybrid beacons, also known as High-intensity Activated Crosswalk Beacon (HAWK), are a type of hybrid signal intended to give pedestrians the ability to stop traffic to cross the street. The beacons are located on mast arms over mid-block pedestrian crossings and the head consists of two red lenses above a single yellow lens.





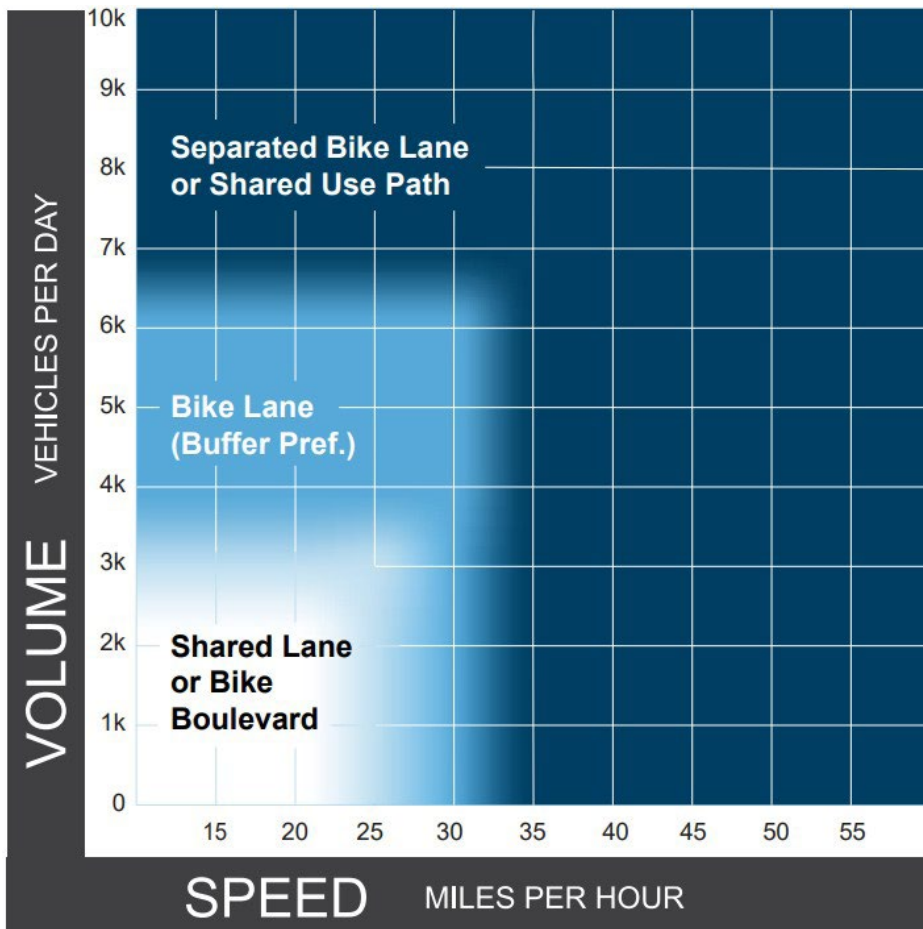
# **CHAPTER 04: BICYCLE FACILITIES**





# Selection Guidance

When possible new roadways should include bike facilities. In general, streets with higher speeds and traffic volumes should include bikeways with more separation, and streets with lower speeds and traffic volumes may be shared.

