

Greater St. Joseph Area  
**MPO**  
Metropolitan Planning Organization

# 2050 METROPOLITAN TRANSPORTATION PLAN

St. Joseph Area Transportation Study Organization

Adopted December 2024



# St. Joseph Area Transportation Study Organization



## 2050 Metropolitan Transportation Plan



**AECOM**

FINAL

Adopted by the SJATSO Coordinating Committee on December 12, 2024

## SJATSO Information

For questions regarding the St. Joseph Area Transportation Study Organization (SJATSO) Metropolitan Transportation Plan (MTP), Transportation Improvement Program (TIP), or other publications please contact SJATSO Staff. To request copies of this document or to request it in an accessible format, please contact SJATSO staff using the below contact information. An electronic copy of the MTP can be downloaded from the SJATSO website.



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### Title VI Note

SJATSO hereby gives public notice that it is the policy of the agency to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, sex, or national origin, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which SJATSO receives federal financial assistance. Any person who believes they have been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with SJATSO. Any such complaint must be in writing and filed with SJATSO's Title VI Coordinator within one hundred and eighty (180) days following the date of the alleged discriminatory occurrence. For more information, or to obtain a Title VI Discriminatory Complaint Form, please see our full Title VI program located on our website at <http://stjoempo.org>.

## SJATSO Committees

The SJATSO Coordinating Committee (Policy Board) along with the Technical Committee have overseen the development of the 2050 Metropolitan Transportation Plan (MTP). The Coordinating Committee consists of locally elected and appointed leaders (individuals appointed to their positions directly by locally elected officials such as mayors or commission members) to represent their local government. Transportation planning activities at SJATSO is overseen by the Technical Committee, which provides technical support and recommendations to the Coordinating Committee. SJATSO's bylaws determine the positions that are represented on each committee. The voting positions for each committee are as follows:

### Coordinating Committee (Policy Board)

- One (1) Buchanan County Commissioner
- One (1) Andrew County Commissioner
- One (1) Doniphan County Commissioner
- Three (3) St. Joseph City Council Members
- One (1) St. Joseph City Manager
- One (1) Citizen At-large (Representative appointed by Committee for a three (3) year term)
- One (1) Elected official from another city in Andrew County or Doniphan County within the transportation planning area (city appointed by committee for a three (3) year term)

### Technical Committee

- Ten (10) seats from the City of St. Joseph
- Two (2) seats from the Missouri Department of Transportation (MoDOT)
- One (1) seat from the Kansas Department of Transportation (KDOT)
- One (1) seat from Buchanan County
- One (1) seat from Andrew County
- One (1) seat from Doniphan County
- One (1) seat from the Country Club Village
- One (1) seat from the City of Savannah
- One (1) seat from the City of Elwood
- One (1) seat from the City of Wathena

### 2050 Metropolitan Transportation Plan Adoption

The SJATSO Technical Committee voted November 21, 2024 to advance the 2050 MTP to the Coordinating Committee for formal adoption. The Coordinating Committee voted on December 12, 2024 to adopt the 2050 MTP.

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# Chapter 1. Overview

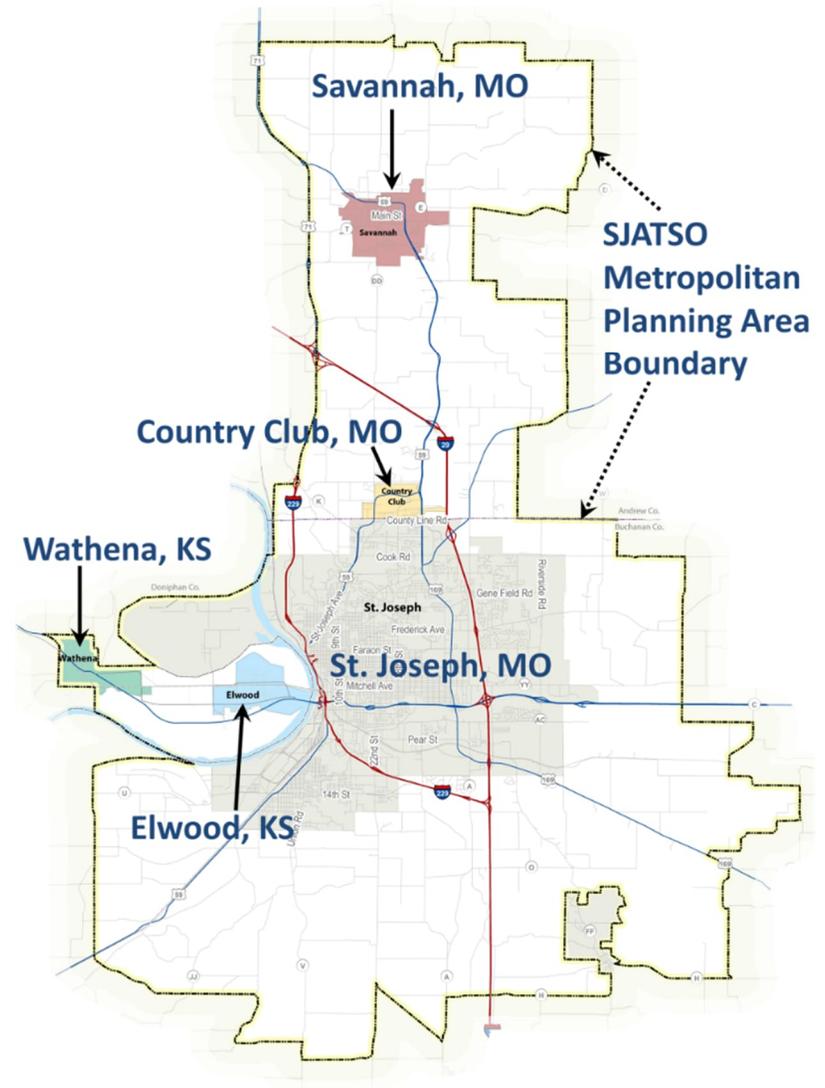
## St. Joseph Metropolitan Planning Area

Strategically located along the Missouri River, the St. Joseph region has played a significant role in the development of the nation's transportation system. This rich history is present throughout the region, as observed in unique community assets including historical links to the Pony Express and Jesse James. The City of St. Joseph is home to numerous museums and historically significant properties that attract regional visitors and support local tourism. The region includes historic architecture, a continuous 26-mile urban parkway system with picturesque landscapes, vast wooded areas, hike and bike trails, and family-oriented parks. Educational opportunities are plentiful, including a 4-year state university, a private technical school, and a privately operated post-secondary vocational/technical school. These assets are available to the 110,000-plus residents and 48,000-plus workers in the three-county area.

## About St. Joseph Area Transportation Study Organization

The St. Joseph Area Transportation Study Organization (SJATSO) is responsible for developing transportation plans and programs for the St. Joseph, Missouri Metropolitan Planning Area (MPA) (Figure 1). SJATSO member governments include the counties of Buchanan and Andrew, the cities of St. Joseph and Savannah, and the Village of Country Club in the State of Missouri and the County of Doniphan and the cities of Wathena and Elwood in the State of Kansas.

Figure 1: Metropolitan Planning Area



As the designated Metropolitan Planning Organization (MPO), SJATSO is responsible for:

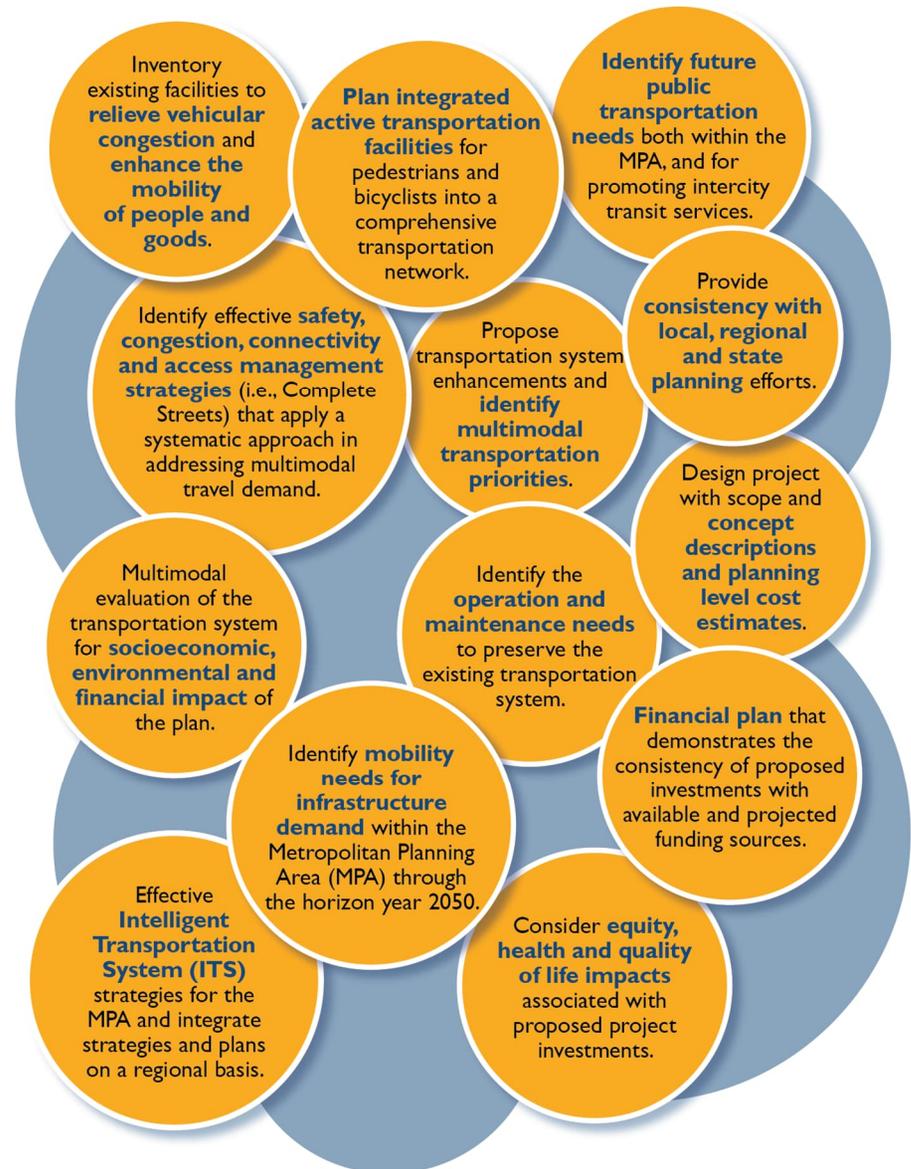
- Promoting the development of a multimodal transportation system to efficiently maximize the mobility of people and goods within and through the MPA while minimizing transportation-related fuel consumption and air pollution;
- Planning and programming for the development of transportation facilities that function as a cohesive, intermodal network for the MPA and the nation;
- Identifying low-income and minority populations so that their needs can be identified and addressed to ensure that plans comply with Title VI and Americans with Disabilities Act (ADA) requirements; and
- Ensuring the process for developing such plans and programs is consistent with the Federal Highway Administration (FHWA) Metropolitan Planning program, which establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas.

### Metropolitan Transportation Plan

The SJATSO 2050 Metropolitan Transportation Plan (MTP) outlines the transportation vision for the SJATSO MPA. The MTP, among other plans and programs, guides the development of an integrated, multimodal transportation system that facilitates the efficient movement of people and goods, supports community development, and advances social and environmental goals—all in the face of current and future challenges of limited transportation funding, increasing mobility challenges for an aging population, and growing urgency in preserving the environment, promoting sustainability, and increasing system resiliency. Figure 2 summarizes key elements in the MTP development process.

The MTP addresses federal planning requirements established in Bipartisan Infrastructure Law (BIL), also referred to as the Infrastructure Investment and Jobs Act (IIJA), which was signed into law by President Biden on November 15, 2021. By fulfilling the BIL/IIJA requirements, and being included in the MTP, transportation projects within the SJATSO MPA become eligible to receive federal funding. As funding becomes available through various sources, projects contained in the MTP are eligible to advance into the SJATSO Transportation Improvement Program (TIP) and ultimately continue onto design and construction.

Figure 2: Key Elements of the MTP Development Process



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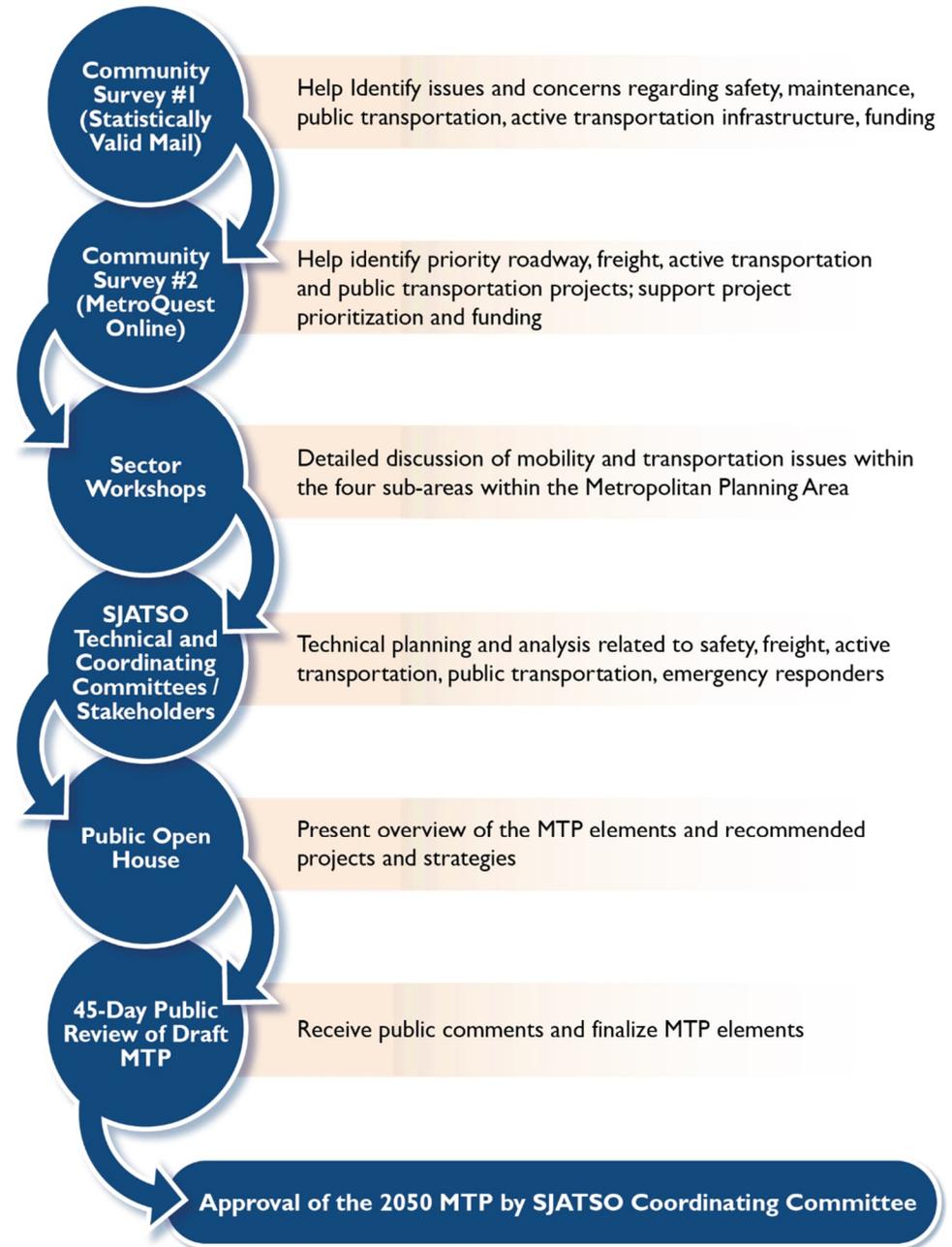
## Chapter 2. Public Engagement

### Informed Decision-Making

SJATSO values public and stakeholder input and recognized it as a vital component of the transportation planning process, including the development of the 2050 MTP. SJATSO supports a continuing and ongoing outreach effort that is consistent with Title VI and ADA requirements as well as the overall aim of maximizing awareness of the study process and obtaining input from residents and employers to complement the technical analysis performed by SJATSO and its partners. Various public outreach activities and stakeholder meetings were conducted as part of the transportation planning process. A public engagement summary is available in Appendix A.

Figure 3 summarizes the key public engagement activities undertaken as part of the 2050 MTP development process.

Figure 3: MTP Key Public Engagement Activities



## Community Survey #1 (Statistically Valid Mail)

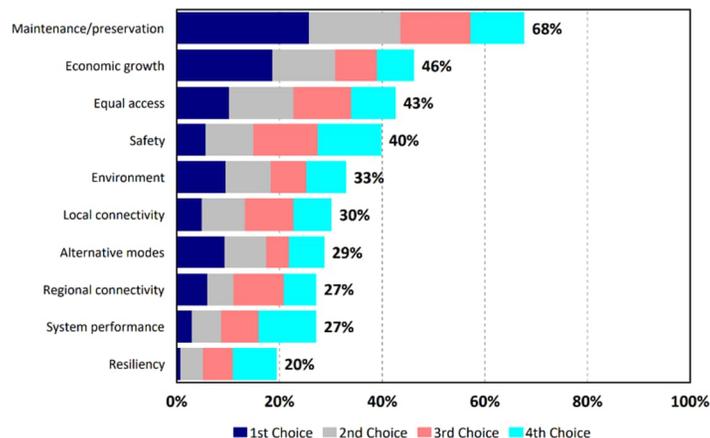
Conducted in April and May 2023, this survey targeted 400 participants with questions related to various transportation modes and topics within the MPA. The survey was conducted by a third-party research firm, ETC Institute. In administering the survey, all zip codes within the three-county MPA were covered, and the survey results have a 95 percent level of confidence (a precision of +/- 4.7 percent). Survey questions were developed in part to be consistent with previous MTP statistically valid survey questions to allow for trends to be analyzed. Surveys were mailed to randomly selected households, and respondents could complete the survey via a postage paid return envelope, online, or by calling a dedicated phone line. In total, 430 survey responses were included in the final dataset. The following highlights key findings. A detailed survey report is included in Appendix A.

### Importance of Various Transportation Issues

Survey respondents were asked to rank their top transportation priorities over the next 25 years. Based upon the combined percentage of “critically important” and “very important” responses among residents who had an opinion, 88 percent indicated that maintenance/preservation of the transportation system was most important. Other transportation issues identified as “critically important” or “very important” were safety (72 percent), equal access (69 percent) and system performance (60 percent).

Based on the sum of respondents top four choices, the transportation items that residents indicated should be the top priorities to address over the next 25 years were 1) maintenance/preservation, 2) economic growth, 3) equal access, and 4) safety. Figure 4 summarizes the priority allocation.

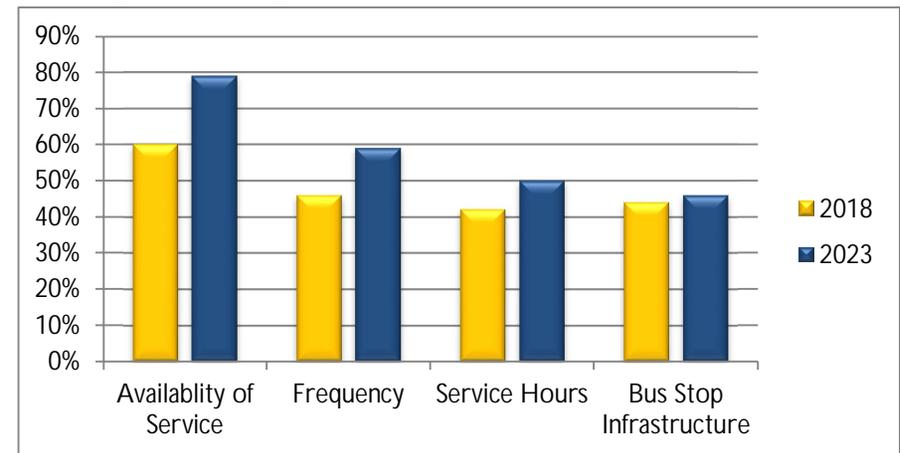
Figure 4: Top Priorities to Address Over Next 25 Years



## Public Transportation Use

Seven percent of respondents indicated they had used public transportation (“Go St. Joe” or the city bus) in the last 12 months. Of those, 79 percent who had an opinion rated the availability of service as “excellent” or “good,” and 59 percent rated the frequency of service as “excellent” or “good.” This is an improvement over the 2018 survey results where 60 percent who had an opinion rated the availability of service as “excellent” or “good,” and 46 percent rated the frequency of service as “excellent” or “good.” Figure 5 compares the 2018 and 2023 survey results for key service characteristics.

Figure 5: Rating of Go St. Joe Transit Service Characteristics



When asked why respondents do not use public transportation or use it more often, the top reasons were prefer to drive (74 percent), takes too long compared to travel by car (32 percent), and service is not available near home (17 percent).

### Bicycling in the St. Joseph Metropolitan Planning Area

Twenty-three percent of respondents indicated they had ridden a bicycle in the St. Joseph MPA in the last 12 months. Of those, 84 percent of those who provided a response indicated they primarily ride a bike for recreation, 5 percent do so primarily to commute, and 11 percent bicycle for both recreation and commuting.

Forty-three percent of respondents who had ridden a bicycle in the last 12 months indicated that an expanded network or system would increase the time spent biking,

whether for commuting or recreation. Forty percent indicated they do not plan to increase their bicycling activity.

### Walking Along Major Roads and Sidewalks

Thirty percent of respondents indicated they had walked or used a wheelchair along a major road in the last 12 months. When asked about their feeling of safety walking on sidewalks in various areas, 90 percent of those who had an opinion felt “very safe” or “safe” in Savannah. Other sidewalks on which respondents who had an opinion felt “very safe” or “safe” walking included Wathena (Kansas) (81 percent), Country Club Village (79 percent), Elwood (Kansas) (76 percent), and Downtown St. Joseph (73 percent).

Sixty-five percent of respondents who felt “uncomfortable” or “very unsafe” walking on sidewalks indicated that the extension/construction of new sidewalks would make them feel safer, and 57 percent indicated they would feel safer if existing sidewalks and crosswalks were repaired.

### Travel to Kansas City and Kansas City International Airport

Respondents were asked how often they travel to Kansas City and/or Kansas City International Airport. As shown in Figure 6, more than half (51 percent) of those who provided a response indicated they travel to Kansas City and/or the airport once a month or less, 27 percent do so twice a month, 11 percent do so once a week, 7 percent do so 2 to 3 times per week, and 11 percent do so two times per week or more. Residents were also asked if they would consider riding a shuttle to/from the St. Joseph area to Downtown Kansas City and/or Kansas City International Airport. More than two-thirds (69 percent) of respondents who had an opinion indicated they would consider riding a shuttle, up from 55 percent in the 2018 survey.

Figure 6: Frequency of Travel to Kansas City Area



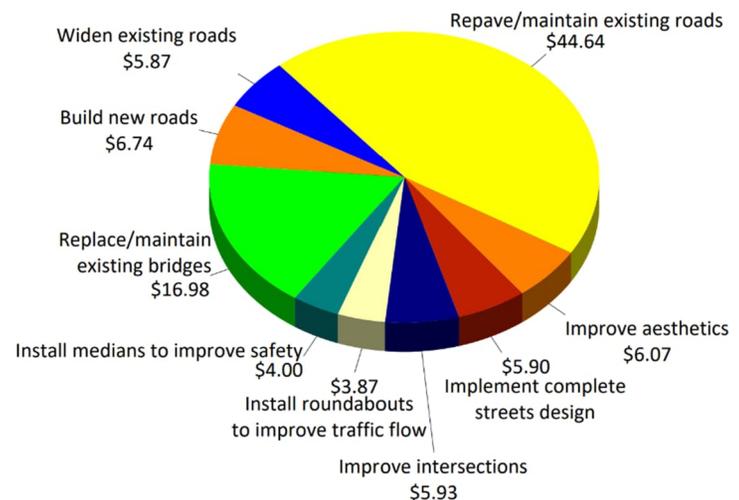
### Funding Levels for Transportation Projects

Residents were asked how current funding levels for various types of transportation projects in the SJATSO MPA should change over the next 25 years. Seventy-one percent of respondents indicated highways/regional roadways should receive “much greater” or “greater” funding. Other projects in which respondents felt the funding level should be “much greater” or “greater” include freight improvements (58 percent), walking/pedestrian facilities (46 percent), and infrastructure and technology (45 percent).

When residents were asked how they would spend a hypothetical \$100 on roadway improvements in the next 25 years, they provided the following responses (with dollar amounts also equivalent to a percentage). The breakdown of the funding is shown in Figure 7.

- Repave/maintain existing roads (\$44.64)
- Replace/maintain existing bridges (\$16.98)
- Build new roads (\$6.74)
- Improve aesthetics (\$6.07)
- Improve intersections (\$5.93)
- Implement Complete Streets design (\$5.90)
- Widen existing roads (\$5.87)
- Install medians to improve safety (\$4.00)
- Install roundabouts to improve traffic flow (\$3.87)

Figure 7: Desired Transportation Funding Categories/Levels



## Community Survey #2 (MetroQuest Online)

A MetroQuest online survey ([click here to review the survey](#)) was conducted between August 19, 2024, and September 15, 2024. The survey asked residents to provide input on specific projects—be they roadway, freight, transit, or bicycle/pedestrian. A select number of projects were identified based upon their preliminary scoring, including public input from the community survey. The survey also included a hypothetical transportation funding/budget exercise that gave respondents the opportunity to indicate the type of transportation investments on which they would spend money.

In total, 281 respondents completed this self-select survey. Figure 8 displays the survey landing page. Figure 9 displays one of the Facebook advertisements used as outreach, along with direct emailing. Figure 10 displays screenshots of the three primary survey activity pages.

Figure 8: MetroQuest Landing Page



Figure 9: Survey Facebook Advertisement

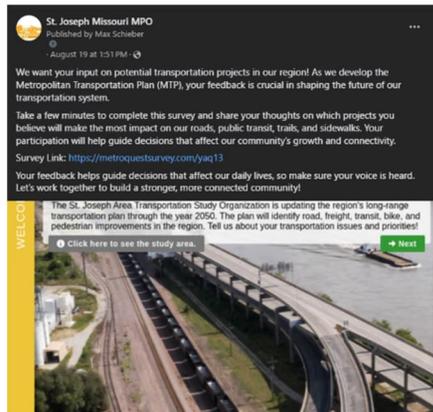
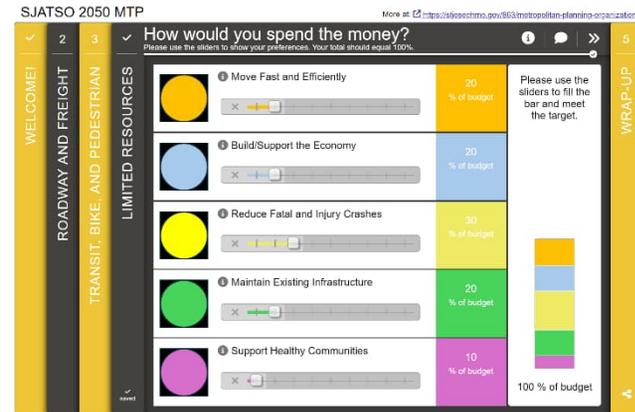
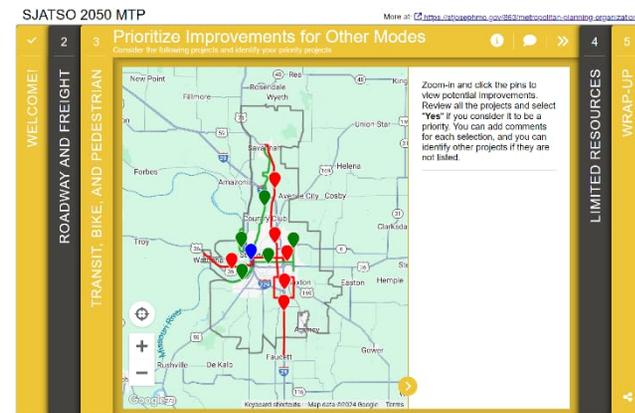
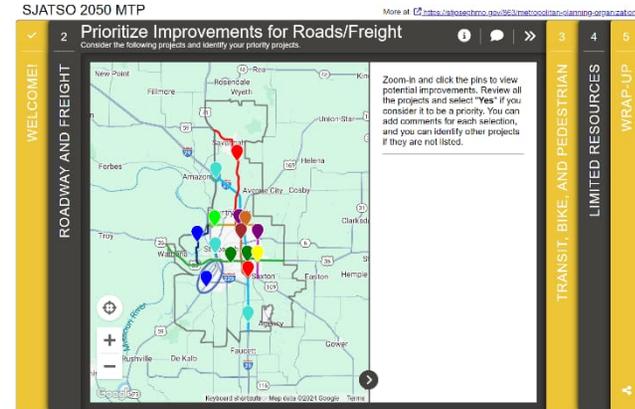


Figure 10: MetroQuest Survey Pages



## Multimodal Project Selection

The survey results related to the multimodal project selection, for roadways/freight and for bicycle/pedestrian/transit, are provided in the *Project Evaluation* chapter (Chapter 7). A brief overview is provided in the following subsections.

### Roadways/Freight Priority Projects

Addressing the Interstate 299 (I-229) Double-Decker Bridge was identified as the top priority. This is the same priority, with very similar responses, as identified in the 2045 MTP MetroQuest survey.

Four of the top five priorities remained the same from the previous MTP survey, with the exception of the US Highway (US) 59 and Port/Freight Access moving into the top five. While the reasoning for this is unclear, it is possible that survey respondents have connected the I-229 redesign project and access to the port/industrial area, as the public has noted concerns regarding how the movement of freight (trucks and rail) will be impacted by an at-grade redesign of I-229.

### Bicycle/Pedestrian/Transit Priority Projects

Support for the redevelopment of the riverfront was identified as the top priority. This is the same priority from the previous MTP survey, with a slightly fewer number supporting this as priority (79 vs. 104 from the last MTP survey).

Four of the top five priorities remained the same from the 2019 survey. Enhance university mobility services moved into the top five while providing transit service to Kansas City dropped out of the top five but remained a priority for the majority of survey respondents.

## Transportation Funding Priorities

The survey included a hypothetical transportation funding/budget exercise that gave respondents the ability to allocate a hypothetical \$100, in \$10 increments, across the following investment categories:

- Build/Support the Economy
- Maintain Existing Infrastructure
- Move Fast and Efficiently
- Reduce Fatal and Injury Crashes
- Support Healthy Communities

Figure 11 shows the average response by investment category. The highest response was for investing in maintaining the existing infrastructure, with an average of 2.62. Building/supporting the economy was second, at an average of 2.16, and reducing fatal and serious injury crashes averaged 2.02.

