



City of Salem Active Transportation Plan

December 2022

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Acknowledgements

The Active Transportation Plan for the city of Salem, Missouri was thoughtfully guided and supported by a group of stakeholders aided by their common goal of improving mobility in the community. Meetings were held monthly to identify and prioritize sidewalk, crosswalk, and trail improvements throughout Salem. MRPC thanks the stakeholders for their participation and willingness to provide thoughtful feedback.

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Section 1: Introduction

Salem is a small, historic community in the south-central region of Missouri. The city of Salem holds the county seat and the largest, and only incorporated, population in Dent County with 4,904 residents as of the 2020 American Community Survey (ACS) 5-year estimate. The city is 3.48 square miles in size and features a traditional downtown, active community center, and several nature areas within a short driving distance of town such as Shawnee Mac Conservation Area and numerous rivers. Trail planning in the late 2010's and construction of Health Dent County/The Community Center @ the Armory show the efforts of Salem's elected officials and citizens to focus on community wellness and infrastructure. To build on these efforts, Salem is now looking to create and implement policies that focus on enhancing connectivity throughout town. This plan provides guidance for the city of Salem to develop more complete streets and sidewalks that will better serve and encourage active transportation users and project recommendations for upgraded facilities which will sustain a culture of walking and biking in Salem.

What is Active Transportation?

The Missouri Department of Health and Senior Services (DHSS) defines active transportation as “any self-propelled, human mode of transportation, such as walking or bicycling.” Active transportation can boost local economies, increase physical health, improve the natural environment, and provide affordable transportation access for all. Through a grant from DHSS, the Meramec Regional Planning Commission (MRPC) selected a community in the eight-county region that had an interest in enhancing the lives of its citizens through the adoption of Livable/Complete Streets policies and improvements. Additionally, MRPC reviewed health and socioeconomic-related statistics from the American Community Survey (ACS Census data) and [countyhealthrankings.org](https://www.meramec.org/countyhealthrankings.org) to ensure the chosen community demonstrated a need. This need included poor health outcomes and low rankings as a health county statewide. Dent County currently ranks #102 out of 115 counties in Missouri, which means it is one of the least healthy counties with a lesser quality of life compared to most of its neighboring counties.

Different types of active transportation include:

- Pedestrian (walk or wheelchair)
- Bicycles
- Skateboards
- Other personal mobility devices



Per the Rails-to-Trails Conservancy, active transportation provides the following benefits:



Healthy People – Adds routine physical activities into citizens' daily lives



Health Environment – Reduces impacts to the environment by using cars less



Healthy Economy – Creates communities with a high quality of life that can spur small business development, increasing tourism dollars and possibly property values



Mobility for All – Provides vulnerable populations (children, elderly, low-income, etc.) with access to move around their community

Salem's Active Transportation Goal

The purpose of defining active transportation in Salem is to improve the physical health of the community as people continue to engage in less recreational opportunities nationwide. During the stakeholder planning process, the group discussed several improvements that would benefit the residents of Salem and enhance safety, quality of life and active opportunities.

The goal of this plan is to prioritize sidewalk and trail improvements that are safe for all users, as well as identify ways to improve the short and long-term health outcomes of Salem's residents.



