



# **TOWN OF MASON**

## **COMPLETE STREETS STUDY**

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AUGUST 2021

## ACKNOWLEDGMENTS

We extend our sincere appreciation and gratitude to the residents of Mason, Town staff, elected officials, and stakeholders who assisted in the public surveys, meetings, and the entire planning process. This critical input guided the development of this study and in turn will have a positive impact on the Town of Mason.

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# INTRODUCTION

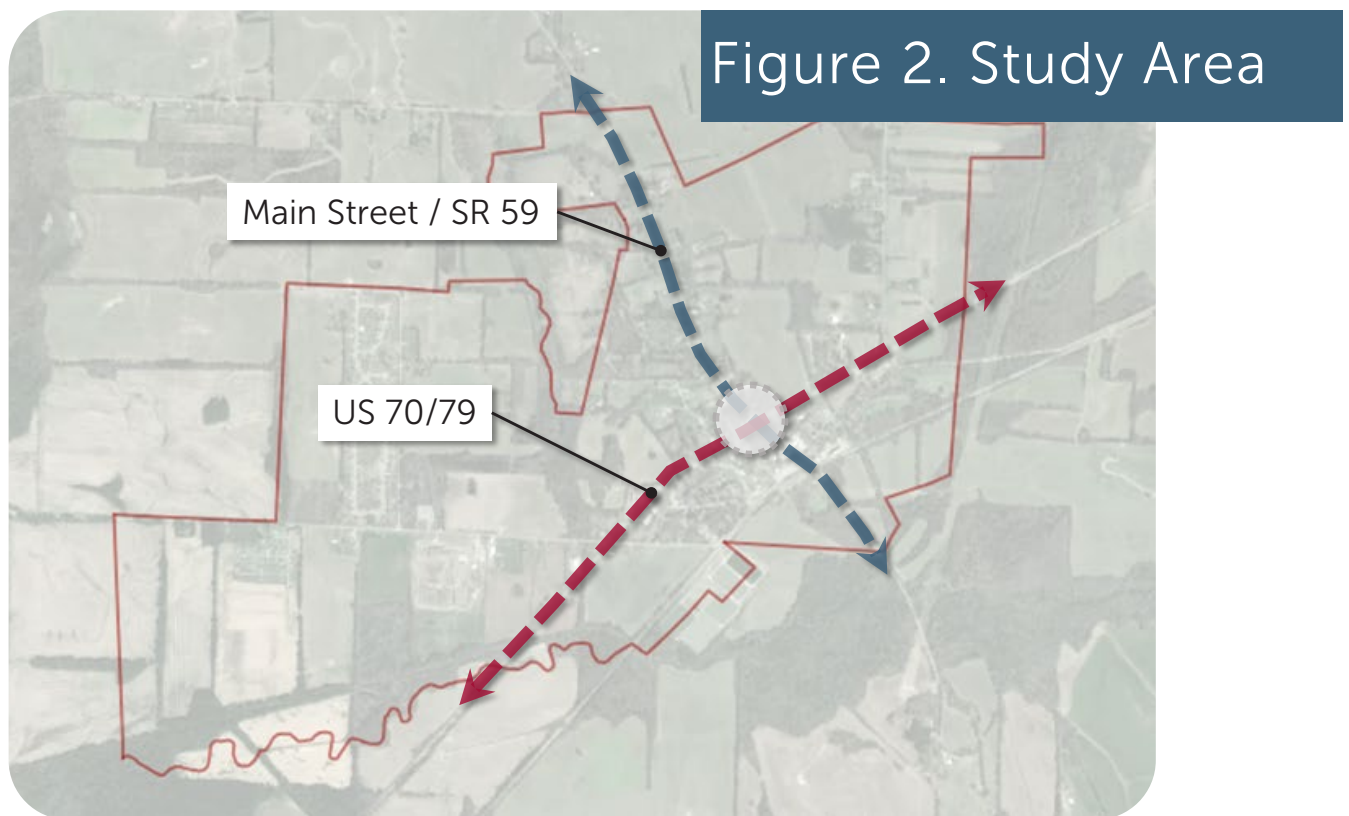
## BACKGROUND

The Town of Mason, Tennessee, located in Tipton County approximately 40 miles northeast of Memphis, is home to approximately 1,600 residents (see Figure 1). The Town of Mason applied for the Tennessee Department of Transportation (TDOT) Rural Community Transportation Planning Grant (CTPG) in order to identify multimodal connectivity options, address pedestrian, cyclist and motor vehicle safety, and improve traffic operations.

Figure 1. Regional Context



The study area includes US Highway 70/79, part of Tennessee’s historic “Memphis to Bristol Highway” that runs parallel to Interstate 40, and SR 59/Main Street, which connects Mason to Covington, the Tipton County Seat. The major vehicular corridors that create this study area are US 70/US 79 and SR 59/Main Street. The intersection of these corridors occurs in the heart of Mason. This intersection is a special area of emphasis for the study, and is shown in Figure 2.



## PLAN FUNDING

The Mason Complete Streets Plan was selected as a recipient of TDOT's Community Transportation Planning Grant (CTPG). The Office of Community Transportation (OCT) coordinates the state's transportation planning efforts to provide technical guidance for local jurisdictions, increasing the level of collaboration between TDOT and local governments. OCT gives TDOT a thorough understanding of local communities and the various transportation planning documents and policies in place. The OCT's mission is to coordinate the state's transportation planning, local land use decisions, and community visions to guide the development of a safe and efficient statewide transportation system. This study was funded by Mason's CTPG. As part of the agreement to receive funding through the grant, the Town of Mason will adopt a resolution allowing the Town to begin implementing recommendations from this study.



## RURAL COMMUNITY TRANSPORTATION PLANNING GRANT OBJECTIVES:

- Develop transportation and land use plans containing deliverables that can be used as guiding tools for future transportation projects.
- Develop real-world transportation and land use solutions that are cost effective and feasible.
- Improve safety through planning documents.
- Create policies and procedures that link all transportation modes and provide alternative mobility options.
- Utilize Context-Sensitive Design and Solutions (CSD/CSS) that preserve and enhance community resources.

## COMPLETE STREETS PLAN OVERVIEW

Complete Streets give consideration to all users, regardless of mode, age or ability. This does not mean that all streets must accommodate all users, but rather a Complete Streets Plan identifies opportunities and locations for developing a multi-modal network to accommodate user choices. Providing dedicated spaces for alternative modes can broaden the use of the network, contribute to a sense of place and encourage investment. Some additional benefits of Complete Streets include:

- Promotion of healthy and active living
- Safety improvements
- Mitigation of traffic issues
- Systems planning

## PROJECT PROCESS

The process of creating a Complete Streets Plan is twofold: this process includes a dedicated project development phase and a project implementation phase.

1.

### Project Development

- Leadership Commitment
- Establish Vision and Consensus
- Planning and Design

2.

### Project Implementation

- Secure funding for Implementation

*Source: Community Transportation Planning Grant Fact Sheet: TDOT Long Range Planning Division, 2021*

## EXISTING CONTEXT

### AREA OF STUDY

The study considers the context of the entire Town of Mason. Analysis and recommendations address the following corridors:



US 70 / 79 between Finde Naifeh Drive (western limit) and Charleston Drive (eastern limit)



SR 59 / Main Street between the Railroad Tracks (southern limit) and Transou Lane (northern limit)

These two corridors intersect at the intersection of US 70/79 and SR 59/Main Street, referred to as “the intersection.”





## EXISTING CONDITIONS

An analysis of existing conditions includes a variety of sources, such as TDOT's Enhanced Tennessee Roadway Information Management System (E-TRIMS) and field observations and measurements obtained through a series of site visits. The Existing Conditions analysis is divided into the following categories:

- Mobility
- Safety
- Roadway geometry
- Origins and destinations
- Character

### MOBILITY - MOTOR VEHICLES

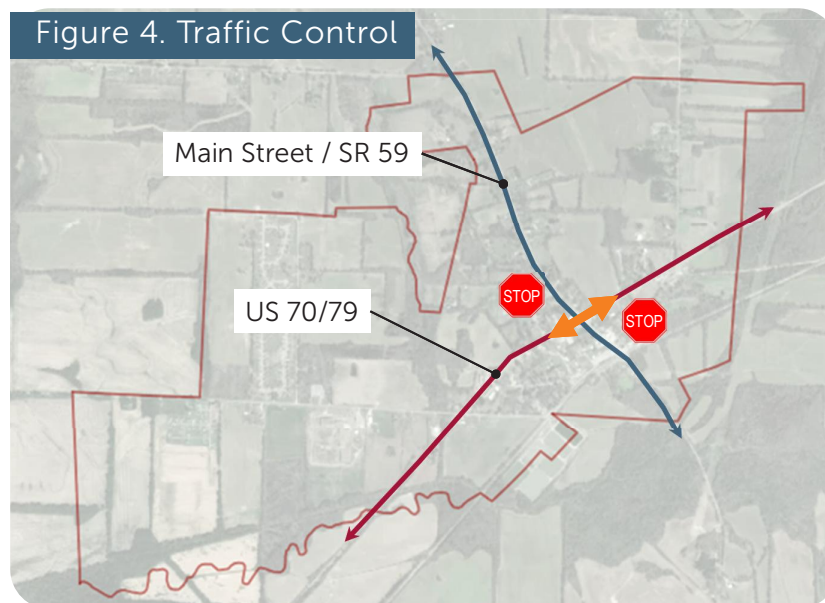
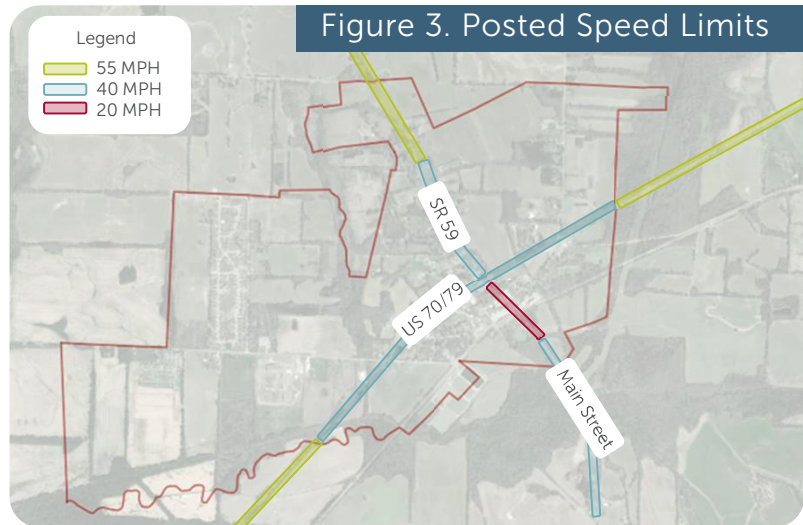
Mobility considers the characteristics of travel through the study area for all modes. The first component of mobility is motor vehicles, which includes annual average daily traffic (AADT) and posted speed limits, as well as field observations of motor vehicle use.

Table 1 provides AADT for the study corridors for years 2019 and 2020 available from TDOT's Transportation Data Management System. The highest traffic volumes occur on US 70/79 west of the intersection (3,880 AADT) and on SR 59 north of the intersection (3,400 AADT), while the lowest volumes occur on US 70/79 east of the intersection (1,420 AADT) and on Main Street (1,020). This data is consistent with field observation, where a greater number of vehicles were observed using US 70 / 79 eastbound to eventually head north on SR 59. A comparison of 2019 and 2020 AADT reveals that traffic volumes on US 70/79 east of the intersection and on Main Street are 10 to 20 percent lower in 2020. This is most likely attributed to the COVID-19 global pandemic and that traffic volumes in future years will likely return to pre-2020 levels.

Table 1. Annual Average Daily Traffic Volumes

Location		Annual Average Daily Traffic (AADT) - 2019	Annual Average Daily Traffic (AADT) - 2020
US 70/79	East of SR 59	1,600	1,420
	West of SR 59	4,380	3,880
SR 59		3,400	3,430
Main Street		980	1,020

Figure 3 identifies posted speed limits on the study corridors. The posted speed limit on US 70/79 transitions from 55 to 40 miles per hour (mph) at the city limits on both the east and west ends. The posted speed limit on US 70/79 remains at 40 mph for its entire length in the Town. The posted speed limit on SR 59 is 55 mph, where the road enters the Town, transitioning to 30 mph at Mosley Avenue approximately one half mile north of its intersection with US 70/79. The posted speed on Main Street is 20 mph through downtown Mason to approximately 1,500 feet south of US 70/79, where it transitions to 40 mph to the Town limits.



The intersection is currently stop-controlled for approach traffic on SR 59/Main Street (see Figure 4). US 70/79 operates in a free-flow condition for its entire length in the Town, however there are frequent turns from US 70/79 north onto SR 59, which requires vehicles to slow or stop when traveling eastbound or westbound.

## MOBILITY - TRUCKS

The second component of mobility is trucks. This analysis includes analyzing truck volumes and observations from a site visit on how trucks operate along the corridors.

Truck traffic is significant on US 70/79 and SR 59 as shown in Table 2, which identifies heavy vehicles as a percentage of total AADT. Trucks are omnipresent along both US 70/79 and SR 59, particularly at their intersection. The geometry of the intersection requires tractor trailers to turn slowly and encroach on opposing approach lanes and on the roadside, which results in operational and safety issues for motor vehicles, pedestrians, and cyclists.

Table 2. Heavy Vehicle Percentage

Location	Heavy Vehicle Percentage
US 70/79	11%
SR 59	14%
Main Street	2%



## MOBILITY - PEDESTRIANS

The third component of mobility is pedestrians. The pedestrian environment is evaluated qualitatively through the presence and quality of sidewalks, evidence of pedestrian demand where sidewalks are not present (“billy goat trails”) and the prevailing roadside environment. A walkshed analysis was also performed to analyze the proximity of Town residents to the Intersection and the feasibility of walking as a mode of transportation.

### Existing Sidewalks

Sidewalks are present on the east side of SR 59 approximately 500 feet north of US 70/79 and on both sides of Main Street from US 70/79 south to Town Hall. These sidewalks are in general disrepair. Additionally, the sidewalk on SR 59 includes a culvert which is almost completely filled and does not function adequately. The sidewalks are three feet in width, which is considered to be substandard and not compliant with the Americans with Disabilities Act (ADA).