Figure 11: Funding Allocation Averages

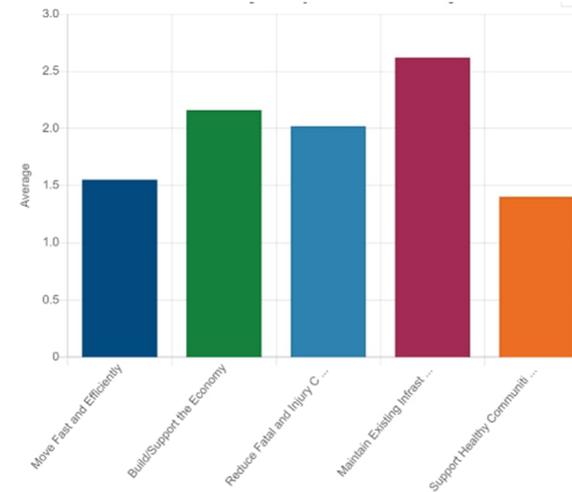
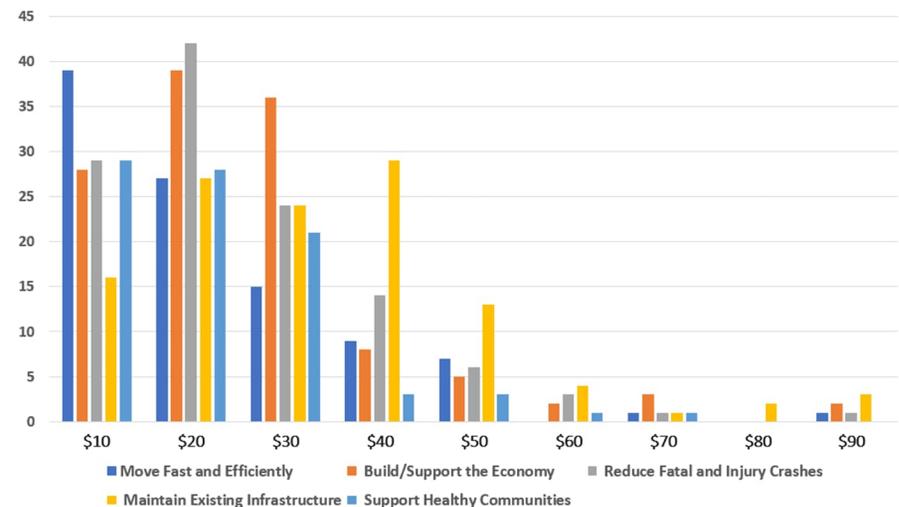


Figure 12 summarizes the overall budget allocation results. As shown, a high percentage of respondents spent between \$30 and \$50 on maintaining existing infrastructure.

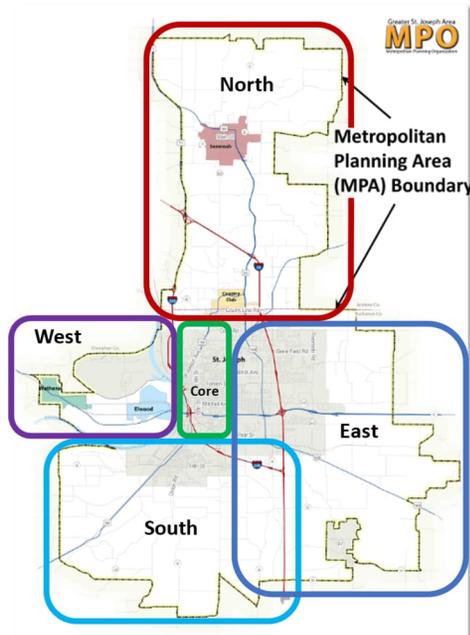
Figure 12: Funding Allocation, by Investment Category



## Stakeholder Input/Sector Workshops

Stakeholder input was obtained through the study development process. This included sector workshops conducted in September 2024 to confirm current and future year mobility and infrastructure needs, and top projects/transportation priorities identified through the technical analysis and public and stakeholder engagement process. The MPA was divided into four sectors: north, south, east, and west (Figure 13). The workshops focused on the issues/projects within each sector, as well as how each sector connects to the St. Joseph downtown/core area, and more broadly to the region. In addition to discussing multimodal transportation issues, the workshops provided an opportunity to discuss future population and employment growth areas and land use issues. Table 1 summarizes the sector themes identified for the 2050 MTP.

Figure 13: SJATSO MPA Sector Workshops



NOTE: The sector boundaries are approximate and were identified to inform the workshop discussions.

Table 1: Sector Workshop Key Themes

North	East
<ul style="list-style-type: none"> <li>• Maintain/upgrade existing roads.</li> <li>• School districts are rapidly growing. Some safety concerns were noted in Country Club (these are being looked into).</li> <li>• Safety concerns, specifically the I-29/229/71 interchange (the Missouri Department of Transportation [MoDOT] has a ramp improvement planned).</li> <li>• Support for rail-to-trails connection to the St. Joseph urbanized area; however, lack funding for implementation.</li> <li>• OATS is adding another day of service to Savannah due to increased demand.</li> <li>• Need more sidewalks throughout the area, increase mobility for low-income individuals who rely on walking.</li> <li>• Cook Road improvements were seen as helping traffic in the north sector.</li> <li>• Long-term housing development was identified in Country Club.</li> </ul>	<ul style="list-style-type: none"> <li>• Belt Highway remains a focus area to improve safety and operations.</li> <li>• With new transit service on the Belt, there is a need to add more sidewalks.</li> <li>• Consider potential long-term options to enhance I-29 and enhance connections to Riverside (Route AC).</li> <li>• Focus remains on improving infrastructure and traffic operations:                         <ul style="list-style-type: none"> <li>– Cook Road Improvements (accommodate development, important east-west connectivity)</li> <li>– I-29 @ US 169 (heavy truck traffic)</li> <li>– US 36 @ Riverside (bridge, capacity)</li> <li>– I-29 @ US 36 (freight impacts)</li> </ul> </li> <li>• Create “Gateway” to city at Frederick Avenue interchange area.</li> <li>• Continue to enhance bicycle connections from MVSU to downtown.</li> <li>• Extend bicycle facilities along Route AC (Riverside).</li> </ul>
South	West
<ul style="list-style-type: none"> <li>• Improve circulation, access to industries in the Stockyards area:                         <ul style="list-style-type: none"> <li>– Enhance traffic flow and safety at the intersection of US 59 and Alabama.</li> <li>– Accommodate truck parking.</li> <li>– Concerns related to the proposed I-229 Double-Decker replacement.</li> </ul> </li> <li>• Address US 36 corridor issues:                         <ul style="list-style-type: none"> <li>– Safety, operational improvement</li> <li>– Maintenance of I-229/US 36/US 59 interchange</li> <li>– MoDOT to begin a statewide evaluation of corridor (county-by-county analysis)</li> </ul> </li> <li>• Enhance transportation alternatives:                         <ul style="list-style-type: none"> <li>– Reinstate late night bus service to area.</li> <li>– Develop Quad State Trails.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Enhance airport access:                         <ul style="list-style-type: none"> <li>– Discussed the potential benefits of a new river crossing</li> <li>– Second access (causeway) east of existing airport access on Kansas side</li> </ul> </li> <li>• Support future airport development:                         <ul style="list-style-type: none"> <li>– Missouri Air National Guard moving creates business development opportunity.</li> </ul> </li> <li>• Address US 36 corridor issues                         <ul style="list-style-type: none"> <li>– Maintenance of I-229/US 36/US 59 interchange</li> <li>– Safely accommodate traffic through Wathena (especially during major events)</li> </ul> </li> <li>• Improve bike/pedestrian facilities.</li> </ul>

## Public Open House

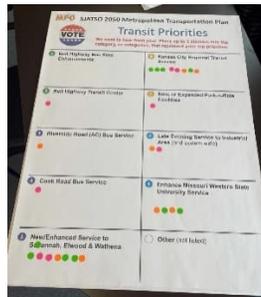
SIATSO conducted a public open house on October 29, 2024, at the St. Joseph City Hall (4:00 p.m. to 7:00 p.m.) in which 18 individuals attended. Participants were able to review regional transportation needs/opportunities and could indicate their top roadway/freight, transit, and active transportation preferences by placing stickers next to their highest priorities (see results in photos below). Two formal comments were submitted. Appendix A includes the open house materials and public comments.



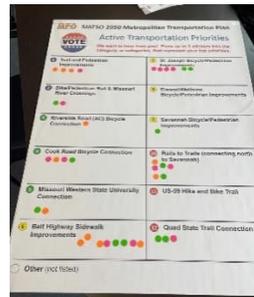
Public Open House Attendees



Roadway / Freight



Transit



Active Transportation

## Public Review/Comment Period

The SIATSO Coordinating Committee voted at the October 17, 2024, meeting to place a draft of the 2050 MTP out for public review. Per SIATSO Public Participation Plan requirements, the draft MTP was made available for a 45-day public review/comment period (October 18, 2024, to December 1, 2024). SIATSO advertised the draft MTP through the following.

- Facebook (45-day paid advertisement)—Reached 24,902 people, with 1,057 people clicking the link for additional information
- St. Joseph Downtown Public Library, 927 Felix Street (St. Joseph, Missouri)
- Rolling Hills Library-Savannah Branch, 514 West Main Street (Savannah, Missouri)
- Wathena City Library, 401 St. Joseph St. (Wathena, Kansas)
- *The St. Joseph News Press Paper*
- *The Kansas Chief*
- *The Savannah Reporter*
- City of St. Joseph website

Hard copies of the draft were available in St. Joseph City Hall, Room 202 and 204. In total, 142 public comments were received via Facebook. SIATSO staff reviewed the comments and determined the majority of the comments were related to the I-229 project and did not impact the 2050 MTP recommendations.

## Plan Approval

The SIATSO Technical Committee voted on November 21, 2024, to advance the 2050 MTP to the Coordinating Committee for formal adoption. The Coordinating Committee voted on December 12, 2024, to adopt the 2050 MTP.

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## Chapter 3. Goals and Objectives

### Metropolitan Transportation Plan Goals Overview

The MTP development process invites the SJATSO metropolitan area residents, businesses, and stakeholders to think big and long-term regarding the region's transportation future. Establishing the 2050 MTP goals and objectives frames the comprehensive, coordinated, and continuing transportation planning process that is critical to shaping the long-term vision of the SJATSO region.

SJATSO places significant importance on the input obtained through the MTP public outreach effort to not only confirm the goals and objectives but to directly impact the project evaluation to ensure the MTP projects truly address and reflect the region's long-term vision (see Appendix B for more details).

As with previous MTP updates, the SJATSO staff and MPO committees reviewed and adopted the goals and objectives summarized in Table 3. The high-level goals focus on the areas as shown in the graphic to the right. Ultimately, these goals support the overall SJATSO vision and mission.



## Federal Planning Requirements

The BIL sets the procedural requirements and provides funding for multimodal transportation planning. The law is incorporated in MTPs to ensure that planning activities align with federal guidelines and funding opportunities. The MTP supports the ten federal planning requirements as summarized in Figure 14.

Figure 14: Federal Planning Requirements



## Alignment with Statewide Long-Range Transportation Plans

As a bi-state MPO, SJATSO strives to develop an MTP that is consistent with the MoDOT and Kansas Department of Transportation (KDOT) Statewide Long-Range Transportation Plan (SLRTP) goals, policies, and multimodal strategies. The most recent MoDOT SLRTP was completed in 2018 and the most recent KDOT SLRTP in 2021. Both incorporate extensive input from the public and stakeholders to inform the planning and decision-making process. The following subsection summarizes the MoDOT and KDOT SLRTP goals, which are reflected in the SJATSO 2050 MTP goals. Table 2 summarizes the current MoDOT and KDOT SLRTP goals.

Table 2: MoDOT and KDOT SLRTP Goals



**MoDOT Statewide LRTP Goals**

- 1) Take care of the transportation system and services we enjoy today.
- 2) Keep all travelers safe—no matter the mode of transportation.
- 3) Invest in projects that spur economic growth and create jobs.
- 4) Give Missourians better transportation choices.
- 5) Improve reliability and reduce congestion on Missouri's transportation system.

**KDOT Statewide LRTP Goals**

- 1) **Safety and Security** - Enhance the safety and security of the transportation system for all users and workers.
- 2) **Transportation System Management** - Maximize performance of the existing system by investing in transportation choices and intelligent transportation systems.
- 3) **Asset Preservation** - Address risks and maintain assets through investments that provide high-value returns and make the best use of limited funds.
- 4) **Freight and Economic Vitality** - Improve reliability and increase flexibility for cost-efficient movement of people, goods, and information to strengthen the Kansas economy.
- 5) **Stewardship** - Continuously improve the quality of the transportation system and surrounding communities and the natural and historic environment through strong partnerships and focused, lower cost, and higher value improvements that avoid or minimize adverse impacts
- 6) **Workforce** - Get the best from our workforce by attracting and retaining talent, modeling diversity, supporting professional development, and inspiring action.

## MTP 2050 Goals and Objectives

Table 3 summarizes the 2050 MTP goals and objectives as adopted by the SJATSO Coordinating Committee:

Table 3: MTP 2050 Goals and Objectives

Area	Goal	Objectives
Safety	<i>Provide a safer transportation system that balances the travel needs of all users, including the general public and area businesses.</i>	<ol style="list-style-type: none"> <li>1. Improve travel safety within the region by prioritizing transportation improvements that reduce fatalities and serious injuries.</li> <li>2. Incorporate Complete Streets principles into project designs to accommodate all users of all abilities.</li> <li>3. Reduce modal conflicts to enhance safety in the movement of people and goods.</li> <li>4. Utilize innovative design strategies to reduce crash exposure and improve flow along major road segments and intersections.</li> </ol>
Economic Vitality	<i>Ensure the St. Joseph metropolitan area's economic growth and competitiveness by providing a safe, secure, reliable, and efficient transportation system.</i>	<ol style="list-style-type: none"> <li>1. Improve the operating efficiency of the existing infrastructure and transportation assets.</li> <li>2. Reduce travel time, delays, and traffic hazards.</li> <li>3. Reduce the amount of vehicle miles traveled on congested roads.</li> <li>4. Foster strategies that reduce the growth in peak period travel.</li> </ol>
Regionalism	<i>Support local and regional transportation and land use planning needs.</i>	<ol style="list-style-type: none"> <li>1. Promote the efficient movement of people and goods by linking the various modes of transportation.</li> <li>2. Promote connections between transportation modes that support the effective shipment of freight.</li> <li>3. Preserve and develop corridors for future transportation systems.</li> <li>4. Ensure compatibility with the transportation facilities of adjacent municipalities and counties.</li> <li>5. Support statewide transportation initiatives that affect the St. Joseph Metropolitan area.</li> <li>6. Utilize mutual aid agreements to help address transportation needs</li> </ol>
Accessibility	<i>Promote alternative transportation options for area residents and employees that are reliable and accessible to all users.</i>	<ol style="list-style-type: none"> <li>1. Enhance transit services by providing more reliable service, improved passenger information, and additional routes to communities outside of the city core.</li> <li>2. Establish regional transit services by providing intraregional service to metropolitan area communities and interregional service to areas outside of the metropolitan area.</li> <li>3. Encourage the development of Complete Streets and accommodate the transportation needs of all users, including vehicular traffic, transit, bikes, and pedestrians.</li> <li>4. Strengthen bicycle and pedestrian access to roadways and transit facilities.</li> <li>5. Promote transit service to major activity and employment centers.</li> <li>6. Place a high priority on serving the needs of transportation disadvantaged persons, including the elderly and low-income residents.</li> </ol>

Area	Goal	Objectives
Funding	<i>Develop innovative funding sources and strategies for transportation improvements.</i>	<ol style="list-style-type: none"> <li>1. Ensure adequate funding to preserve and maintain the integrity of the existing transportation infrastructure.</li> <li>2. Develop transportation investment decisions that maximize the full benefits of the system while considering the full costs.</li> <li>3. Give priority to funding those transportation needs identified in state, regional, and local transportation system plans.</li> <li>4. Consider the funding implications of federal and state actions on the regional transportation system and services.</li> <li>5. Promote public/private partnerships in addressing transportation needs.</li> </ol>
Transportation / Land Use	<i>Improve transportation and land use coordination.</i>	<ol style="list-style-type: none"> <li>1. Strengthen the connection between land use and transportation planning to develop a more efficient transportation system.</li> <li>2. Encourage the concentration of employment and activity sites within transit corridors to maximize transportation efficiency.</li> <li>3. Emphasize the importance of access management in preserving corridor capacity and enhancing travel safety.</li> <li>4. Focus transportation system improvements to support and promote tourism.</li> </ol>
Environmental Protection	<i>Protect the environment, promote energy conservation, increase safety and improve the quality of life.</i>	<ol style="list-style-type: none"> <li>1. Avoid disproportionate adverse impacts on low-income and minority communities</li> <li>2. Support alternative transportation modes to improve air quality and community health.</li> <li>3. Encourage use of alternative fuels and technologies in motor vehicle, fleet, and transit application.</li> <li>4. Preserve and enhance scenic views of and access to historic, cultural, and other attractive features.</li> <li>5. Minimize impacts to the environment by avoiding sensitive environmental features or by identifying relevant mitigation measures early in corridor development.</li> </ol>
System Management	<i>Preserve and maintain the existing transportation system.</i>	<ol style="list-style-type: none"> <li>1. Encourage new programs designed to preserve and maintain the regional infrastructure</li> <li>2. Utilize Intelligent Transportation System measures to maximize existing transportation system resources.</li> <li>3. Utilize transportation system management improvements when more cost effective than facility expansion.</li> <li>4. Manage access along corridors to preserve corridor capacity and travel safety.</li> </ol>
Public Involvement	<i>Support community involvement in the transportation planning process.</i>	<ol style="list-style-type: none"> <li>1. Inform the public about transportation issues in a clear and concise manner.</li> <li>2. Involve the public in a number of ways—early and often—to encourage their participation in the planning process.</li> <li>3. Conduct the plan in an inclusive manner to ensure the process is fair and open to all individuals.</li> <li>4. Ensure that plans respond to the diversity of community needs.</li> <li>5. Encourage local government agencies to formally adopt the MTP recommendations.</li> </ol>

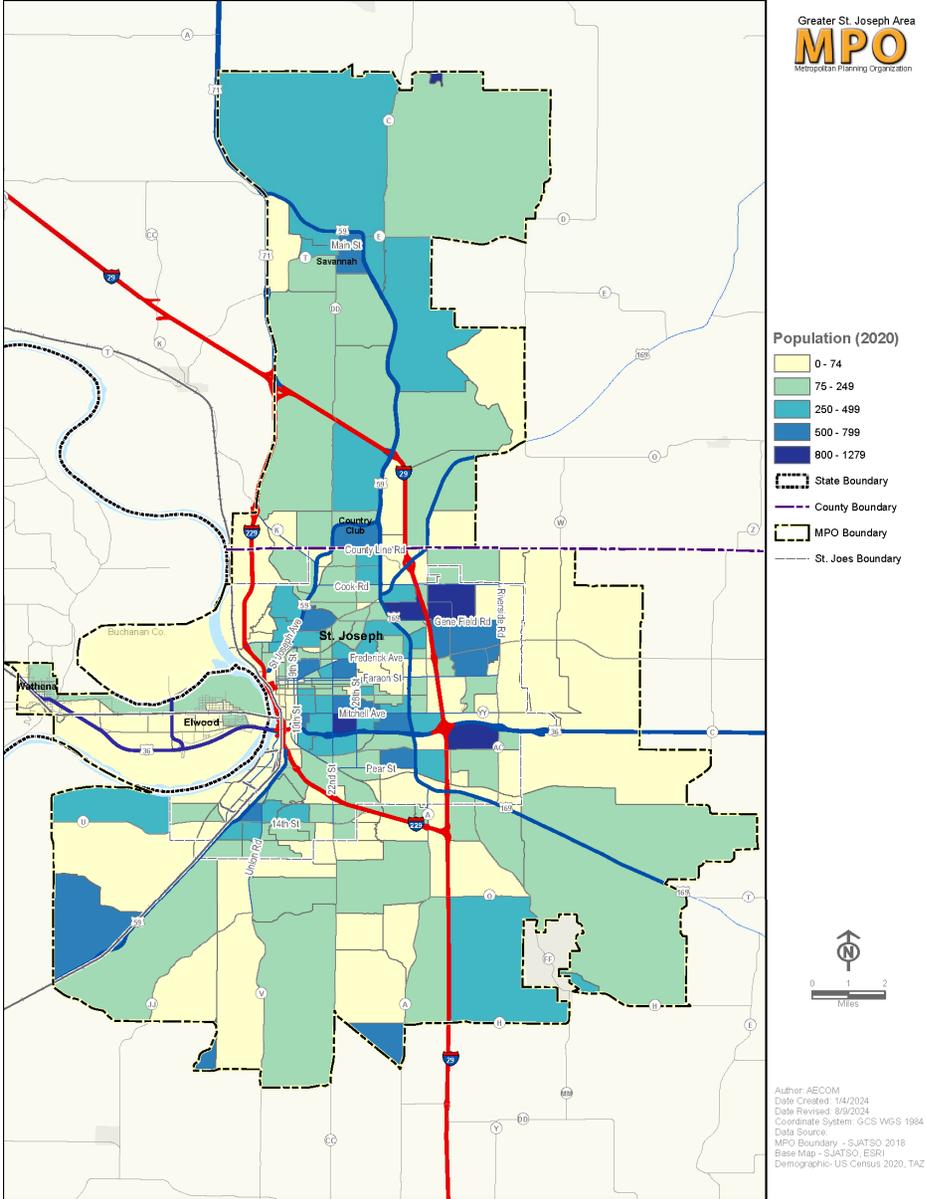
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# Chapter 4. Demographic Trends

## Developing Future Year Projections

To effectively plan for the region, SJATSO reviewed recent demographic data and historical trends to support the development of year 2050 socioeconomic (SE) projections. The 2050 SE projections focus on population and employment within the SJATSO MPA to better understand potential impacts on future transportation and mobility issues throughout the region. The following summarizes key SE data—historic, present, and future projections—for the region.

Appendix C provides details on the existing regional profile, including population, housing, employment, income, and education figures. It further discusses the year 2050 population and employment projections.



## Population

Between 1990 and 2010, the SJATSO region experienced steady population growth. The three counties—Buchanan, Missouri; Andrew, Missouri; and Doniphan, Kansas—added approximately 8,600 people (approximately 4,900 between 1990 and 2000, and approximately 3,700 between 2000 and 2010). Between 2010 and 2020, the three-county population fell slightly by approximately 600 people. Figure 15 shows the historic growth trend dating back to 1990. Between 2010 and 2020, Buchanan and Doniphan counties both experienced a decline in population. Buchanan County represented the largest decline, at approximately 4,400 people. Andrew County continued to experience an increase in population, adding approximately 850 residents, or a 5 percent increase. Figure 16 displays the comparative growth rates across various geographic locations and time periods.

Figure 15: Historical Population Trends (1990 to 2020)

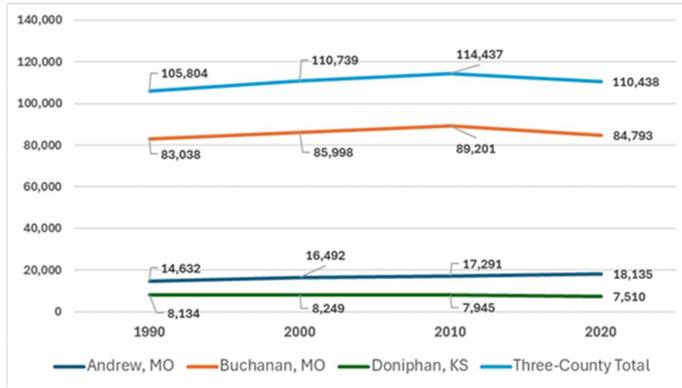


Figure 16: Comparative Growth Rates

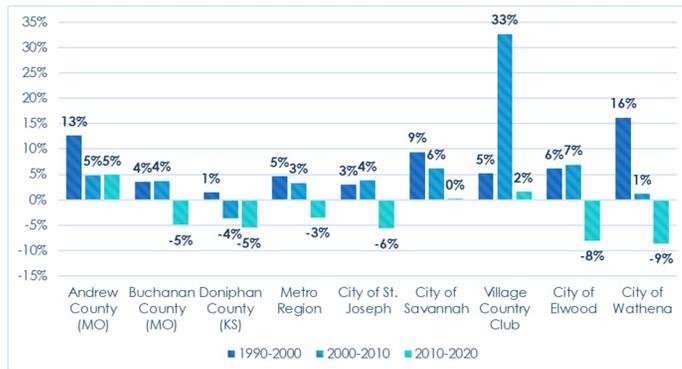
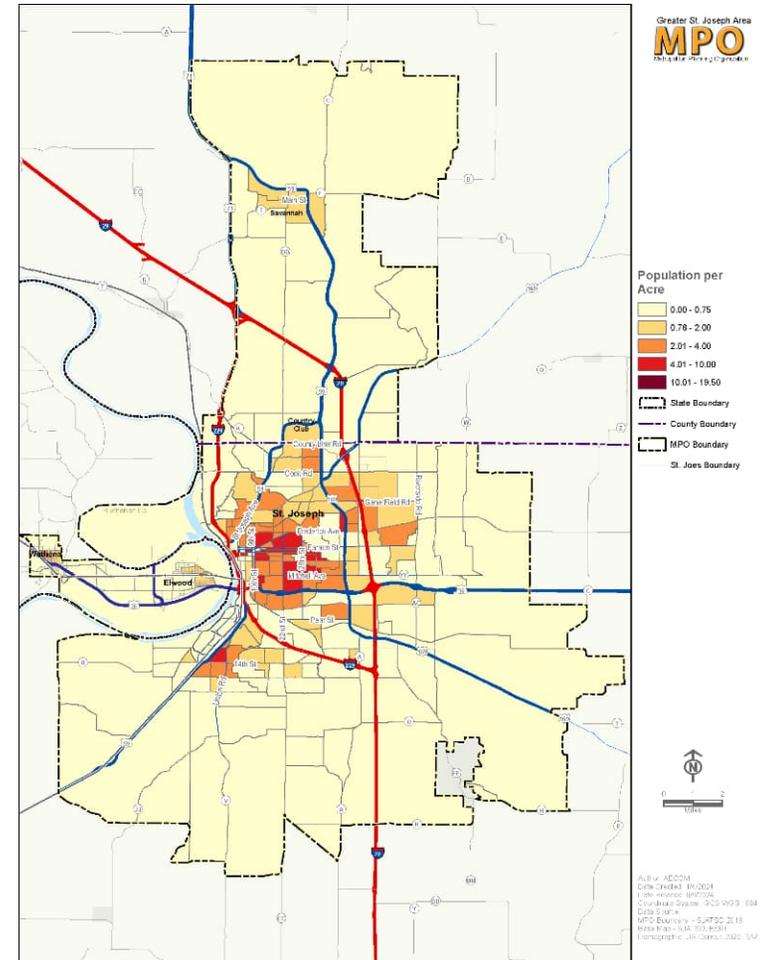


Figure 17 displays the population density within the SJATSO MPA. The highest population density is observed in the central core of the City of St. Joseph. Growth has primarily been, and continues to occur, in the northern part of Buchanan and the southern part of Andrew County. As shown in the previous chart, the Village of County Club saw a 33 percent increase in population between 2010 and 2020. This represents the highest percentage increase observed within the SJATSO region in reviewing the historical data.

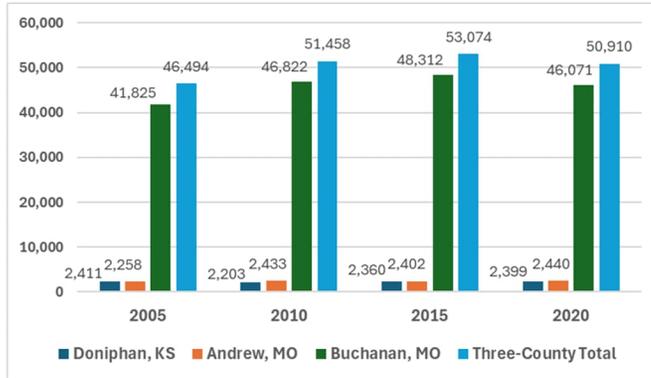
Figure 17: Population Density (2020)



## Employment

Similar to population, the SJATSO region experienced steady employment growth between 2005 and 2015. The three counties—Buchanan, Missouri; Andrew, Missouri; and Doniphan, Kansas—added approximately 6,500 jobs (approximately 5,000 between 2005 and 2010, and approximately 1,500 between 2010 and 2015). Figure 18 displays the employment figures for the SJATSO region. As shown, Buchanan County accounts for over 90 percent of the region's employment total.

Figure 18: Historical Employment Trends (2005 to 2020)



Between 2015 and 2020, the region lost jobs, falling from approximately 53,000 jobs in 2015 to 50,900 jobs in 2020 (a decline of 2,100 jobs). As stated previously, the COVID-19 pandemic is primarily responsible for this job loss.

## Place of Work

Figure 19 shows the distribution of where Andrew, Buchanan, and Doniphan County residents are employed. Figure 20 shows the distribution of jobs with the region. U.S. Census data indicate that approximately 71 percent percent of the three-county area workers are employed in Andrew, Buchanan, and Doniphan counties, while the remainder work in other Missouri or Kansas counties.

Most of Andrew County's workforce works in Buchanan County (57 percent), and 13 percent both live and work in Andrew County. The majority of Buchanan County's workforce (69 percent) stays within the county for work. Doniphan County's workforce is split between working in Buchanan County (32 percent) and Doniphan County (27 percent). Doniphan County also has 41 percent of its workforce working in other counties, a far higher percentage than Andrew or Buchanan counties.