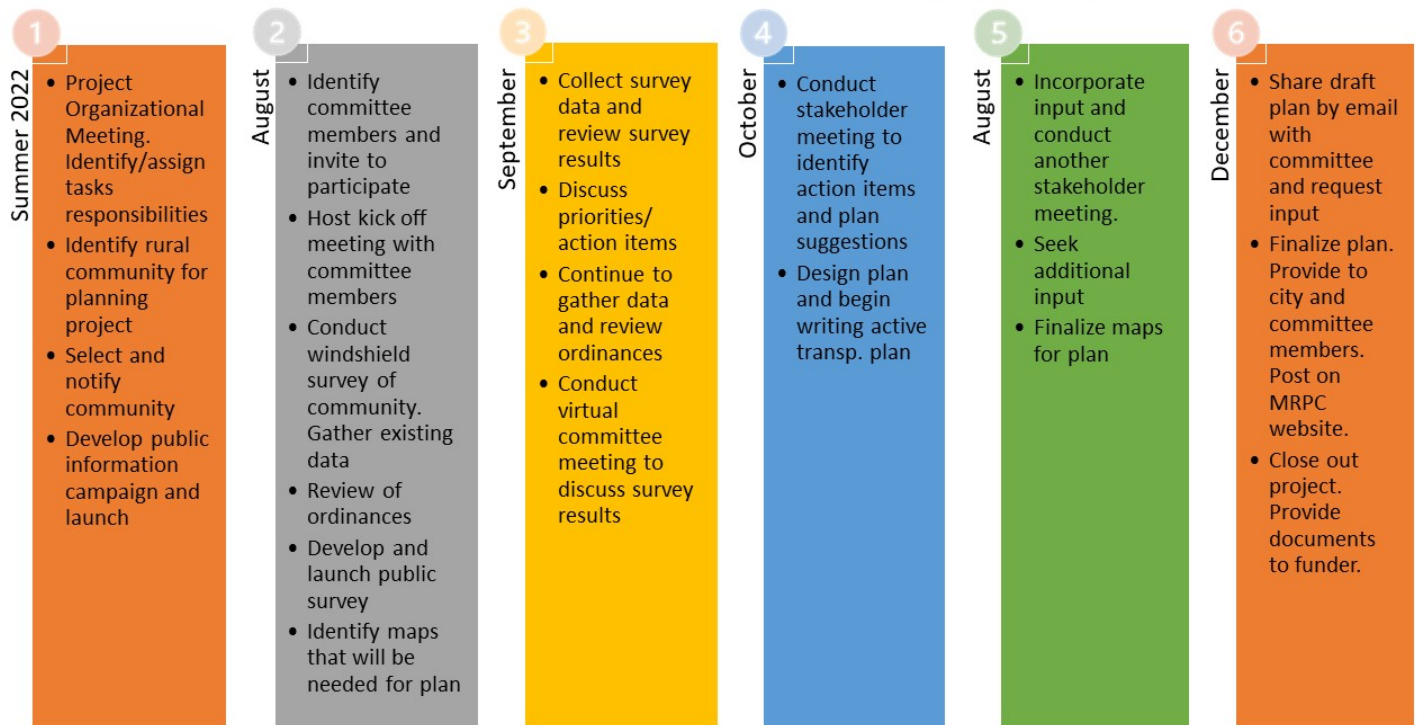
View facing east on Roosevelt St.



View of existing Tiger Trail

Based on the dates identified for the DHHS grant, MRPC created the following table to ensure project completion by the end of December 2022.

Active Transportation Plan: Timeline (Updated)