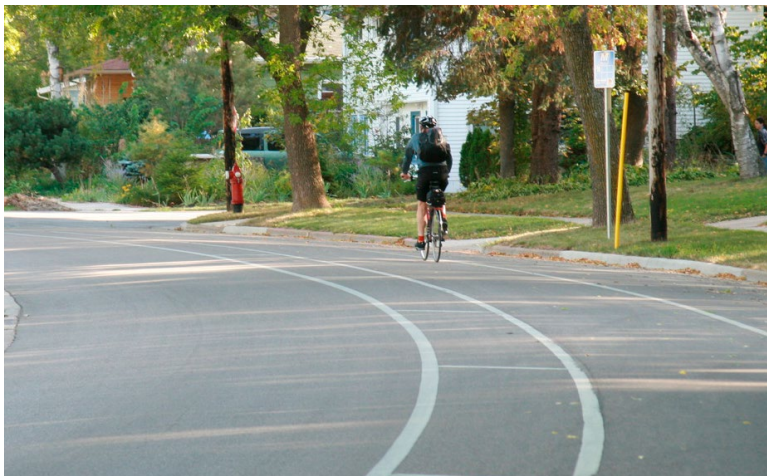


## Shared Use Path

- Shared use paths provide a shared space for bicycling, walking and other non-motorized uses. They offer a high-quality bicycling environment preferred by a wide range of people.
- Paths must be designed according to state and national standards. This includes establishing a design speed (typically 18 mph) and designing path geometry accordingly. Consult the AASHTO Guide for the Development of Bicycle Facilities for guidance on geometry, clearances, traffic control, railings, drainage, and pavement design.
- Shared use paths must also conform to Public Rights-of-way Accessibility Guidelines (PROWAG) if in a public right-of-way, or Advance Notice of Proposed Rulemaking (AN-PRM) on Accessibility Guideline for Shared Use Paths if in a private right-of-way.
- In Smithville, shared use paths of 10 feet should be used, however, widths as narrow as 8 feet are acceptable for short distances under physical constraint. Warning signs should be considered at these locations.
- In locations with heavy volumes or a high proportion of pedestrians, widths exceeding 10 feet are recommended.







## Buffered Bicycle Lanes

- Buffered bike lanes enhance traditional bike lanes with additional striped or buffered space between people biking and motor vehicles.
- Consider placing buffer next to travel lane where speeds are 30 mph or greater, or when traffic volume exceeds 3,000 vehicles per day.
- Where there is 7 feet of roadway width available for a bicycle lane, a buffered bike lane should be installed instead of a conventional bike lane. The preferred configuration is a 5-foot or wider bike lane and an 18-inch or wider buffer. Typical buffer widths are 3 to 5 feet.
- The minimum width of a buffered bike lane adjacent to parking or a curb is 4 feet exclusive of gutter (if present); a desirable width is 6 feet.
- The minimum buffer width is 18 inches. There is no maximum width. Diagonal cross hatching should be used for buffers less than 3 feet in width. Chevron cross-hatching should be used for buffers greater than 3 feet in width.



## Bicycle Lanes

- Standard bicycle lanes provide a dedicated space for bicycling alongside motor vehicle traffic. Bicycle lanes can be a low-cost option when adequate right-of-way is available, and often can be incorporated into street paving, sealcoating, and restriping projects.
- Bicycle lanes are generally striped with solid lines, although they are typically dashed where vehicles are allowed to cross the bicycle lane for right turns.
- Bicycle lanes are best suited on streets where there is enough width to accommodate a bicycle lane in both directions.
- The minimum width of a bike lane adjacent to a curb is 5 feet exclusive of a gutter (4 feet in highly constrained locations); a desirable width is 6 feet.
- The minimum width of a bike lane adjacent to parking is 5 feet; a desirable width is 6 feet.

# Bicycle Parking

For bicycle parking to be safe, accessible and appealing, bicycle racks should be located as close as possible to destinations and should support short-term and long-term parking needs.

**Short-term bicycle parking** is usually provided outdoors, near the entrance of the building. Locating bicycle parking in a highly visible location, such as proximate to a building entrance, makes it easy to find and use, and discourages vandalism and theft of parked bicycles.

**Long-term bicycle parking** is generally provided in a more secure bicycle parking area within the building. This type of parking is most appropriate for employees, long-term visitors, and residents who need their bicycles to be protected from vandalism, theft and the weather. The standard footprint for a single short- or long-term bicycle parking space is 24 inches wide by 72 inches deep.

Side-by-side bicycle racks should:

- Be offset by a minimum of 30 inches on center
- Have aisles a minimum width of 48 inches between racks
- Have a minimum depth of 72 inches between each row of parked bicycles

Bicycle racks should:

- Permit a bicycle frame and one wheel to be locked to the rack with a high security lock
- Permit a bicycle to be securely held with its frame supported in at least two places
- Be durable and securely anchored
- Have a locking surface thin enough to allow standard u-locks to be used, but thick enough so the rack cannot be cut with bolt cutters
- Perform as well as an inverted u-rack