Figure 19: Place of Work

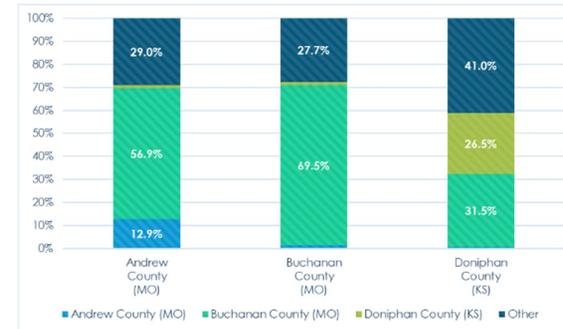
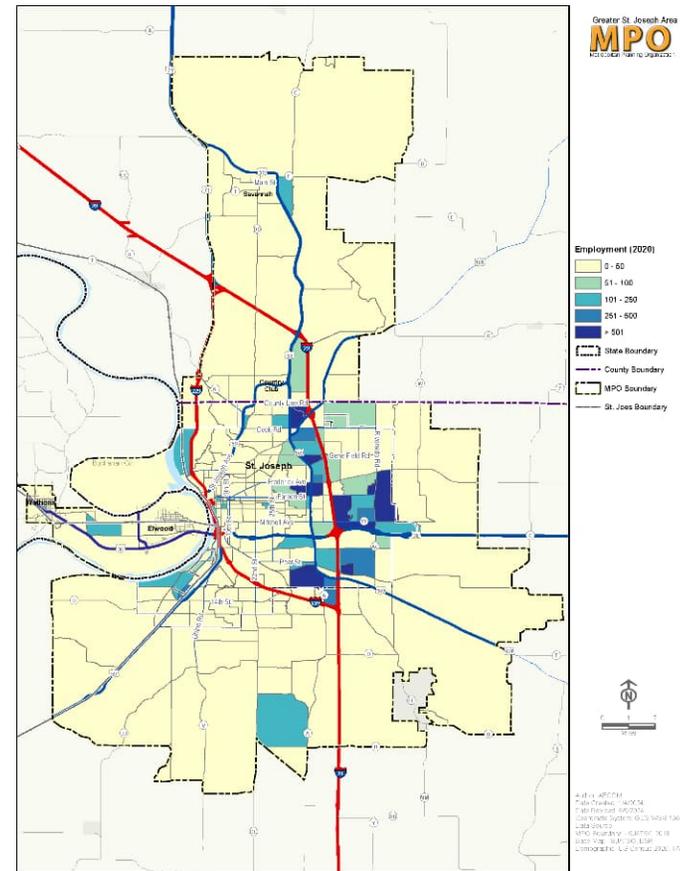


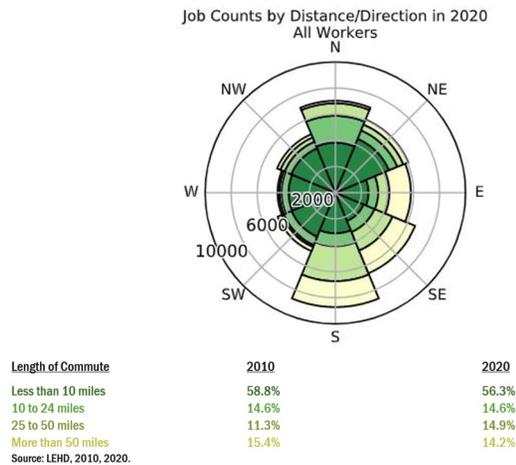
Figure 20: Regional Employment (2020)



## Commute to Work

Among workers residing in the three-county area, just over 56 percent worked within 10 miles of their home in 2020, down slightly from 2010. In contrast, the share of workers traveling 25 to 50 miles has risen, from about 11 percent to nearly 15 percent. There appear to be slightly fewer workers commuting more than 50 miles. The vast majority of long-distance commuters are traveling to the south and east, as seen in Figure 21. In addition, the COVID-19 pandemic has had a significant impact on commuting patterns, as many employees now work at home on a part-time basis or in some cases, a full-time basis. Slightly over 7 percent of SJATSO area workers are employed in either Kansas City, Missouri, or Kansas City, Kansas. Both of these percentages represent slight declines from 2010, but the changes are extremely slight.

Figure 21: Place of Work



## Future Projections

The analysis of historical and recent population and employment data play a large role in shaping the 2050 MTP SE projections. As documented in this chapter, the three-county area of the SJATSO MPA declined to approximately 110,400 in 2020, down 4,000 from the 2010 population. By comparison, the 2045 MTP projected a 2020 population of approximately 118,600. Similarly, employment fell by 2,100 jobs between 2015 and 2020 to a total of approximately 51,900. By comparison, this was consistent with the 2045 MTP, which projected a 2020 estimate of approximately 52,000 jobs.

In speaking with area stakeholders, the recent trend of losing population and employment is accurate; however, there have been some questions regarding the accuracy of the 2020 U.S. Census, as it occurred during the COVID-19 pandemic. Furthermore, and the more important question, how will the pandemic impact long-term population and employment growth? Specifically, will telecommuting continue to remain an option, and if so, how might this impact an area such as the SJATSO region? For example, increased telecommuting might encourage people to move to the region where cost of living is more affordable than larger urban areas. Or, perhaps residents might only need to commute into Kansas City one or two times per week, as opposed to pre-pandemic, when most jobs were in the office 5 days per week.

## 2050 Population Projections

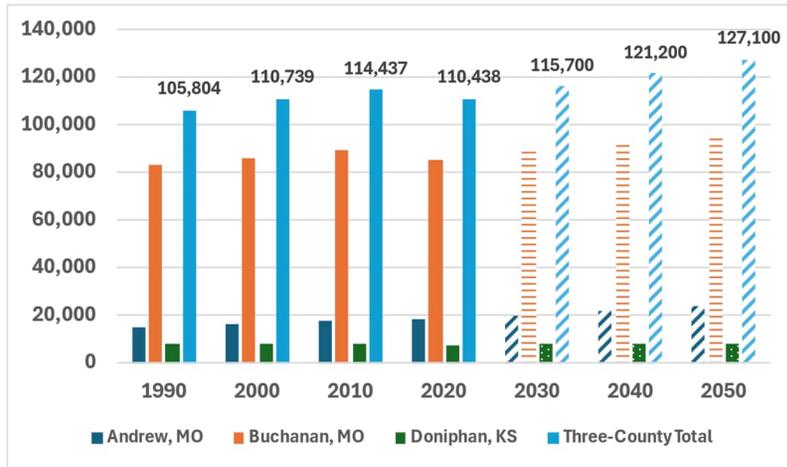
Following a review of the historical and recent U.S. Census data and the 2045 MTP population projections, it was determined that the previous 2045 MTP population target of approximately 127,000 was a realistic target for the three-county 2050 population projection. Historical growth rates dating back to 1990 were reviewed and the recent COVID-19 pandemic impacts were taken into consideration to develop growth rates for the decades from 2020 to 2050. Based on this analysis, a growth rate per decade of 4 percent was applied to Buchanan County, a growth rate of approximately 10 percent was applied to Andrew County, and a growth rate of approximately 3 percent was applied to Doniphan County.

As shown in Figure 22, year 2050 population projections reflect a 15 percent increase in population between 2020 and 2050, or a 2050 population of 127,100. This equates to nearly 16,700 new residents in the region by 2050, or approximately a 5 percent increase in population each decade through 2050. Furthermore, this is consistent with the higher growth rates observed between 1990 and 2010.



New Construction along North Village Drive

Figure 22: 2050 Population Projections (3-County Area)



SOURCE: U.S. Census data; modified 2045 MTP SE data.

Figure 23: 2050 Employment Projections (3-County Area)



SOURCE: U.S. Census LEHD; modified 2045 MTP SE data.

## 2050 Employment Projections

Following a review of the historical U.S. Census Longitudinal Employer-Household Dynamics (LEHD) data, and a review of prior MTP employment projections, it was determined that the 2045 MTP employment projections were generally on track to hit future year projections. Historical growth rates dating back to 2010 were reviewed and recent COVID-19 pandemic impacts were considered in developing the 2020 to 2050 growth rates. The previous MTP had a 2045 three-county employment projection of 57,000. Given the recent drop in employment from the 2020 U.S. Census numbers, it was determined to use the 2045 target as the new 2050 employment target. In doing so, the 2050 projected employment is 56,500.

As shown in Figure 23, year 2050 employment projections reflect a 11 percent increase in population between 2020 and 2050 for the three-county area. This equates to approximately 5,600 new jobs in the region by 2050.

## Potential Growth-Related Transportation/Mobility Impacts

The aging population across the country is projected to grow significantly through the year 2050. As the Baby Boomer generation continues to age, the proportion of residents aged 65 and older will increase, leading to a higher demand for age-friendly infrastructure and services. This demographic shift could have profound implications on transportation within the region. Area stakeholders have already talked about the increasing transportation needs to access medical facilities in the Kansas City area, something that could continue to grow over the years.

Infrastructure improvements, such as better-maintained sidewalks, more pedestrian crossings, and age-friendly urban planning, will be crucial to ensure that older adults can move safely and independently. Addressing these transportation issues proactively will be essential to support the aging population and maintain their quality of life. In addition, these transportation investments are good for transportation users of all ages and abilities.

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## Chapter 5. Needs and Opportunities

A review of existing conditions establishes a foundation for identifying transportation and mobility challenges facing the region. Key challenges, needs, and opportunities are highlighted in this chapter. Further details regarding existing conditions are provided in Appendix D.

### Identifying Needs and Opportunities

Identifying future needs and opportunities involves a combination of a multimodal technical analysis, consideration of growth trends, and input from local agencies, stakeholders, and the public. The 2050 MTP needs and opportunities build upon the analysis and recommendations from the 2045 MTP and takes into consideration recent and ongoing planning studies that could impact future decision-making, transportation investments, and related policy decisions. This assessment also begins to identify potential multimodal transportation projects that are further evaluated as part of the MTP development process to determine how well they support the SJATSO goals and objectives.

Further details regarding needs, opportunities, and potential projects are provided in Appendix E.



## Multimodal Challenges

### Maintenance and Preservation

Like many regions across the country, SJATSO has experienced significant increases in the cost of maintaining existing infrastructure and critical transportation assets. In addition, area residents recognize the need to maintain/preserve transportation infrastructure, having identified this topic as the highest priority in recent 2050 MTP surveys as well as 2045 MTP surveys.

### Network Connectivity Gaps

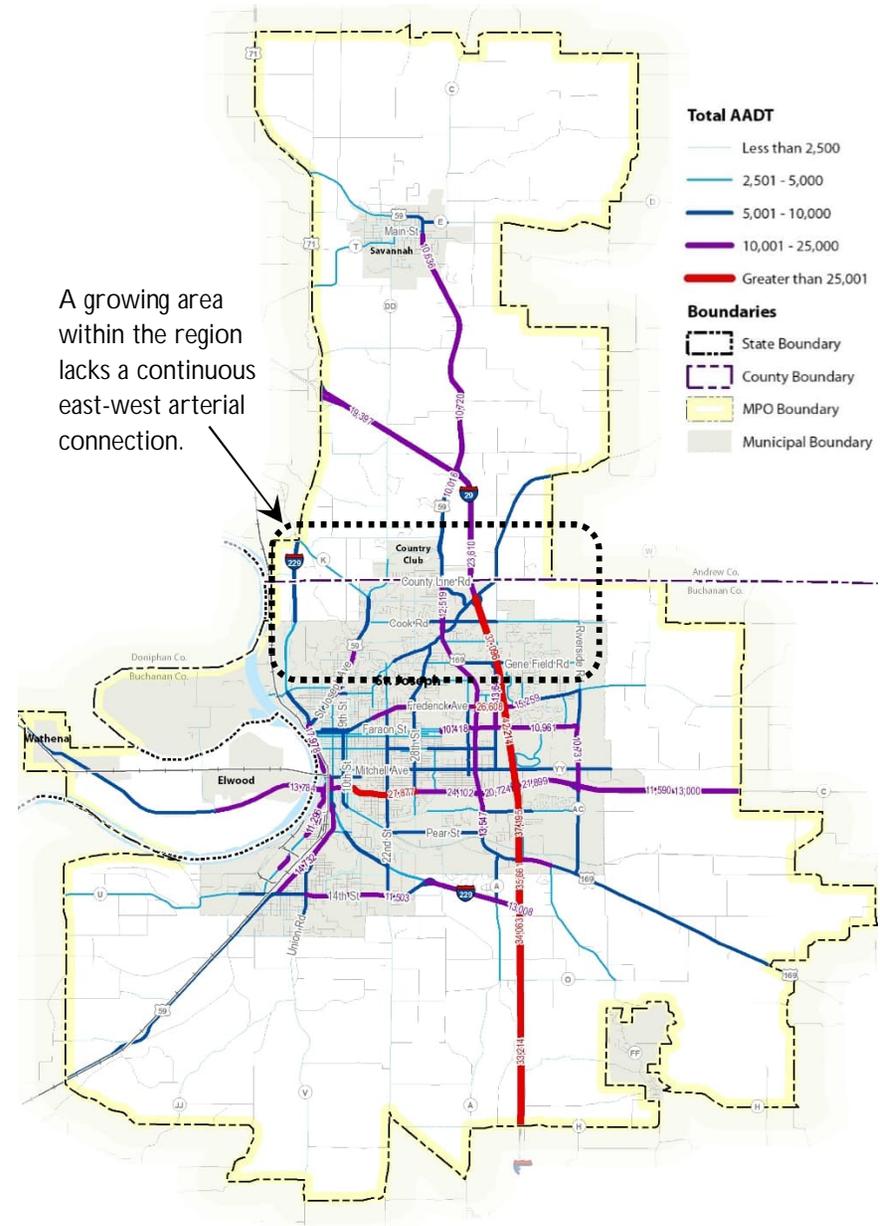
For the regional transportation network to work effectively, roadway facility types must balance a combination of speed and access to nearby land uses and key travel destinations. Gaps in the roadway network—or existing roadways that are not designed for the speed and access required—create long-term connectivity and accessibility issues when the roadway infrastructure does not keep pace with development. Figure 24 highlights an area of the region that has ongoing development and growing traffic volumes.

The northern portion of Buchanan County and southern portion of Andrew County lacks a continuous east-west arterial connecting I-229 to the Riverside Road corridor. Previous MTP planning efforts have identified Cook Road as priority roadway improvement that would fill this gap. In addition to moving vehicles—both private cars and buses as part of a new transit route—the improvement of Cook Road has long been envisioned as a boulevard design that would also accommodate bicyclists and pedestrians. Extending east, Cook Road would tie into Riverside Road and transition to a north-south active transportation route that would connect to segments of an existing trail system.

### Operational Concerns

The Belt Highway and US 169 is another location to monitor. This area has major commercial development activity that is still ongoing. The public and stakeholders consistently identify the Belt Highway as an area with peak-hour capacity concerns. Given it is already has five lanes, adding capacity is not an option; however, the corridor could benefit from operational improvements like signal timing/coordination, traffic enforcement technology, and enhanced sidewalks. Closing the gaps in the pedestrian network supports the use of active transportation modes in the corridor, including enhancing access to a new north-south transit route along the Belt Highway that recently started operation.

Figure 24: Network Connectivity and Volumes



## Regional Freight Movement

Aside from moving people, the SJATSO transportation network plays a critical role in moving goods within and through the region. **Truck traffic** is vital to supporting economic activity; however, it contributes to **congestion and wear-and-tear** on area roadways. The main facilities that serve truck traffic in the MPA include I-29, I-229, US 36, US 59, and Highway 71. The Stockyards industrial area is a key intermodal facility serving truck, water (port), and rail traffic. Commercial vehicles along I-29 continue to increase from Kansas City up and through the SJATSO region. In addition, there is concern regarding how planned improvements to the I-229 Double-Decker Bridge will impact traffic, and specifically freight movement, through downtown St. Joseph. Public and stakeholder input demonstrates that there is an understanding that I-229 needs to be addressed; however, there is still a concern regarding the proposed solution (see page 27) and how the redesign might negatively impact regional freight movements.

## Enhanced Transit Services and Hours of Operation

*Go St. Joe* provides transit service within the St. Joseph urbanized area. The system consists of eight bus routes radiating from the transit station at the southern edge of downtown (Figure 25). In June 2022, a Transit Development Plan (TDP) introduced demand response service to the industrial area to enhance fixed-route service. The demand response is in addition to the long-standing route deviation service. In addition, headways were improved from 60 minutes to 30 minutes; however, due in large part to a driver shortage, it was necessary to reinstate the 60-minute headways. With that said, it is a priority of *Go St. Joe* to return to 30-minute headways toward the end of this year or early next year.

While urbanized area coverage is solid, **outlying areas of the MPA could benefit from additional public transportation service** to connect to jobs, services, and other amenities. OATS indicated that they are planning to add an additional day of service to Savannah. Additionally, the **Belt Highway** now has a north-south bus route, which has enhanced overall service; however, there is a need to improve first- and last-mile connections to bus stops.

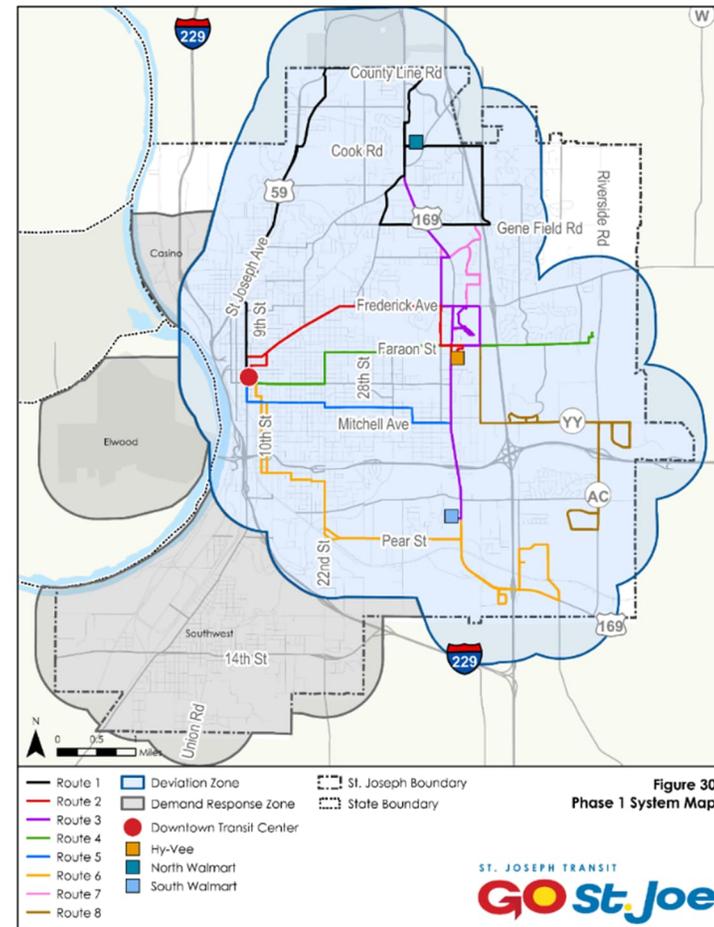
## Coordinated Improvements / Planning Studies

Recent improvements in Downtown St. Joseph demonstrate the potential for redevelopment to spur economic development. The **Riverfront/downtown redevelopment** process highlights the importance of coordinating future year transportation investments with future downtown development plans.

The **I-229 Double-Decker redesign** also provides an opportunity to reimagine the future of the Missouri River.

In addition, the I-29 corridor and US 36 corridor serve as the major arteries to access the SJATSO MPA. As such, it is important that these critical corridors continue to be evaluated for opportunities to address future safety and operations concerns. MoDOT has indicated that they will begin a statewide study of the US 36 corridor, and SJATSO will be conducting a study to evaluate the potential break-in access (potential new interchange) along I-29 at Faraon Street.

Figure 25: *Go St. Joe* Transit System Enhancements



## Roadway/Freight Opportunities

Roadways accommodate the highest percentage of travel within the region, and providing a safe, efficient, and effective multimodal network is critical to support the region's economy, quality of life, mobility, and social equity. In designing and improvement area roadways, it is important to consider the impacts on all transportation users, including truck (freight) movements, buses, bicycling, and pedestrians (sidewalks/crosswalks).

Descriptions of select key opportunities follow, and details on the roadway/freight opportunities shown in Figure 28 can be found in Appendix E.

The **Belt Highway** is a north-south principal arterial serving major commercial activities within the region. Generally speaking, the five-lane cross section provides sufficient capacity to accommodate the 20,000-plus daily vehicles that travel this corridor; however, some intersections along the Belt Highway experience delay (congestion) during peak travel times (i.e., a.m. and p.m. peak hours). Crash data shows this corridor having the highest number of incidents in the MPA over the past 5 years, consistent with analysis from previous MTPs. Furthermore, the public and stakeholders regularly identify the Belt Highway as a top safety concern to address. Finally, there are potential redevelopment/development plans that existing along the corridor that could result in increased traffic volumes.

The 2045 MTP planned for a north-south transit route that has since started operation in 2023. The 2050 MTP reinforces concerns raised in the 2045 MTP, mainly that operating transit service along the Belt Highway should require a greater emphasis on implementing sidewalk improvements to enhance pedestrian and bicycle safety, especially near bus stops that provide important first- and last-mile connections for pedestrians and bicyclists. In addition, a new transit center is being discussed along the Belt Highway, further reinforcing the need to enhance travel for vulnerable road users.



Northbound on Belt Highway (approaching the intersection of Beck Road)

The **Cook Road** corridor continues to experience residential and employment growth. In particular, the segment between the Belt Highway and I-29 continues to experience rapid commercial growth. A review of historic daily traffic volumes along the corridor shows a steady increase in traffic volumes, resulting in increased traffic delays/congestion. Consistent with previous MTP planning efforts, the corridor remains a priority to enhance east-west regional connectivity and strengthen the roadway functional classification system.

Improving this corridor has been part of the region's long-range vision for more than two decades. Part of the long-term concept includes improving the corridor from I-29 east toward Riverside Road; the City of St. Joseph is currently improving a portion of this segment. In addition, MoDOT is in the process of improving the I-29/Cook Road bridge, which was rated in "poor" condition in the 2045 MTP.

Another aspect of an improved Cook Road corridor involves an extension of Cook Road, beginning at US 59 and continuing west to connect to I-229 and tie into the riverfront area, potentially with a new interchange at I-229. While this has always been a long-term concept, the current plans to replace the I-229 Double-Decker Bridge with an at-grade arterial and decommission I-229 may make a west extension a lower priority.



Cook Road, westbound approaching Belt Highway



I-29, southbound approaching Cook Road

A more immediate need along Cook Road is to provide enhanced capacity and **geometric/design improvements at the intersection with US 59**. Recent field observations highlighted a heavy westbound left-turn movement from Cook Road onto US 59; however, it was observed that the left-turn lane was too short, which resulted in several left-turning vehicles missing the turn signal.

Finally, this corridor is viewed as a potential future active transportation link, and consistent with the Complete Streets policy, pedestrian and bicycle accommodations should be considered in the future planning and design of Cook Road improvements.



Addressing the I-229 elevated structure, or what is commonly referred to by locals as the **I-229 Double-Decker Bridge**, remains a top regional transportation priority. In May 2018, MoDOT started an Environmental Assessment (EA) that evaluated the potential long-term bridge maintenance and reconstruction options. While preliminary alternatives were being developed to address the long-term future of the facility, the EA identified approximately \$50 million in near-term maintenance/repairs. This consideration, along with the following subsections, led to a preferred alternative that replaces the elevated structure with an at-grade arterial roadway:

- The bridge is nearing the end of its expected life: the expected lifespan of the bridge is 50 years. The bridge is currently 40 years old.
- The bridge is rated in poor condition: despite ongoing maintenance, the bridge continues to deteriorate and is rated in poor condition—the equivalent to a C- grade.
- Current structural problems on the bridge will be difficult and costly to repair: if the bridge was rehabilitated, it would either need a second rehabilitation or a complete replacement in approximately 25 years, with an estimated cost around \$200 million.
- Traffic volumes do not support the need for the current bridge structure: the amount of traffic using the bridge does not require a four-lane, elevated structure. At the time the bridge was conceptualized, a higher volume of traffic was expected to travel I-229 than does today.
- The economic development of St. Joseph's downtown and riverfront is more challenging with the current bridge in place: the current bridge is not compatible with the City of St. Joseph's current vision for riverfront development and continued growth.



Photo Credit: HG Consult; I-229 EA Study

In Spring 2024, the EA document was finalized and a Recommended Preferred Alternative based on stakeholder and public feedback was presented to the FHWA. Figure 26 displays the preferred alternative. The EA document was approved and signed by the FHWA in July 2024. In August 2024, the Recommended Preferred Alternative and supporting documents were made available for public review, and a formal public hearing was held on August 15, 2024.

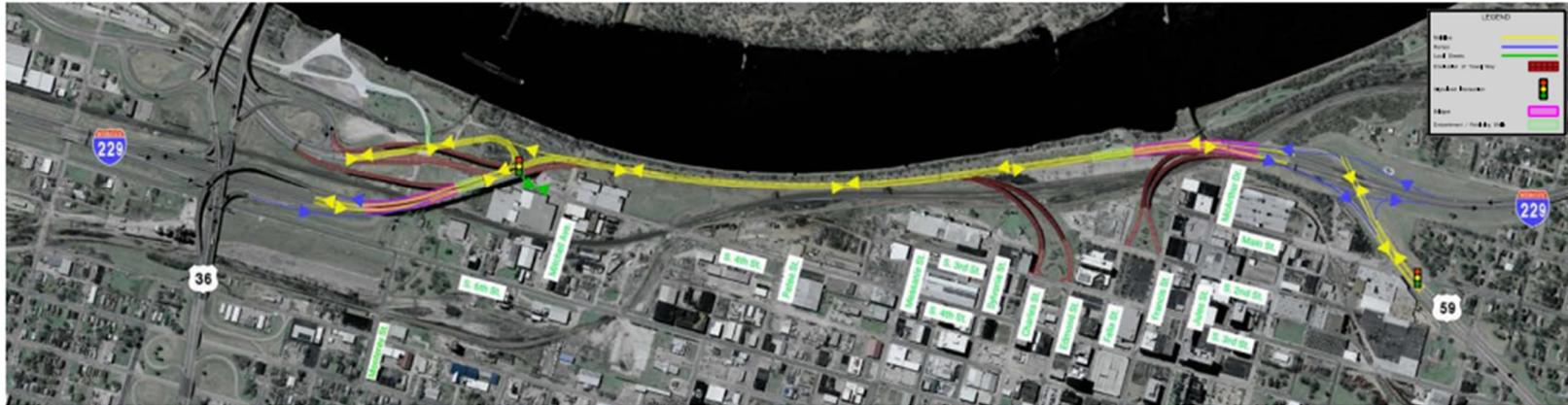
#### What is Next?

In fall 2024, the FHWA will consider the Recommended Preferred Alternative and issue a Finding of No Significant Impact (FONSI) or decide there is a need to develop an Environmental Impact Statement. If the FHWA issues a FONSI and SJATSO includes the Recommended Preferred Alternative in the Transportation Improvement Plan (TIP), then MoDOT will be able to move forward with the design process. Ultimately, the construction timeline will be determined by funding availability and priority of other major bridges around the state.

# Alternative D

Figure 26: I-229 EA Preferred Alternative

## EXISTING CORRIDOR



In this alternative the double-decker bridge is removed and replaced with a new four-lane arterial road constructed at-grade (elevated as necessary for compliance with floodplain and stormwater requirements) in generally the same location as the existing double-decker bridge between the railroad tracks and the Missouri River. This alternative would require de-designation of I-229 as interstate.



### PROS

- ▶ Additional access at St. Joseph Avenue.
- ▶ Provides better connectivity to the port and 4th Street at the south end of the project.
- ▶ Good travel times.
- ▶ Low impact to private property.
- ▶ Provides additional space downtown for development.
- ▶ No direct impacts to high-risk hazmat sites.

### CONS

- ▶ No direct access into downtown.
- ▶ Impedes potential riverfront development in the downtown.
- ▶ Additional traffic through 4th Street at-grade railroad crossing.
- ▶ Mostly built in the floodplain.
- ▶ North-end bridge impedes the view of the river along the riverfront.

**Recommendation:** This alternative is being recommended in its entirety.

**I-229 MOVING FORWARD**

**PREFERRED ALTERNATIVE**

The **I-29/US 169 interchange** (exit 44) is heavily utilized by trucks and passenger cars within the region. There are numerous truck facilities located within the interchange area, making this a popular destination to exit/enter I-29. Close interchange ramp spacing with US 169, along with a slow truck acceleration factor, contributes to travel delays (congestion), especially during a.m. and p.m. peak periods.



Heavy truck traffic (I-29 Northbound off-ramp), Close intersection spacing on US 169 (westbound at I-29 ramps)

The I-29 bridge structure is rated in fair condition; however, increasing volumes and truck activity could lead to higher congestion levels in the area, which could create a more immediate need for capacity improvements and potentially a faster replacement timeline. This bridge has been, and continues to be, listed on MoDOT's regionally significant projects, which is developed in consultation with the City of St. Joseph and SJATSO. As such, this interchange could potentially be eligible for future funding/programming should additional transportation funding become available.

The **Stockyards industrial area** is home to local and regional employers, including access to the St. Joseph Regional Port. US 59 and the Stockyards Expressway provide the primary access to the area. MO-752, connecting to I-229, is frequently utilized by trucks to access the industrial area. The large concentration of trucks in the area often results in trucks parking/waiting along area roadways. While designated truck parking has been recently added to the area, there remains an unmet truck parking demand, which results in a continued practice to park on the shoulder of area roadways.

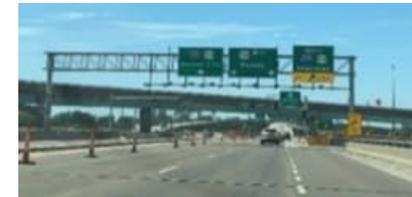
The **intersection of US 59 and Alabama Street** is a specific area of concern. The Burlington Northern Santa Fe rail line parallels US 59 to the west and is closely spaced to the Stockyards Expressway intersection. This at-grade rail crossing frequently blocks traffic, including buses that are often delayed (mentioned in conversations with OATS). In addition, this location was identified by emergency responders as a potential safety concern. MoDOT is currently in the process of making improvements at this intersection that are focused on improving safety and enhancing freight access and connectivity.

**US 36** serves as the primary east-west corridor through the SJATSO region. It functions as a gateway to Downtown St. Joseph and provides access to the Stockyards industrial area, St. Joseph Regional Port, and Rosecrans Airport. On the east side of the corridor is a system-to-system regional interchange with I-29 and an interchange at Route AC (Riverside Road), connecting to local and regional businesses, industries, and medical facilities. It also serves as an important connection to MWSU, which also becomes an important tourist destination each summer for the Kansas City Chiefs preseason training camp.

From a statewide perspective, **US 36 is an alternative to the I-70 corridor** through Missouri and Kansas. Maintaining safe traffic operations and efficient connectivity and traffic operations along the corridor and at key interchange locations is vital to the regional and local economy.



Short ramps along the US 36 corridor



US 36, approaching I-229/US 59 interchange

Previous SJATSO planning efforts have reinforced the regional significance of the US 36 corridor, and recent MTPs have recommended a **US 36 corridor study** to identify potential mainline improvements, ramp upgrades, and potential access consolidation to improve safety for the traveling public and to enhance freight movement. In August 2024, MoDOT announced they plan to begin a statewide assessment of the US 36 corridor to identify county-by-county the long-term needs of the corridor. At the time of this MTP development, it was believed that the corridor assessment would begin on the east side of the state and work west.