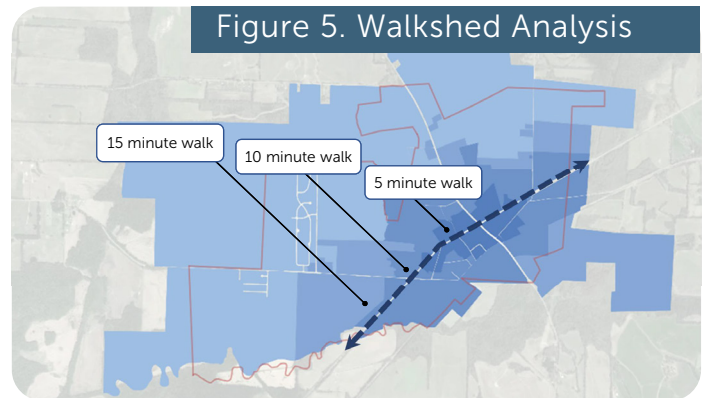


### Sidewalk Gaps

“Billy Goat Trails” are signs of pedestrian activity where there are no existing facilities. Billy goat trails can be observed intermittently along US 70/79 from SR 59 to Finde Naifeh Drive. Other notable gaps in the sidewalk network include US 70/79 just west of SR 59 and on Main Street south of town hall.



The walkshed analysis analyzes population in the Town of Mason and the potential for walking along US 70 / 79, where many of the businesses are located in Mason. From the analysis, it is estimated that approximately 4 out of every 10 residents are within a 15-minute walk of downtown.

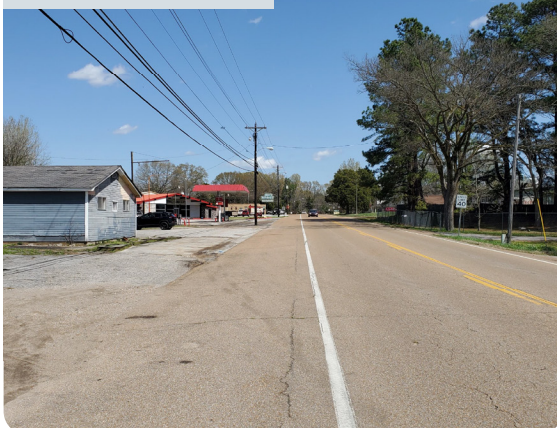


## MOBILITY - BICYCLES

The final component of mobility is bicycles. For this study, bicycle facilities and bicycle parking were inventoried in addition to a site visit to observe the presence of cyclists.

There are no formally designated bicycle facilities on US 70/79 or SR 59/Main Street. Many segments of US 70/79 include paved shoulders, as does a small segment of Main Street south of US 70/79. By law, bicycles may operate in the street with motor vehicles, although observed motor vehicle speeds and heavy truck volumes do not present a comfortable environment for casual cyclists.

Shoulder along US 70 / 79, facing east

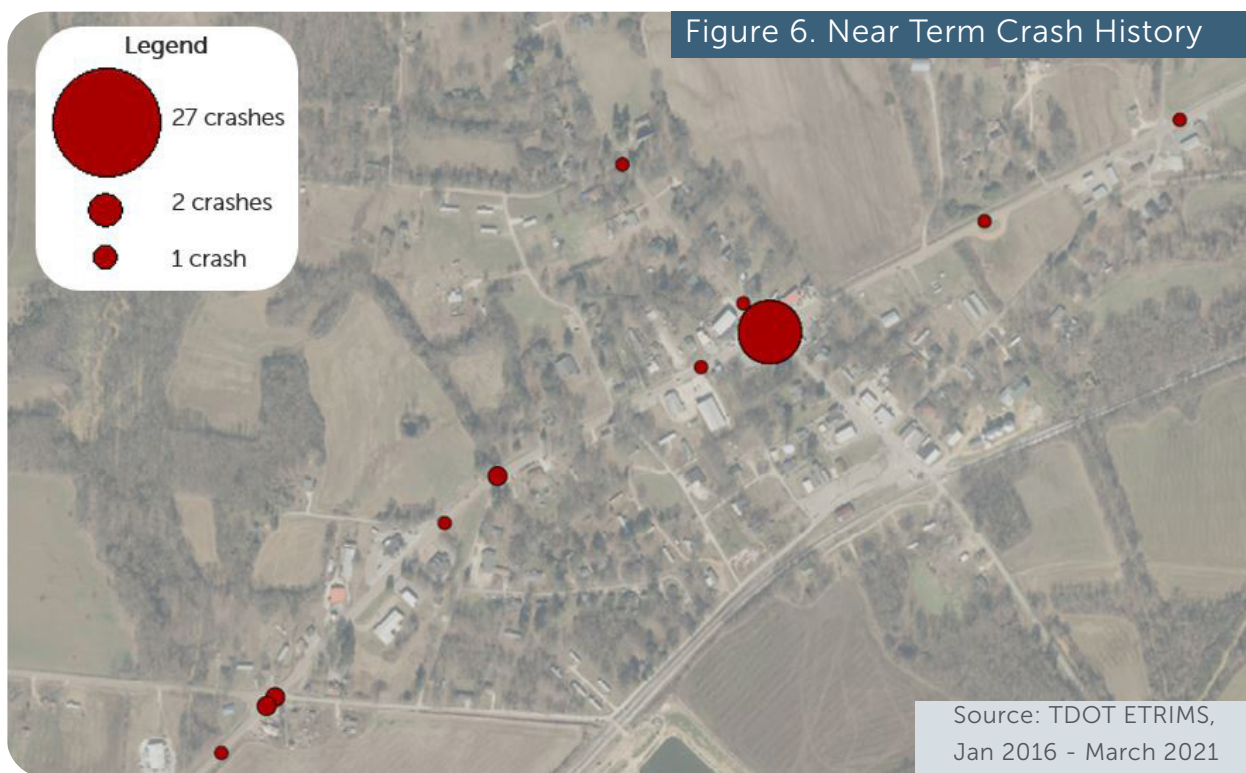


Shoulder along Main Street, facing north



## SAFETY

Safety addresses available crash information along the study corridors. Utilizing TDOT's ETRIMS database, the crash history from 2016 to 2021 and 2001 to 2021 was analyzed to discover crash hotspots and short and long term trends, as well as to determine the severity of crashes.



Between 2016 and March 2021, 47 crashes have occurred within the study area limits. As shown in Figure 6, there is a cluster of crashes at the intersection of US 70/79 and SR 59/Main Street. Using the Tennessee Integrated Traffic Analysis Network (TITAN) to analyze crash attribute data, it is evident that many crashes are caused by expectancy issues. Drivers assume the Intersection is a four-way stop. Another common concern is truck turning movements create the need for stopped motorists to reverse into other queuing vehicles at SR 59 and Main Street in order to make room for the truck turning radius. Anecdotally, it has been reported that there are many "near-misses" along these corridors.

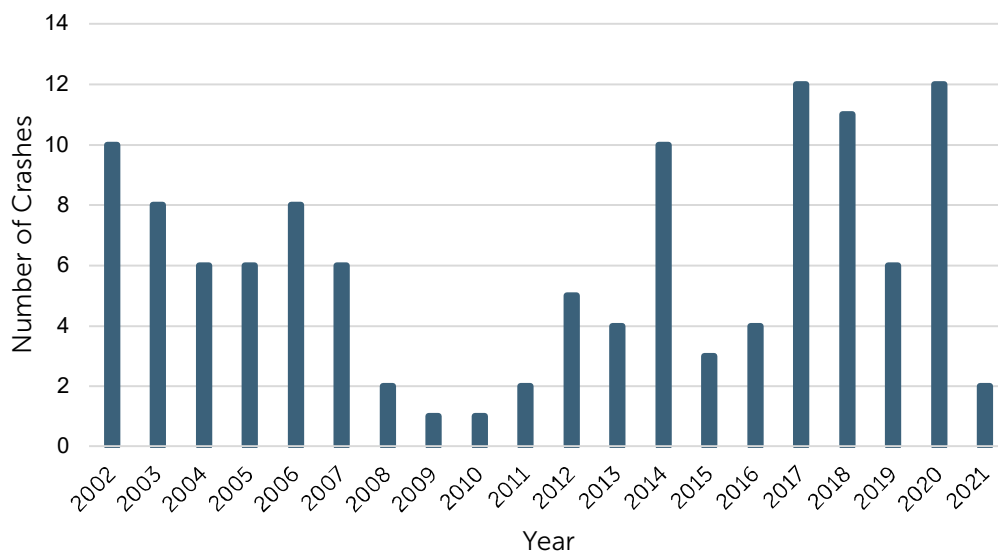
In order to determine safety trends, long term crash trends since 2001 were also analyzed. Based on the data, it does not appear that crashes have increased in severity over time. Since 2001, there have been no reported fatalities on these corridors within the study area. As shown in Table 3, one-third of all recent (since 2016) have resulted in injury.

Table 3. Crash History

	Near Term (2016 – 2021)	Long Term (2001 – 2021)
Total Crashes	49	119
Injury Crashes	15	34
Total Injuries	21	42
Incapacitating Injuries	0	2
Fatalities	0	0

As shown in Figure 7, the number of crashes on US 70 / 79 and SR 59 / Main Street have generally increased over time. Between 40 and 50 percent of all crashes, injury-related crashes and total injuries between 2001 and 2021 have occurred in the last five years.

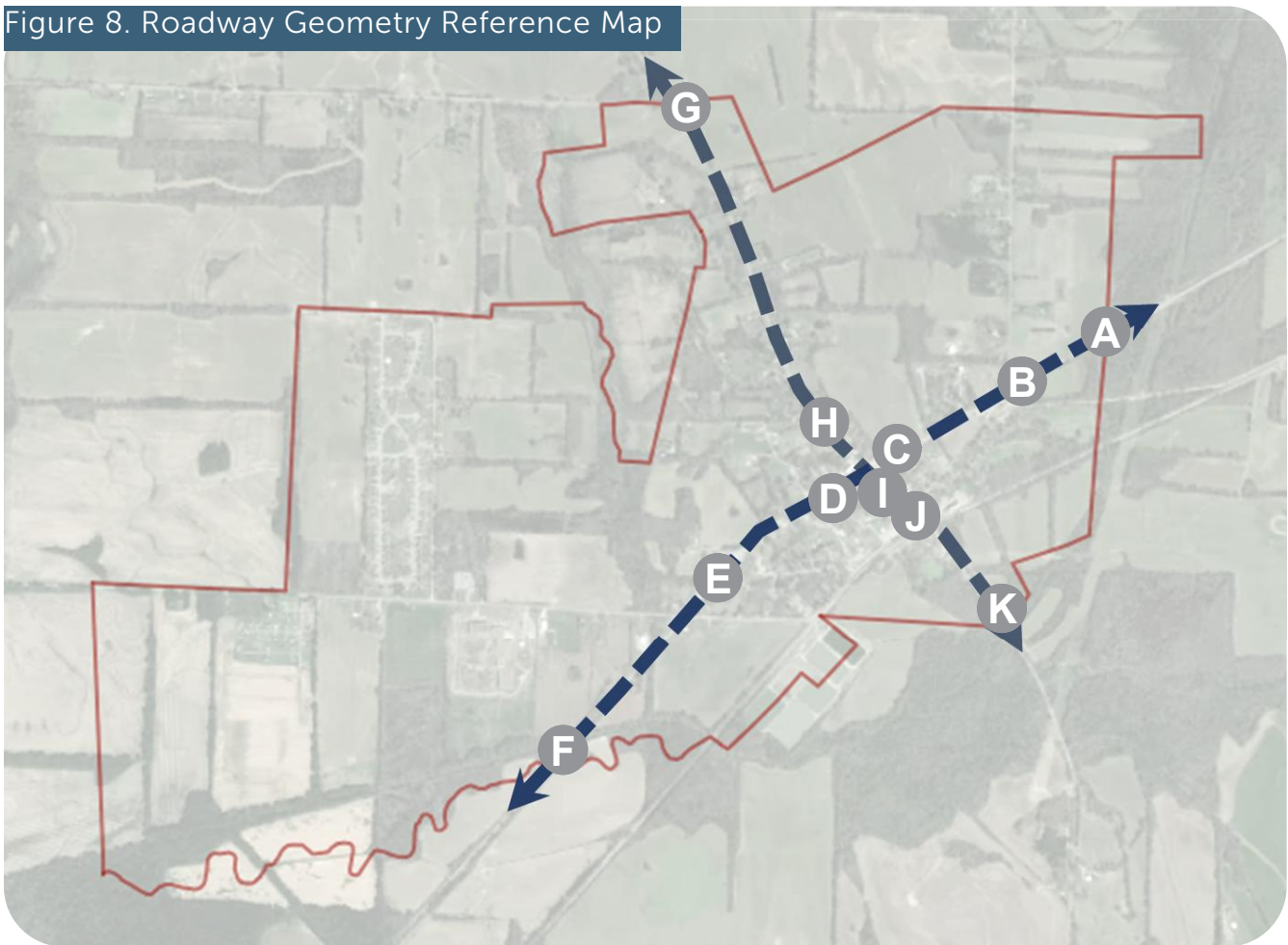
Figure 7. Crash History



## ROADWAY GEOMETRY

The existing roadway geometry was considered as part of the existing conditions analysis. Based on aerial imagery, a site visit, and TDOT's ETRIMS database, the existing roadway geometry was catalogued and analyzed.

Figure 8. Roadway Geometry Reference Map





US 70 / 79 EAST OF TOWN AT TOWN LIMITS

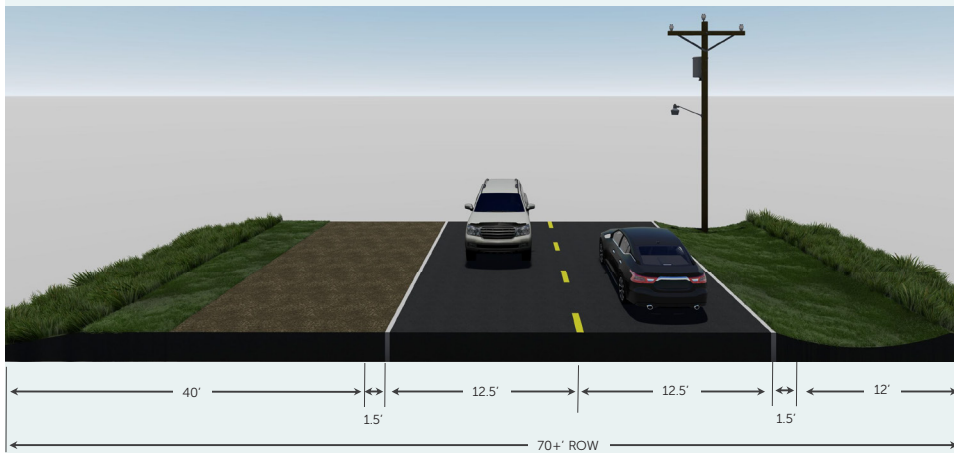
A  
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Entering Mason from the east, US 70/79 consists of a single 12.5 foot lane with 1.5 foot shoulder in each direction. The roadside environment consists of a sloped grassy clear zone that ranges from 12 to 40 feet. The total right-of-way is 70 feet.