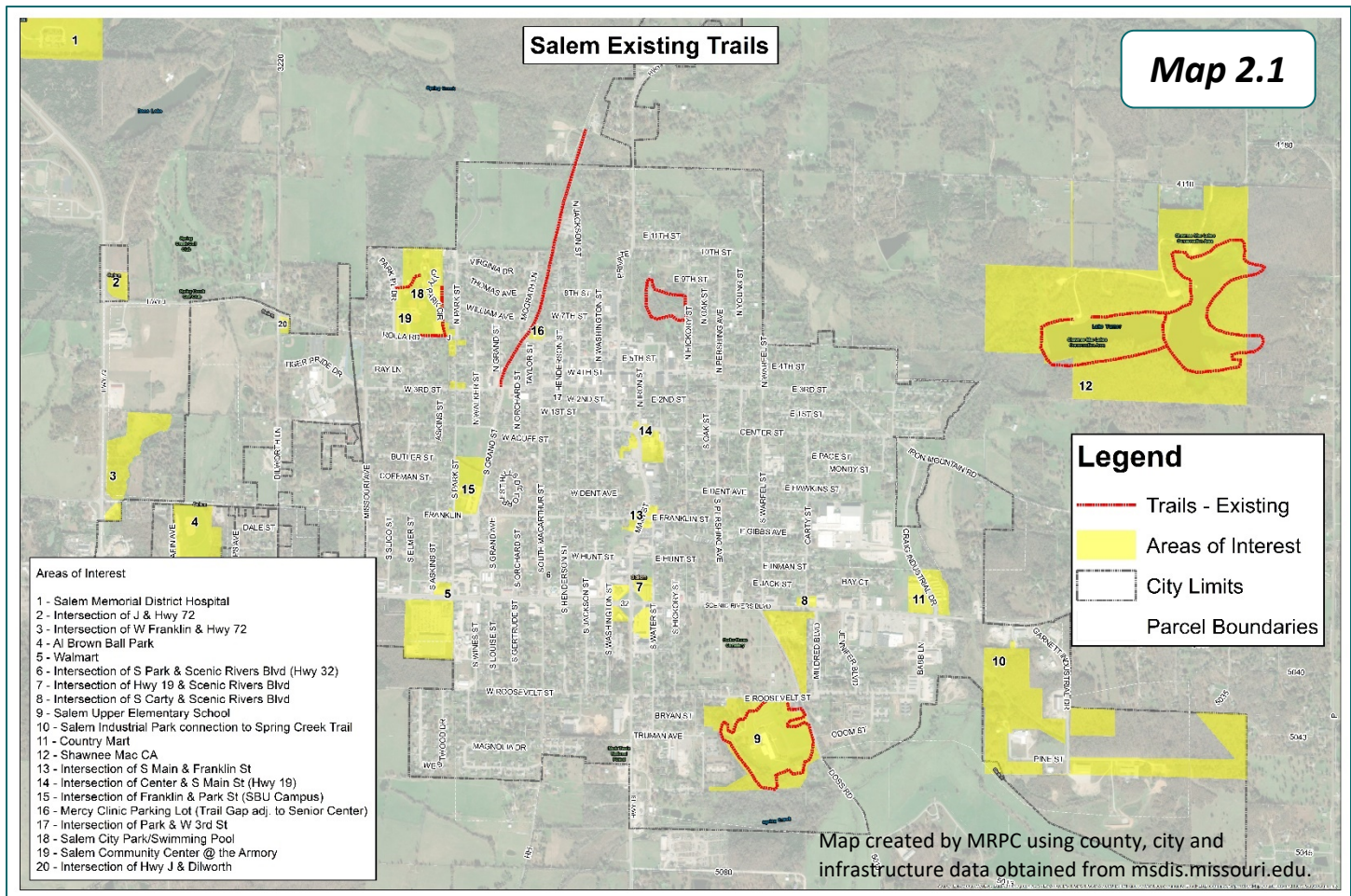


Section 2: Existing Conditions

Before trail and sidewalk recommendations can be made, it is important to understand the condition of existing infrastructure, including sidewalks, trails, crosswalks, etc. Overall, the city of Salem has a larger pedestrian network than many other small towns in the Meramec region. With approximately 134,137 linear feet (25.4 miles) of sidewalk and just under five miles of trails, the community has a good base for expansion of its facilities. Additionally, the city adopted a Complete Streets Policy ordinance in 2018, which is intended to set forth guiding principles and practices for use in all transportation projects. A complete copy of the ordinance is located in Appendix C of this plan.

Trail Conditions

A trail study was done by PedNet around 2018 to identify future trail locations and costs in Salem. While some of the proposed trails from 2018 are no longer a priority due to park location changes, this plan does consider several of the previously proposed trails around the city. Since 2018, additional sidewalks have been constructed in Salem, but no new trails have been built. Map 2.1 depicts the location of Areas of Interest identified by the stakeholder group and existing trails in and around the city of Salem.



According to PedNet's Trails Plan, the following trails are located within city limits:

- **Tiger Trail:** An approximately 1.5-mile-long loop trail around the school property. The trail is gravel.
- **Railroad Trail:** An approximately .75-mile-long asphalt trail that follows along the Old Burlington Northern Railroad bed. It is roughly 8' wide.
- **Bonebrake Nature Center Trail:** Approximately ½ mile of trail that loops around the 12-acre property. The trail is a combination of natural surface and mowed grass.
- **Shawnee Mac Lakes Conservation Area:** Approximately 2.2 miles of trails that loop around the 2 lakes and 256 acres of the Conservation Area. The trails are a combination of natural surface, mowed grass and gravel.

Sidewalk Conditions

In Salem, existing sidewalk infrastructure is concentrated in the northern half of the city with concentrations in the older parts of town and the downtown area. Additional sidewalks are located to the east, west and south; however, most are only oriented north/south. In 2019, MRPC updated the sidewalk inventory through a windshield survey, which is intended to be a general survey of the community completed every few years with transportation funds from the Missouri Department of Transportation.

Sidewalk conditions are organized into three categories:



Sidewalk on south side of Rolla St./Hwy JJ.

- **Good sidewalks** have a smooth and continuous paved surface with minimal cracks or upturned segments. Good sidewalks are separated from automobile conflicts with a curb or landscape buffer and well-defined driveway crossings. This sidewalk was built within the last five years to provide access from the Community Center @ the Armory/City Park to the high school.

- **Fair sidewalks** are continuous and paved but may have cracks or upturned segments that make use difficult for those with mobility challenges. Some Salem sidewalks have encroaching vegetation and utility poles which shrinks the already narrow walking path.