**US 36 at the I-229/US 59 interchange is an aging structure** that has geometric deficiencies and high crash rates. As the only Missouri River crossing in the MPA, it is critically important from a long-term perspective to consider the potential repair, or replacement, of this interchange—especially with a focus on keeping traffic open during any ongoing maintenance or reconstruction. As such, there has been some discussions at potentially exploring a second river crossing/bridge within the MPA.

Preliminary concepts suggest a **new river crossing** could be potentially tied into an extension of Cook Road and potentially an interchange at I-229 and Cook Road. As previously mentioned, given that I-229 is set to be decommissioned with the construction of the new Double-Decker alternative (at-grade arterial roadway), the concept of constructing a new interchange may not be feasible, and other alternatives would need to be considered if a second river crossing advances for further study.

In addition, public input identifies US 36 safety upgrades as a priority. Some respondents are concerned about crashes—particularly related to entrance and exit ramps at the interchange. Some are concerned about the long-term maintenance and upkeep of the facility.

Finally, beyond the horizon year 2050, the long-term vision for the US 36 corridor includes the potential to be **upgraded to interstate standards**. This is not a current MTP priority, but it should be considered in future planning efforts to ensure that any short-term improvements are consistent with the long-term vision to improve US 36.

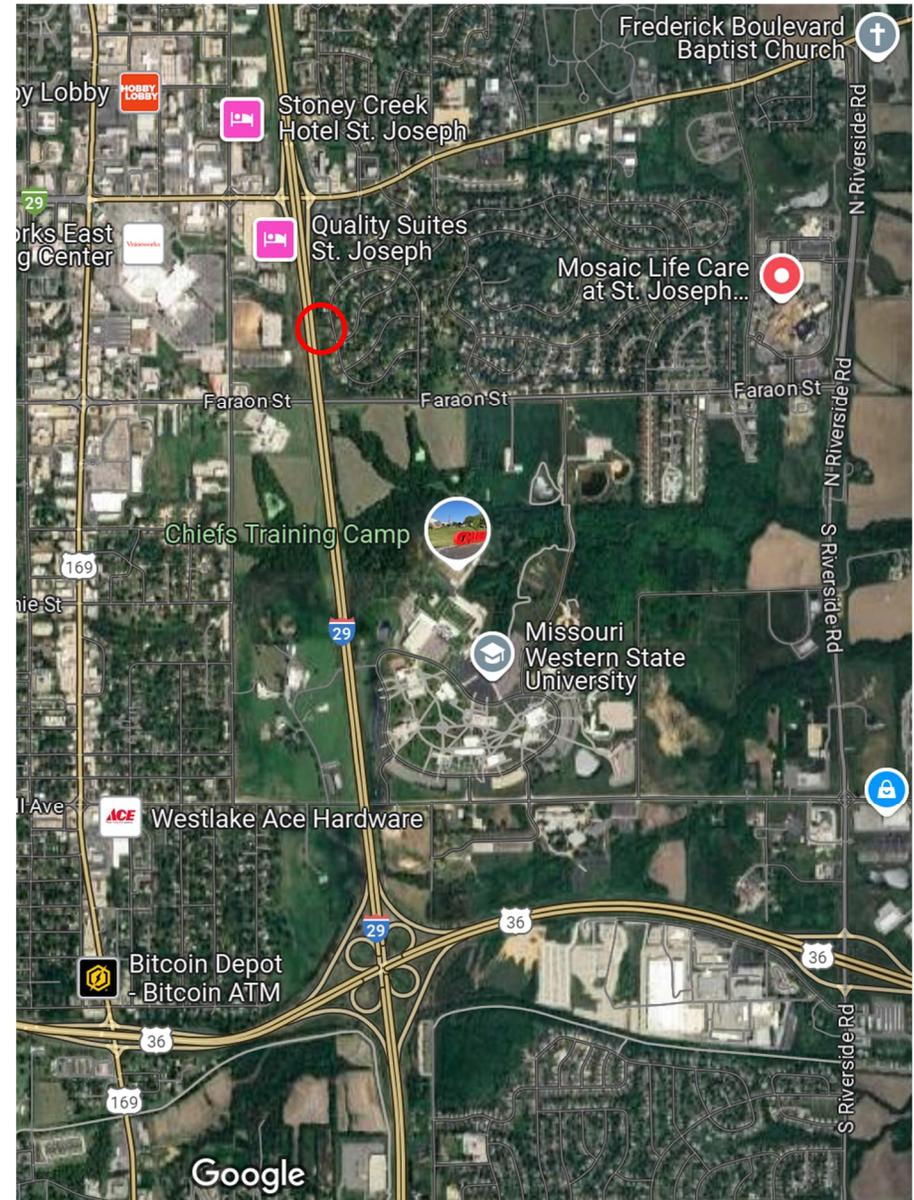
I-29 provides the primary north-south access to and through the SJATSO region. It functions as gateway to the area at key interchanges between I-229 on the south and US 169 on the north, including a system-to-system interchange with US 36.

I-29, between US 36 and Frederick Avenue, has the highest traffic volumes in the region. In addition, there are several large commercial/hotel developments planned along this stretch of I-29. Given current traffic volumes and planned development/redevelopment, SJATSO will be undertaking a study to **evaluate a potential break-in access** along I-29 at Faraon Street (Figure 27). This concept could potentially increase access to new developments, including a planned hotel on the west side of the I-29 corridor. It could also enhance access to MWSU and improve access to the facility when it is used in the summer by the Kansas City Chiefs for their preseason training camp.



Northbound I-29, approaching the Faraon Street overpass. This location will be studied for a potential new interchange.

Figure 27: I-29 Break-in Access Study at Faraon Street



**Safety Improvements**

- 1 Belt Highway**  
 Highest crash area in the MPA; explore targeted safety/geometric improvements.
- 2 I-29/I-229/US 71 Interchange**  
 Geometric ramp deficiencies; explore improves to to reduce crashes.

**Capacity/Access Improvements**

- 3 I-29/US 169 Interchange**  
 Heavy traffic, and truck volumes, with closely spaced intersections cause traffic congestion.
- 4 Riverside Road (Route AC)**  
 Existing and projected congestion along the corridor; new development will add additional traffic along this corridor and potentially increase travel delays .
- 5 I-29 Access Study**  
 Potential new interchange access to/from Faraon Street, including adding mainline capacity.

**Maintenance/Preservation Priority**

- 6 I-229 Double-Decker Bridge**  
 The EA preferred alternative replaces the I -229 elevated structure with an at-grade arterial roadway.

**Network Connectivity Improvements**

- 7 Cook Road Improvements**  
 Continue to improve geometrics, capacity, and regional connectivity to support continued growth.
- 8 New Bridge, with Cook Road Extension and Airport Access**  
 A new Missouri river crossing would enhance regional connectivity by extending Cook Road west from US 59. It would also enhance airport access and support Missouri Air National Guard development. A new causeway, connecting to US 36, could be explored to enhance access.
- 9 New Southeast Access**  
 Explore the long-term potential for a connecting roadway that would provide an alternative route to access growing developments along Route AC and relieve traffic volumes along I -29.

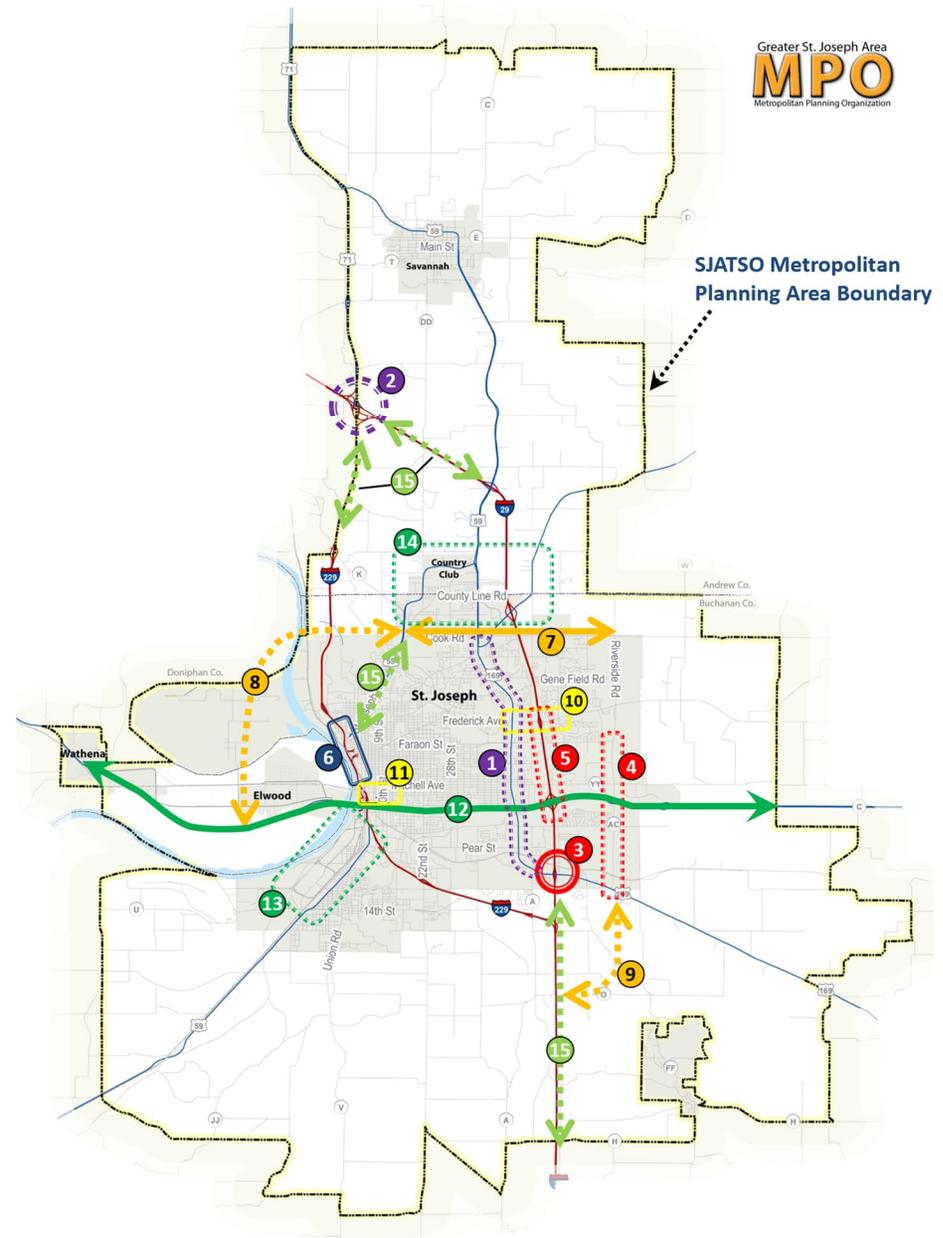
**Gateway Improvements**

- 10 Frederick Avenue (from I-29)**  
 Primary access into downtown St. Joseph; bike and pedestrian improvements would be incorporated into aesthetically pleasing infrastructure and urban design elements.
- 11 Downtown St. Joseph Access (from US-36)**  
 Enhance multimodal access to downtown by incorporating improvements that are consistent with the I-229 Double Decker Bridge preferred alternative and Riverfront Development plans.

**Traffic Operations / Studies**

- 12 US 36 Corridor Study**  
 Support a study to explore opportunities to enhance traffic operations, safety, capacity, and access.
- 13 Stockyards Industrial Area Improvements**  
 Monitor truck/rail connectivity, safety, port access, and truck parking needs.
- 14 Spot Improvements to Enhance Traffic Operations**  
 Monitor potential operational and capacity improvements as this area continues to develop.
- 15 Regional Freight Movements**  
 Monitor growing truck volumes; identify potential operational and capacity improvements.

Figure 28: Roadway/Freight Opportunities



SJATSO Metropolitan Planning Area Boundary

## Transit Service Opportunities

Addressing the needs of transit captive and choice riders is an important consideration in planning for a reliable multimodal transportation system. The following highlights key transit needs and potential opportunities within the SJATSO region. Additional details regarding the opportunities, as depicted in Figure 30, can be found in Appendix E and Appendix K.

The north side of St. Joseph and the MPA is continuing to experience residential and commercial development. Since the adoption of the 2045 MTP, *Go St. Joe* introduced a north-south route along the Belt Highway that was consistent with recommendations of the Transit Service Development Plan (June 2022). The 2050 MTP continues to support investments in this corridor to further expand transit operations.

This includes constructing a Belt Highway transfer center to enhance transit operations. Furthermore, the 2050 MTP supports continued investments to add/improve sidewalks and crosswalks along the corridor. Given the high crash rates along the Belt Highway, identifying opportunities to improve safety for vulnerable roadway users (pedestrians and bicyclists) will help to increase access to bus stops and ultimately help to enhance overall transit operations.

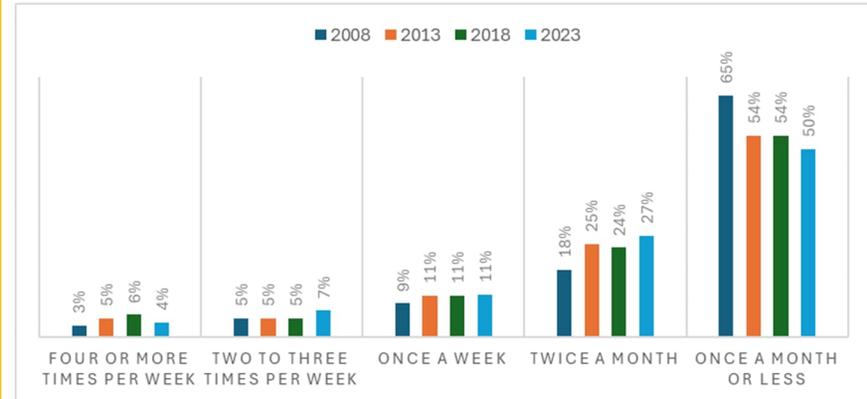


The 2050 MTP supports the construction of a new transfer facility along the Belt Highway. A specific site is to be determined.

In 2018, *Go St. Joe* was awarded a \$4.7 million Federal Transit Administration (FTA) grant to purchase new buses. This created an opportunity to implement one of the agency's primary goals of reducing headways from 60 minutes to 30 minutes. This improvement was viewed as being successful; however, due to driver shortages a decision was made in 2023 to revert back to the 60-minute headways. In recent discussions with *Go St. Joe*, they indicated that it is again a priority to reinstate the 30-minute headways, and they hope to accomplish this by the end of 2024 or early 2025. In addition, it is also a goal to reinstate late evening service to provide mobility to second and third shift workers.

The proximity of the St. Joseph and Kansas City regions makes it logical to explore regional transit service. In fact, the last four MTP planning efforts have included a survey question as part of the statistically valid survey that asks SJATSO area residents about their frequency of travel to the Kansas City area or airport. Figure 29 displays the results.

Figure 29: Frequency of Travel to Kansas City (incl. airport)



Source: ETC Community Survey NOTE: Percentages may not equal 100 percent due to rounding.

Since 2013, at least half of survey respondents indicated they travel to the Kansas City area multiple times per month. The 2023 survey results saw a slight decrease in the number of respondents traveling to the area four or more times per week; however, this is not surprising given how COVID-19 has increased the number of individuals who telecommute. A further look shows that those traveling two to three times per week increased by 2 percent, suggesting that there is still a strong travel demand between Kansas City and the SJATSO region.

An intercity bus route to Kansas City could help remove cars from the road and reduce congestion and vehicle miles traveled. The implementation of regional transit service could potentially include the development of park-n-ride lots within the SJATSO region. The existing commuter parking facility at I-29/US 169 interchange is typically at or near capacity, providing one indication of potential demand for regional transit service as well as for additional commuter parking locations to relieve crowding at the existing facility. Finally, MoDOT is about to begin a study that will evaluate the feasibility of passenger rail service between Kansas City and St. Joseph. These results should be available for the next MTP update, and efforts should be made to continue to explore intercity bus service.

## Belt Highway Improvements

- 1 Belt Highway Bus Stop Enhancements**  
 With the introduction of a north-south route, explore opportunities to enhance pedestrian and bicycle connectivity to bus stops, including improving intersection crosswalks.
- 2 Belt Highway Transit Center**  
 Identify a site for a new transit center site along the corridor. This will provide enhance transit service coverage and help to better serve growing areas on the fringe of the urbanized area.

## Growth Corridors / Areas

- 3 Riverside Road (AC) Bus Service**  
 As future development continues in this corridor, monitor future transit service needs in connecting people to jobs and medical services.
- 4 Cook Road Bus Service**  
 Cook Road is a priority roadway improvement. Once improved, the Cook Road corridor could accommodate future bus service helping to expand service coverage to growth areas in the north.
- 5 New/Enhanced Service to Savannah, Elwood & Wathena**  
 Monitor opportunities to expand, or introduce, service to these communities. OATS will be increasing their service to Savannah in the near future.

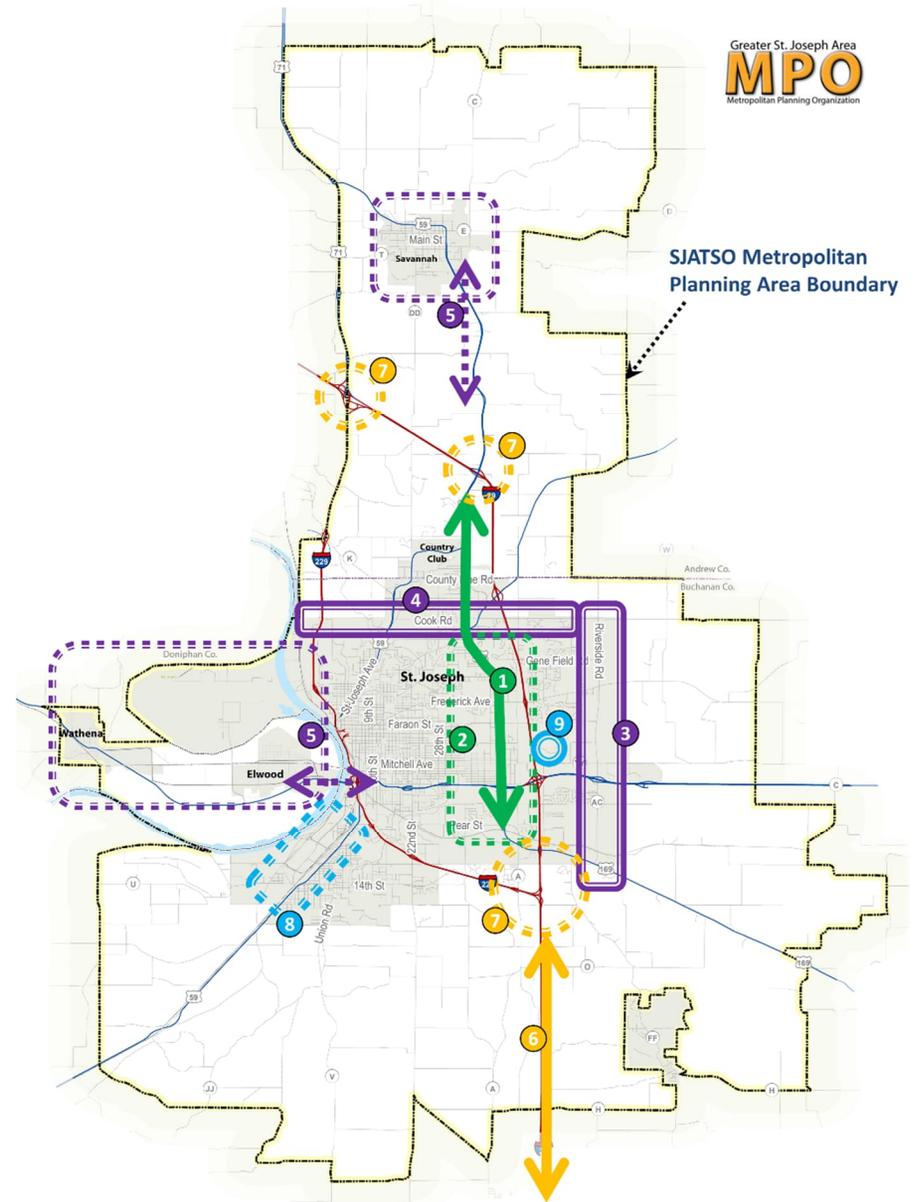
## Regional Service

- 6 Kansas City Regional Transit Service**  
 Explore opportunities to offer regional transit service between St. Joseph and Kansas City. MoDOT is currently studying the feasibility of future passenger/commuter rail service.
- 7 New, or Expanded Park-n-Ride Facilities**  
 Explore opportunities to provide future park-n-ride facilities to promote carpooling, and potentially to support regional transit service to Kansas City.

## Service Enhancements

- 8 Late Evening Service to Industrial Area (and system wide)**  
 Restore late evening/early morning bus service to accommodate shift workers whose transportation needs do not match existing transit service hours.
- 9 Enhance Missouri Western State University Service**  
 Explore opportunities to continue to enhance bus service to/from MWSU. This would support increased student demand for enhanced connections, and more direct service to/from campus.

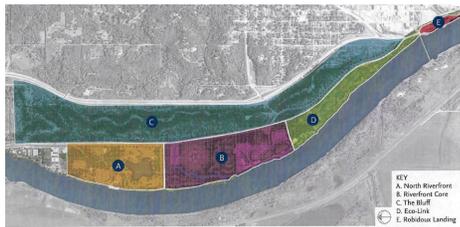
Figure 30: Transit Opportunities



## Active Transportation Opportunities

The active transportation network comprises several on-street and trail facilities. Needs and issues related to the improvement of the system include expanding the existing network to provide local and regional connections. Several examples from Figure 31 are highlighted below, and additional details are available in Appendix E.

The St. Joseph Riverfront Master Plan was completed in 2019 and identifies numerous improvements to the active transportation network, including an extension and improvements to the existing Riverfront Trail, streetscape improvements along Waterworks Road, new bike/pedestrian trails with views over the river, a Trail Center at Robidoux Landing, a pedestrian bridge over the river, and an extension of Cook Road to form a new access route to the riverfront. The plan notes that many of the recommended improvements will depend on the outcome of the I-229 EA study, but none are dependent on a particular future for the I-229 Double-Decker Bridge, and alterations and accommodations can be made depending on the study's final conclusions.



Riverfront Development Plan

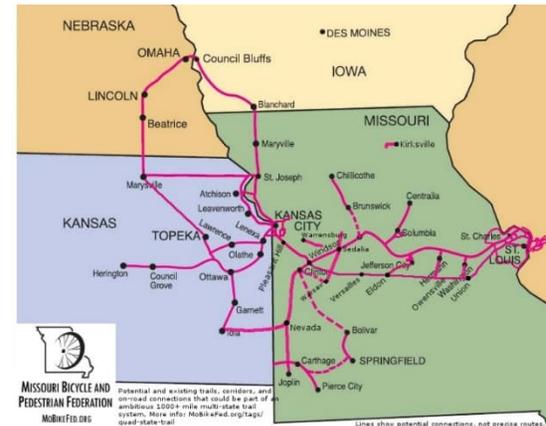


Existing Riverfront Trail



Riverfront Development Plan Conceptual Designs

The Quad State Trail is a planned bicycle trail network of over 700 miles, including existing segments extending from St. Louis to Omaha and Lincoln, Nebraska. Some of the existing trail passes through the SJATSO region along segments of the Riverfront Trail. An alternative alignment would allow bicyclists to traverse the City of St. Joseph through the existing urban parkway system, requiring some potential connectivity improvements. Completion of the Quad State Trail through the SJATSO MPA would substantially enhance the active transportation network at the local, regional, and state level.



Quad State Trail

Segments of the Belt Highway lack sidewalks or have sidewalks that need repair, making walking along the corridor difficult and potentially unsafe. The inconsistent sidewalk network makes it difficult to access bus stops along the Belt Highway, as transit riders become pedestrians after leaving the bus.

With a north-south bus route now in operation and the potential for a new transit center along the corridor, enhancing sidewalk connectivity and improving intersection crosswalks should be a primary focus of any future transportation studies and project improvements. In addition, when opportunities present themselves, SJATSO should leverage opportunities to replace or construct sidewalks along the Belt Highway to ultimately work toward building a complete and comprehensive pedestrian network.

## Riverfront Development

- 1 Trail and Pedestrian Improvements**  
 The Riverfront Development plan includes bicycle and pedestrian improvements that would connect to existing local and regional bicycle/pedestrian facilities.
- 2 Bike/Pedestrian Rail & Missouri River Crossings**  
 Preserve the long-term potential to use the Missouri River railroad bridge as a bicycle/pedestrian crossing. This would enhance connectivity between the riverfront and the Elwood/Wathena.

## Multimodal Corridors/Connections

- 3 Riverside Road (AC) Bicycle Connection**  
 Complete the partially constructed multi-use trail that already exists in the corridor.
- 4 Cook Road Bicycle Connection**  
 As a priority roadway improvement, this corridor provides an opportunity to accommodate an east-west bicycle facility that connects to the existing urban trail system.
- 5 Missouri Western State University Connection**  
 Enhance connections to MWSU, and Riverside Road, to downtown St. Joseph. This would likely occur through a I-29 underpass with a connection to the existing urban trail system.

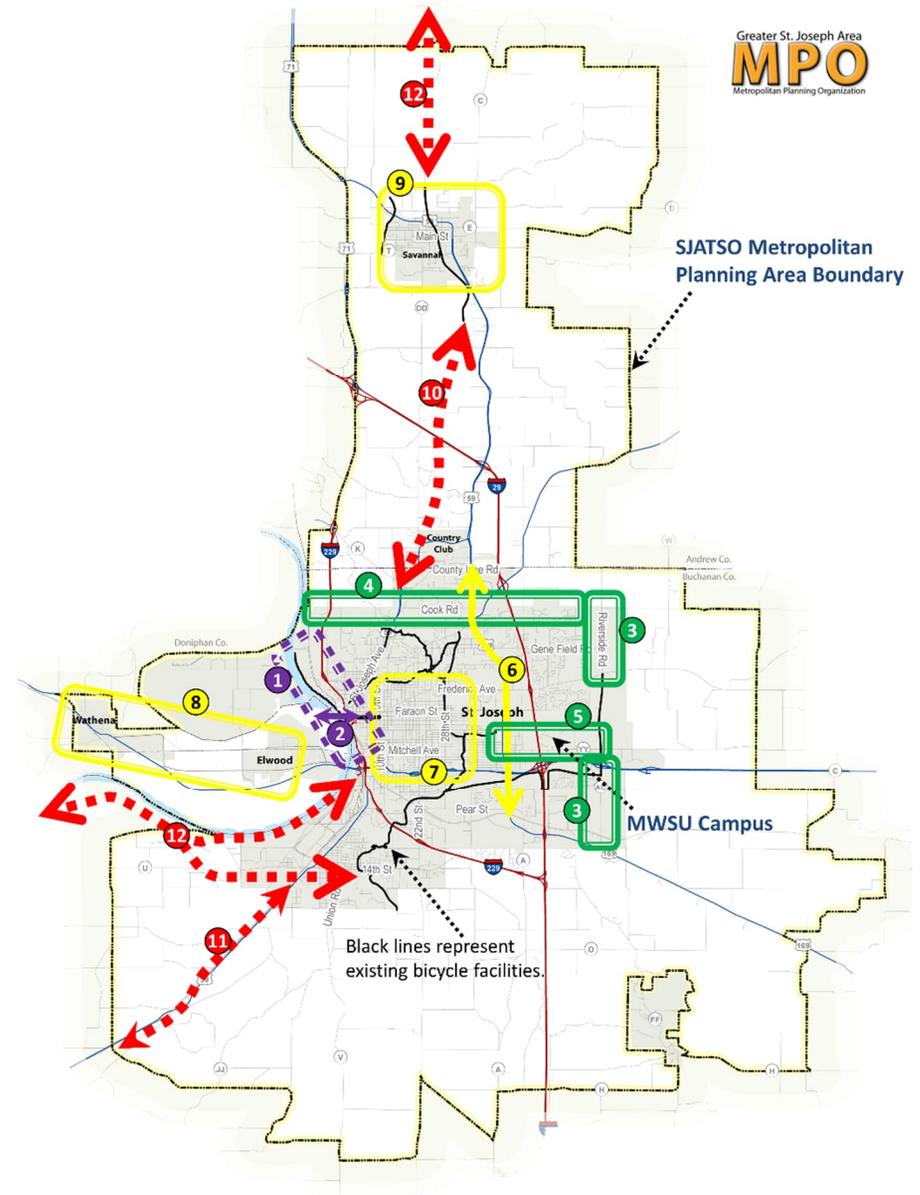
## Local Bicycle/Pedestrian Improvements

- 6 Belt Highway Sidewalk Improvements**  
 Develop a comprehensive sidewalk network along the corridor, with a priority focus on improving areas around transit stops along the corridor, including access to a planned/new transit facility.
- 7 St. Joseph Bicycle/Pedestrian Improvements**  
 Continue to invest in sidewalk improvements throughout the neighborhoods and in the downtown.
- 8 Elwood/Wathena Bicycle/Pedestrian Improvements**  
 Explore opportunities to enhance bicycle and pedestrian connections, including the possible use of the abandoned rail line for a multi-use trail.
- 9 Savannah Bicycle/Pedestrian Improvements**  
 Explore opportunities to expand bicycle and pedestrian infrastructure, especially in new residential development areas.

## State/Regional Trails (Quad State Trail Elements)

- 10 Rails to Trails (connecting north to Savannah)**  
 Explore opportunities to construct the rails to trails connection that would use an abandoned rail line to connect St. Joseph, Country Club Village, and Savannah.
- 11 US-59 Hike and Bike Trail**  
 Explore opportunities to construct an approximately 10-mile trail connecting St. Joseph to Rushville using former BNSF right-of-way.
- 12 Quad State Trail Connection**  
 Explore opportunities to construct a multi-state trail that connects to, and through, the region.