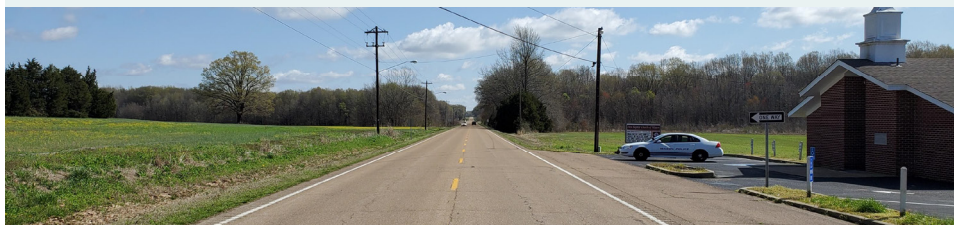


US 70 / 79 EAST OF TOWN AT CHARLESTON ROAD

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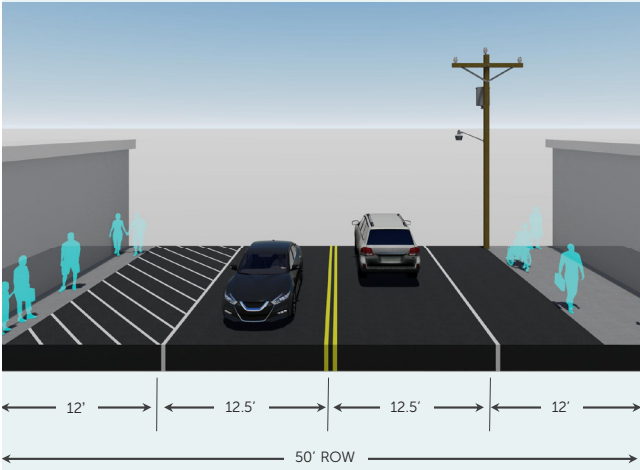


At Charleston Road, just outside of downtown Mason, the pavement geometry stays the same (12.5 foot travel lanes and 1.5 foot shoulder). The total ROW width also remains at 70 feet, while the roadside environment transitions to more level grass and dirt, with a mix of occupied and abandoned buildings (service stations and retail) and a church.



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US 70 / 79 DOWNTOWN EAST OF SR 59 / MAIN STREET

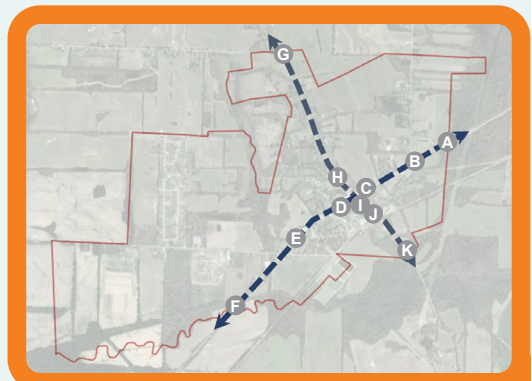
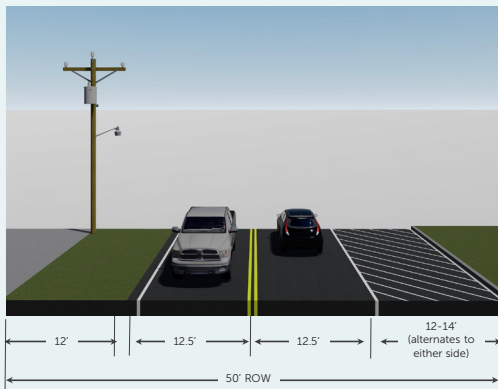


In downtown Mason, just east of SR 59/Main Street, the lane widths remain at 12.5 feet, but with paved 12 foot shoulders on both sides. The roadside environment includes a car wash and vacant and abandoned lots. The total ROW is reduced to 50 feet.

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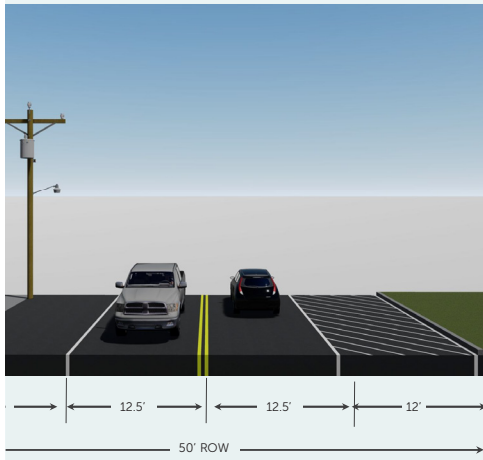
US 70 / 79 DOWNTOWN WEST OF MAIN STREET

Just west of SR 59/ Main Street, the lane widths on US 70/79 remain at 12.5 feet. A paved shoulder, ranging in width from 12 to 14 feet, alternates on either side of the road. A 12 foot grass shoulder is located on the opposite side. The roadside environment includes retail, parking and services, transitioning to residential farther west. The total ROW remains at 50 feet.



US 70 / 79 IN FRONT OF BANK AND POST OFFICE

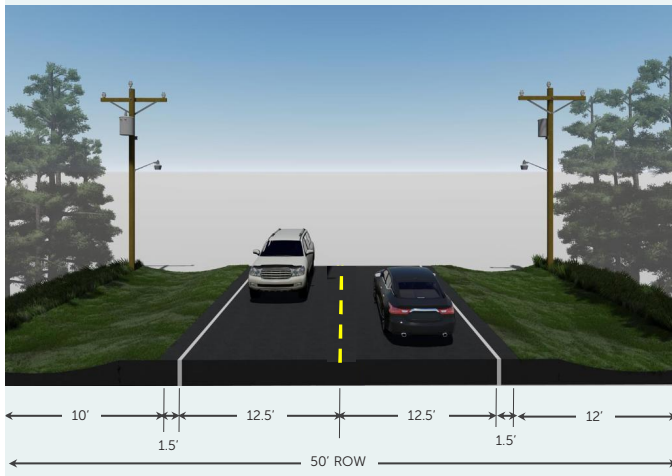
E  
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Farther west on US 70/79, the lane widths remain at 12.5 feet with an approximately 12 foot paved shoulder on both sides. The roadside environment includes restaurants, service and residential. The total ROW remains at 50 feet.

US 70 / 79 EAST OF TOWN AT TOWN LIMITS

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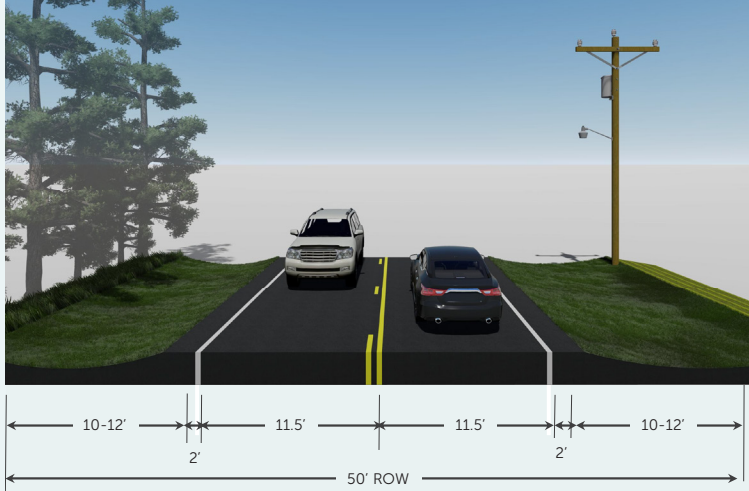
West of Finde Naifeh Drive to the western Town limits, lane widths US 70/79 remain at 12.5 feet, but transitions to 1.5 paved shoulders. There is a sloped grassy clear zone of 10 to 12 feet on both sides of the road. The roadside environment is a mixed of wooded land and agriculture. The total ROW is 50 feet.

**G**  
MAP ID

SR 59 AT NORTH TOWN LIMITS



At the northern Town limits, SR 59/Main Street includes 11.5 travel lanes with a two foot shoulder in both directions. A grassy clear zone between 10 and 12 feet wide exists on both sides of the road. The roadside environment is rural and agriculture. The total ROW is 50 feet.



US 70 / 79 IN FRONT OF BANK AND POST OFFICE



At Mosley Drive, the roadside environment begins to transition to residential. Approximately 500 feet north of US 70/79, the lane widths are 11 feet with a two foot shoulder in both directions. On the east side of the road, there is a three foot sidewalk that is separated from the travel lane by a three foot culvert. There is a grassy clear zone ranging in width from seven to 10 feet on the west side of the road. The total ROW is 50 feet.



MAIN STREET DOWNTOWN SOUTH OF US 70 / 79

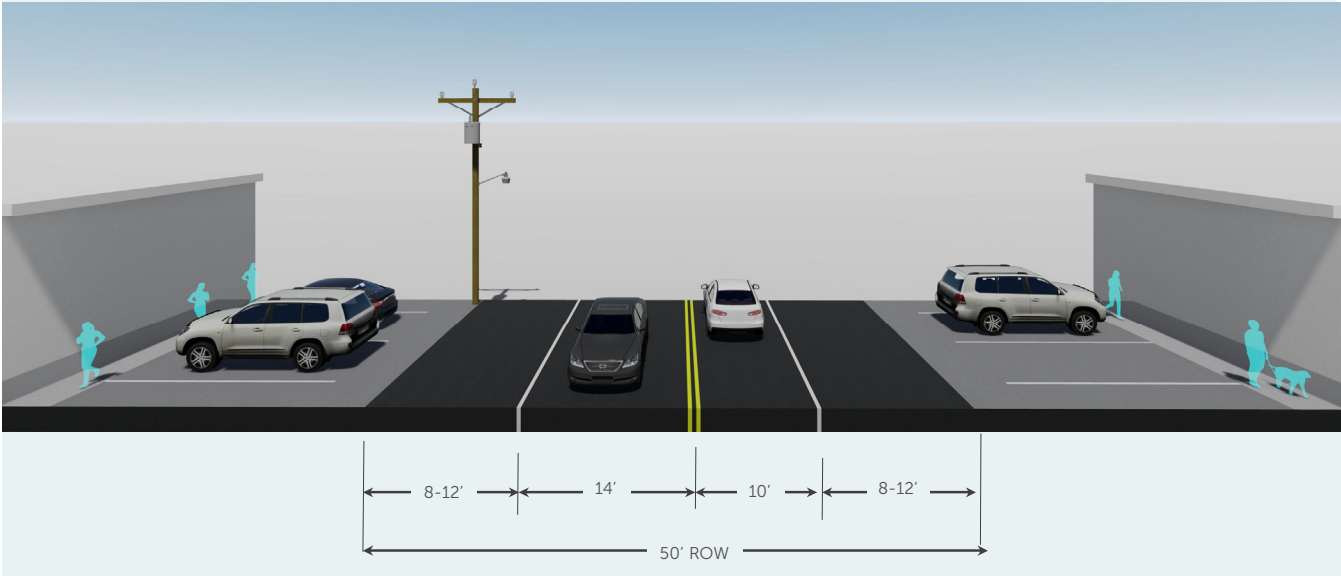


South of the intersection of US 70/79, Main Street transitions to 12 foot travel lanes with no shoulder. There are three foot wide sidewalks on both sides of the road, separated from the travel lanes by a six foot wide grass strip. The roadside environment is residential. The total ROW width is 50 feet.

**J**  
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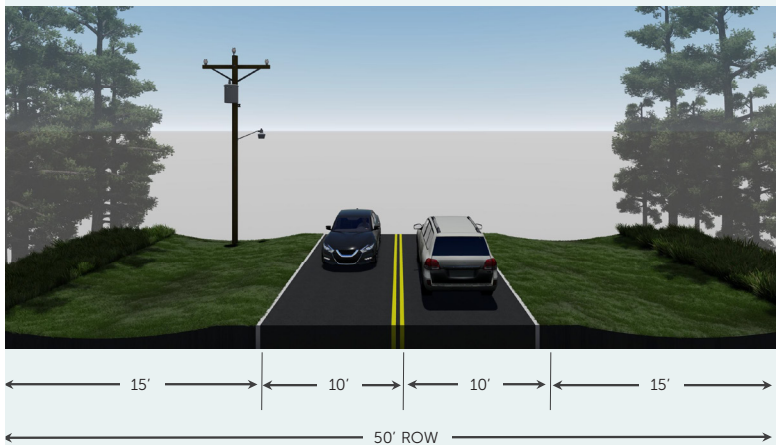
**MAIN STREET SOUTH OF TOWN HALL**

Farther south on Main Street south of Town Hall, the pavement expands to encompass the entire 50 feet of ROW. There is an imbalanced lane width configuration of 14 feet in the southbound direction and 10 feet in the northbound direction. There are eight to 12 foot wide paved shoulder on both sides. The roadside environment is a mix of occupied and abandoned retail and service buildings.



MAIN STREET SOUTH NEAR TOWN LIMITS

From south of the railroad crossing outside of downtown to the Town limits, Main Street transitions to 10 foot wide travel lanes with no shoulder. There is a sloped 15 foot grassy clear zone on both sides of the road. The roadside environment is rural. The total ROW width is 50 feet.



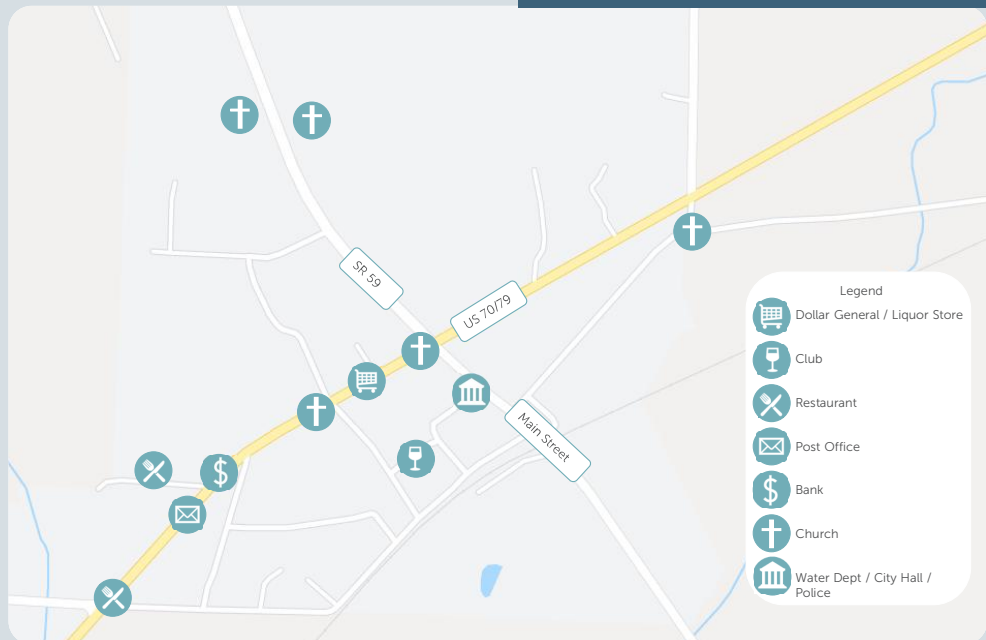
## DESTINATIONS

A good understanding of destinations is important to developing a plan for complete streets that connects residents and visitors. An analysis of destinations includes those both within Mason (local) as well as regional.