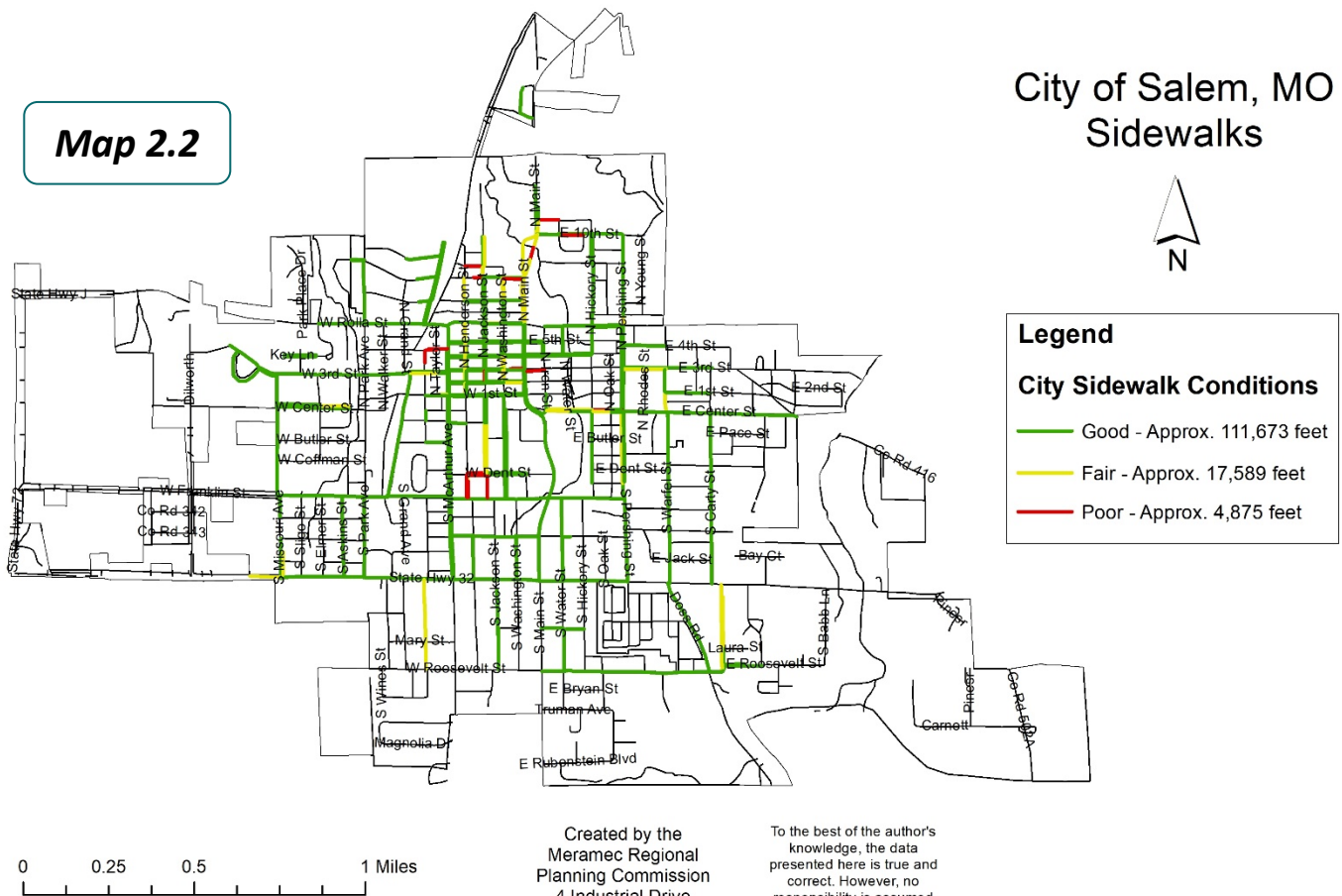
Sidewalk along north side of E. 10th St.



Sidewalk along south side of W. 8th St. near the Main St. intersection

- **Poor sidewalks** are in significant disrepair, are overgrown, or are missing large segments entirely. These sidewalks are functional only for the able-bodied in ideal weather conditions.

The city has approximately 134,137 linear feet (25.4 miles) of existing sidewalks. A majority of the sidewalks are considered to be in good condition. *Map 2.2* illustrates sidewalk conditions from 2019. This map can also be found in Appendix E of MRPC's Regional Transportation Plan.



Section 3: Community Engagement

After selection of Salem as the focus city, MRPC and city staff identified a group of stakeholders committed to the planning and implementation of active transportation. Participants included representatives of infrastructure, local government, economic development, parks and recreation, police and safety, and social service organizations. The non-profit, Healthy Dent County, hosted each of the stakeholder group meetings at their location in the Salem Community Center at the Armory.

First Meeting

The first meeting was held on Aug. 26, 2022. A total of 10 people attended the meeting. MRPC staff provided a presentation on the active transportation planning process. Staff then asked the group to begin identifying areas of interest within the city. The group discussed possible locations where there was a need to improve pedestrian access. MRPC staff indicated a map would be completed by the next meeting which would highlight each of the focus areas. Attendees discussed the importance of connections for youth and elderly access, especially to schools, parks and shopping.

Second Meeting

The second stakeholder meeting was held on Sept. 9, 2022. A total of six stakeholders and two MRPC staff persons attended the meeting. At the meeting, the group began identifying connections between the previously discussed areas of interest on the map. Stakeholders marked sections where sidewalks, trails and crosswalks were needed most in the city to ensure access was available to all citizens.