Figure 31: Bike/Pedestrian Opportunities



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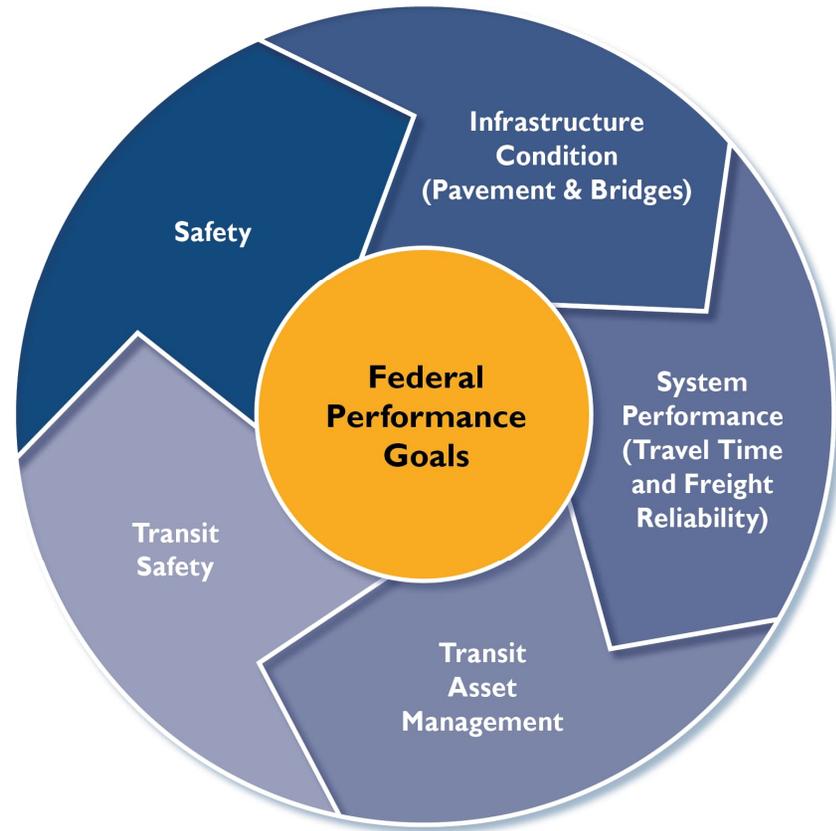
# Chapter 6. System Performance

## Overview

The 2050 MTP includes a System Performance Report that addresses the FHWA and FTA performance goals. This chapter summarizes how the SJATSO evaluates the condition and performance of the transportation system with respect to established performance measures (Appendix F). It addresses safety (roadway, non-motorized, and transit), infrastructure condition (pavement and bridge), congestion, system reliability, freight movement, and transit asset management (TAM).

## Coordination with State Targets

The 2050 MTP aligns with the MoDOT and KDOT performance targets. This coordination ensures that local and regional planning efforts contribute to broader state and national transportation goals and objectives. The integration of performance measures into the 2050 MTP helps inform project prioritization, resource allocation, and tracking progress towards achieving a safer, more efficient, and sustainable transportation system.



## Goals and Performance Measures

Goals set the direction and priorities for transportation planning, while performance measures provide the data needed to track progress and make informed decisions. States and MPOs are required to incorporate FHWA and FTA goals and measures into their planning practice, and SJATSO has adopted the MoDOT and KDOT statewide targets. The following provides a brief description of the national FHWA and FTA goals, followed by Table 4, which summarizes the national performance measures.

### Federal Highway Administration National Goals

The national Federal-aid Highway Program performance goals as established by Congress are:

- **Safety**—To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
- **Infrastructure Condition**—To maintain the highway infrastructure asset system in a state of good repair
- **Congestion Reduction**—To achieve a significant reduction in congestion on the National Highway System
- **System Reliability**—To improve the efficiency of the surface transportation system
- **Freight Movement and Economic Vitality**—To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
- **Environmental Sustainability**—To enhance the performance of the transportation system while protecting and enhancing the natural environment
- **Reduced Project Delivery Delays**—To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

### Federal Transit Administration National Goals

The following strategic goals reflect the FTA's commitment to creating a safer, more resilient, sustainable, equitable, and connected public transportation system:

- **Enhance Safety**—Improve safety for transit riders, workers, and pedestrians through oversight and technical assistance.
- **Build Resiliency**—Renew and maintain transit systems to ensure they can withstand future challenges.
- **Increase Sustainability**—Support investments that address climate change and reduce environmental impacts.
- **Improve Equity**—Ensure all communities, especially underserved ones, have access to quality transit services.
- **Connect Communities**—Expand high-quality transit services to connect people and build thriving communities.

Table 4: National Performance Measures

Safety (PM1)	Infrastructure Condition (PM2)		System Performance (PM3)	Transit Asset Management (TAM)	Public Transportation Agency Safety Plan (PTASP)
	Pavement	Bridge			
Number of fatalities	Percentage of pavement on the Interstate System in good condition	Percentage of NHS bridges classified as in good condition	Percentage of person-miles traveled on the Interstate that are reliable	Percentage of revenue vehicles (by type) that exceed the Useful Life Benchmark (ULB)	Number of reportable fatalities
Rate of fatalities per 100 million vehicle miles traveled (VMT)	Percentage of pavement on the Interstate System in poor condition	Percentage of NHS bridges classified as in poor condition	Percentage of person-miles traveled on the non-Interstate NHS that are reliable	Percentage of non-revenue service vehicles (by type) that exceed the ULB	Rate of reportable fatalities per total vehicle revenue miles by mode
Number of serious injuries	Percentage of pavement on the non-Interstate NHS in good condition		Interstate Truck Travel Time Reliability (TTTR) Index	Percentage of facilities (by group) rated less than 3.0 on the Transit Economic Requirements Model (TERM) scale	Number of reportable injuries
Rate of serious injuries per 100 million VMT	Percentage of pavement on the non-Interstate NHS in poor condition				Rate of reportable injuries per total vehicle revenue miles by mode
Number of non-motorized fatalities and non-motorized serious injuries					Number of reportable safety events
					Rate of reportable safety events per total vehicle revenue miles by mode
					Mean distance between major mechanical failures by mode

## Safety (PM1)

Table 5 summarizes crashes within the SJATSO MPA between 2018 and 2022. In total, there were 4,237 reported crashes, of which approximately 14 percent involved a fatality or serious injury. Figure 32 displays the location of fatal and serious injury crashes.

Table 5: Total Crashes (2018 to 2022)

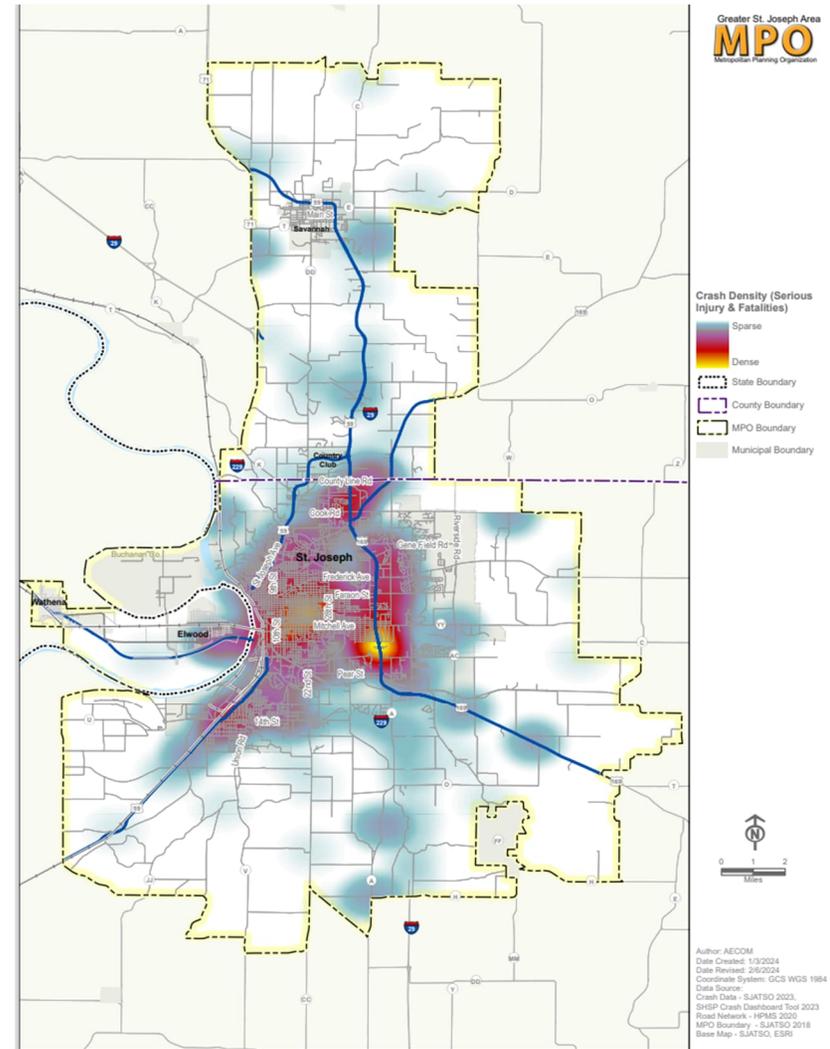
Crash Type	2018	2019	2020	2021	2022	Total
Fatal	23 2.4%	13 1.4%	17 2.0%	22 2.6%	20 3.1%	95 2.2%
Disabling Injury / Suspected Serious Injury	110 11.5%	77 8.2%	107 12.5%	103 12.3%	88 13.6%	485 11.4%
Minor Injury	821 86.1%	852 90.4%	732 85.5%	714 85.1%	538 83.3%	3,657 86.3%
<b>Total Crashes</b>	<b>954</b>	<b>942</b>	<b>856</b>	<b>839</b>	<b>646</b>	<b>4,237</b>

Overall, total crashes in the MPA have experienced a downward trend since 2018. This includes a decline in 2020 and 2021 when many areas across the country experienced a spike in crashes during the pandemic. In 2022, the total crashes saw a significant decline to 646, a 32 percent decrease from the 954 crashes in 2018.

The Belt Highway remains one of the most heavily traveled roadways within the MPA. The corridor includes established commercial activities between US 36 and the Buchanan-Andrew County Line Road, with newer development occurring to the north. The combination of high traffic volumes and numerous access points contribute to high crash rates. Between 2018 and 2022, there was a total of 1,223 crashes along this corridor. This total represents approximately 29 percent of all crashes within the SJATSO MPA. I-29, with 800 crashes, represents approximately 19 percent of all crashes in the region. As shown in Figure 32, the majority of fatalities and serious injury crashes are concentrated along the central core of the region, primarily along I-29 and the Belt Highway.

While overall crashes have declined, fatalities have seen a slight increase from 2019 and 2020 numbers, reaching 22 fatalities in 2021 and 20 fatalities in 2022. Serious injury crashes dropped from 107 crashes in 2020, to 103 crashes in 2021, to 88 crashes in 2022. Generally speaking, the safety numbers are moving in the right direction to support the established MoDOT and KDOT performance metrics.

Figure 32: Fatal and Serious Injury Crash Density (2018 to 2022)



## Vulnerable Roadway Users

According to the FHWA, vulnerable roadway users (VRUs) include non-motorists such as pedestrians, bicyclists, and individuals using personal transport like wheelchairs. VRUs also extend to highway workers on foot in work zones. These users are considered vulnerable because they lack the protection that motor vehicles provide, making them more susceptible to severe injuries or fatalities in the event of a collision.

Considering VRUs in transportation planning is crucial for several reasons. First, it enhances safety by implementing design and operational improvements that reduce the risk of crashes. Second, it promotes equity by ensuring that all demographic groups have safe and comfortable access to transportation networks. Lastly, it supports the development of connected, multimodal networks that encourage walking, biking, and other forms of active transportation, contributing to healthier and more sustainable communities.

Table 5 summarizes crashes involving bicyclists and pedestrians within the MPA between 2018 and 2022. Figure 33 shows the location of fatalities and serious injury crashes, by crash type.

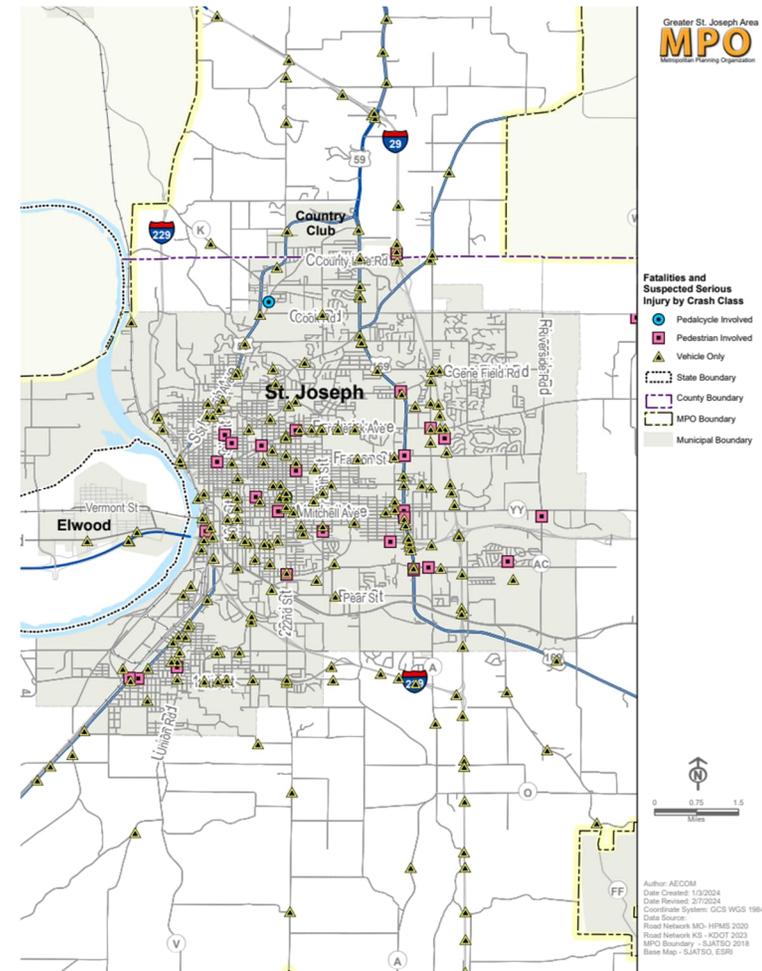
Table 6: Bicycle and Pedestrian Related Crashes (2018 to 2022)

	2018	2019	2020	2021	2022	Total
Fatal	1 3.4%	3 9.4%	3 9.1%	1 4.2%	1 4.5%	9 6.4%
Disabling Injury / Suspected Serious Injury	8 27.6%	7 21.9%	6 18.2%	6 25.0%	6 27.3%	33 23.6%
Minor Injury	20 69.0%	22 68.8%	24 72.7%	17 70.8%	15 68.2%	98 70.0%
<b>Total Crashes</b>	<b>29</b>	<b>32</b>	<b>33</b>	<b>24</b>	<b>22</b>	<b>140</b>

Generally speaking, the number of reported crashes involving a bicycle or pedestrian has slightly declined in recent years. At 22 crashes in 2022, this is the lowest number in the past 5 years. Fatalities were at a high of three in 2019 and 2020 but as few as one in other years. Serious injury crashes have remained fairly steady in the 5-year period from 2018 to 2022, coming in at six crashes in 2020, 2021, and 2022.

In an effort to enhance VRU safety, and safety for all users, the SJATSO will be developing a [Safety Action Plan \(SAP\)](#) in 2025. The SAP, as defined by the FHWA, is a strategic document designed to prioritize safety improvements and justify investment decisions in transportation infrastructure. These plans are comprehensive, data-driven approaches that identify key safety issues and outline specific strategies and projects to address them. By focusing on reducing and eliminating serious injuries and fatalities, an SAP can help communities develop a clear, actionable roadmap for enhancing safety for all users.

Figure 33: Fatal and Serious Crashes (2018 to 2022)



## Infrastructure Condition (PM2)

Roadway pavement is one of the largest infrastructure investments for the region and maintaining it adequately and at reasonable cost involves complex decision-making processes. Data on pavement condition is available for roughly half of the MPA roadways, and among them, 27 percent are in good condition, 66 percent fair, and nearly 7 percent in poor condition. Table 7 summarizes the pavement condition data.

Table 7: Pavement Condition (2020)

Condition	Miles	Percentage
Good	145.0	27.0%
Fair	356.5	66.4%
Poor	35.5	6.6%
<b>Total</b>	<b>537.0</b>	<b>100.0%</b>

There are 181 bridges within the SJATSO region. Of this total, 34 percent are in good condition, 56 percent fair, and approximately 9 percent in poor condition (does not equal 100 percent due to rounding). Seventeen bridges within the MPA, most within Buchanan County, rated in poor condition. The Cook Road bridge over I-29 was rated as poor but is currently being repaired.

The I-229 Double-Decker Bridge has received significant attention over the past 5 years as part of the I-229 EA. Several maintenance concerns will be addressed as the preferred alternative reconstructs this corridor as an at-grade arterial.

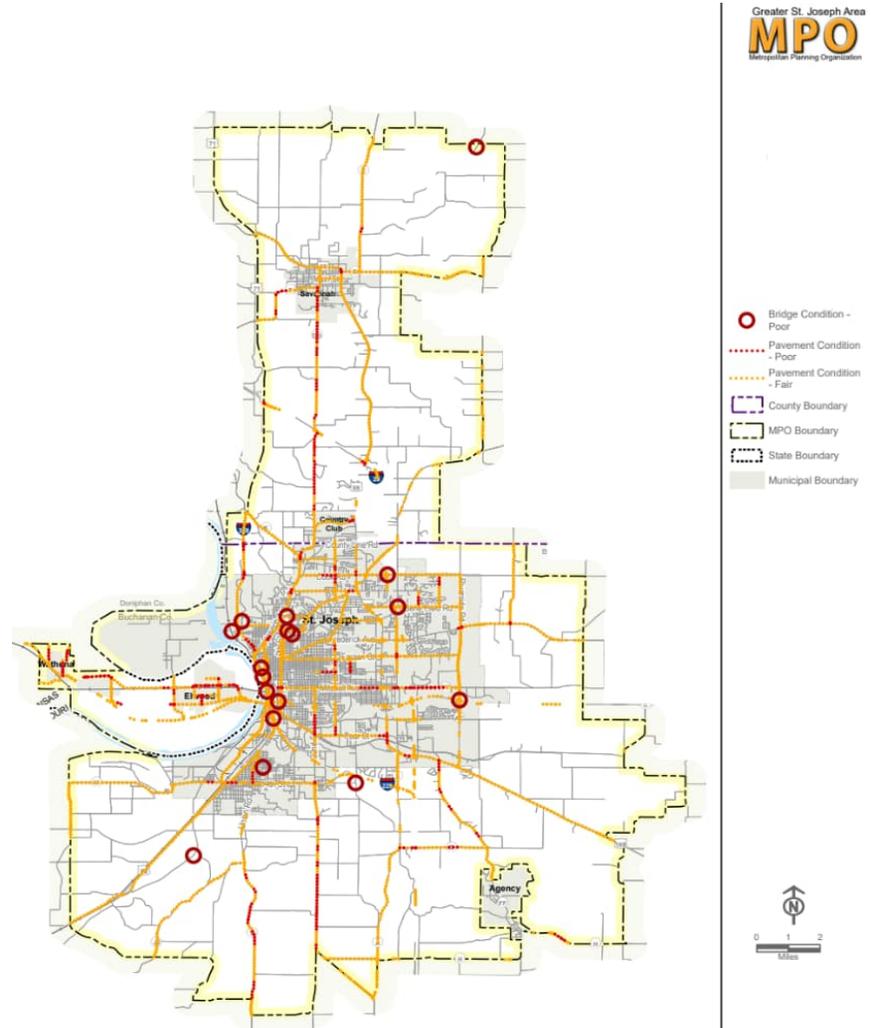
Table 8 summarizes bridge conditions in the SJATSO region. Figure 34 displays both bridge and pavement conditions (fair and poor). Additional discussion of these performance measures is included in Appendix F.

Table 8: Bridge Condition by County (2020)

County	Good	%	Fair	%	Poor	%	Total
Andrew	16	8.8%	11	6.1%	1	0.6%	<b>28</b>
Buchanan	40	22.1%	91	50.3%	16	8.8%	<b>147</b>
Doniphan	6	3.3%	0	-	0	-	<b>6</b>
<b>Total Bridges</b>	<b>62</b>	<b>34.3%</b>	<b>102</b>	<b>56.4%</b>	<b>17</b>	<b>9.4%</b>	<b>181</b>

NOTE: Percentages may not equal 100% due to rounding.

Figure 34: Bridge and Pavement Conditions



## System Performance (PM3)

System performance refers to travel time reliability for the traveling public (interstate and non-interstate travel) as well as freight movement, measured in terms of a truck travel time reliability index. As such, the purpose of this performance goal is to ensure that these facilities do not become congested, as they are a critical regional and national transportation system. The SJATSO has adopted the MoDOT and KDOT statewide PM3 targets.

Generally speaking, there is low traffic congestion within the SJATSO MPA. There are isolated areas that experience peak hour delays, mostly at off-ramps along I-29 and US 36. Noted areas of delay include:

- Eastbound off-ramp from US 36 to Route A (Riverside)
- Route A (Riverside), between Picket Road and Mitchell Avenue
- Northbound and southbound off-ramps from I-29 to Frederick Avenue
- US 169 (Rochester Road), between Belt Highway to east of I-29

The SJATSO is committed to strategically prioritizing improvements that can help reduce travel delays within the MPA, including identifying these locations for potential future projects. Additional detail is provided in Appendix F.

## Transit Asset Management

TAM is a method to quantify transit improvements, helping St. Joseph Transit move towards meeting the TAM targets. It is the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risk, and costs over their life cycles for the purpose of providing safe, cost-effective, and reliable public transportation. All TAM plans must contain four major components:

- Asset Inventory
- Condition Assessment
- Management Approach
- Investment Prioritization

TAM targets were discussed at the February 16, 2023, SJATSO Coordinating Committee meeting. At this meeting, transit agency representatives presented an overview of the system assets as they relate to the established targets.

The FTA has determined that, at a minimum, facilities should have a 3.0 rating on the TERM scale. According to the *Go St. Joe*, with the exception of the 6th and Angelique Station (rated 3.0), all other transit facilities receive a 4.0 rating or above. As reference, the 6th and Angelique Station was built in 1998.

Regarding equipment, a 2009 service truck that exceeded its useful life was replaced in FY24. The rolling stock includes a bus fleet of 2 2012s, 9 2019s, and 15 2020s. As an addition to the fleet, there is a 2017 Cutaway which serves as a backup vehicle. Additional detail is provided in Appendix F.

## Transit Safety

The Public Transportation Agency Safety Plan (PTASP) is a critical requirement for bus transit agencies, mandated by the FTA under 49 CFR Part 673. The PTASP aims to enhance the safety of public transportation systems by requiring transit agencies to develop and implement a comprehensive safety plan. St. Joseph transit presented safety targets to the SJATSO Coordinating Committee in January 2024. Additional detailed is provided in Appendix F.

The SJATSO works closely with *Go St. Joe* staff to promote a safe environment and travel experience for all system users. For example, the transit agency has hosted speakers from the Highway Patrol and the St. Joseph Traffic and Safety Council that have covered a variety of topics including distracted driving, defensive driving, and de-escalation techniques. Additionally, the transit agency has hired a security guard stationed at the transfer center, which has helped reduce safety events. The SJATSO and *Go St. Joe* staff are committed to working together to continue to move the region in the right direction to enhance transit safety within the service area.

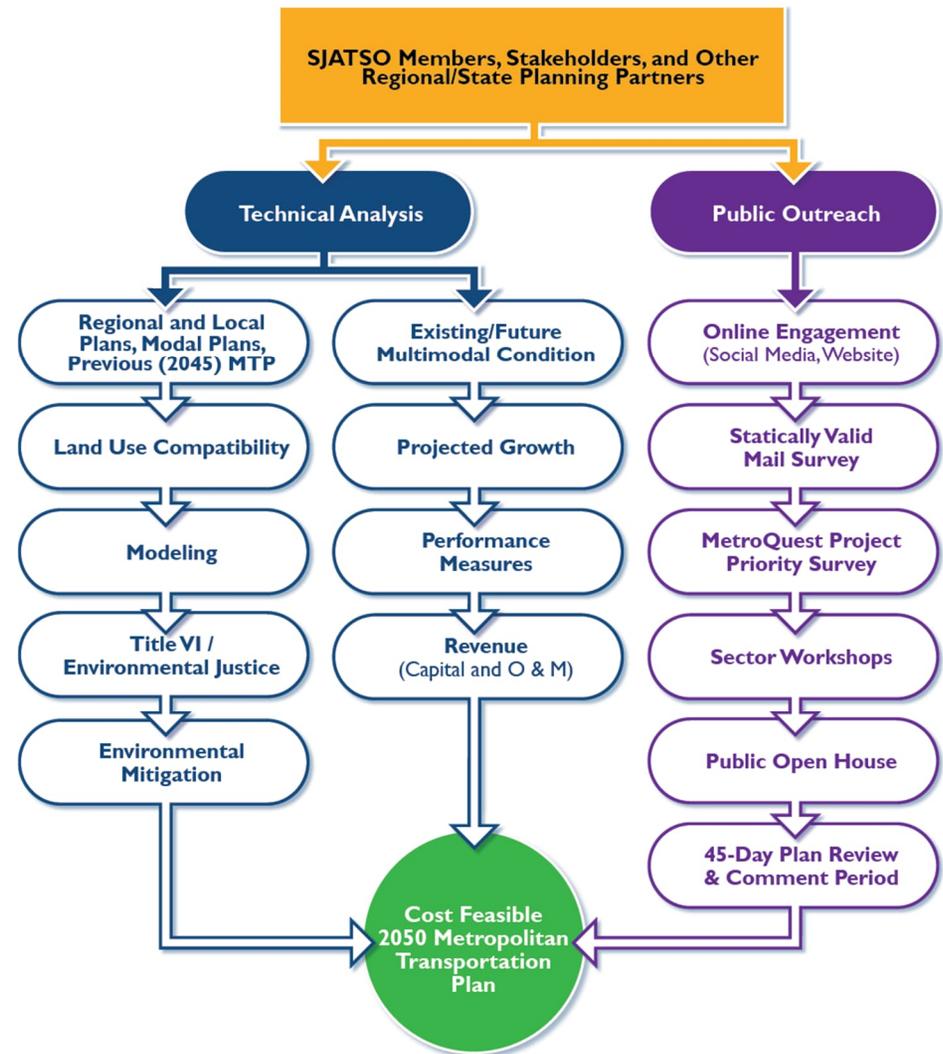
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# Chapter 7. Project Evaluation

## MTP Project Evaluation and Selection

SJATSO uses a combination of a technical analysis and public outreach to identify, evaluate, and prioritize multimodal improvements within the region. This iterative process considers the region's ongoing maintenance needs as well as identifies future year transportation investments to support the long-term mobility needs of the public, local businesses, and industries.

The chart to the right provides a high-level overview of the evaluation process, ultimately resulting in the adoption of the 2050 MTP. The SJATSO Coordinating Committee, along with area and region planning partners, provide oversight of the 2050 MTP development process. Appendix G provides additional detail regarding potential projects and the evaluation process.



## Project Identification

The analysis of existing and future year conditions and multimodal needs and opportunities provides the foundation to identify a range of potential projects to consider through the year 2050. Potential 2050 MTP projects are identified in various ways, including a review of the 2045 MTP fiscally constrained projects and the unfunded transportation priorities (2045 MTP potential projects). The technical analysis further supports the identification of transportation issues and potential transportation improvements. Table 10 and Figure 37 identify the potential roadway/freight projects evaluated as part of the MTP.

## Project Evaluation

Given financial limitations at the regional and state level, it is impossible to fund/design/construct all the potential projects in the MTP. Simply put, the transportation needs exceed available resources. In addition, some needs are greater than others and it is therefore necessary to prioritize future year investments. SJATSO uses a project scoring to inform the investment decision-making process and to ultimately help identify priorities for consideration as part of the fiscally constrained 2050 MTP. Table 9 displays the evaluation criteria along with the weighted values assigned by the SJATSO Coordinating Committee. As part of the 2050 MTP update, the committee reviewed the evaluation criteria and weights and determined no changes were necessary from the 2045 MTP.

When discussing project evaluation, it is important to note that the scoring results are intended to inform the planning process and identification of transportation investment priorities. In other words, the **scoring (ranking) is designed to support the decision-making process, rather than render a decision**. The planning process should allow for non-technical considerations, recognizing that there are other factors that need to be considered in the decision-making process that cannot be captured through project scoring. As such, the scoring results are not intended to be the final ranking; projects that score in the middle or lower may still be considered. Conversely, projects that score high do not immediately advance to construction. Several variables, project cost being at the top of the considerations, often result in projects taking years, or even decades, to be constructed.

In addition to the technical analysis and project scoring, public input is taken into consideration. Two surveys were conducted as part of the 2050 MTP development process, and 281 respondents provided input regarding roadway/freight priorities (Figure 35) and transit/active transportation priorities (Figure 36).