### Local Destinations

Figure 8. Local Destinations

As shown in the map in Figure 8, most of the destinations within the Town of Mason are concentrated east of the Intersection. Popular restaurants including Bozo's and Gus' are located here, as well as services including post office and bank. Other important destinations include churches, located throughout the study



area, city services associated with the Town Hall, and retail just west of the intersection of US 70/79 and SR 59/Main Street.





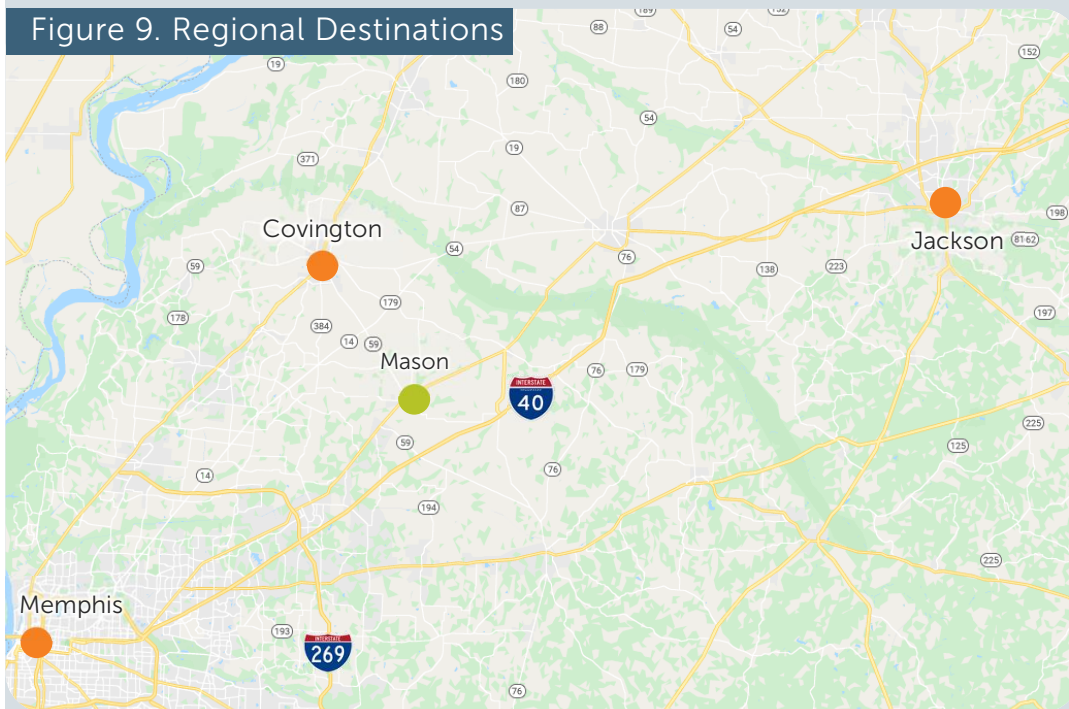
## Regional Destinations

Regional destinations are identified in the map in Figure 9. Regional destinations are important to understanding motor vehicle flows and how they relate to Mason. Mason is located approximately five miles from Interstate 40. Covington is located 13 miles north of Mason, on SR 59. Memphis is approximately 42 miles west of Mason via Interstate 40, and Jackson is approximately 50 miles east via Interstate 40. This data is presented in Table 4. Trucks frequently pass through Mason on their way to Covington, utilizing SR 59. Vehicles and trucks bypass traffic due to accidents or delays on Interstate 40 by using US 70 / 79 in Mason.

Table 4. Distances from Mason

Destination	Distance from Mason
Interstate 40	5 miles
Covington, TN	13 miles
Memphis, TN	42 miles
Jackson, TN	50 miles

Figure 9. Regional Destinations



## CHARACTER

Understanding the character of the roadside environment is important to establishing the contexts in which US 70/79 and SR 59/Main Street operate. This context is essential to recommending the appropriate types of complete streets improvements.

The study area can be divided into three context zones: Traditional Downtown, Transitional, and Rural. Improvements recommended for the Downtown Zone and the Rural Zone are not alike, as they serve a different purpose within the Town of Mason.

Figure 10. Context Zones



# Rural

The Rural Context Zones are located at the Town limits at all four approaches (north, south, east and west). The Rural Context Zone is characterized by few roadside objects and higher motor vehicle speeds. No pedestrians or cyclists were observed during a field visit.

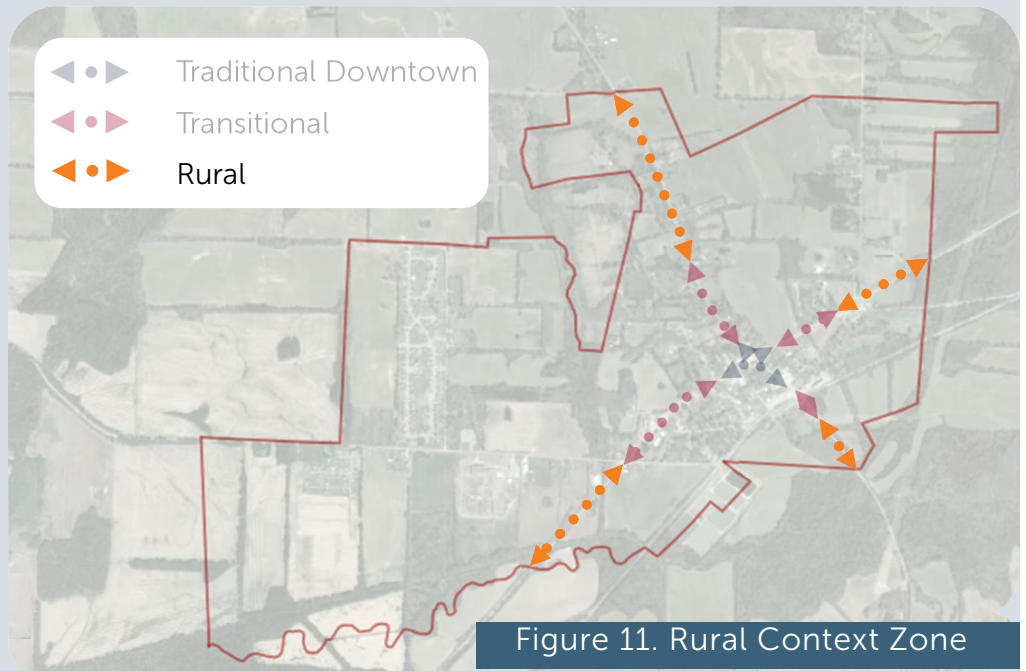


Figure 11. Rural Context Zone



# Transitional

The Transitional Context Zones are characterized by a mix of commercial buildings and homes. Buildings are set back approximately 30 to 50 feet from the roadway and are often separated from the road by parking. There is some evidence

of pedestrian activity in the Transitional Context Zone.

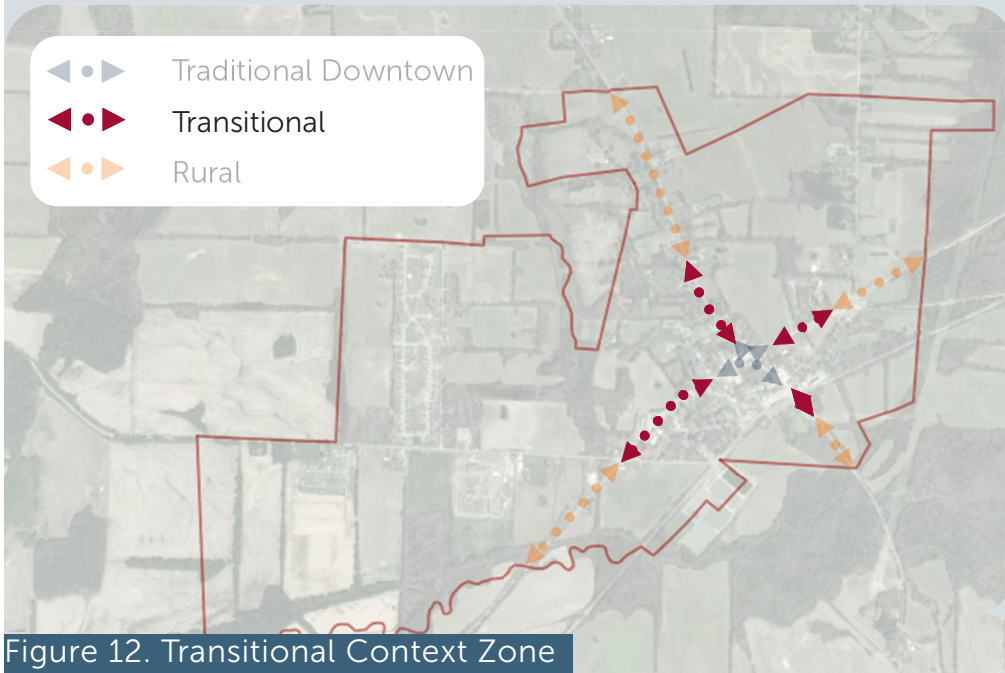
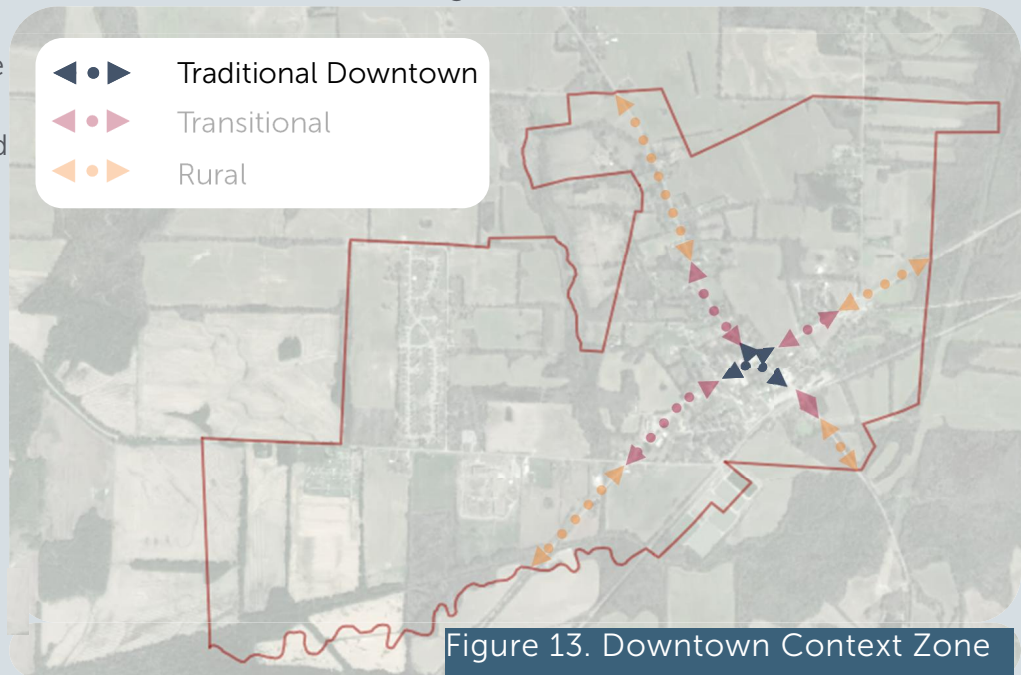


Figure 12. Transitional Context Zone



## Traditional Downtown

The Traditional Downtown Context Zone is located approximately 500 feet from the Intersection of US 70/79 and SR 59/Main Street in each direction. Here, there is more activity, curb cuts, and some sidewalks. Buildings are oriented closer to the street and to one another. Pedestrian activity was observed during a field visit. Observed motor vehicle speeds appear to be lower than the Rural and Transitional Zones, but exceed 30 miles per hour.



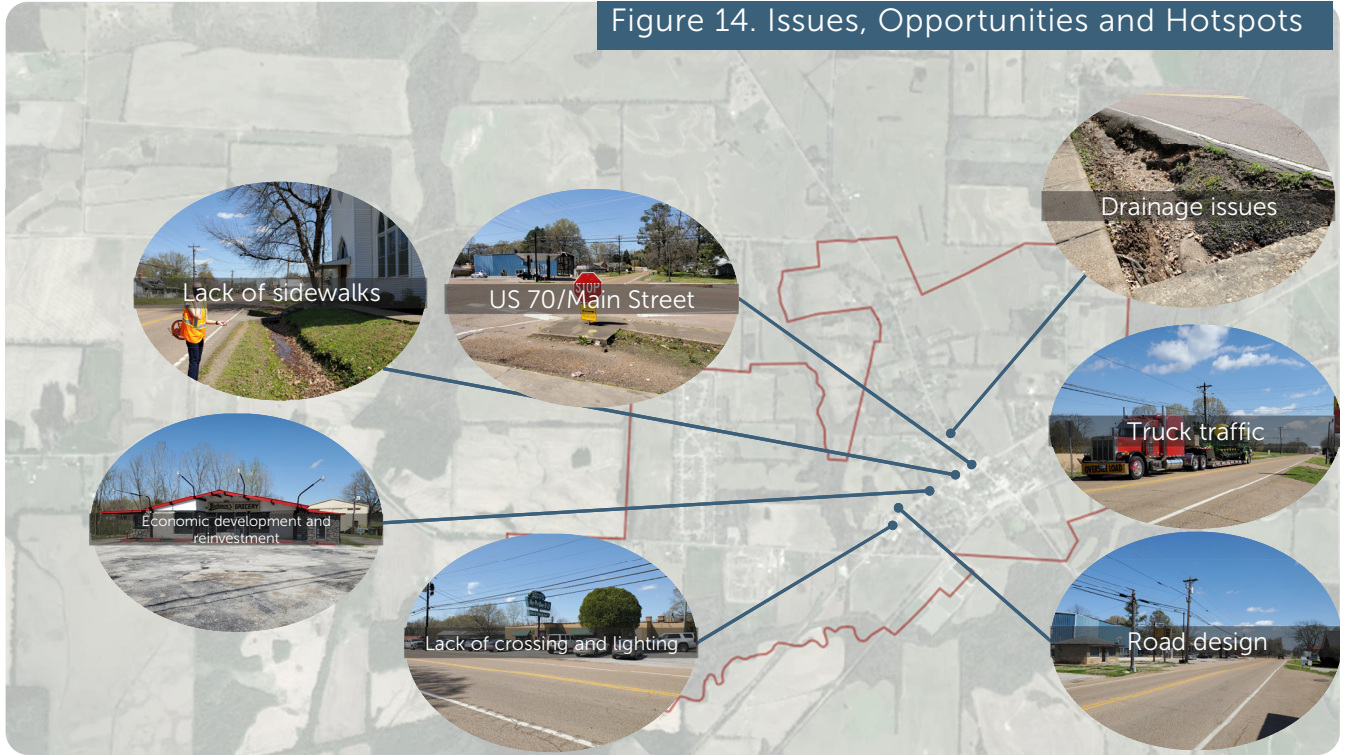
## ISSUES, OPPORTUNITIES AND HOTSPOTS

The results of the existing context analysis reveal a number of issues, opportunities and hotspots to be addressed in the plan recommendations. These include:

- **The Intersection of US 70/79 and SR 59/Main Street:** This is the most prominent and heavily traveled location in Mason and suffers from a number of safety and operational issues.
- **Lack of pedestrian facilities:** There are few dedicated facilities for pedestrian in Mason, despite numerous origins and destinations within walking distance of each other and evidence of pedestrian demand.
- **Drainage issues:** Mason's roadside drainage system is aging and in disrepair, especially on SR 59/Main Street.
- **Truck traffic:** The Town is at a major crossroads for truck traffic, which is an economic development opportunity, but also presents issues for motor vehicle operations and bicycle and pedestrian safety and comfort, especially at the intersection of US 70/79 and SR 59/Main Street.
- **Road design:** Many of the existing roadway design elements are inconsistent with the surrounding context and not conducive to multimodal mobility. This is especially true on US 70/79, which maintains 12.5 foot travel lanes through the entire length of the Town.
- **Economic development and reinvestment:** There are numerous vacant and abandoned properties in Mason that could benefit from a more context-sensitive, multimodal roadway design.
- **Lack of crossing opportunities:** There are currently no marked or designated crossing locations at either US 70/79 or SR 59/Main Street. Roadway crossings occur at random locations throughout both corridors.