Online Survey

In order to understand the greater community's priorities and needs, an online survey asked citizens of Salem and the surrounding area about their experiences walking and biking, and what topics were most important to them. Surveys were posted online, in person and via email. A total of 43 people took the survey. Results of the survey were reported at the third meeting on Oct. 21, 2022.

Survey respondents unanimously agreed that sidewalks and trails were somewhat or very important to the health of the community. Of the 43 responses:

- 16 engaged in physical activity several times a week



The City of Salem and the Meramec Regional Planning Commission (MRPC) are seeking to assess community needs and wants to increase active transportation networks in Salem. MRPC received a grant from the Missouri Division of Health and Senior Services to create an Active Transportation Plan for the City of Salem that will assess and propose improvements to the active transportation network.

- Almost half (20) of the respondents felt that bike lanes would be useful
- A majority of respondents (31) drove to work alone, with only one walking and one biking to work
- 20 people felt that the city of Salem was moderately walkable, with one individual stating that the city was not walkable at all.
- 26 respondents provided additional comments on what they felt should be focus areas for sidewalk connections in the city of Salem. These areas include, but are not limited to:
 - Scenic Rivers Blvd.
 - 4th St. (Downtown)
 - Highway 19/Main St.
 - Rolla Rd.
 - Dilworth Rd.
 - Franklin St.
 - Roosevelt St.
 - Ensure sidewalks have trees and bushes trimmed to provide clear pathways on all routes

Third Meeting

The third stakeholder meeting was held on Oct. 21, 2022. A total of four stakeholders attended the meeting with two MRPC staff. The group reviewed the proposed connections for trails, sidewalks and crosswalks and staff noted that a prioritization survey would be sent around for completion. The resulting list of prioritized needs and strategies are located in Section 4: Implementation. The group also reviewed the results of the public survey listed in Appendix A.

Fourth Meeting

The fourth stakeholder meeting was held on Dec. 9, 2022. A total of five participants attended. Participants reviewed a draft of the plan and offered feedback on the study. MRPC made recommended edits to the plan to provide an updated copy to the Salem Board of Alderman at the Dec. 13, 2022 meeting.

Board of Aldermen Meeting

MRPC staff presented the Active Transportation Plan to the Salem Board of Aldermen on Tuesday, Dec. 13, 2022. A copy of the draft plan was provided to the council members for review and public comment. Staff noted that the final plan is due to the Department of Health and Human Services by the end of December 2022.

Section 4: Proposed Improvements

Over the past few months, the Active Transportation stakeholders' group has carefully considered a variety of projects and community improvements to better serve the citizens of Salem. A long list of possible projects was identified for trails, sidewalks and crosswalks and then prioritized to address the greatest areas of need. Special consideration was given to areas where safety was a concern for pedestrians, especially those school-aged and elderly populations. Examples of major areas of concern include travel along and across Highway 32/Scenic Rivers Boulevard, as well as pedestrian traffic along Roosevelt Street at the intersection of Highway 19.

As noted in the Salem Trails Plan, it is also important to clarify that all potential projects identified in this plan will require more detailed planning and design before anything can be finalized and constructed because each route and crosswalk is conceptual only. With regards to trails, the governing jurisdictions should work with the public to develop the final design and location. Additional state and federal partnerships may also be required, especially for those trail projects that connect to or cross waterways. Finally, land or right-of-way acquisition will likely be required for the city or county in order to construct the proposed improvements. Since all of these additional costs are difficult to estimate at this time, any proposed projects shown with estimates are based solely on a current cost of concrete pavement and rock base per MoDOT Multimodal. Any listed amounts do not include grading, labor or other types of materials that may be required for construction. As of Dec. 1, 2022, MoDOT notes that concrete sidewalk per square yard costs \$60 and a rock base per square yard costs \$6.00. The remainder of this section provides an overview of each type of active transportation mode with suggestions for potential improvements. The following map provides a complete picture of all recommended projects in and around the city of Salem.