Figure 35: Ranking of Roadway/Freight Projects

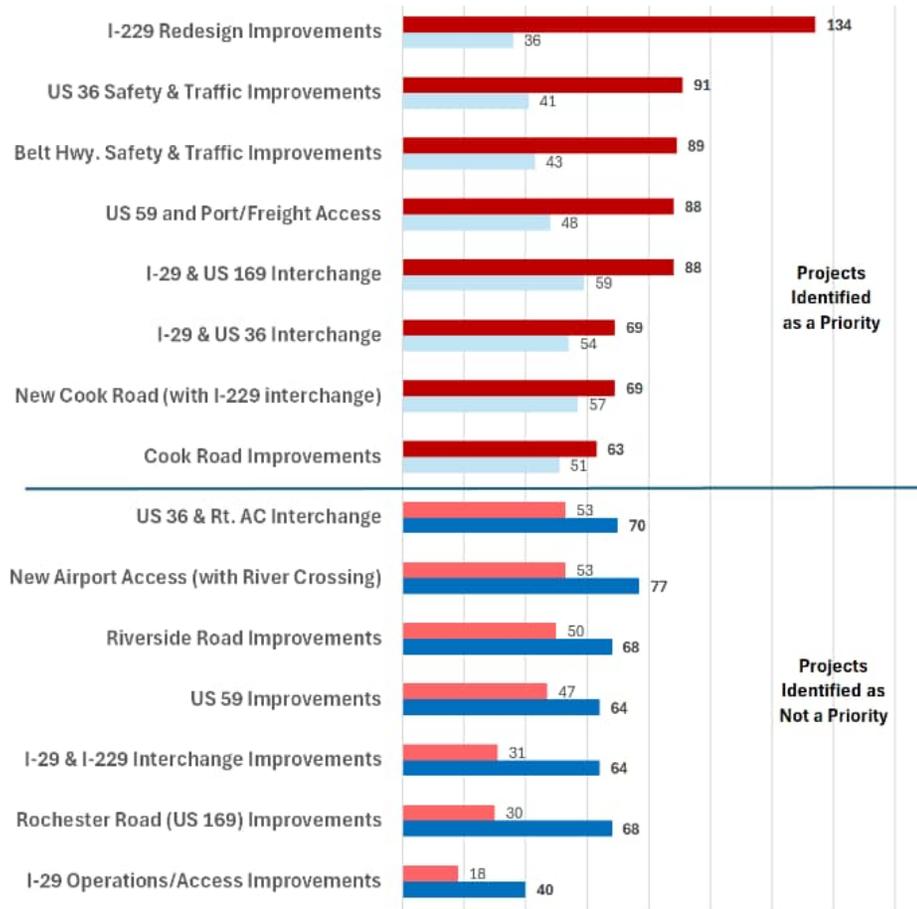
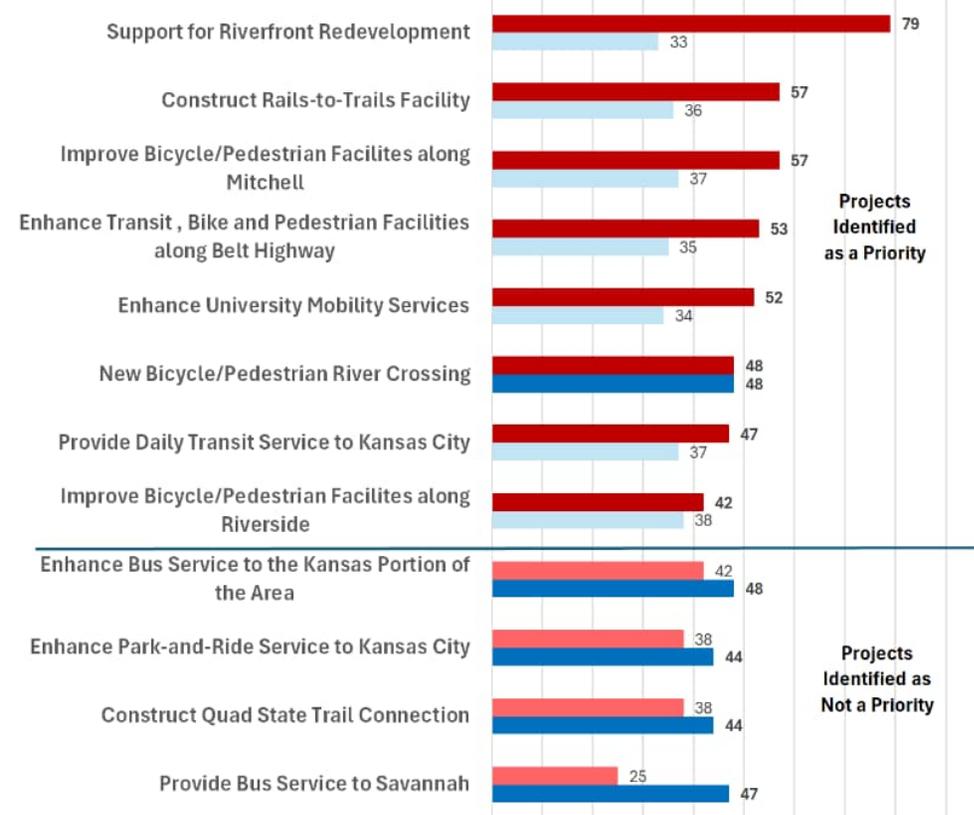


Figure 36: Ranking of Transit/Active Transportation Projects



Red lines represent number of survey respondents who identified a project a priority.

Blue lines represent number of survey respondents who said a project was not a priority.

Table 9: 2050 MTP Evaluation Criteria

			Rating			
MTP Goals	Evaluation Criteria	Weighted Value	3	2	1	0
Safety	Potential to reduce crashes, or enhance safety for the traveling public	20%	Targeted safety project/improvement, or project enhances geometric design	Project has potential safety benefits, to roadway users or alternative transportation modes	Project has limited safety benefits, to roadway users or alternative transportation modes	Does not target or address a safety issue/need
System Management	Potential to improve existing infrastructure, or more efficient operations	20%	High pavement or bridge priority, or specifically targets other infrastructure need	Identified pavement or bridge need, or other infrastructure need	Routine treatment to improve pavement, or other infrastructure need	No effect on pavement or bridge condition, or other infrastructure
Funding	Project readiness, including overall project cost and potential for available funding	20%	Project ready to build, or in design. Project funding (full or partial) has been identified.	Some analysis/design completed, project requires further study. Project funding has been partially addressed/identified.	Limited analysis/design, project is mostly in the planning stage. Project funding is mostly conceptual, or needs to be addressed.	Project is mostly conceptual, does not address an immediate concern. No funding available, or funding has not been identified.
Economic Vitality	Potential Economic Benefits	15%	Potential to enhance regional economic development and competitiveness	Potential to enhance local economic development within the MPA	Limited or speculative economic benefits within the MPA	Does not directly support economic development within the MPA
Accessibility, Regionalism	Congestion reduction, reduce VHT, reduce VMT, Connectivity	15%	Targets roadway with 'over capacity' v/c ratio and/or a freight corridor	Targets roadway with 'at capacity' v/c ratio and/or a freight corridor or emerging freight corridor	Targets roadway with 'approaching capacity' v/c ratio and/or an emerging freight corridor	Does not target congested roadway and/or no discernable freight benefit
Environmental Protection, Natural Environment, Transportation / Land Use	Consistency with growth/land use patterns, supports environmental protection	5%	Supports targeted development areas, avoids negative environmental impacts	Supports development in existing or planned infrastructure service areas, minimizes negative environmental impacts	Potential land use compatibility / environmental concerns	Is not consistent with desired growth patterns, and/or could have significant environmental impacts
Public Involvement	General support from the public	5%	High priority support for existing or proposed regionally significant investments	Complements existing or proposed regionally significant investments	Minimal existing or proposed support for transportation investment	No support or significant opposition to proposed transportation improvement

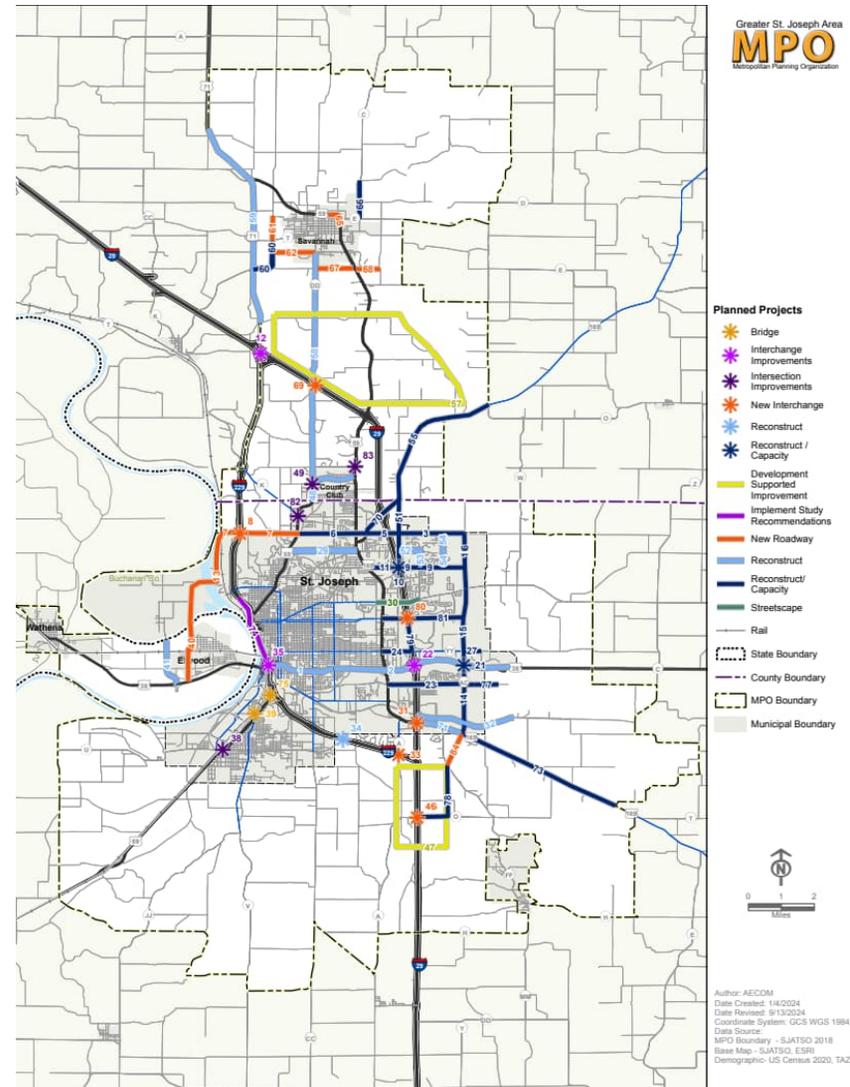
Table 10: Planned/Potential Projects

ID	Roadway	Project Sponsor / Jurisdiction	Location	Improvements
1	US 36	MoDOT	28th Street to I-229 / US 36 / US 59 (interchange)	Mainline and ramp improvements
2	US 36	MoDOT	I-29 to 28th Street	Mainline and ramp improvements
3	Cook Road	City of St. Joseph	I-29 to Riverside	Improve capacity/reconstruct from 2 lane to 3 lane; improve vertical
5	Cook Road	City of St. Joseph	US 169 to I-29	Improve capacity/reconstruct from 2 lane to 3 lane
6	Cook Road	City of St. Joseph	US 59 to US 169	Improve capacity/reconstruct from 2 lane to 3 lane
7	Cook Road	City of St. Joseph	St. Joseph Avenue / US 59 to Waterworks Rd	Construct new roadway
8	I-229	MoDOT	@ new Cook Road extension (with project 7)	Construct new interchange
9	Gene Field Road	City of St. Joseph	Woodbine to Riverside	Improve capacity from (3 lane section)
10	Gene Field Road (Bridge)	MoDOT	@ I-29	Improve bridge; potential capacity improvement with projects 9 and 11
11	Gene Field Road	City of St. Joseph	Belt Hwy to Woodbine	Improve capacity (3 lane section)
12	I-29/I-229 and US 71 interchange	MoDOT	System interchange	Improve ramp geometrics; enhance safety and traffic flow
13	New Airport River Crossing	Buchanan / City of St. Joseph / MoDOT / KDOT	TBD	Construct bridge to provide secondary access to the airport
14	Riverside Road (Route AC)	MoDOT	US 36 to Pickett Rd	Improve capacity/reconstruct from 2 lane to 3 lane
15	Riverside Road (Route AC)	MoDOT	US 36 to Route 6	Improve cross section and turn lanes; add capacity US 36 to Mitchell
16	Riverside Road	City of St. Joseph	Gene Field to Cook	Improve roadway; urban cross section
21	Riverside Road (Route AC)	MoDOT	US 36 Interchange / Bridge	Reconstruct, add capacity
22	I-29	MoDOT	US 36	Improve interchange
23	Pickett Road	City of St. Joseph	Belt Highway to Riverside	Improve cross section with turn lanes
24	Mitchell Avenue (YY)	MoDOT	US 169 (Belt Highway) to I-29	Improve cross section and intersections
27	Mitchell Avenue (YY)	MoDOT	Riverside to 59th	Improve intersection approach; geometrics
29	Karnes Road	City of St. Joseph	US 169 (Bus. 29) to St. Joseph Avenue (US 59)	Improve cross section; add shoulders; improve intersections
30	Frederick Avenue	City of St. Joseph	36th St. and Leonard	Streetscape/gateway improvements; improve sidewalks
31	I-29	MoDOT	US 169	Reconstruct interchange
32	Easton Road	City of St. Joseph	Leonard to east of Riverside	Improve (rebuild horizontal/vertical alignment as standard urban section)
33	I-229 (Interchange)	MoDOT	@ Route A	Add ramps at interchange to accommodate all travel movements
34	I-229 (Interchange)	MoDOT	@ MO 752	Improve interchange ramps
35	I-229 / US 36 / US 59 (interchange)	MoDOT	System interchange	Improve geometrics; enhance safety and traffic flow
38	Alabama Street	MoDOT	near US 59	Improve intersection geometrics; explore at-grade rail crossing options
39	Lower Lake Road	City of St. Joseph	@ railroad crossing	Construct grade-separation
40	New Airport Causeway	Buchanan / Doniphan County / Elwood	Location TBD	Construct secondary access point to/from airport
41	Rosecrans Airport Access	KDOT	US 36 to airport entrance	Improve cross section
46	I-29	MoDOT	Route O	Construct new interchange
47	Develop supporting roadway network	City of St. Joseph / Buchanan	TBD	Develop local area roads to support future development
48	US 59	MoDOT	County Line Road to Belt Highway	Improve cross section and intersection geometrics
49	US 59	MoDOT	Route DD	Intersection improvements
50	McArthur Drive (Bridge)	City of St. Joseph	@ BNSF RR	Reconstruct
52	Karnes Road	City of St. Joseph	Leonard to Woodbine	Improve (rebuild to 2-lane standard section)
53	Leonard Road	City of St. Joseph	Gene Field to Karnes	Improve (rebuild to 2-lane standard section)
54	Bishop Road	City of St. Joseph	Gene Field Road to Cook	Improve (rebuild to 2-lane standard section)
55	US 169	MoDOT	I-29 to MPA eastern boundary	Improve cross section; and intersections
57	Develop supporting roadway network	Andrew County	TBD	Develop new roadways to support future development
58	Highway DD	Andrew County	Between US 59 and T (near Savannah)	Upgrade segment
59	US 71	MoDOT	US 59	Upgrade roadway
60	Highway T	Andrew County	Roadway segment	Improve capacity; add shoulders
61	Route T / (CR 428)	Andrew County	CR 424 and CR 427	Extend roadway
62	E. Swenson Drive	Savannah	7th Street to Route T	Extend Roadway
65	Business 71 (Savannah)	MoDOT	Main street north to 3rd Street	Extend existing four-lane section; include active transportation facilities
66	Highway C	Andrew County	Roadway segment	Improve capacity, resurface & install shoulders
67	CR 366	Andrew County	Business 71	Connect segment between DD and Business 71
68	CR 366	Andrew County	Business 71 east to Route 332	Extend CR 366 eastward to connect
69	I-29	MoDOT	Route DD	Construct new interchange to accommodate future development
70	US 169	MoDOT	Cook Road to I-29	Improve (increase capacity from 2 to 3 lanes) and modify interchange

NOTE: The project numbering may skip numbers. If this occurs, the missing project number was either constructed, in construction, or removed from the list of potential/planned projects.

Figure 37: Potential/Planned Projects

ID	Roadway	Project Sponsor / Jurisdiction	Location	Improvements
71	US 169	MoDOT	I-29 to Route FF	Increase capacity; 4-lane section with access management
73	US 169	MoDOT	Route FF to MPA boundary	Improve cross section; add turn-lanes
74	I-229 (Double Decker)	MoDOT	I-229/US 59 to I-229/US 36/US 59 interchange	Construct preferred alternative identified in I-229 EA Study
75	6th Avenue (Bridge)	City of St. Joseph	@ King Hill Avenue	Reconstruct concrete stringer
77	Pickett Road	City of St. Joseph	Route AC to Craig Parkway	Improve to urban cross section
78	Route O (future I-29 to Route AC connector)	City of St. Joseph / MoDOT	Route O and potential new corridor alignment	Improve existing road capacity/cross section; construct new roadway
79	I-29 Mainline	MoDOT	US-36 to Frederick Avenue	Geometric and capacity improvements; coordinated with project 80
80	I-29 New Interchange	City of St. Joseph / MoDOT	I-29 at Faraon Street	Construct new interchange (pending results of I-29 break-in access study)
81	Faraon Street	City of St. Joseph	Belt Highway to Riverside	Improve roadway cross section; add turn-lanes
82	US 59	MoDOT	@ Route K	Improve intersection geometrics/turning lanes
83	Route DD	Village of County Club / MoDOT	@ John Glenn Road	Improve intersection geometrics/turning lanes
84	New Route (future I-29 to Route AC connector)	City of St. Joseph	State Route FF to Route AC (Riverside)	Construct new roadway; completes I-29 / Route AC connector route



## Project Scoring Results

Table 11 summarizes the results of the project scoring (projects scoring 2.00 or greater). As the highest scoring projects, these become the initial projects that are considered for the fiscally constrained plan. For detailed scoring results see Appendix G.

Table 11: Project Scoring Results (2.00 or over)

ID	Roadway	Project Sponsor / Jurisdiction	Location	Improvement	Weighted Value
38	Alabama Street	MoDOT	near US 59	Improve intersection geometrics; explore at-grade rail crossing options	2.95
31	I-29	MoDOT	US 169	Reconstruct interchange	2.80
6	Cook Road	City of St. Joseph	US 59 to US 169	Improve capacity/reconstruct from 2 lane to 3 lane	2.75
21	Riverside Road (Route AC)	MoDOT	US 36 Interchange / Bridge	Reconstruct, add capacity	2.75
74	I-229 (Double Decker)	MoDOT	I-229/US 59 to I-229/US 36/US 59 interchange	Construct preferred alternative identified in I-229 EA Study	2.75
5	Cook Road	City of St. Joseph	US 169 to I-29	Improve capacity/reconstruct from 2 lane to 3 lane	2.55
12	I-29/I-229 and US 71 interchange	MoDOT	System interchange	Improve ramp geometrics; enhance safety and traffic flow	2.40
22	I-29	MoDOT	US 36	Improve interchange	2.35
15	Riverside Road (Route AC)	MoDOT	US 36 to Route 6	Improve cross section and turn lanes; add capacity US 36 to Mitchell	2.35
1	US 36	MoDOT	28th Street to I-229 / US 36 / US 59 (interchange)	Mainline and ramp improvements	2.20
10	Gene Field Road (Bridge)	MoDOT	@ I-29	Improve bridge; potential capacity improvement with projects 9 and 11	2.15
3	Cook Road	City of St. Joseph	I-29 to Riverside	Improve capacity/reconstruct from 2 lane to 3 lane; improve vertical alignment	2.00
30	Frederick Avenue	City of St. Joseph	36th St. and Leonard	Streetscape/gateway improvements; improve sidewalks	2.00

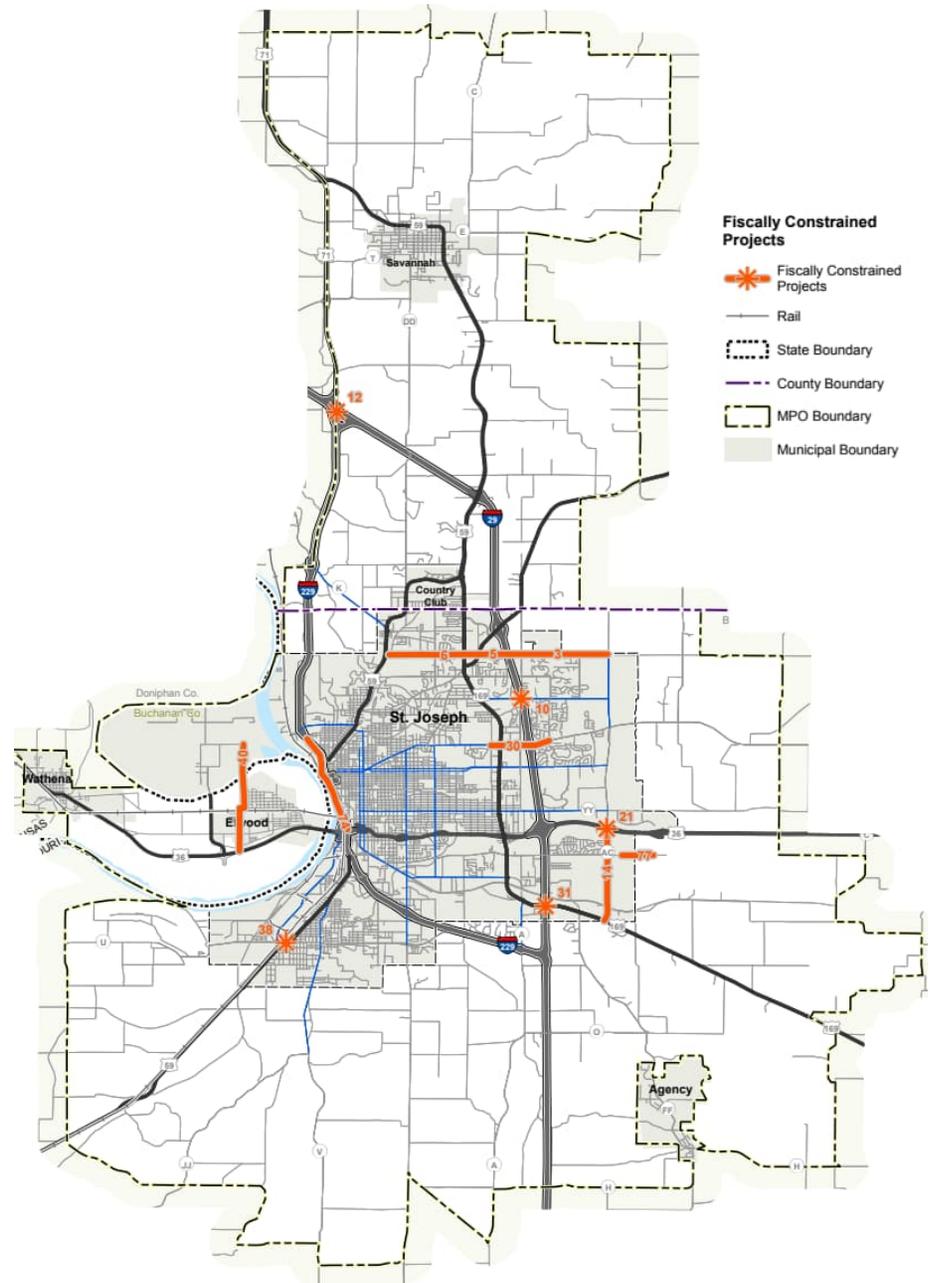
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## Chapter 8. Fiscal Constraint

### What is a Fiscal Constraint Analysis?

Federal regulations require MTPs be fiscally constrained, meaning the projected costs of transportation projects must not exceed the anticipated revenues. This ensures that the plan is realistic and achievable within the financial resources available. The analysis involves identifying and forecasting potential funding sources, including federal, state, local, and private funds. It also requires estimating the costs of proposed projects, considering factors such as inflation and year of expenditure (YOE). By doing so, SJATSO can prioritize projects that are financially feasible and align with the 2050 MTP goals. Ultimately, these projects can move forward to being included in the SJATSO TIP.

The process of fiscal constraint enhances the credibility and effectiveness of transportation planning. Fiscal constraint also ensures that the existing transportation infrastructure is adequately maintained and operated. Overall, this analysis is intended to create a balanced and sustainable transportation plan that can be successfully executed.



## Projected Revenues

A cost feasible analysis ensures that the 2050 MTP reflects realistic assumptions regarding future revenues. Project cost estimates, presented in Appendix H, were compared against projected revenues to determine which projects are reasonably likely to have funding available through the horizon year 2050. Equally important is to ensure there are sufficient operation and maintenance revenues available to maintain bridge and pavement assets in a state of good repair (also discussed in Appendix H).

In developing the 2050 MTP revenue and cost estimates, it is necessary to use an inflation factor to reflect “YOE dollars.” For the 2050 MTP, a 3.0 percent annual inflation factor for project costs was used for YOE project cost estimates. This is consistent with MoDOT inflation factor, and the process used for the SJATSO TIP.

Table 12 summarizes the estimated available revenue for capital projects between 2028 and 2050. These estimates were developed using historic and current revenue sources in the SJATSO TIP. Since the TIP includes fiscally constrained projects from

2025 to 2028, the MTP revenues are assumed to begin in 2028. The top lines of Table 12 represent an estimate of total revenues available for transportation (roadway) improvements, including maintenance and capital projects. The middle lines represent an off the top estimate of 80 percent, which would be used for ongoing maintenance and repairs such as funds used to resurface interstates or other area roadways or maintain or repair bridges. The bottom lines of the table represent an estimate of remaining revenue that could be use used for capital projects. Through the horizon year 2050 it is estimated that approximately \$104 million could be available for construction or capacity/expansion projects.

## Fiscally Constrained Roadway/Freight Projects

Figure 38 displays the fiscally constrained roadway projects included in the 2050 MTP. The project selection is informed in part by the project scoring summarized in Chapter 7.

Table 12: Projected Revenues (2028\* to 2050)

Funding Source	2028-2030	2031- 2035	2036 - 2040	2041 - 2045	2046 - 2050	Total
<b>Estimated Total Revenue</b>						
Local	\$20,963,556	\$55,223,045	\$59,490,903	\$64,088,598	\$69,041,621	\$268,807,722
Federal / State	\$19,634,160	\$51,721,095	\$55,718,309	\$60,024,443	\$64,663,372	\$251,761,379
Total	\$40,597,716	\$106,944,140	\$115,209,211	\$124,113,040	\$133,704,993	\$520,569,101
<b>Estimated Revenue for Maintenance/Preservation (Assumed 80%)</b>						
Local	\$16,770,845	\$44,178,436	\$47,592,722	\$51,270,878	\$55,233,297	\$215,046,178
Federal / State	\$15,707,328	\$41,376,876	\$44,574,647	\$48,019,554	\$51,730,698	\$201,409,103
Total	\$32,478,173	\$85,555,312	\$92,167,369	\$99,290,432	\$106,963,995	\$416,455,281
<b>Estimated Total Revenue (Available for Capital Roadway Projects)</b>						
Local	\$4,192,711	\$11,044,609	\$11,898,181	\$12,817,720	\$13,808,324	\$53,761,544
Federal / State	\$3,926,832	\$10,344,219	\$11,143,662	\$12,004,889	\$12,932,674	\$50,352,276
Total	\$8,119,543	\$21,388,828	\$23,041,842	\$24,822,608	\$26,740,999	\$104,113,820

\*TIP projects are 2025 to 2028 and are fiscally constrained. The first band of the MTP is assumed to begin in 2029.

Table 13 summarizes the fiscally constrained projects along with the estimated YOE. Due to some higher project cost estimates, it is necessary to split costs between YOE bands. In addition, some projects, as noted in the table, are currently included in various phases (i.e., design, letting, construction) of the SJATSO current TIP.

Project #31 is currently on MoDOT’s unfunded needs list; however, it is anticipated that this project will be needed in the next 20 years, and as such, it is included in the fiscally constrained list as it is anticipated that funding will become available.

Project #74, the preferred alternative to address the I-229 Double-Decker Bridge, has a significant price tag that cannot be covered by projected revenues. However, some early phases of this project are planned to move forward in the next few years, and given the current bridge condition, it is reasonably anticipated that this project will be fully funded and constructed prior to the 2050 horizon year. As such, this project is included in the fiscally constrained list.

Finally, it is worth noting that the MTP fiscally constrained list can be modified to add or remove projects or potentially move projects around in the YOE. This could be done for various reasons, including when funding becomes available.