These issues, opportunities and hotspots are shown in Figure 14.

Figure 14. Issues, Opportunities and Hotspots

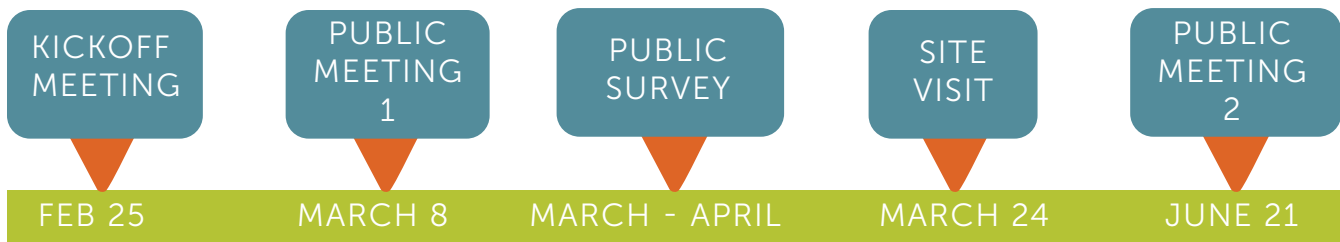


## COMMUNITY ENGAGEMENT

### OUTREACH OVERVIEW

Community involvement and input is crucial to the success of any planning process. It guides the project team in understanding the desires of citizens and Town leaders. It provides citizens the opportunity to have a voice in shaping the future of the community, giving the project team the ability to discover concerns that aren't readily apparent from field visits or crash data. The outreach process broadened the project team's understanding of the Town, which led to the identification and expansion of recommendations, identified in subsequent sections in this report.

The timeline of outreach is represented in the graphic below:



### KICKOFF MEETING

A kickoff meeting was held on February 25, 2021, to engage Town members, TDOT, and the local Rural Planning Organization (RPO). In this meeting, major objectives and outcomes were determined, as well as the general schedule of the planning process, including stakeholder engagement and plan development.

### PUBLIC MEETINGS

Two public meetings were held during the course of the project. The first meeting was held virtually on March 8, 2021 due to the COVID-19 pandemic, and took place at the regular Planning Commission meeting. This meeting introduced stakeholders to the concept of complete streets, describe the goal of the plan and provided Commissioners



and members of the public the opportunity to answer questions. Potential strategies were discussed, and questions about right-of-way acquisition and the effects on businesses with driveways were addressed. The second public meeting was held in person in Mason on June 21, 2021 at the mayor and board of alderman meeting. Proposed complete streets strategies were presented and questions were answered.

## **PUBLIC SURVEY**

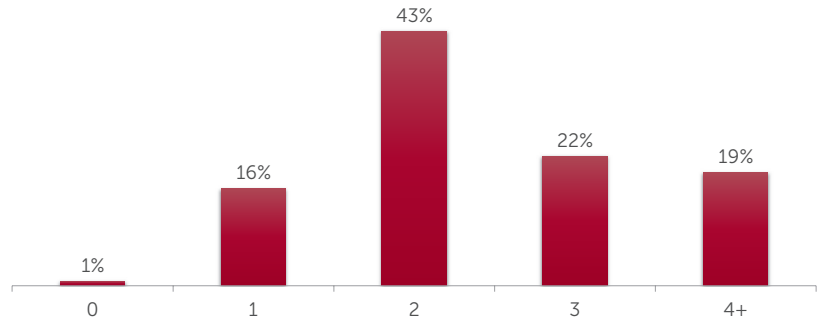
In order to understand Town residents' current behaviors and attitudes toward multimodal transportation Town staff distributed a survey. The eleven questions in the survey were developed to gather data regarding perceptions, concerns, and user trends within the Town as well as to understand demographic information about the respondents. The questions focus on the intersection of US 70 / 79 and Main Street / SR 59. This survey was distributed to residents on March 8, 2021. The survey was also provided in an online format. Mason promoted participation in the survey by including the survey in residents' utility bills and conducting automated calls to remind residents to drop them off.

In total, there were 148 responses. With a population of approximately 1,600 residents (2010 Census Data), the survey had approximately 10% of residents' participation. The survey responses to the eleven questions listed below are presented on the following pages.

- How many people in each age group live in your home?
- How many vehicles do you and members of your household own?
- How do you currently travel on US 70 / US 79? SR 59 / Main Street?
- What is your typical purpose on US 70 / 79? SR 59 / Main Street?
- What would make you more likely to walk on US 70 / 79? SR 59 / Main Street?
- What would make you more likely to bike on US 70 / 79? SR 59 / Main Street?
- Are there any specific issues or problems you face along US 70 / 79? SR 59 / Main Street?

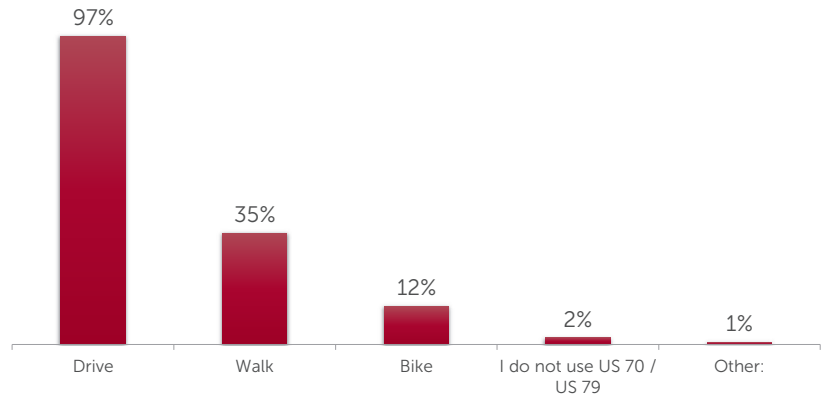
### HOW MANY VEHICLES DO YOU AND MEMBERS OF YOUR HOUSEHOLD OWN?

The majority of survey respondents have two or more vehicles per household.



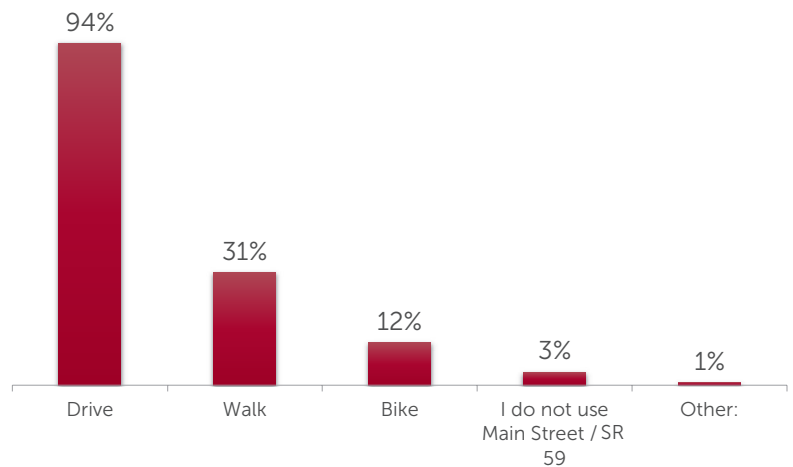
### HOW DO YOU CURRENTLY TRAVEL ON US 70 / US 79?

The majority of survey respondents drive on US 70 / 79, however about 35% of respondents walk along the corridor. A smaller percentage, 12%, of respondents bike along the corridor.



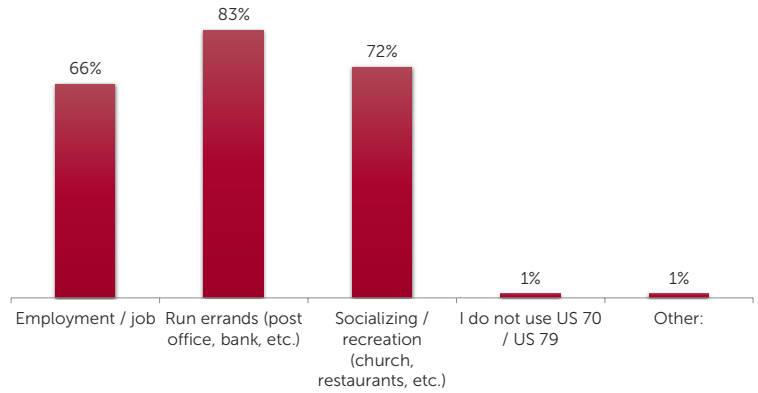
### HOW DO YOU CURRENTLY TRAVEL ON SR 59 / MAIN STREET?

The majority of survey respondents drive on SR 59 / Main Street, however about 31% of respondents walk along the corridor. As with US 70 / 79, 12% of respondents bike along the corridor.



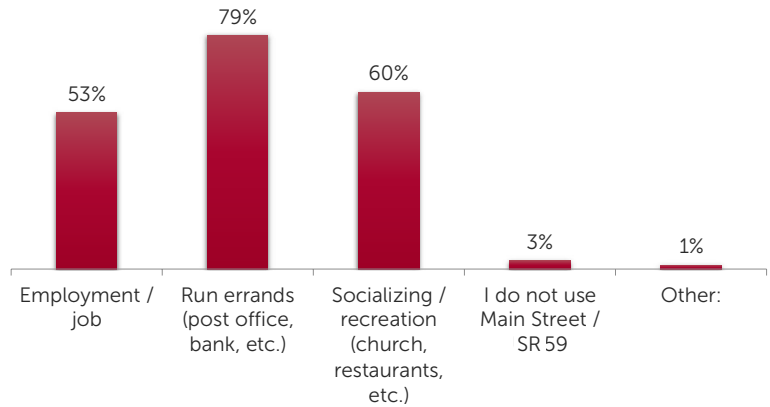
WHAT IS YOUR TYPICAL TRIP PURPOSE ON US 70 / 79?

Survey respondents typically use US 70 / 79 for running errands, followed by employment and socializing.



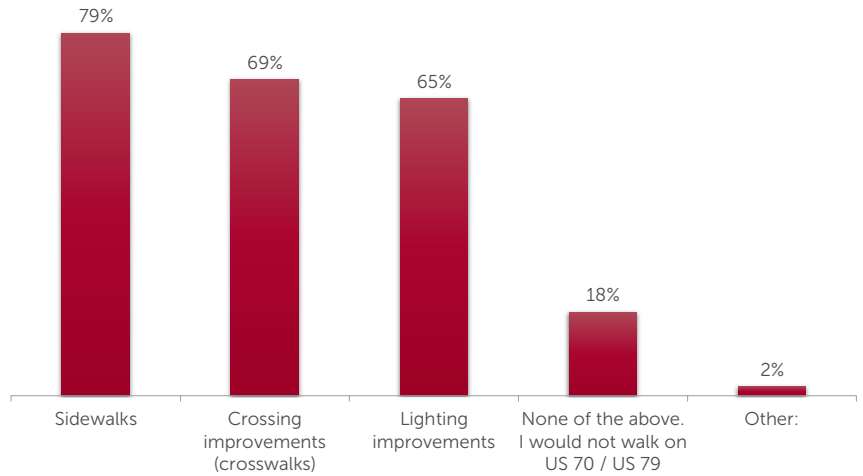
WHAT IS YOUR TYPICAL TRIP PURPOSE ON SR 59 / MAIN STREET?

Survey respondents typically use SR 59/Main Street for running errands, followed by employment and socializing. Less people use SR 59 / Main Street compared to US 70 / 79 according to the survey.



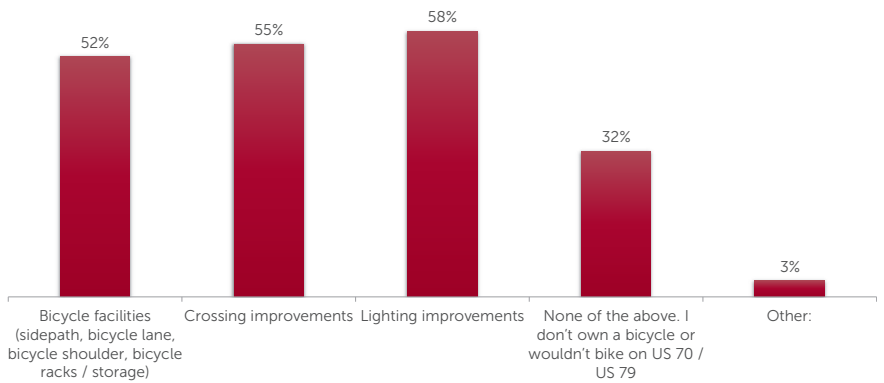
**WHAT WOULD MAKE YOU MORE LIKELY TO WALK ON US 70 / 79?**

Approximately 80% of surveyees would walk more, citing sidewalks, crossing, and lighting opportunities as reasons they would walk more.