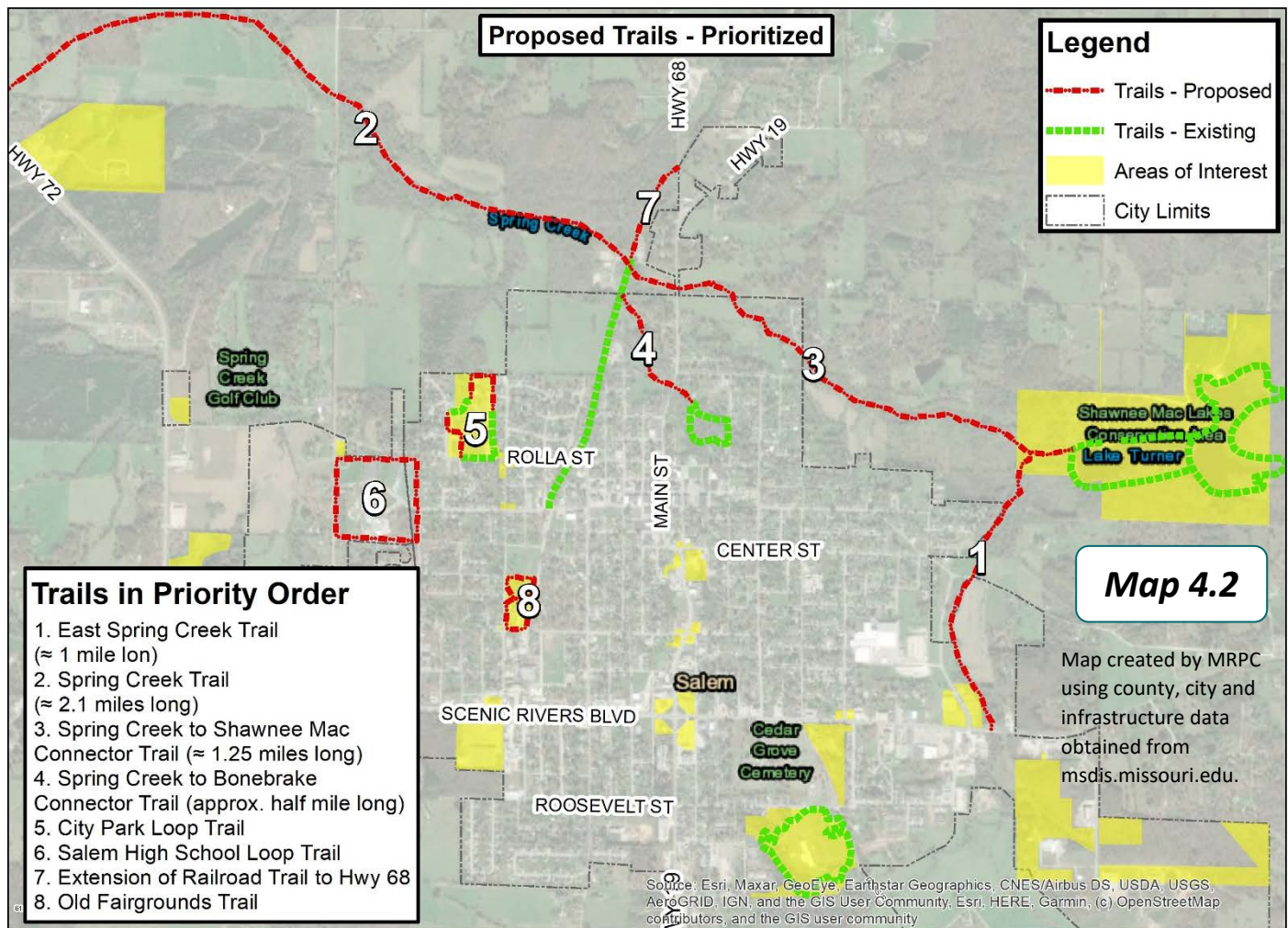


Images of a sidewalk, trail, and crosswalk in the city of Salem. Center picture located within Salem Trails Plan.

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Trail creation has been an important part of the active transportation planning process as trails can generate additional tourism opportunities and boost economic development. Building on the existing network of hiking/cycling opportunities, the stakeholders discussed trail locations that would be of the most benefit to the community. While trails can be less expensive to build from a materials standpoint, the cost of right-of-way acquisition may be greater than sidewalks and can potentially include more pedestrian bridges or other improvements required for hilly terrain. As previously noted, all 2022 estimates are based on a concrete path material and a rock base per square yard cost. No other costs of construction (ROW acquisition, grading, retaining walls, bridges, etc.) were factored into these numbers. Costs could be adjusted based on use of alternate materials such as asphalt, rock, etc.

As noted by the Rails to Trails Conservancy and the American Association of State Highway and Transportation Officials (AASHTO), multi-use trails should be a minimum of 10 feet wide. In areas of heavy use, a trail 12-14 feet wide is recommended. Map 4.2 highlights all proposed trails in priority order.



Proposed Trails (Rank 1 through 7) in Priority Order:

1. East Spring Creek Trail (approx. 1 mile long) – runs north/south connecting Shawnee Mac CA to Scenic Rivers Blvd. In 2018, this trail was estimated to cost \$260,000 with concrete construction. Based on MoDOT's 2022 multimodal estimates for concrete and rock base alone and a 10-foot width, the trail would cost approximately \$387,200.

2. Spring Creek Trail (approx. 2.1 miles long) – runs east/west from CR 4120 to Hwy 72 and primarily follows Spring Creek. This is the largest trail opportunity, but also the one that would carry the highest cost. In 2018, a 4.1-mile-long version of this trail was estimated to cost \$1.2 million with concrete construction due to potential flooding along the creek corridor. Bridges would also be required. Using the same MoDOT calculations for a 2.1-mile-long trail in 2022, the Spring Creek Trail would cost approximately \$82,707 for a 10-foot trail width.