Figure 38: Fiscally Constrained Roadway Projects

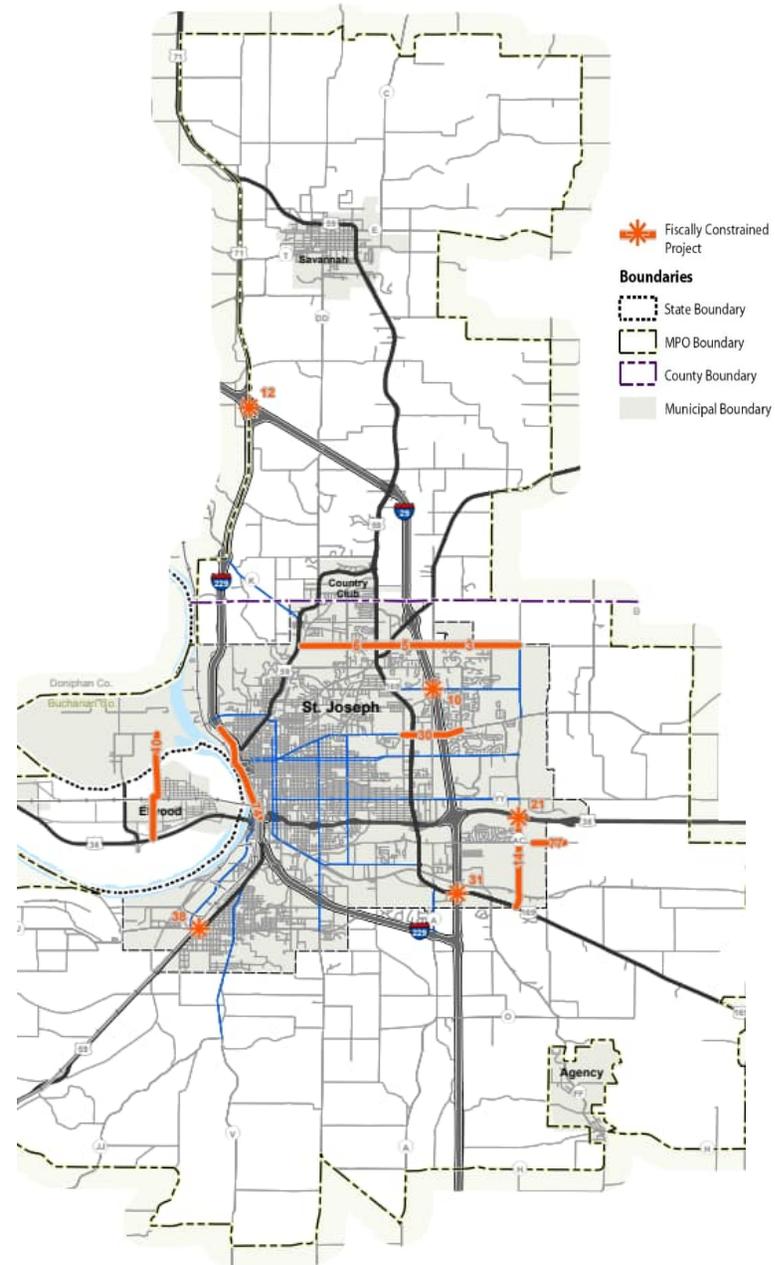


Table 13: 2050 MTP Fiscally Constrained Projects

ID	Roadway	Project Sponsor / Jurisdiction	Location	Improvements	Funding Source	Estimated Year of Expenditure Cost				
						2029 / 2030	2031- 2035	2036 - 2040	2041 - 2045	2046 - 2050
3	Cook Road	City of St. Joseph	I-29 to Riverside	Improve capacity/reconstruct from 2 lane to 3 lane; improve vertical alignment	Local	\$2,900,000				
					Federal / State	\$600,000				
5	Cook Road	City of St. Joseph	US 169 to I-29	Improve capacity/reconstruct from 2 lane to 3 lane	Local		\$4,000,000			
					Federal / State		\$1,200,000			
6	Cook Road	City of St. Joseph	US 59 to US 169	Improve capacity/reconstruct from 2 lane to 3 lane	Local		\$2,000,000	\$7,000,000		
					Federal / State		\$500,000	\$3,000,000		
10	Gene Field Road (Bridge)	MoDOT	@ I-29	Improve bridge; potential capacity improvement with projects 9 and 11	Local					
					Federal / State	Project currently in design and expected to be constructed during 2025-2028 TIP period				
12	I-29/I-229/US 71 interchange	MoDOT	System interchange	Improve ramp geometrics; enhance safety and traffic flow	Local					
					Federal / State	Project currently in design and expected to be constructed during 2025-2028 TIP period				
14	Riverside Road (Route AC)	MoDOT	US 36 to Pickett Rd	Improve capacity/reconstruct from 2 lane to 3 lane	Local			\$1,000,000	\$500,000	
					Federal / State			\$3,000,000	\$4,000,000	
21	Riverside Road (Route AC)	MoDOT	US 36 Interchange / Bridge	Reconstruct, add capacity	Local					
					Federal / State	Project currently in design and expected to be constructed during 2025-2028 TIP period				
30	Frederick Avenue	City of St. Joseph	36th St. and Leonard	Streetscape/gateway improvements; improve sidewalks	Local	\$1,000,000	\$2,000,000			
					Federal / State	\$500,000	\$500,000			
31	I-29	MoDOT	US 169	Reconstruct interchange	Local					
					Federal / State				\$3,000,000	\$12,000,000
38	Alabama Street	MoDOT	near US 59	Improve intersection geometrics; explore at-grade rail crossing options	Local					
					Federal / State	Project to be constructed during 2025-2028 TIP period (let for construction in September 2024).				
40	New Airport Causeway	Buchanan / Doniphan County / Elwood	Location TBD	Construct secondary access point to/from airport	Local					
					Federal / State			\$4,000,000	\$7,000,000	
74	I-229 (Double Decker)	MoDOT	I-229/US 59 to I-229/US 36/US 59 interchange	Construct preferred alternative identified in I-229 EA Study	Local					
					Federal / State	2025-2028 TIP includes some funding; remaining funds to construct the preferred alternative to be identified.				
77	Pickett Road	City of St. Joseph	Route AC to Craig Parkway	Improve to urban cross section	Local					
					Federal / State	Project released for bid October 2024				

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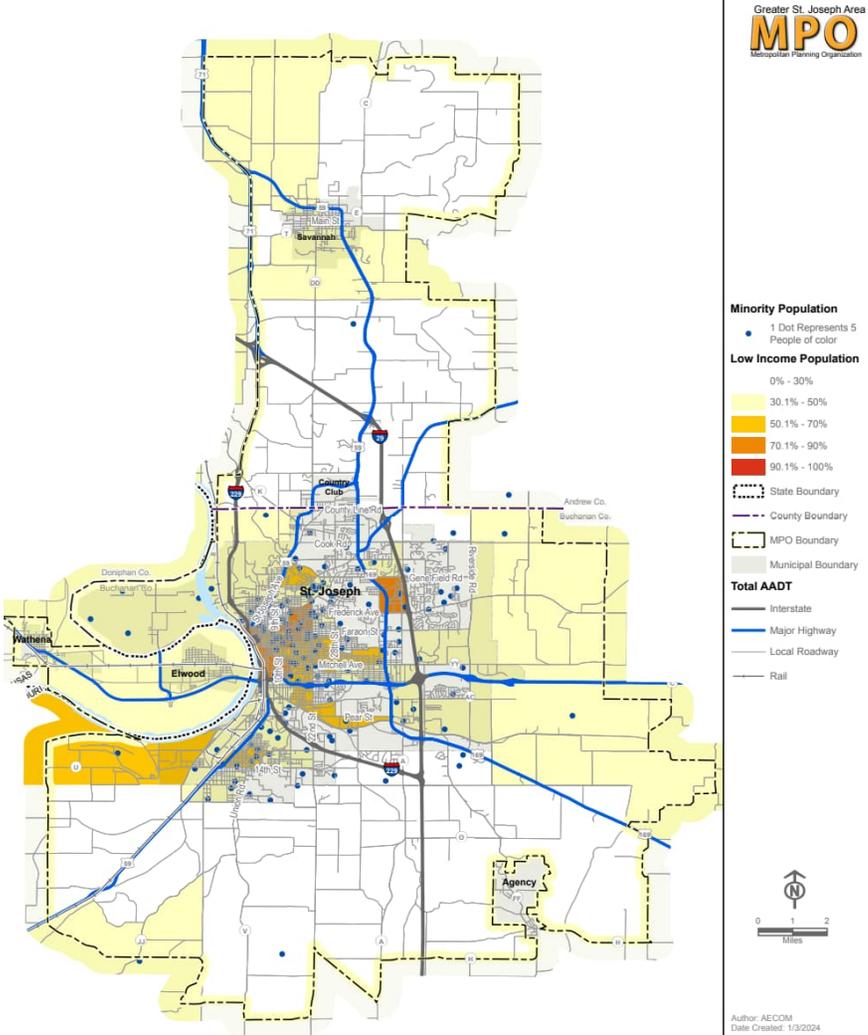
# Chapter 9. Environmental Justice

## What is Environmental Justice?

Environmental justice (EJ) involves ensuring that transportation projects and policies do not disproportionately impact low-income and minority communities. The goal is to provide equitable access to transportation benefits while avoiding or mitigating adverse effects on these vulnerable populations. This includes considering how proposed transportation projects might affect things such as air quality, noise levels, and access to essential services like healthcare, education, and employment. By incorporating EJ principles, SJATSO aims to promote fairness and inclusivity in 2050 MTP development and all transportation planning activities, ensuring that all stakeholders have a voice in the decision-making process.

As part of the 2050 MTP development, SJATSO carried out an EJ analysis, and the findings are summarized in this chapter. Appendix I documents the review of the 2050 MTP fiscally constrained projects in relationship to EJ areas and analyzes existing and future transit service from an EJ perspective. Figure 39 displays the EJ areas within the SJATSO region.

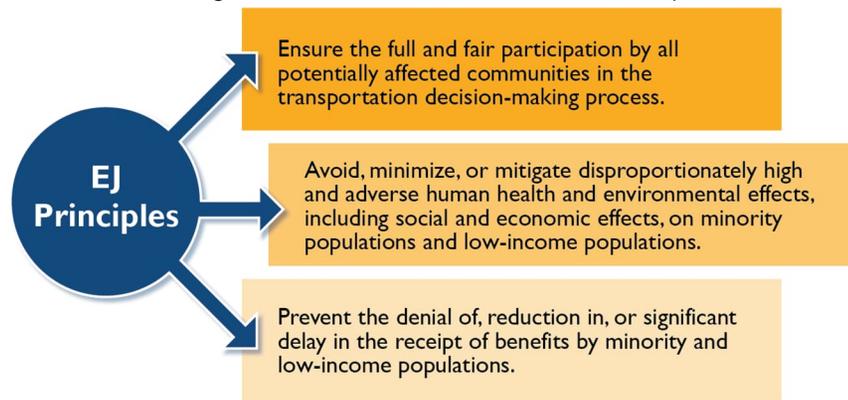
Figure 39: Environmental Justice Areas



## Environmental Justice Analysis

As the recipient of federal transportation funds, SJATSO ensures non-discrimination in all aspects of the transportation planning process. This includes ensuring that all people regardless of race or income have access to the benefits afforded by federally funded projects as well as access to the decision-making process for the selection of those projects. The Environmental Protection Agency and Title VI of the Civil Rights Act provide guidance on ensuring EJ and non-discrimination. Key EJ principles are shown in Figure 40.

Figure 40: Environmental Justice Principles



For the purposes of Title VI and EJ analysis, SJATSO not only uses data on the standard protected classes—minority and low-income populations—but also pays close attention to what would be considered potential indicators of disadvantage, such as zero car households and persons with disabilities. While not federally required for EJ analysis, this information helps provide a more complete representation of the community and potential transportation/mobility needs.

### Limited English Proficiency

Addressing Limited English Proficiency (LEP) is also an area of consideration. The LEP population with the SJATSO is relatively small, and the two primary public surveys each had an option for Spanish-speaking residents to complete the survey. No additional direct outreach was determined to be necessary.

## Minority Population

For the 2050 MTP EJ analysis, a census tract with a minority population greater than the St. Joseph MPA average minority population (14 percent) is defined as an EJ area. These areas are mostly located within the urbanized area of St. Joseph. Figures 41 and 42 use dots to represent the approximate location of minorities throughout the region. One dot represents five people of color. It should be noted that dots do not represent exact locations; instead, the dots represent an approximate location within a census tract.

### Low-Income Population

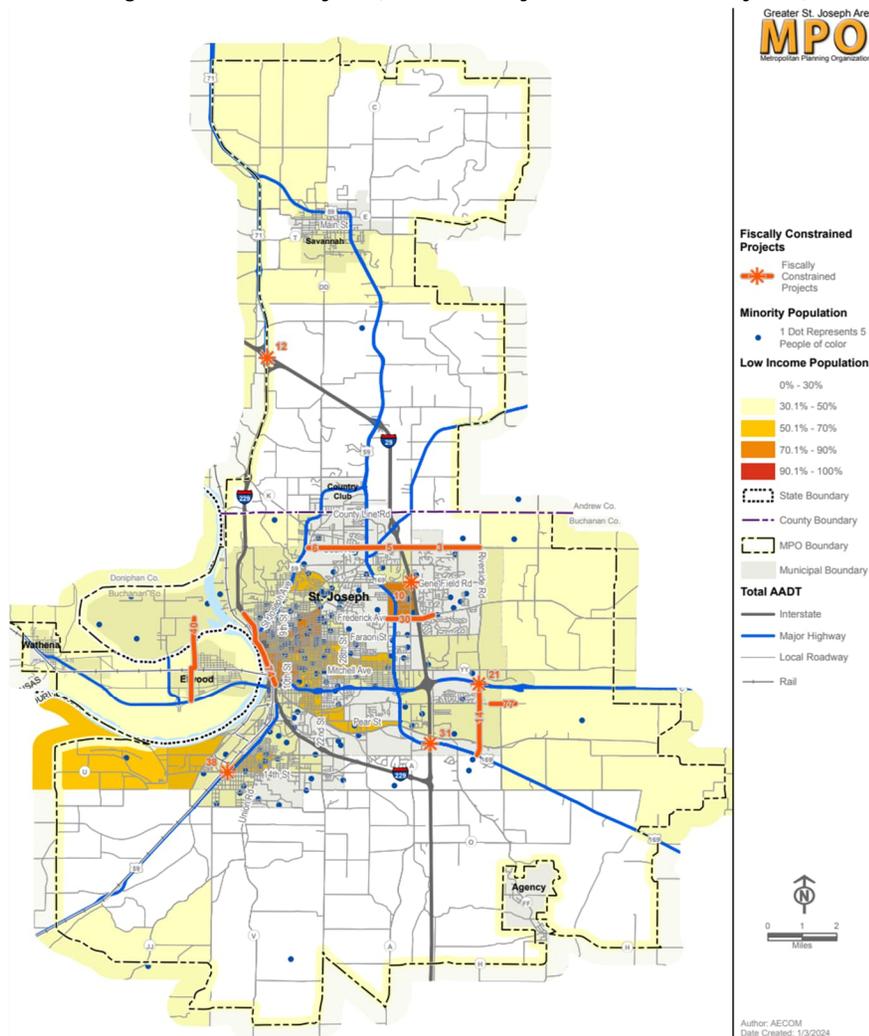
Low-income population was identified using the percentage of households with income levels below the poverty line. Census tracts having greater than 20 percent of households below the poverty line were identified as an EJ area. The low-income population within the MPA is concentrated in the western portion of the St. Joseph urbanized area, areas extending south along US 59, and portions of the Kansas portion of the MPA. Low-income populations also extend along the southern portion of US 36 and in small pockets along the Belt Highway.

### Environmental Justice Analysis

The analysis of the 2050 MTP projects highlights the potential for transportation investments to enhance EJ areas within the MPA. As shown in Figure 41, except for the I-29/I-229/US 71 interchange improvement, the remaining 2050 MTP fiscally constrained roadway/freight projects fall within, or in proximity to, EJ areas within the MPA.

The 2050 MTP also includes transit service improvements that would benefit EJ populations. Perhaps the biggest improvement is the plan to once again reduce system headways from 1-hour to 30-minutes. This was implemented a few years ago but had to be eliminated due to a driver shortage. *Go St. Joe* intends to reinstate this service by end of year. In addition, the agency continues to explore potential opportunities to add late evening service. Finally, two improvements made since the 2045 MTP have supported the EJ population. One is the addition of a north-south transit route along the Belt Highway, and the second is the expansion of demand response service on the south side of the St. Joseph area.

Figure 41: EJ Analysis (with Fiscally Constrained Projects)



## Environmental Justice Conclusion

Following a review of the 2050 MTP fiscally constrained projects, in comparison to the EJ areas, the SJATSO believes there are no significant EJ concerns associated with the proposed roadway/freight and transit projects. In fact, it is believed that all the MTP projects benefit the EJ communities and support the overall 2050 MTP goals. A more detailed conclusion is included in Appendix I.

The 2050 MTP identifies the potential EJ impacts of projects at a very high level, as the MTP often contains relatively conceptual projects. As projects advance through the planning and design phases and they become more specific, the TIP documents SJATSO's prioritization of limited transportation resources available among the various needs of the region. TIP projects are also reviewed for potential EJ impacts consistent with the SJATSO EJ planning process.

SJATSO also maintains an interactive map that displays the physical projects listed in the TIP, allowing policy makers, project sponsors, and the public to more easily visualize the transportation projects that may affect EJ populations. Together, it is through the MTP and its implementing program (the TIP) that investments to the transportation system can be examined, and addressed, to avoid any disparate EJ impacts.

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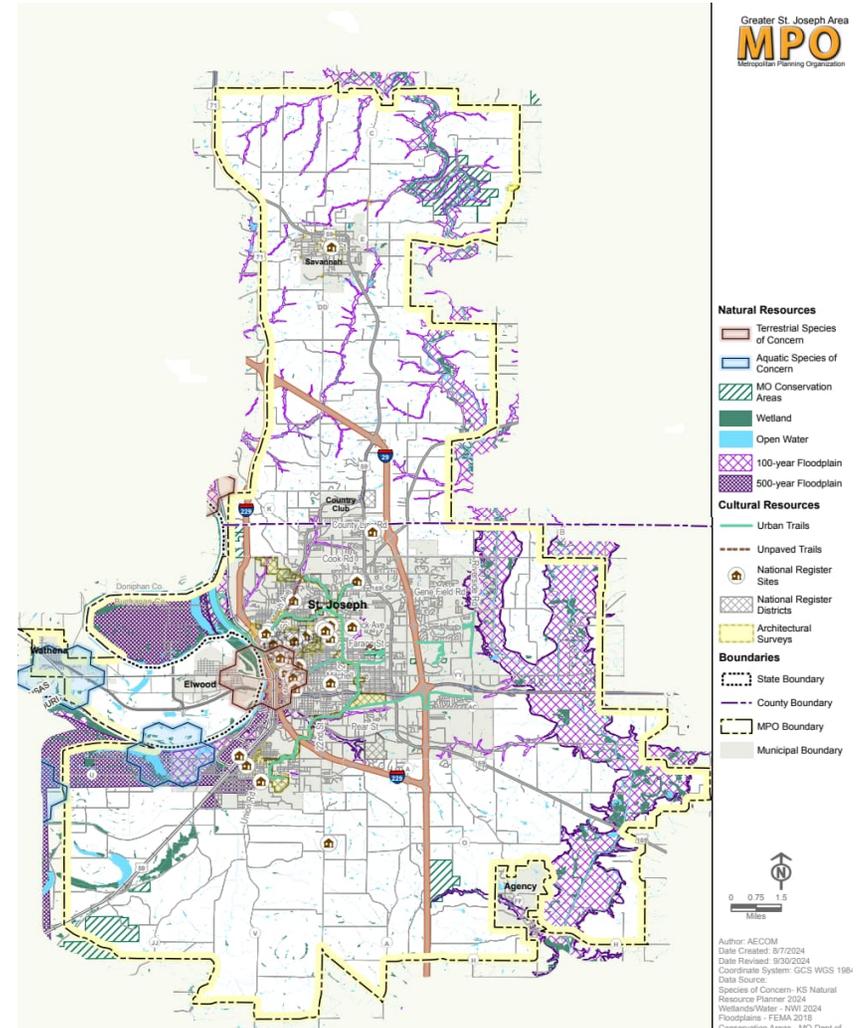
# Chapter 10. Environmental Mitigation

## What is Environmental Mitigation?

Environmental mitigation involves identifying potential adverse impacts that proposed transportation projects might have on the natural and built environment, such as air and water quality, wildlife habitats, and community resources. This high-level MTP analysis helps to identify potential strategies to avoid, minimize, or mitigate the impacts of potential future year transportation investments. This could include considerations such as designing projects to reduce emissions, implementing green infrastructure, preserving natural areas, and ensuring that transportation developments are sustainable and environmentally friendly. By integrating environmental mitigation early into the transportation planning process, SJATSO aims to promote more resilient and sustainable regional growth that protects valuable environmental resources.

Further details about this analysis are available in Appendix J. Environmental resources for the SJATSO region are shown in Figure 42.

Figure 42: Environmental Resources Map



The 2050 MTP development process included an inventory of environmentally sensitive areas within the SJATSO MPA. Some the resources considered included:



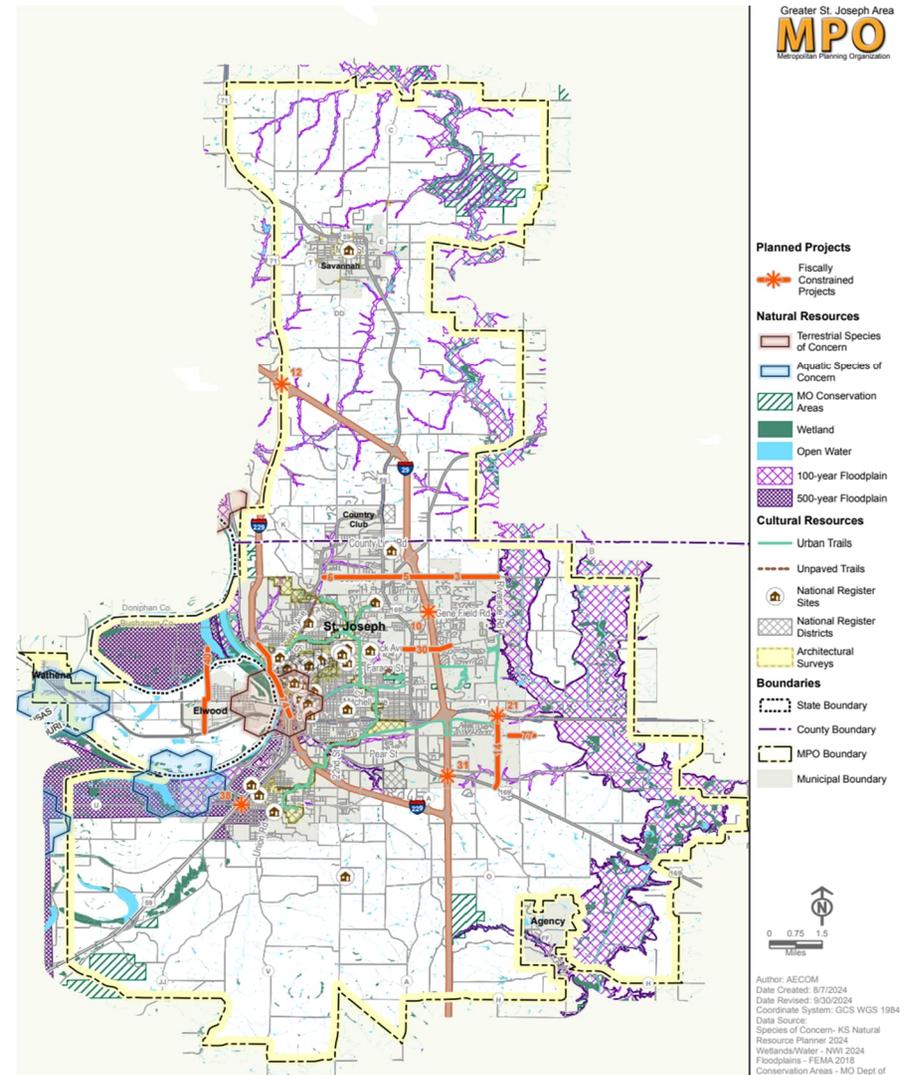
This documentation allows for the analysis of the MTP fiscally constrained projects to identify potential impacts on environmentally sensitive areas. It is important to note that this analysis is conducted at a very high level for the MTP update and is not intended to be a detailed environmental analysis.

The primary purpose of the 2050 MTP environmental mitigation analysis is to identify potential concerns early in the transportation planning process. If a potential concern is identified (i.e., roadway improvement or new roadway located in a floodplain), it is not the intent of the MTP analysis to solve the potential issue(s) or conflict(s). It also does not eliminate a project from moving forward for further consideration or additional study. If a potential impact is identified, general mitigation guidelines for all phases of project planning, design, construction, and maintenance are provided for agency consideration. These are discussed in Appendix J.

### 2050 MTP Environmental Mitigation Analysis

The approximate limits of the fiscally constrained 2050 MTP projects were overlaid on top of the environmental resources basemap. Using GIS, a quarter-mile buffer was established around each fiscally constrained project. A potential impact was recorded when a mapped resource intersected with a project buffer. Figure 43 displays the fiscally constrained projects in proximity to the environmental resources.

Figure 43: Environmental Mitigation (Fiscally Constrained Projects)



Following a review of the fiscally constrained projects, most appear to have no significant impacts on environmentally sensitive areas. Six projects that would potentially be impacted by floodplain issues include:

- Project 3 (Cook Road, I-29 to Riverside Road)
- Project 6 (Cook Road, US 59 to US 169)
- Project 14 (Riverside Road, US 36 to US 169)
- Project 38 (US 59, at Alabama Street intersection improvements)
- Project 40 (New Airport Access Road)
- Project 74 (I-229 Double-Decker replacement)

For each of these six projects, at least a portion of the project touches the 100- or 500-year floodplains. In the case of projects 3, 6, and 14, the floodplain impacts appear to be relatively minor. Still, this is a good example of how early consideration of potential issues can support and strengthen the future planning and project design.

Another consideration worth noting is the proximity of Project 74 (I-229 Double-Decker Bridge replacement) to historic sites in Downtown St. Joseph. The recently completed I-229 EA provides a detailed assessment within the study corridor that will provide detailed guidance to address issues as the project moves into design and construction.

Additional analysis and findings of the environmental mitigation analysis can be found in Appendix J.

## Mitigation Planning Guidance

Identification of a potential impact does not by itself mean that a project cannot advance for further study or eventually be constructed. Having identified potential impacts, planning guidelines can help the respective agencies during all phases of project planning, design, construction, and maintenance.

As the 2050 MTP fiscally constrained projects move through the development process, they should be analyzed in detail to determine whether negative environmental impacts will be realized by the surrounding area. SJATSO uses the environmental mitigation analysis results as a starting point to consult with the appropriate local, state, and federal agencies to minimize the impact the transportation projects may have on the environment.

The general guidelines for addressing potential impacts to sensitive resources establish a three-step approach, commonly called sequencing. The first step is to avoid the resource whenever or wherever possible. If a sensitive resource cannot

be avoided, then the second step is to minimize the impact to the greatest extent possible. The third step is to consider compensatory mitigation to offset harm to the resource from those impacts that remain after steps one and two.

While SJATSO provides general mitigation guidelines that are consistent with MoDOT, KDOT, and the American Association of State Highway and Transportation Officials in Appendix J, it is recommended that lead agencies consult the most current documents for guidance and any specific requirements. SJATSO recommends and encourages lead agencies to follow these guidelines during the project planning and development process; however, SJATSO cannot enforce these guidelines. Ultimately, these “best practice” guidelines follow good planning practices that will help protect the SJATSO regional environment and help the region to better plan for and construct more resilient and sustainable transportation investments.

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# Chapter 11. Implementation

## Moving the Region Forward

The 2050 MTP identifies opportunities to make future year transportation investments that will support the SJATSO goals and objectives. Future multimodal investments have been identified that have the potential to expand mobility options, grow the economy and tourism, improve the efficient movement of freight, expand access to jobs, maintain existing assets, and increase safety for the traveling public.

While previous chapters have outlined the various multimodal challenges and opportunities, this chapter focuses on implementing the fiscally constrained projects. In addition to the projects themselves, the identification of supporting policies and strategies play an important role in helping turn the MTP vision from concept into reality.



## Importance of the Long-Range Vision

Future transportation needs outnumber the projected revenue forecast through the horizon year 2050. Increasing construction, maintenance, and operating costs over the past 5 years have significantly limited the ability of the SJATSO and local agencies to implement large-scale transportation infrastructure projects. Unfortunately, as large-scale projects are pushed further into the future, the project costs increase, which make it more difficult to implement. As such, it is critical for the SJATSO to maximize current funding and to seek additional funding through various sources, including leveraging grants.

SJATSO recognizes it is not possible to construct all the transportation projects identified in the MTP; however, the unconstrained vision is a critical part of the transportation planning process. The unconstrained vision, or illustrative projects, is important because it:

- Establishes the long-term vision, or blueprint, for future transportation investments;
- Promotes coordinated land use planning, informed development decisions, and enhanced policy-making at the local and regional levels; and
- Positions SJATSO to quickly respond to future year transportation needs—including having “shovel ready” projects should additional funding become available.

## Fiscally Constrained and Unconstrained Vision

The unconstrained vision represents improvements that could be made in the SJATSO region if money were not an issue. Chapter 7 provided an evaluation of the potential projects, and the following describes the approximate timing of when projects might be needed. Projects are divided into three tiers, described below, and as shown in Figure 44 and summarized in Table 14.

It is important to keep in mind that the timing is approximate, as there are multiple factors that could influence the planning, programming, and construction of projects. Appendix H provides additional detail on the tiered projects.

### Tier I Projects (Fiscally Constrained)

Tier I projects are the fiscally constrained projects previously identified in Chapter 8. Based on projected revenue through the year 2050, these are projects that are prioritized for construction. Furthermore, based on the projected revenues, it is anticipated that funding will be available for these projects. It is important to note

that the fiscally constrained projects reflect the needs and funding availability at the time this MTP was developed. As the MTP spans a 20-year horizon, priorities can and often change based on various factors, including funding availability and asset condition, to name a few. SJATSO monitors ongoing safety needs, infrastructure conditions, operational conditions, and population and employment growth to ensure the appropriate multimodal infrastructure is in place to meet the future demand. As such, additional projects may be added to the fiscally constrained project list through MTP and TIP amendments.

### Tier II Illustrative Projects (2025 to 2034 and 2035 to 2050)

Tier II projects are generally considered to be “next in line” if additional funding becomes available. In many cases, these projects could already help address an existing or emerging transportation need. The Tier II projects are sub-divided into a general time frame of when specific improvements might be needed (with the understanding that projected funding levels will not be adequate to construct these projects). The Tier II projects are divided into a 2025 to 2034 time frame and 2035 to 2050 time frame. Again, these time frames are approximate and could change.

### Tier III Illustrative Projects (Beyond 2050)

Tier III projects represent the long-range component of the fiscally unconstrained vision and are projects that would likely be implemented beyond the 2050 planning horizon year. With that said, it is still important to highlight these long-range projects because it helps provide the overall blueprint for the future transportation network, thus allowing planners, stakeholders, and elected officials the opportunity to see how these projects fit that with the overall long-range vision and other projects that will be constructed before the horizon year. Furthermore, priorities can change and what may now be considered long-range project could potentially move up the priority list and eventually be programmed for design and construction before 2050. These projects are reevaluated as part of future MTP updates.