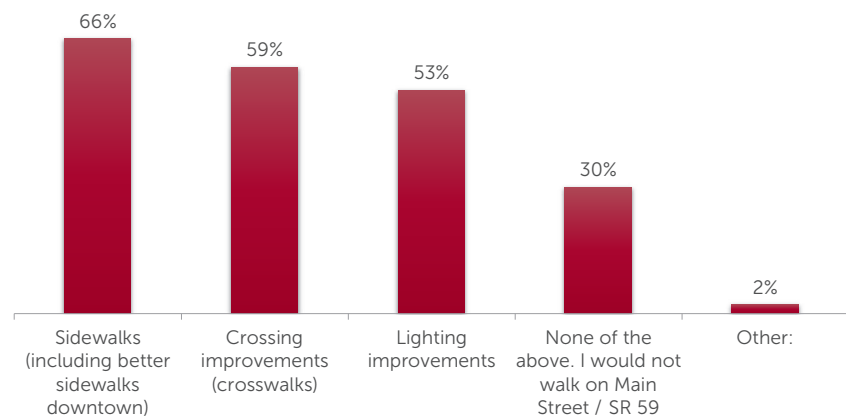
**WHAT WOULD MAKE YOU MORE LIKELY TO BIKE ON US 70 / 79?**

Approximately 70% of respondents would bike more, citing better lighting, crossing improvements, and more facilities as reasons they would walk more.



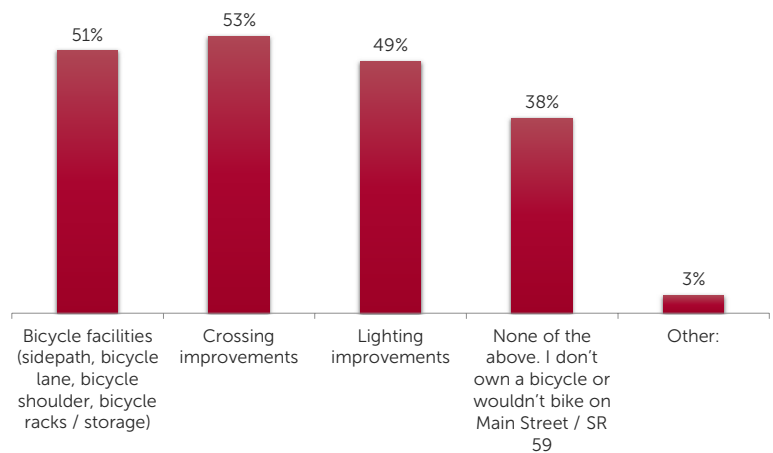
**WHAT WOULD MAKE YOU MORE LIKELY TO WALK ON SR 59 / MAIN STREET?**

Approximately 66% of respondents would walk more given better sidewalks and more crossing opportunities, followed by improved lighting.



WHAT WOULD MAKE YOU MORE LIKELY TO BIKE ON SR 59 / MAIN STREET?

Approximately 53% of surveyees would bike more on SR 59 / Main Street, citing crossing improvements and more facilities as reasons they would bike more. Almost 40% of respondents either do not own a bicycle, or are not interested.



ARE THERE ANY SPECIFIC ISSUES OR PROBLEMS YOU FACE ALONG US 70 / 79 OR SR 59 / MAIN STREET?

Common concerns that Town residents described in the survey include the following:

- Poor lighting, especially at the Intersection
- Sidewalks
- Wider roads for truck turns
- Trucks
- More places to walk to

## SITE VISIT

A site visit was conducted on March 24, 2021 to gather measurements, photos, videos, and to speak with Town of Mason residents and Town staff. The site visit provided the planning team the opportunity to observe the truck volumes, high speeds, and driver expectancy issues that the Town staff and survey respondents had described. The planning team spoke with Town of Mason Police Officers who provided their perspective on the speeding issues and truck volumes that they witness. The planning team concluded the site visit by speaking with Town Staff to review their observations and discuss next steps.



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## RECOMMENDED PLAN

### CONTEXT-SENSITIVE APPROACH

The previous section of this report establishes context zones for US 70/79 and SR 59/ Main Street that delineate unique and specific conditions along each corridor. The approach for making Complete Streets recommendations takes these unique contexts into account by establishing design parameters, including target and design speed and design vehicle, that are specific to that context.

### TARGET AND DESIGN SPEED

**Target speed** is the speed at which vehicles should operate, consistent with the desired level of multimodal activity generated by adjacent land uses to provide both mobility for motor vehicles and a safe environment for bicycles and pedestrians. **Design speed** is the speed that governs certain geometric features of the road. For this study, the target speed is equivalent to the design speed.

Research demonstrates a clear relationship between motor vehicle speed and pedestrian safety. Further, lower design speeds enable more bicycle and pedestrian friendly street design, such as more narrow motor vehicle lanes that enable bicycle lanes and other multimodal features. The approach for target speed in Mason is to enable the creation of safe, walkable streets without compromising motor vehicle safety or mobility.



The research is clear, speed is the number one factor that determines the safety of a street. The Town of Mason Complete Street Plan uses target speed as a tool for creating people friendly streets. (image source: San Francisco MTA Vision Zero Action Plan)



This plan recommends a target speed of less than 25 mph in the downtown context zone and between 25 to 30 mph in the transition zones (see Table X). The application of a lower target speed will enable the creation of bicycle and pedestrian design features and encourage appropriate motor vehicle speeds.

Table 5. Recommended Target Speeds

Context Zone	Recommended Target Speed
Traditional Downtown	Less than 25 mph
Transitional	25 to 30 mph
Rural	Greater than 30 mph

## DESIGN VEHICLE

The design vehicle influences the design of roadway elements such as lane width and curb radii. As noted in the existing conditions assessment, both US 70/79 and SR 59/Main Street experience a significant amount of truck traffic. As a result, the tractor trailer (WB-40) is recommended as the design vehicle for through movements on US 70/79 and on SR 59 as well as the intersection of both roads. Table 6 identifies the design vehicle recommendations.

Table 6. Recommended Design Vehicle

Location	Recommended Design Vehicle
<ul style="list-style-type: none"> <li>Through movement on US 70/79</li> <li>SR 59 (north of US 70/79)</li> <li>Intersection of US 70/79 and SR 59</li> </ul>	Tractor Trailer (WB-40)
All other locations in the study area	Passenger car (P) Single unit truck (SUT)

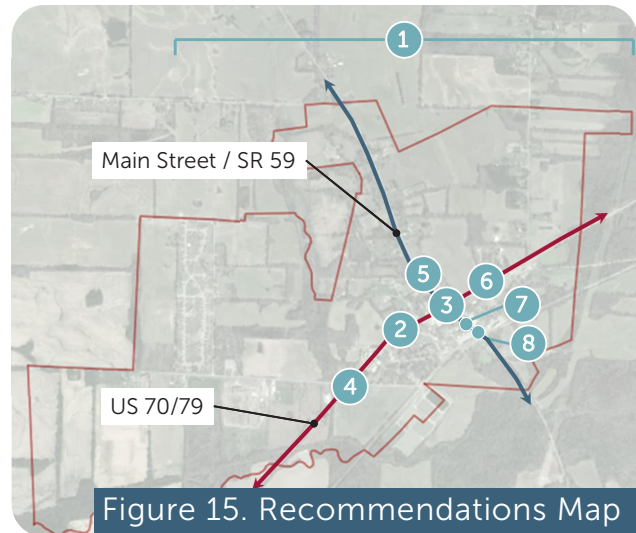
## RECOMMENDATIONS

The following recommendations address the issues, opportunities and hotspots identified in the existing context analysis and will result in a more safe and comfortable environment for all users of US 70/79 and SR 59/Main Street, be sensitive to and help preserve the Town’s character and context and support reinvestment and revitalization efforts. To the extent feasible, lower cost and more practical strategies that can be completed with less resources and within short time frames are identified. The map

shown in Figure 15 will serve as a reference for the eight project locations on the list. Each project has a corresponding map identification number.

### PROPOSED PROJECT LIST:

1. US 70/79 and SR 59/Main Street Short Term Actions
2. US 70/79 and SR 59/Main Street Safety and Livability Improvements
3. US 70/79 and SR 59/Main Street Safety and Livability Improvements
4. Finde Naifeh Gateway Project
5. Pedestrian and Drainage Enhancements North of Intersection
6. US 70/79 East Multi-use Trail
7. Main Street Connectivity Enhancement South of Intersection
8. South Main Street Pedestrian and Streetscape Improvements



## US 70/79 AND SR 59/MAIN STREET SHORT TERM ACTIONS

1  
MAP ID

Throughout the Town, there are various actions that can be taken in the short-term (within the next year), such as

- Conduct a warrant analysis to determine if the intersection of US 70/79 and SR 59/Main Street could include additional traffic control measures
- Improve signage at the intersection and throughout the study area
- Install a High-Intensity Activated Beacon (HAWK) signal or Rapid Rectangular Flashing Beacon (RRFB) at a mid-block crossing location on US 70/79.

These strategies can be pursued in the near-term (within the next year) and will address important safety and operational issues on US 70/79 and SR 59/Main Street.



The image above represents a location where improved signage would be installed.

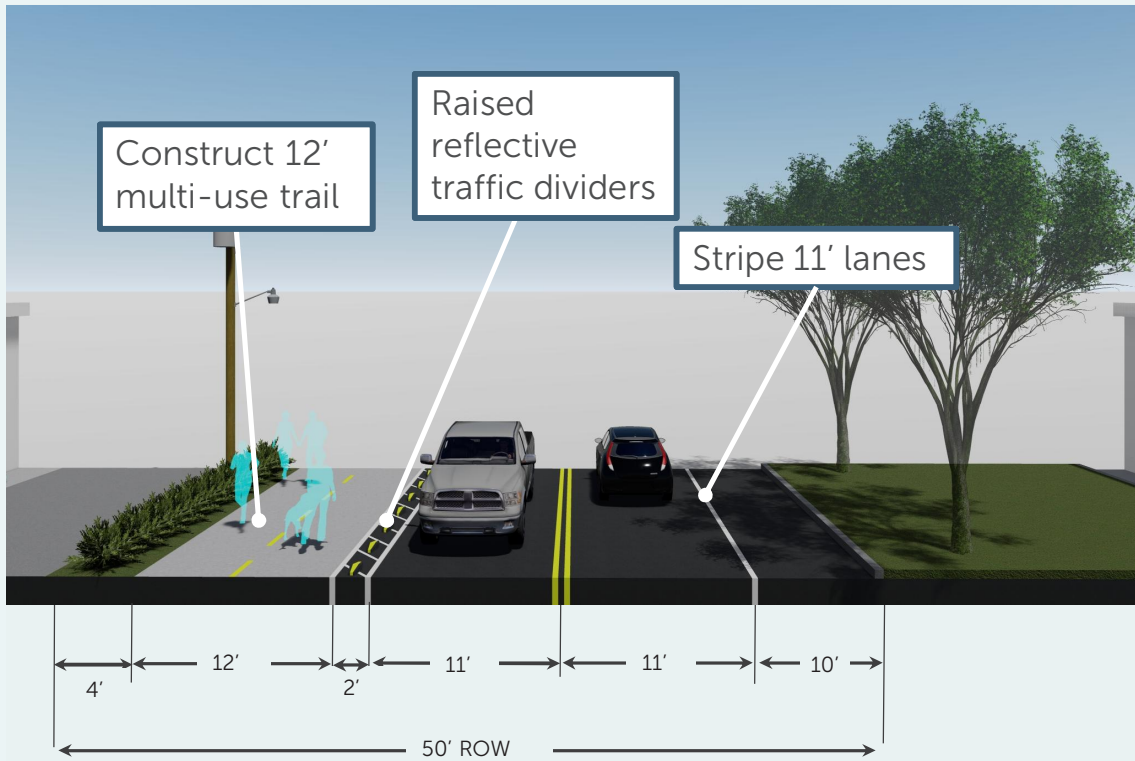


The image above represents a location where an RRFB or HAWK signal could be installed.

**2**  
MAP ID

US 70/79 WEST MUTLI-USE TRAIL

The US 70/79 West Multi-use Trail recommendation is located from Finde Naifeh Drive to the intersection of US 70/79 and SR 59/Main Street. It includes the construction of a 12-foot multi-use trail, raised reflective traffic dividers placed on a striped two-foot buffer, and decreased lane widths. A landscaped four-foot buffer on the outside of the multi-use trail will provide vertical and horizontal protection from the remaining ROW. Decreasing the lane widths will promote lower speeds, which matches the transitional context of this area. A majority of the trail can be completed within the existing pavement, making it a lower cost improvement.

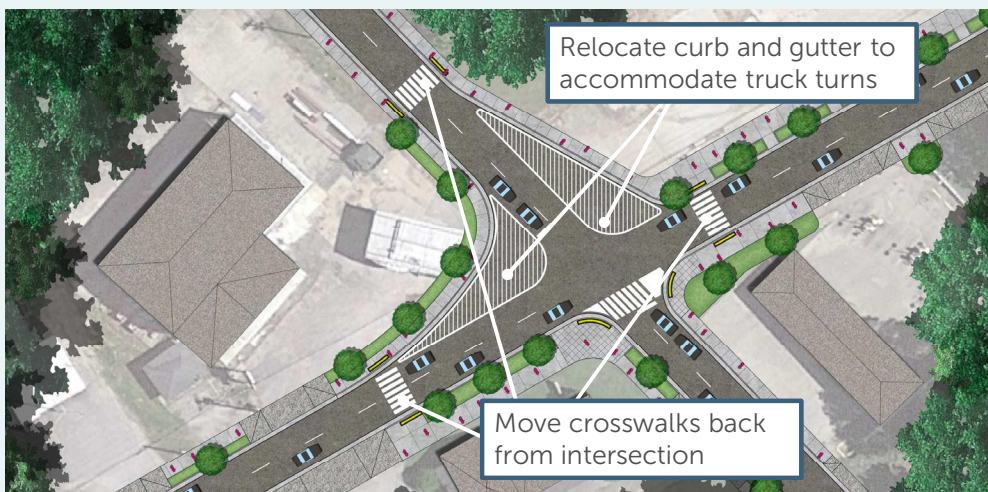


Raised reflective traffic dividers, known as “armadillos” or “zebras” are a cost-effective option for buffers between travel lanes and a multi-use trail. (image source: Fayetteville Arkansas Bike NWA Final Report)



US 70/79 AND SR 59/MAIN STREET SAFETY AND  
LIVABILITY IMPROVEMENTS

The US 70/79 and SR 59/Main Street Safety and Livability Improvements recommendation is located at the intersection of these two corridors. It spans from approximately 500 feet west of the intersection to 250 feet east of the intersection, and from 150 feet south of the intersection to 250 feet north of the intersection. This project's primary goal is to create a more safe, predictable and operationally efficient environment for all users of the intersection – passenger vehicles, trucks and pedestrians – that will reinforce walkable downtown environment and support reinvestment. Recommendations include reconstructing curb and gutter, the addition of a four to eight-foot planting zone, seven to 10 foot sidewalks, and crossing treatments. The curb radii at the northern leg of the intersection are sufficiently wide to accommodate truck turn movements. As a result, marked crosswalks will be set back from the intersection to provide an appropriate location for pedestrian crossing. Additionally, the recommended intersection design will likely impact utilities and require necessary coordination.