Picture provided by Health Dent County

3. Spring Creek to Shawnee Mac Connector Trail (approx. 1.25 miles long) – runs east/west between Shawnee Mac CA and Spring Creek Trail. The recommended multi-use trail is 10-feet wide with a concrete surface due to potential flooding. In 2018, this eight-foot trail was estimated to cost \$380,000. In 2022, a 10-foot concrete trail is approximately \$486,420.

4. Spring Creek to Bonebrake Connector Trail (approx. half mile long) – runs north/south and is also recommended to be a concrete trail due to flooding concerns. The 2018 eight-foot concrete trail was estimated to cost \$180,000. In 2022 with an increase to 10-feet in width, the materials would cost \$186,780.
5. City Park Loop Trail – completes full circle around the city park. This trail would be approximately half a mile long and extend the existing five-foot wide concrete sidewalks. The 2018 estimate was \$110,000; however, current estimates are \$102,263.



Aerial provided by Healthy Dent County



View of Salem HS Trail

6. Salem High School Loop Trail – completes full circle around the high school, connecting to sidewalks through the existing site and is just under a mile (0.9) long. This trail would be similar to the City Park Loop Trail as it will connect to existing paths; however, it is recommended at a six-foot width. 2018 estimates were \$200,000 and \$215,776 in 2022 for materials only.

7. Railroad Trail Extension – extends Railroad Trail north to Hwy 68 from Spring Creek Trail. This identified extension is a new trail proposal that was not previously noted in the 2018 plan. The new connection to Highway 68 continues the existing path by about 1,591 ft. (0.3 miles). To maintain consistency in design with the existing Railroad Trail, the eight-foot-wide concrete path would cost approximately \$93,338.67 in concrete and rock.



Picture provided by Health Dent County



8. Old Fairgrounds Trail – follows the perimeter with a figure eight shape on the old fairground property between W Franklin St and International St. This is a newer trail proposed for the site and would provide active opportunities should the land ever be developed for another city park or activity. The trail would be approximately half a mile long (2,665 feet) and cost an estimated \$195,433 for materials on a 10-foot trail.

Existing Trail Updates/Improvements:

1. Tiger Trail – to maintain consistency in design of other proposed trails, the stakeholder group discussed updates to the existing one and a half mile trail that surrounds Upper Elementary School. Costs to make the trail concrete instead of rock would cost approximately \$580,800.
2. Railroad Trail – the existing multi-use path is only eight feet wide but acts as a alternate truck route to the city wastewater treatment plant during flooding of Spring Creek. From N 8th St to the treatment plant (approx. 1,990 feet), the trail is proposed to be expanded to 10 or 12 feet in order to provide

better access for city trucks. Costs to reconstruct the trail would be anywhere from \$145,933 to \$175,120, depending on width.