Table 14: Tiered Projects (continued on pages 58 and 59)

Table 1 of 3 (sorted by Tier)										
ID	Roadway	Project Sponsor / Jurisdiction		Location	Improvements	Cost Estimate (2024 Dollars)	Tier I Fiscally Constrained	Tier II	Tier II	Tier III
								Year 2025 to 2034	Year 2035 to 2050	Beyond 2050
3	Cook Road	City of St. Joseph	Woodbine to Riverside		Improve capacity/reconstruct from 2 lane to 3 lane; improve vertical alignment	\$ 3,000,000	●			
5	Cook Road	City of St. Joseph	US 169 to I-29		Improve capacity/reconstruct from 2 lane to 3 lane	\$ 4,000,000	●			
6	Cook Road	City of St. Joseph	US 59 to US 169		Improve capacity/reconstruct from 2 lane to 3 lane	\$ 8,000,000	●			
10	Gene Field Road (Bridge)	MoDOT	@ I-29		Improve bridge; potential capacity improvement with projects 9 and 11	\$ 4,000,000	●			
12	I-29/I-229/US 71 interchange	MoDOT	System interchange		Improve ramp geometrics; enhance safety and traffic flow	\$ 1,000,000	●			
14	Riverside Road (Route AC)	MoDOT	US 36 to Pickett Rd		Improve capacity/reconstruct from 2 lane to 3 lane	\$ 7,000,000	●			
21	Riverside Road (Route AC)	MoDOT	US 36 Interchange / Bridge		Reconstruct, add capacity	\$ 14,000,000	●			
30	Frederick Avenue	City of St. Joseph	36th St. and Leonard		Streetscape/gateway improvements; improve sidewalks	\$ 3,000,000	●			
31	I-29	MoDOT	US 169		Reconstruct interchange	\$ 8,000,000	●			
38	Alabama Street	MoDOT	near US 59		Improve intersection geometrics; explore at-grade rail crossing options	\$ 8,300,000	●			
40	New Airport Causeway	Buchanan / Doniphan County / Elwood	Location TBD		Construct secondary access point to/from airport	\$ 9,000,000	●			
74	I-229 (Double Decker)	MoDOT	I-229/US 59 to I-229/US 36/US 59 interchange		Construct preferred alternative identified in I-229 EA Study	\$ 200,000,000	●			
77	Pickett Road	City of St. Joseph	Route AC to Craig Parkway		Improve to urban cross section	\$ 5,450,000	●			
1	US 36	MoDOT	28th Street to I-229 / US 36 / US 59 (interchange)		Mainline and ramp improvements	\$ 65,000,000		●		
2	US 36	MoDOT	I-29 to 28th Street		Mainline and ramp improvements	\$ 20,000,000		●		
9	Gene Field Road	City of St. Joseph	Woodbine to Riverside		Improve capacity from (3 lane section)	\$ 11,000,000		●		
11	Gene Field Road	City of St. Joseph	Belt Hwy to Woodbine		Improve capacity (3 lane section)	\$ 6,000,000		●		
29	Karnes Road	City of St. Joseph	US 169 (Bus. 29) to St. Joseph Avenue (US 59)		Improve cross section; add shoulders; improve intersections	\$ 8,000,000		●		
48	US 59	MoDOT	County Line Road to Belt Highway		Improve cross section and intersection geometrics	\$ 9,000,000		●		
49	US 59	MoDOT	Route DD		Intersection improvements	\$ 1,000,000		●		
50	McArthur Drive (Bridge)	City of St. Joseph	@ BNSF RR		Reconstruct	\$ 2,000,000		●		
52	Karnes Road	City of St. Joseph	Leonard to Woodbine		Improve (rebuild to 2-lane standard section)	\$ 3,000,000		●		

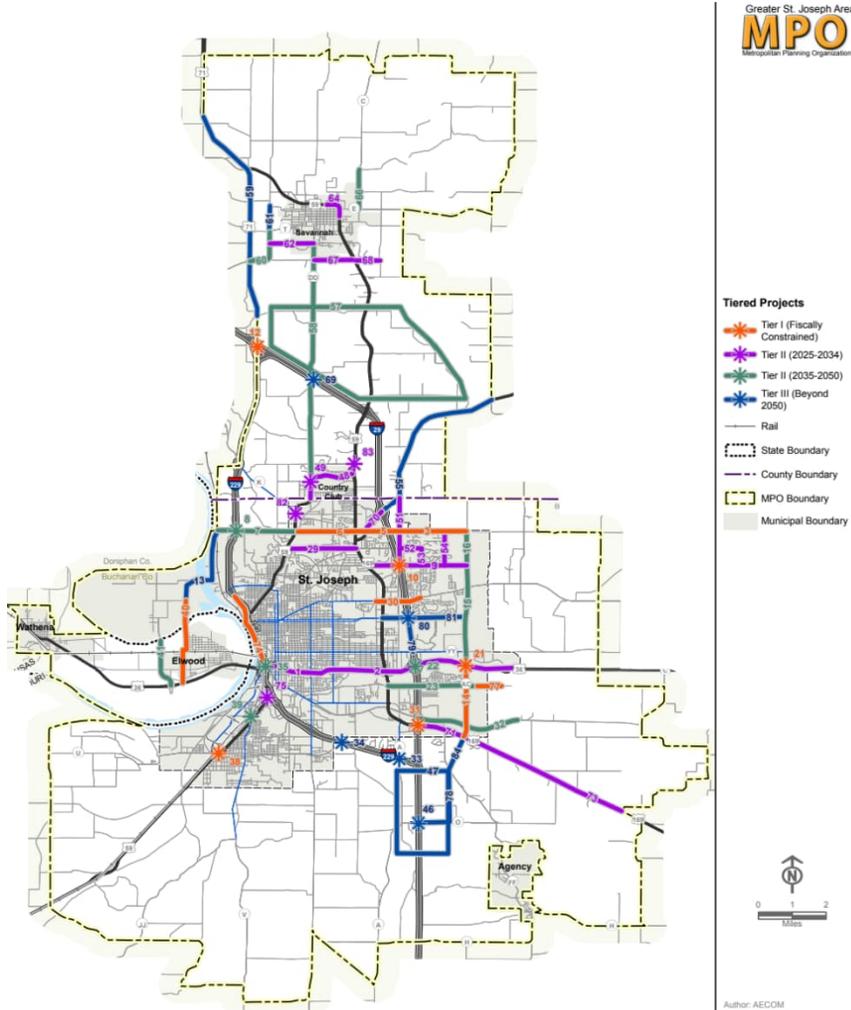
Table 2 of 3 (sorted by Tier)

ID	Roadway	Project Sponsor / Jurisdiction	Location	Improvements	Cost Estimate (2024 Dollars)	Tier I Fiscally Constrained	Tier II Year 2025 to 2034	Tier II Year 2035 to 2050	Tier III Beyond 2050
53	Leonard Road	City of St. Joseph	Gene Field to Karnes	Improve (rebuild to 2-lane standard section)	\$ 3,000,000		●		
54	Bishop Road	City of St. Joseph	Gene Field Road to Cook	Improve (rebuild to 2-lane standard section)	\$ 3,000,000		●		
62	E. Swenson Drive	Savannah	7th Street to Route T	Extend Roadway	\$ 3,000,000		●		
65	Business 71 (Savannah)	MoDOT	Main street north to 3rd Street	Extend existing four-lane section; include active transportation facilities	\$ 1,000,000		●		
67	CR 366	Andrew County	Business 71	Connect segment between DD and Business 71	\$ 3,000,000		●		
68	CR 366	Andrew County	Business 71 east to Route 332	Extend CR 366 eastward to connect	\$ 2,000,000		●		
70	US 169	MoDOT	Cook Road to I-29	Improve (increase capacity from 2 to 3 lanes) and modify interchange	\$ 2,000,000		●		
71	US 169	MoDOT	I-29 to Route FF	Increase capacity; 4-lane section with access management	\$ 3,000,000		●		
75	6th Avenue (Bridge)	City of St. Joseph	@ King Hill Avenue	Reconstruct concrete stringer	\$ 1,000,000		●		
82	US 59	MoDOT	@ Route K	Improve intersection geometrics/turning lanes	\$ 2,000,000		●		
83	Route DD	Village of County Club / MoDOT	@ John Glenn Road	Improve intersection geometrics/turning lanes	\$ 2,000,000		●		
7	Cook Road	City of St. Joseph	St. Joseph Avenue / US 59 to Waterworks Rd	Construct new roadway	\$ 19,000,000			●	
8	I-229	MoDOT	@ new Cook Road extension (with project 7)	Construct new interchange	\$ 4,000,000			●	
15	Riverside Road (Route AC)	MoDOT	US 36 to Route 6	Improve cross section and turn lanes; add capacity US 36 to Mitchell	\$ 18,000,000			●	
16	Riverside Road	City of St. Joseph	Gene Field to Cook	Improve roadway; urban cross section	\$ 7,000,000			●	
22	I-29	MoDOT	US 36	Improve interchange	\$ 40,000,000			●	
23	Pickett Road	City of St. Joseph	Belt Highway to Riverside	Improve cross section with turn lanes	\$ 6,000,000			●	
32	Easton Road	City of St. Joseph	Leonard to east of Riverside	Improve (rebuild horizontal/vertical alignment as standard urban section)	\$ 3,000,000			●	
35	I-229/US 36/US 59 interchange	MoDOT	System interchange	Improve geometrics; enhance safety and traffic flow	\$ 30,000,000			●	
39	Lower Lake Road	City of St. Joseph	@ railroad crossing	Construct grade-separation	\$ 6,000,000			●	
41	Rosecrans Airport Access	KDOT	US 36 to airport entrance	Improve cross section	\$ 6,000,000			●	
57	Develop supporting roadway network	Andrew County	TBD	Develop new roadways to support future development	\$ -			●	

Table 3 of 3 (sorted by Tier)									
ID	Roadway	Project Sponsor / Jurisdiction	Location	Improvements	Cost Estimate (2024 Dollars)	Tier I Fiscally Constrained	Tier II Year 2025 to 2034	Tier II Year 2035 to 2050	Tier III Beyond 2050
58	Highway DD	Andrew County	Between US 59 and T (near Savannah)	Upgrade segment	\$ 22,000,000			●	
60	Highway T	Andrew County	Roadway segment	Improve capacity; add shoulders	\$ 1,000,000			●	
61	Route T / (CR 428)	Andrew County	CR 424 and CR 427	Extend roadway	\$ 2,000,000			●	
66	Highway C	Andrew County	Roadway segment	Improve capacity, resurface & install shoulders	\$ 1,000,000			●	
13	New Airport River Crossing	Buchanan / City of St. Joseph / MoDOT / KDOI	TBD	Construct bridge to provide secondary access to the airport	\$ 170,000,000				●
33	I-229 (Interchange)	MoDOT	@ Route A	Add ramps at interchange to accommodate all travel movements	\$ 3,000,000				●
34	I-229 (Interchange)	MoDOT	@ MO 752	Improve interchange ramps	\$ 3,000,000				●
46	I-29	MoDOT	Route O	Construct new interchange	\$ 12,000,000				●
47	Develop supporting roadway network	City of St. Joseph / Buchanan	TBD	Develop local area roads to support future development	\$ -				●
55	US 169	MoDOT	I-29 to MPA eastern boundary	Improve cross section; and intersections	\$ 14,000,000				●
59	US 71	MoDOT	US 59	Upgrade roadway	\$ 18,000,000				●
69	I-29	MoDOT	Route DD	Construct new interchange to accommodate future development	\$ 18,000,000				●
73	US 169	MoDOT	Route FF to MPA boundary	Improve cross section; add turn-lanes	\$ 12,000,000				●
78	Route O (future I-29 to Route AC connector)	City of St. Joseph / MoDOT	Route O and potential new corridor alignment	Improve existing road capacity/cross section; construct new roadway	\$ -				●
79	I-29 Mainline	MoDOT	US-36 to Frederick Avenue	Geometric and capacity improvements; coordinated with project 80	\$ -				●
80	I-29 New Interchange	City of St. Joseph / MoDOT	I-29 at Faraon Street	Construct new interchange (pending results of I-29 break-in access study)	\$ -				●
81	Faraon Street	City of St. Joseph	Belt Highway to Riverside	Improve roadway cross section; add turn-lanes	\$ -				●
84	New Route (future I-29 to Route AC connector)	City of St. Joseph	State Route FF to Route AC (Riverside)	Construct new roadway; completes I-29 / Route AC connector route	\$ -				●

NOTE: Project 13 is an average of two cost estimates prepared as part of a river crossing study.

Figure 44: Tiered Roadway/Freight Projects



#31 – I-29/US 169 Interchange



#74 – I-229 Double-Decker Bridge



Photo Credit: HG Consult, Inc.

#6 – Cook Road Improvement



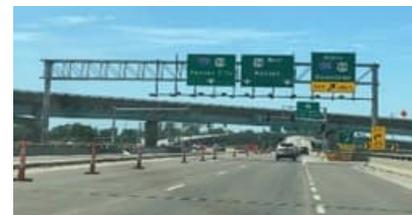
#10 – Gene Field Bridge over I-29



#38 – Alabama Street/US 59 (near at-grade rail crossing)



#35 – I-229/US 36/US 59 Interchange



## Land Use Compatibility with MTP Long-Range Vision

The importance of understanding the transportation/land use connection cannot be overemphasized. As stated by the U.S. Department of Transportation in *The Transportation Planning Process Key Issues*:

*Land use and transportation are symbiotic: development density and location influence regional travel patterns, and, in turn, the degree of access provided by the transportation system can influence land use and development trends...*

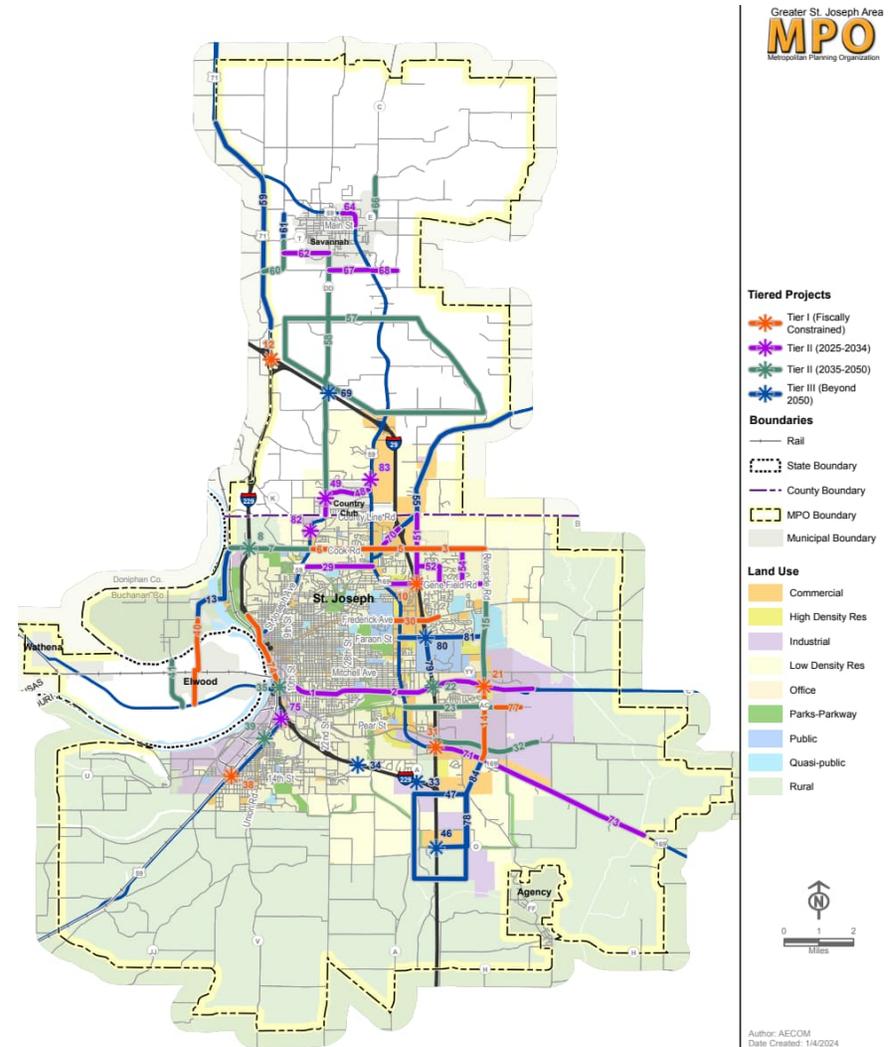
*MPOs are responsible for consultation with state and local agencies responsible for land use management; comparing transportation planning efforts with land use plans; and using current land use estimates...when updating planning products.*

The SJATSO region currently has future land use plans for the City of St. Joseph and Buchanan County. Andrew County does not have a future land use plan or zoning, both of which would significantly help in defining future transportation corridors and lead to better transportation infrastructure decisions.

Figure 45 displays the relationship between the MTP vision and the future land use plan. SJATSO could encourage, and potentially work with, the regional planning agency to develop a comprehensive land use plan that would cover the entire MPA. Future transportation legislation is likely to continue to promote livable and sustainable communities, and developing a comprehensive regional land use plan would greatly enhance future development and transportation decisions.

Corridor planning and right-of-way preservation are also important tools that can be used to strengthen the transportation/land use connection. Identifying future corridor alignments can lead to better development and transportation decisions benefiting the entire region. SJATSO should utilize the MTP vision outlined in this plan to move projects from the conceptual stage to implementation, even if some larger projects need to be implemented in phases.

Figure 45: Land Use Compatibility with Roadway/Freight Projects



## Transit Investment Emphasis Areas

The 2050 MTP highlights the following transit investment emphasis areas. These emphasis areas are consistent with recent plans developed by *Go. St. Joe*, including:

- *Coordinated Public Transit – Human Services Transportation Plan* (June 2023)
- *Transit Service Development Plan* (June 2022)

### Reinstate 30-Minute Headways

Following the completion of the 2045 MTP, *Go. St. Joe* completed a TDP that reinforced the priority to implement 30-minute headways. This went into effect in 2023 and was discontinued in 2024 due to a driver shortage. *Go. St. Joe* continues to view 30-minute headways as a priority and are working to reinstate this service by year end, or early 2025.

### Late Evening Service

The *Go. St. Joe* TDP also prioritized providing late evening service. This evening service would help connect residents with second and third shift jobs, many of which are located in the Stockyard industrial area. Much like 30-minute headways, the provision of late evening service is largely dependent on driver availability. *Go. St. Joe* continues to explore opportunities to expand late evening service within the current service area.

### Belt Highway Transfer Facility and Pedestrian Improvements

The 2045 MTP, supported by 2022 TDP recommendations, highlighted the need for a north-south route along the Belt Highway. This was introduced in 2023, and according to *Go. St. Joe*, the route has been a success. To further support transit operations along the Belt Highway, SJATSO and *Go. St. Joe* continue to explore opportunities to construct a new transfer facility. Additionally, upgrading existing sidewalks, constructing new sidewalks, and providing safer crosswalks would enhance critical first- and last-mile connections for pedestrians and bicyclists.

### Regional Transit Service to Kansas City

Over the past two decades, SJATSO has been monitoring the potential demand for regional service to the Kansas City area. Recent MTP surveys continue to show a steady increase in travel between the SJATSO region and Kansas City area. This connection is likely due in part to the convenient access to the Kansas City International Airport and other facilities, including medical services located in north

Kansas City. In 2024, MoDOT, in conjunction with MARC, began a passenger rail corridor ID study to evaluate the feasibility of service between Kansas City and St. Joseph. These results should be incorporated into the next MTP update. In addition, the 2050 MTP supports further study of a potential regional bus service that could provide service to/from the Kansas City area.

### Expanded Service to Savannah

As part of the previous MTP update, residents and local officials in the Savannah area expressed interest in having transit service that would connect to the St. Joseph urbanized area. While there are no immediate plans for *Go. St. Joe* to provide fixed-route service, OATS has indicated that they plan to add an additional vehicle to provide enhance service to the area.

## Active Transportation Investment Emphasis Areas

Most active transportation facilities within the MPA are located within the City of St. Joseph. The urban trail system, consisting of the Parkway system and other dedicated trails, form a well-established active transportation network. The Parkway by itself consists of over 20 miles of continuous trails through the central part of the MPA. The 2050 MTP includes active transportation improvements that would extend non-motorized facilities to developing areas throughout the region and eventually connect to statewide trails.

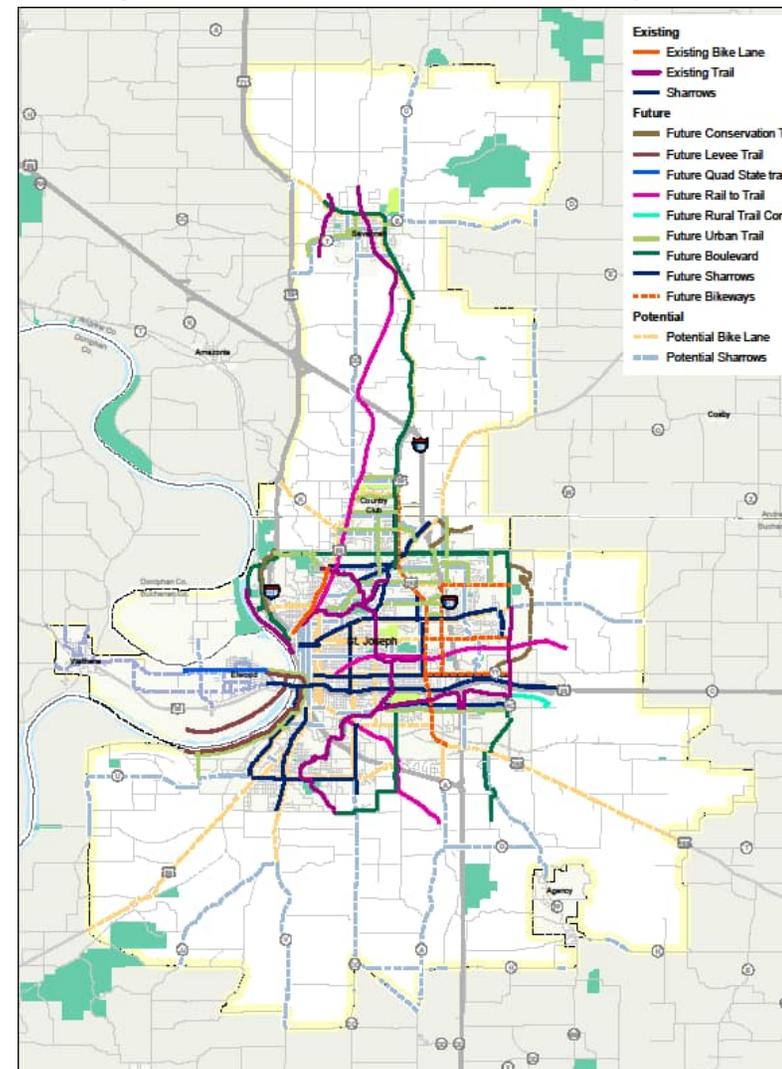
With increased emphasis on reducing greenhouse gas emissions, the active transportation component of the MTP could play a more significant role in the future. The active transportation improvements, set forth in the SJATSO *Active Transportation Plan: A Complete Streets Roadmap* and displayed in Figure 46 consist of individual trail projects as well as roadway improvements with planned non-motorized facilities. In fact, the fiscally constrained roadway projects include active transportation facilities along Cook Road and the Riverside Road corridors.

The most notable active transportation improvements were recently identified in the *Riverfront Development Plan*. This plan identified opportunities to connect Downtown St. Joseph with the riverfront, including a pedestrian bridge over the rail line and a proposed non-motorized bridge over the Missouri River connecting to Kansas. This plan also includes potential additional trail connections, including a connection north to tie into a future Cook Road extension. Furthermore, in a recent 2050 MTP survey, respondents identified the riverfront redevelopment as their top active transportation improvement.

*Cook Road*, as part of future roadway improvements, is also envisioned to include active transportation facilities to develop a continuous east-west connection to US 59 and potentially continue west toward I-229 and Riverside Road. This facility would support continued growth in the area and would also tie into facilities near Country Club Village.

The *Quad-State Trail Plan*, originally announced in 2005, envisions an interconnected trails system that connects portions of four states: Missouri, Iowa, Kansas, and Nebraska—though recent additions now connect to Illinois. Since 2005, the plan has been augmented with new and planned trails across Missouri—including the Rock Island Trail, which connects with the Katy Trail to create a nearly 300-mile cross-state system. Future plans connect this statewide trail to the St. Joseph region, including connections through the region to Savannah.

Figure 46: Planned Active Transportation System



## Supporting Strategies and Policies

For decades, traditional transportation planning has focused on moving vehicles as quickly and efficiently as possible. Over the past decade there has been a shift toward developing a transportation system that moves people and goods, regardless of mode, as opposed to simply prioritizing movement by private vehicle. In addition, new technology has the potential to reshape how we move people and goods over the next 20-plus years. The following summarizes supporting strategies and policies to help implement the recommended 2050 MTP projects.

### Complete Streets

According to the SJATSO *Active Transportation Plan: A Complete Streets Roadway*, the prevailing definition of Complete Streets is streets that are designed and operated to enable safe access for all users. Although there are subtle differences between Complete Streets, Walkable Communities, Complete the Streets, Context Sensitive Design, Neo-Traditional Street Design, and Taking Back the Streets, the aim of each is essentially the same. Pedestrians, bicyclists, motorists, and transit riders of all ages and abilities must be able to safely move along and across a complete street. Creating Complete Streets could involve changing the policies and practices of transportation agencies from state departments of transportation to cities, villages, and counties.

A Complete Streets plan ensures that the entire right-of-way is routinely designed and operated to enable safe access for all users. Transportation agencies must ensure that all road projects result in a complete street appropriate to local context and local planning.

Elements of a good Complete Streets plan include:

- A vision for how and why the community wants to build and re-build its streets.
- Specifies that “all users” includes pedestrians, bicyclists, and public transportation passengers of all ages and abilities as well as trucks, buses, and automobiles.
- Encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes.
- Is adoptable by all agencies to cover all roads.
- Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right-of-way.
- Makes any exceptions specific and sets a clear procedure that requires high-level approval of exceptions.

- Directs the use of the latest and best design standards while recognizing the need for flexibility in balancing user needs.
- Directs that Complete Streets solutions compliment the context of the community.
- Establishes performance standards with measurable outcomes.
- Includes specific next steps for implementation of the plan.

The SJATSO Complete Streets transportation vision.

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*The St. Joseph MPO envisions a transportation system that encourages healthy, active living; promotes transportation options and independent mobility; increases community safety and access to healthy foods; reduces environmental impact; mitigates climate change; and supports greater social interaction and community identity by providing safe and convenient travel along and across streets through a comprehensive, integrated transportation network for pedestrians, bicyclists, public transportation riders, automobiles, freight, emergency vehicles, and agricultural vehicles. Also included are people of all ages, regardless of SE status, race, and ethnicity, as well as children, youth, families, older adults, and individuals with disabilities.*

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### Transit-Oriented Development

Transit-oriented development (TOD) is higher-density, multi-family housing and mixed-use development designed to encourage accessible, active, pedestrian-friendly areas within walking distance of transit. TOD comes in all shapes and sizes, depending on the local context, but one thing that is common across TOD is its goal to encourage the use of public transit and reduce private vehicle trips. TOD includes several of the same Complete Streets principles in that the policy is intended to strengthen alternative transportation modes. As a result, a corridor is able to move more people with fewer vehicles. TOD design focuses on:

- Locating housing near transit;
- Locating neighborhood-serving retail and office uses near transit and housing;
- Connecting streets and paths for pedestrians and cyclists to and through the TOD; and
- Creating viable retail spaces for various tenants.

For TOD to be successful, a strong relationship between development and transit and an understanding of how transit works in tandem with surrounding development is necessary. This understanding begins with:

- Defining locations and sites with land use designation where TOD should occur;
- Describing a conceptual framework in which existing and prospective development and transit can relate to and complement each other;
- Understanding the challenges to implementing those concepts; and
- Defining the components of TOD.

While transit represents a relatively small percentage of trips within the region, it is possible that this mode may become more important as the SJATSO approaches the 2050 planning horizon year. Demographic data from 2017 to 2021 indicates there is a growing number of residents in the SJATSO MPA over the age of 65 (31.5 percent increase for the MSA). As the region's senior population grows, it could be possible to see increased reliance on public transportation. TOD can support and encourage the use of public transportation and, furthermore, creates a pedestrian-friendly environment that encourages individuals to walk and remain active, which can be a benefit for the entire community.

### Safe Routes to School

In 2024, SJATSO prepared the *Safe Routes to School Plan*, which supports local schools and community leaders in identifying potential improvements to create a more walkable/bikeable environment consistent with the goal of the national Safe Routes to Schools program. Through this program, children are encouraged to safely walk and bicycle to school. In the process, these programs help reduce traffic congestion and improve health and the environment, making communities more livable for everyone. By encouraging young students to walk as their primary transportation mode, Safe Routes to School programs can promote an active lifestyle which will hopefully continue beyond childhood.

SJATSO staff and St. Joseph School District have worked together closely in the past to implement elements of the Safe Routes to Schools Plan. The Safe Routes to School Plan involves extensive research and analysis of each school within the MPO as well as mapping and preparation of cost estimates to create a road map that can be used to identify bicycle and pedestrian infrastructure needs near the schools.

Federal legislation and funding exist to support Safe Routes to School programs efforts, but these funds alone cannot meet all of a community's needs. Most programs can benefit from a mixture of local, state, federal, and private funding.

Though some communities have implemented complex local government financing tools—such as sales tax funding or bonds—to fund Safe Routes to School programs, perhaps the easiest approach is to tap into existing sources of money that support active transportation, safety improvements, or health programs. Regardless of the funding source, SJATSO is committed to working with local schools to enhancing walking and biking as a safe, viable transportation option.

### Access Management

A highway network serves a dual role in providing travel mobility and access to property. Mobility is provided at varying levels and includes a wide range of elements (e.g., riding comfort, freedom of speed changes, etc.), while access is a fixed requirement necessary at both ends of a trip. Access management is the process of managing the connections between public highways and roadways and adjoining land. Transportation officials must balance the need for land development with the need for safe and efficient travel. MoDOT's and KDOT's existing access management regulations require an application process for all new access points for new developments on roadways in their respective jurisdictions.

MoDOT's access management guidelines promote safety and infrastructure efficiency through the proper selection of access improvements based on the roadway's functional classification, distance between intersections and other access points, and the context of other access features such as frontage and backage roads. KDOT's access management guidelines focus on the elimination of driveways by consolidating access points or providing access from other roads, proper spacing between access points, geometric changes to ensure safe deceleration, and the introduction of dedicated turning lanes to separate through and turning vehicles.

The City of St. Joseph has its own Access Management Policy using the SJATSO model. According to this standard, applications for building permits, development plans, or subdivision plats are not processed until an application for access is made; the application is reviewed to ensure that it complies with the City of St. Joseph construction and access management standards unless in conflict with more stringent MoDOT requirements. These guidelines help optimize the existing and future function of the road network.

### Green Infrastructure

A form of low-impact development, green infrastructure is an approach to wet weather management that seeks to be environmentally friendly, sustainable, and cost-effective. It manages stormwater by mimicking natural hydrological features and processes, consistent with the local context. In this way, green infrastructure turns

rainfall into a resource instead of a waste. Examples of green infrastructure include vegetated rooftops, rainfall gardens, permeable pavements, rainwater harvesting, and roadside plantings, among others. Implemented correctly, these features can help reduce stormwater runoff, which has secondary benefits of reducing flooding, increasing the underground water supply, providing public health benefits by reducing contaminants from runoff, and mitigating heat-related issues.

In the case of rural locations where it can be cost-prohibitive to construct and maintain traditional stormwater infrastructure, replacing curb-and-gutter systems and implementing green infrastructure features like bioswales and ditches can reduce costs while better managing stormwater by replicating natural hydrological processes. Transportation improvement projects create an opportunity to cost-effectively construct green infrastructure while carrying out roadway capital improvements.

### Context Sensitive Solutions

Context sensitive solutions (CSS) is an approach that considers the total context in which a project will exist. CSS can include considering the interactions between transportation systems and facilities and then tailoring them to the local human and natural environments. Because there are so many competing needs and perspectives, the goal is to develop solutions that are acceptable to most parties. CSS requires an interdisciplinary and collaborative approach with multiple stakeholders involved in developing the most acceptable solution. Communication must be open, honest, early, and continuous, and there must be a commitment to the process from top agency officials and local leaders.

### Resiliency Planning

To best meet future demand and to promote sustainably, regional planning partners should be looking for opportunities to incorporate resiliency into future infrastructure projects. This involves several elements including dynamic adaptation, smart growth infrastructure, embracing innovation, and planning for evolving norms, travel patterns, and technological advancements. SJATSO supports efforts to reinforce the transportation network, enhancing both future mobility and security of the transportation system.

### Technology

Technology is rapidly evolving and new opportunities are constantly arising that enhance travel safety and more efficiently accommodate the movement of people and goods. Through the year 2050, transportation has the potential to undergo a

considerable revolution with continuously improving data and data management. It is essential to integrate digital transformation technologies into transportation operations, such as leveraging real-time traffic data to keep residents informed, reducing incident response times, and directing services to areas with the greatest need.

### Autonomous and Connected Vehicles

Autonomous vehicles (AVs) and connected vehicles (CVs) represent a paradigm shift in transportation. Autonomous vehicles are advancing steadily and anticipated to account for around 12 percent of new passenger cars with gradual integration as technology matures. These vehicles combine sophisticated software and hardware, operating without human control and communicating via short-range radio signals to maintain real-time awareness of nearby vehicles, thereby preventing crashes, reducing congestion, and reducing the space needed for motor vehicles. AVs and CVs generally consume less energy, reduce human error, and contribute to improved safety.

### Justice40

The federal government and many state governments are focusing on issues of EJ in infrastructure planning. Justice40 is an initiative that aims to ensure that 40 percent of the overall benefits from federal investments reach disadvantaged communities—those that are marginalized, underserved, and disproportionately affected by pollution. This initiative could have significant impacts on future transportation planning efforts and should be monitored to identify potential impacts on future MTP and TIP updates.

Greater St. Joseph Area  
**MPO**  
Metropolitan Planning Organization

**2050 METROPOLITAN  
TRANSPORTATION PLAN**  
St. Joseph Area Transportation Study Organization

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