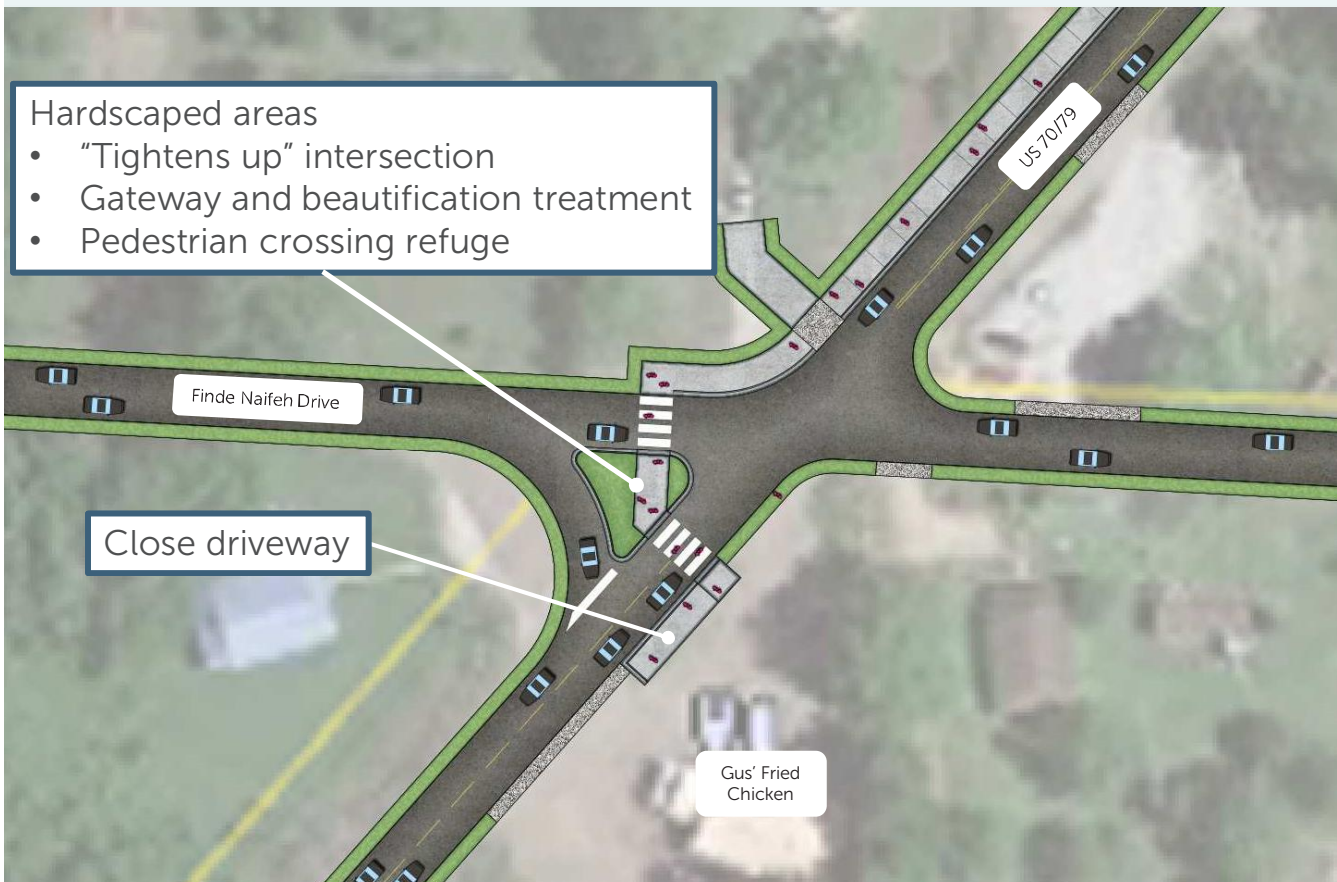


4

MAP ID

## FINDE NAIFEH GATEWAY

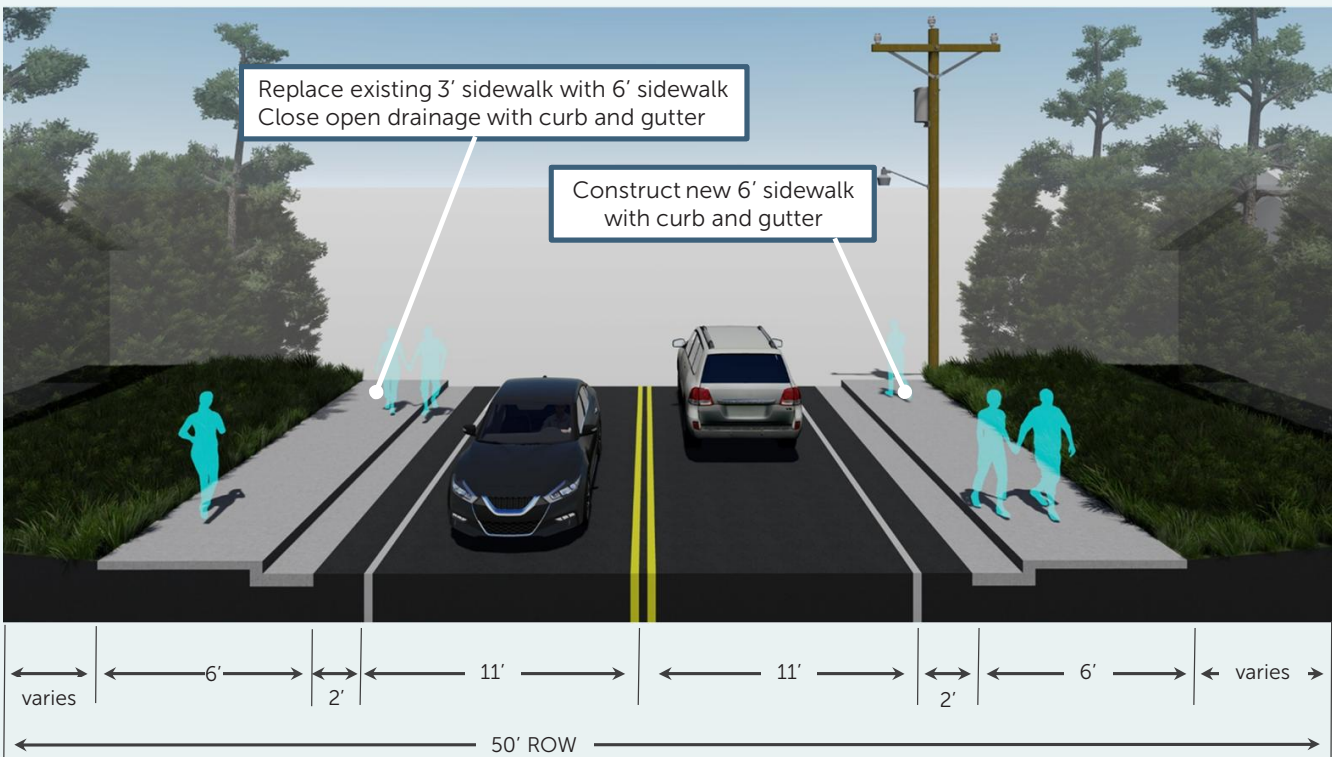
The Finde Naifeh Gateway recommendation includes the intersection of Finde Naifeh Drive and US 70/79. This includes hardscaping areas to “tighten up” the street, reducing horizontal clearance consistent with the target speed, which will signal to drivers that they are entering the Town and must slow down. The addition of raised median island and pedestrian crossing refuge will create a safer option for pedestrians to cross Finde Naifeh Drive and encourages access to local businesses. Closing one of the driveways to Gus’ Fried Chicken will decrease the number of curb cuts.



PEDESTRIAN AND DRAINAGE ENHANCEMENTS  
NORTH OF INTERSECTION

5  
MAP ID

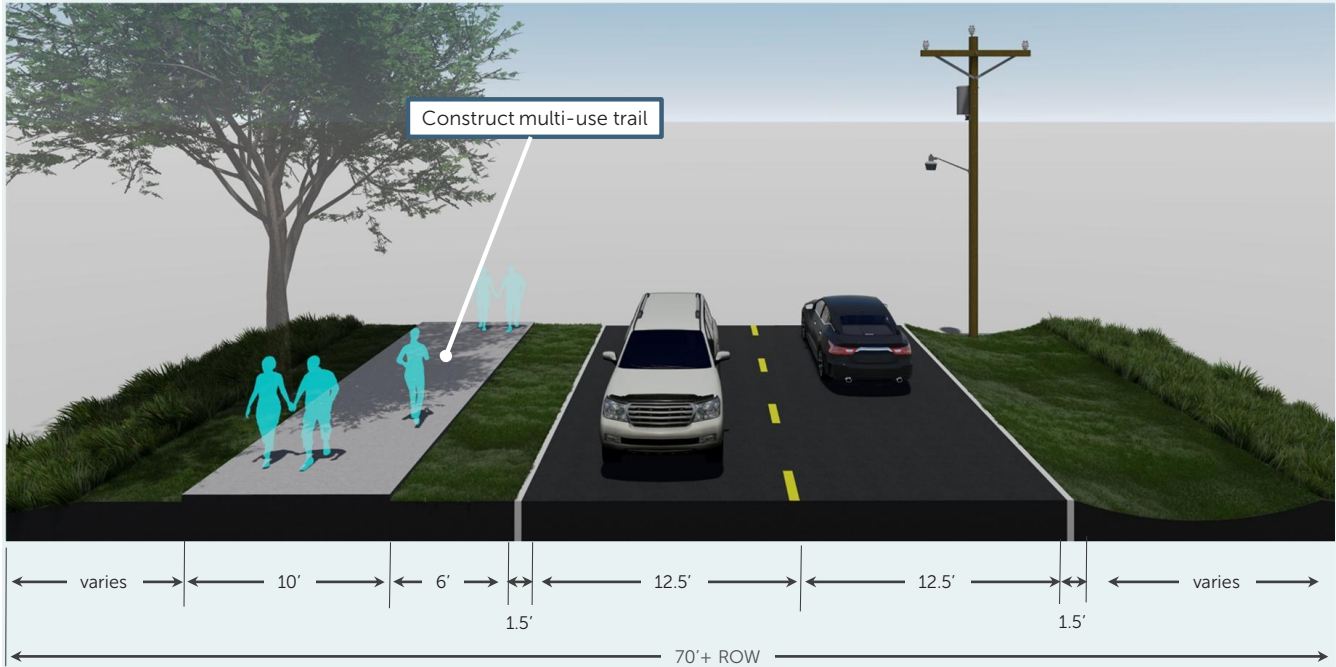
The Pedestrian and Drainage Enhancements North of Intersection recommendation is located from 250 feet north of the intersection to Mosley Avenue on SR 59. This recommendation includes reconstructing the street to replace the failed culvert with a closed drainage system and installing new sidewalks with curb and gutter. The existing three-foot sidewalks on the east side of SR 59 will be replaced with six-foot sidewalks on both sides of SR 59.



**6**  
MAP ID

US 70/79 EAST MULTI-USE TRAIL

The US 70/79 East Multi-use Trail recommendation is located east of the intersection from 250 feet east of the intersection to Charleston Drive. Improvements associated with this recommendation include reusing the existing ROW to construct a 10-foot multi-use trail on the north side of the roadway along US 70/79. A six-foot landscaped buffer is recommended to provide a horizontal barrier between cyclists and pedestrians and motor vehicles. Lane widths will remain the same, and pavement striping should be refreshed.

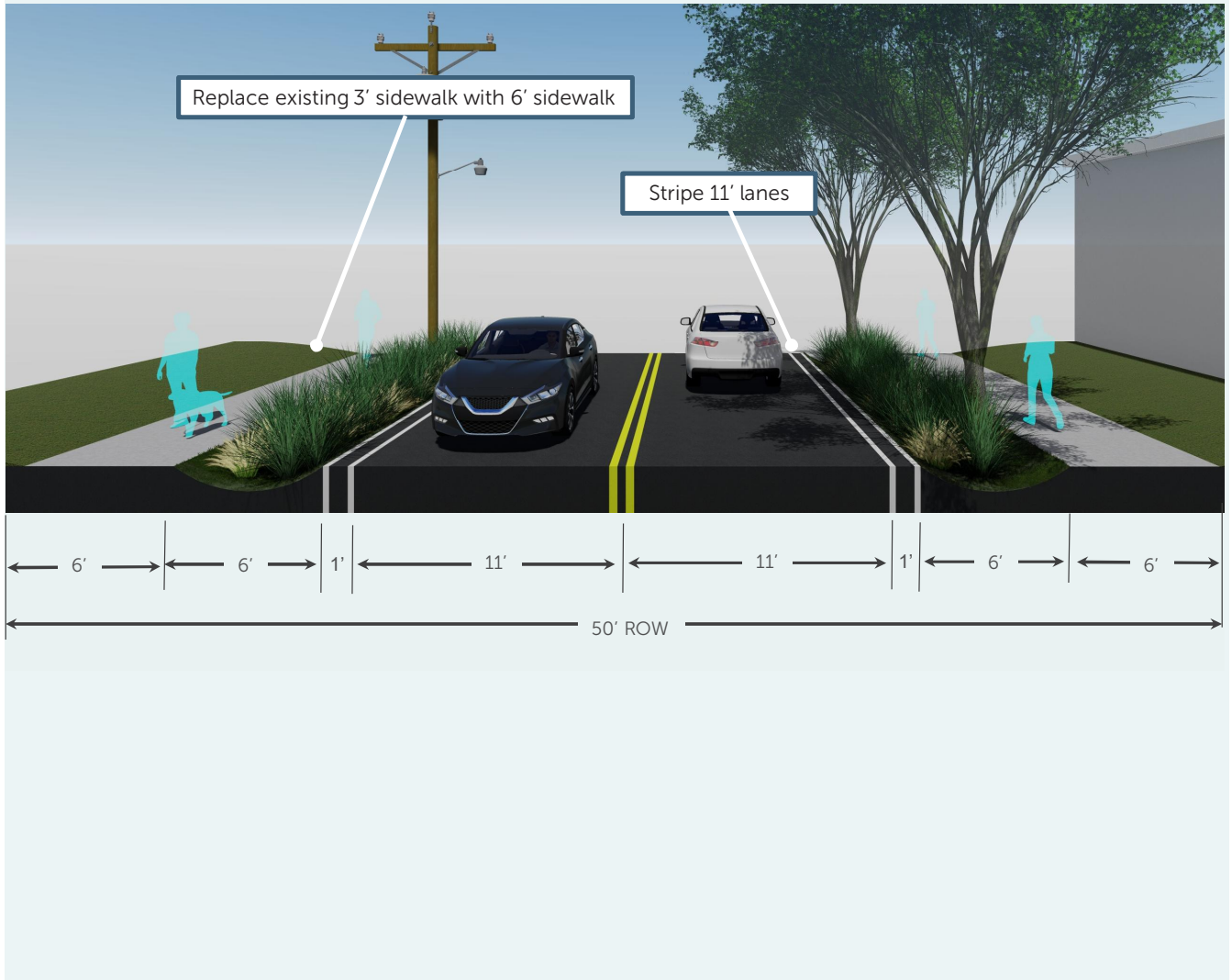




MAIN STREET CONNECTIVITY ENHANCEMENT SOUTH  
OF INTERSECTION

7  
MAP ID

The Main Street Connectivity Enhancement South of Intersection recommendation is located just south of the intersection of US 70/79 and Main Street. The lane widths will be reduced from 12 feet to 11 feet, and the residual one foot of pavement will be repurposed as a striped shoulder. The sidewalks will be widened from three feet to six feet, with a landscaped buffer between the sidewalk and shoulder. The addition of greenery and trees within the landscaped buffer as well as the wider sidewalks will contribute to beautification, the sense of a traditional downtown and improved comfort for pedestrians. It will also tie together downtown and Town Hall and the other uses on South Main Street.



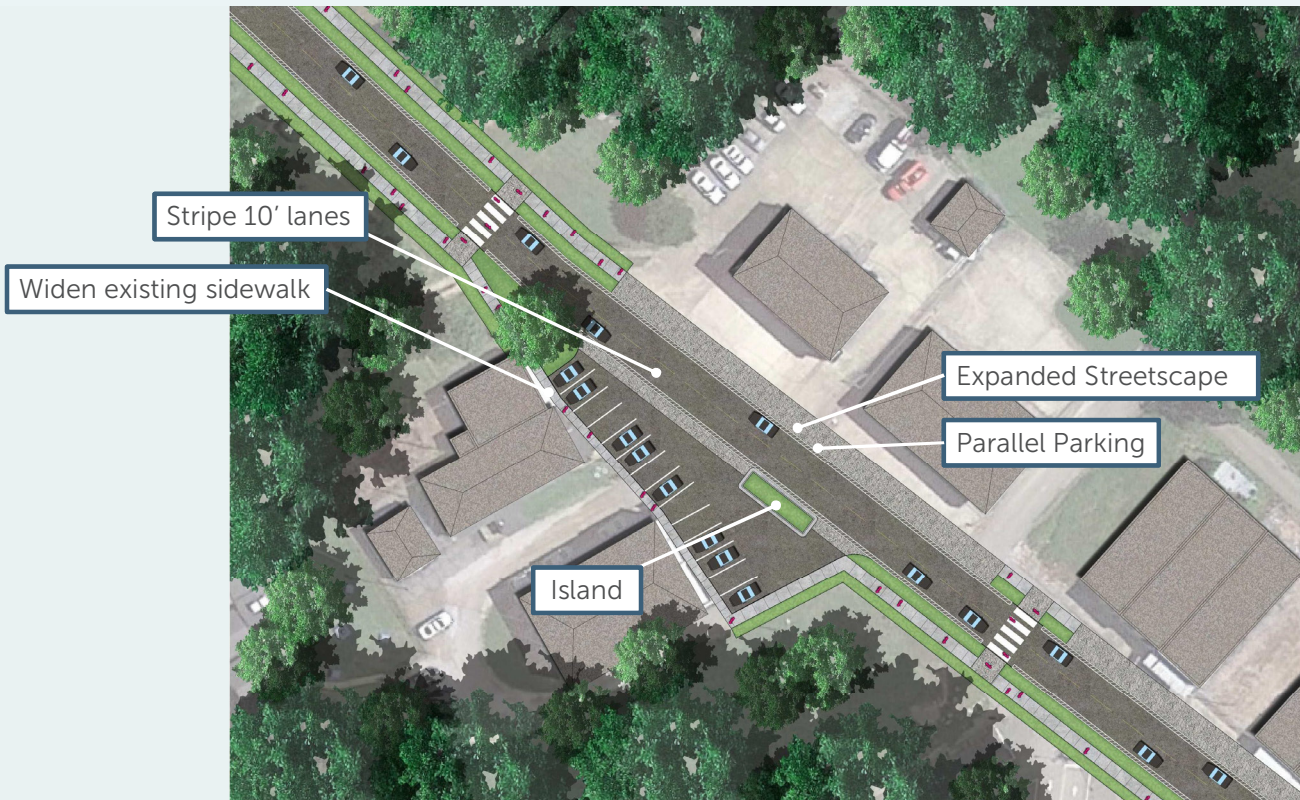
8

MAP ID

## SOUTH MAIN STREET PEDESTRIAN AND STREETScape IMPROVEMENTS

The South Main Street Pedestrian and Streetscape Improvement recommendation is located between A Street south of the Town Hall to the Railroad Tracks on Main Street. The existing pavement spans 50 feet and contains two travel lanes with imbalanced widths, wide shoulders, and parking. The roadside environment is a combination of occupied and abandoned buildings.

As part of this Project, the lane widths, which vary from 12 to 14 feet, will be reduced to 10 feet. Pavement closer to the buildings will be repurposed for parallel parking spaces. New sidewalk will be installed, and the existing sidewalk on the east side of Main Street will be widened. Another component of this project is the construction of a landscaped island, which will provide beautification and greenspace opportunities. The decreased lane widths and expanded streetscape will contribute to reduced speeds and economic development opportunities.



## FUNDING OPPORTUNITIES

The Town of Mason can pursue a variety of local, state, and federal grant options that best fit their needs based on project and location Current grant opportunities are highlighted in Table 7 below.

Table 7. Grant Opportunities

Grant Option	Potential Uses	Funding Breakdown	Time frame	Eligibility
Multimodal Access Grants	<ul style="list-style-type: none"> <li>• Pedestrian Crossings</li> <li>• Sidewalks</li> <li>• Bike Lanes/Facilities</li> <li>• ADA Improvements</li> <li>• Pedestrian Lighting</li> <li>• Utility Relocation</li> </ul>	95% state, 5% local	Application cycle June to Nov, awarded in June	Project must be on or near a State Route; apply through RPO; each RPO can submit 2 projects to TDOT
Transportation Alternatives Program (TAP)	<ul style="list-style-type: none"> <li>• Pedestrian Facilities</li> <li>• Multi-use paths</li> <li>• Bike Lanes</li> <li>• Sidewalks</li> <li>• Signage</li> <li>• Crosswalks</li> </ul>	80% state, 20% federal - does not cover ROW or engineering costs	Application cycle July to Nov, awarded in May	Any agency can apply through TDOT
Local Parks and Recreation Fund (LPRF)	<ul style="list-style-type: none"> <li>• Indoor/Outdoor Recreational Facilities</li> <li>• Trail Development</li> </ul>	\$500,000 maximum, 50% state, 50% federal	Depends, expected biannually	City or County Governments
Healthy Built Environments	<ul style="list-style-type: none"> <li>• Publicly accessible spaces</li> </ul>	\$85,000 maximum, 100% state	Application cycle Sept to Jan, awarded in March	Any agency can complete an application
Recreational Trails Program	<ul style="list-style-type: none"> <li>• Trails and greenways</li> </ul>	\$200,000 maximum, 80% state, 20% local	Depends, expected biannually	Local, state, federal land managing agencies
Spot Safety and Highway Spot Safety Improvement Program	<ul style="list-style-type: none"> <li>• Signage improvements</li> <li>• Roadway re-striping</li> <li>• Intersection Enhancements</li> </ul>	Varies from 80% federal, 20% local to 100% federal	Based on need	Contract Regional Traffic Engineer or TDOT Safety Office
State Industrial Access Road Program	<ul style="list-style-type: none"> <li>• Access road to a new or expanding industry</li> </ul>	ROW: 50% state /50% local Construction: 100% state	Based on need, can apply any time	Any agency can apply

## IMPLEMENTATION MATRIX

The Implementation Matrix on the following pages summarizes the recommendations identified in the previous descriptions and provides a location of each project, estimated costs, and potential funding opportunities.

IMPLEMENTATION MATRIX						
MAP ID	PROJECT NAME	NEAR / LONG TERM	FROM	TO	APPROXIMATE LENGTH	
1	US 70/79 and Main Street Short Term Actions	Near	---	---	Throughout Study Area	
2	US 70/79 West Multi-use Trail	Near	Intersection of US 70/79 and SR 59/ Main Street	Finde Naifeh Drive	2,000 feet	
3	US 70/79 and Main Street Safety and Livability Improvements	Long	500 feet west of Intersection 150 feet south of Intersection	Approximately 250 feet east of Intersection 250 feet north of Intersection	750 feet (east/west) 400 feet (north/south)	
4	Finde Naifeh Gateway Project	Long	Gus' Fried Chicken Driveway	Finde Naifeh Drive	200 feet	

<sup>1</sup>Source: [https://safety.fhwa.dot.gov/ped\\_bike/step/docs/TechSheet\\_RRFB\\_508compliant.pdf](https://safety.fhwa.dot.gov/ped_bike/step/docs/TechSheet_RRFB_508compliant.pdf)

<sup>2</sup>MOT stands for maintenance of traffic

## RECOMMENDED PLAN

SUMMARY	ESTIMATED COST
<ul style="list-style-type: none"> <li>• Conduct Signal Warrant Analysis</li> <li>• Install improved signage</li> <li>• Install High Intensity Activated Beacon (HAWK) Signal or Rapid Rectangular Flashing Beacon (RRFB)</li> </ul>	<ul style="list-style-type: none"> <li>• Cost Varies</li> <li>• RRFB average cost of \$25,000<sup>1</sup></li> </ul>
<ul style="list-style-type: none"> <li>• Repurpose existing pavement to narrow travel lanes</li> <li>• Install 12 ft protected multi-use trail with Raised Reflective Traffic Dividers</li> <li>• Install landscaped 4 ft buffer on the outside of multi-use trail</li> </ul>	<ul style="list-style-type: none"> <li>• \$220,000 to \$275,000</li> <li>• Assume \$200 to \$250 per linear foot for pavement marking/restriping, installation of protective barrier (armadillos), crossing treatment, spot paving, design, MOT<sup>2</sup> and contingency.</li> </ul>
<ul style="list-style-type: none"> <li>• Reconstruct Intersection</li> <li>• Construct curb and gutter</li> <li>• 4-8 ft planting zone</li> <li>• 7-10 ft sidewalks</li> <li>• Crossing Treatments</li> </ul>	<ul style="list-style-type: none"> <li>• \$300,000 to \$500,000</li> <li>• Assume \$260 to \$430 per linear foot to reconstruct intersection to urban curb and gutter with landscape/hardscape including design, construction, MOT<sup>2</sup>, contingency, but NOT ROW.</li> </ul>
<ul style="list-style-type: none"> <li>• Replace flush pavement at Southeast corner with a landscaped raised island</li> <li>• Reduce horizontal clearance</li> <li>• Construct crossing treatments at South leg and West end</li> <li>• Close one of the Gus' Fried Chicken Driveway</li> </ul>	<ul style="list-style-type: none"> <li>• \$25,000 to \$50,000</li> <li>• Assume hardscaped/landscaped island, pedestrian crossing enhancements, design, construction, contingency.</li> </ul>

IMPLEMENTATION MATRIX					
MAP ID	PROJECT NAME	NEAR / LONG TERM	FROM	TO	APPROXIMATE LENGTH
5	Pedestrian and Drainage Enhancements North of Intersection	Long	250 feet north of Intersection	Mosley Avenue	2,500 feet total 500 feet of closed drainage
6	US 70/79 East Multi-use Trail	Long	250 East of intersection	1,750 East of Intersection (Charleston Drive)	1,500 feet
7	Main Street Connectivity Enhancement South of Intersection	Long	150 South of Intersection	A Street	250 feet
8	South Main Street Pedestrian and Streetscape Improvements	Long	A Street	Railroad Tracks	500 feet

## RECOMMENDED PLAN

SUMMARY	ESTIMATED COST
<ul style="list-style-type: none"> <li>• Install closed drainage system to replace the failed culvert</li> <li>• Reconstruct existing sidewalk on east side of the roadway, widen to 6 ft</li> <li>• Install 6 ft sidewalk on west side of the roadway</li> <li>• Reconstruct curb and gutter</li> </ul>	<ul style="list-style-type: none"> <li>• \$230,000 to \$315,000</li> <li>• Assume 2,000 feet at \$50/linear foot for installation of sidewalks on both sides. Assume 500 feet at \$260 to \$430 per linear foot to reconstruct to urban standard with curb and gutter and sidewalks.</li> </ul>
<ul style="list-style-type: none"> <li>• Construct 10 ft mutli-use trail along existing right-of-way</li> <li>• Install 6 ft landscaped buffer</li> <li>• Refresh pavement striping</li> </ul>	<ul style="list-style-type: none"> <li>• \$300,000 to \$375,000</li> <li>• Assume \$200 to \$250 per linear foot to restripe, and construct asphalt side path</li> </ul>
<ul style="list-style-type: none"> <li>• Widen existing sidewalk from 3 ft to 6 ft</li> <li>• Add greenery and trees</li> <li>• Repurpose pavements by decreasing lane widths (12 ft to 11 ft)</li> </ul>	<ul style="list-style-type: none"> <li>• \$37,500 to \$50,000</li> <li>• Assume \$150 to \$200 per linear foot to replace sidewalk and restripe Main Street</li> </ul>
<ul style="list-style-type: none"> <li>• Repurpose pavement for parallel parking spaces</li> <li>• Install new sidewalk and widen existing on the east side</li> <li>• Install landscaped island</li> <li>• Construct streetscape enhancements and parallel parking on east side</li> </ul>	<ul style="list-style-type: none"> <li>• \$100,000 to \$125,000</li> <li>• Assume \$200 to \$250 per linear foot to restripe, hardscape and add sidewalks</li> </ul>

## CONCLUSION

Every community should have comfortable, safe and inclusive places for residents and visitors to travel to meet their daily needs. This Complete Streets Study makes recommendations so that US 70/79 and SR/Main Street in Mason can achieve that purpose.

This report educates residents, stakeholders and decisionmakers on the need for and benefits of Complete Streets in Mason and will serve as a roadmap for their implementation. The Town is now able to pursue grant funding and other resources to make the recommendations a reality.





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