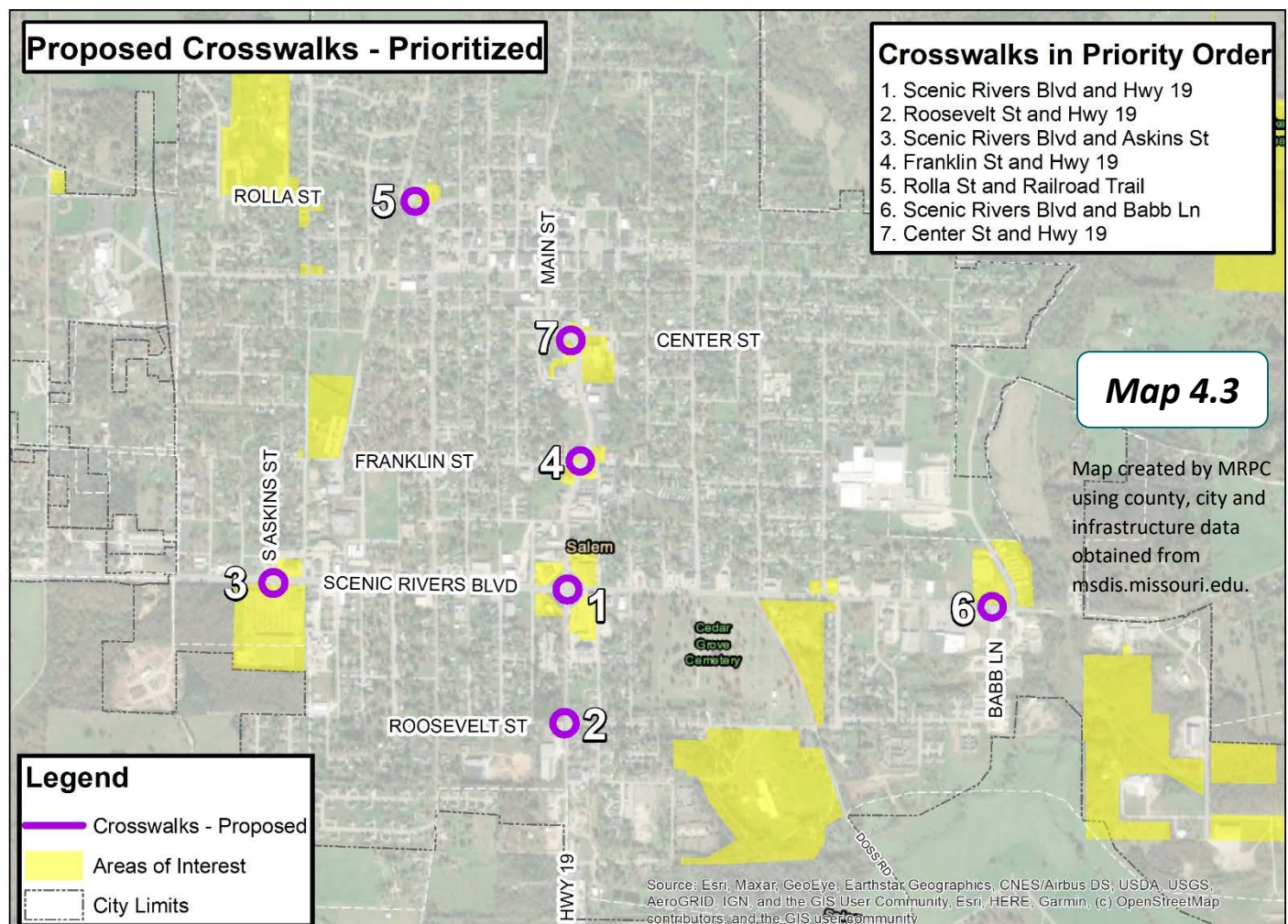
Crosswalks in the city of Salem are some of the most important improvements needed for sidewalks and trails due to their ability to move pedestrians and cyclists safely across town. During the planning process, the stakeholder group discussed seven different crosswalk locations, most of which are located along the Main Street/Highway 19 corridor. Each of these locations has unique issues that range from a wide right-of-way, to a short sight-distance and high speeds from motorists. Crosswalk education is another important issue that should be considered as a part of construction. Pedestrians and motorists can both benefit from education opportunities to teach people how to safely utilize these enhancements. The links listed below are all related to pedestrian safety training opportunities in Missouri, including crosswalk safety:

<https://mobikefed.org/sites/default/files/moactivesummit2022/SGF%20Yields%20MO%20A%20T%20Summit.pdf>

<https://www.nhtsa.gov/road-safety/pedestrian-safety>

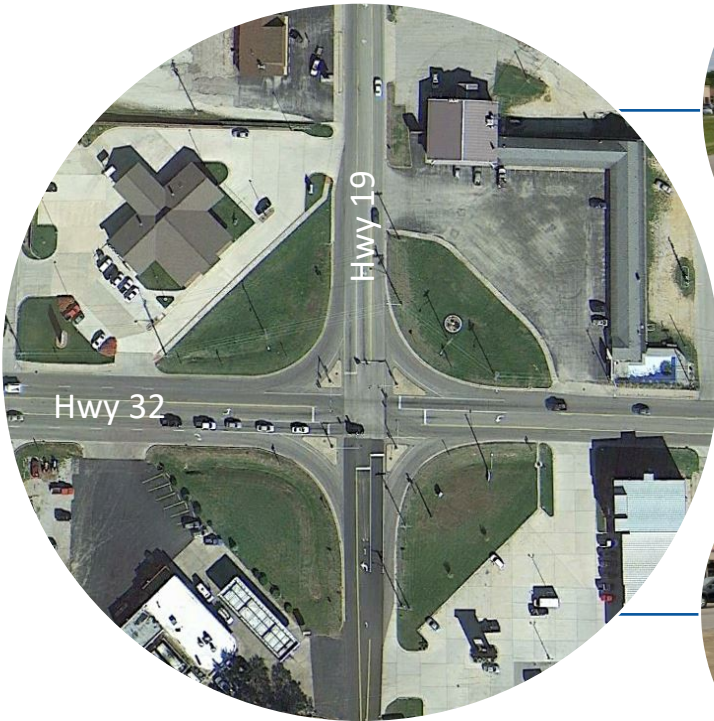
<https://www.springfieldmo.gov/3519/Pedestrian-Safety---SGF-Yields>

<https://www.savemolives.com/mcrs/pedestrian-safety-campaign>

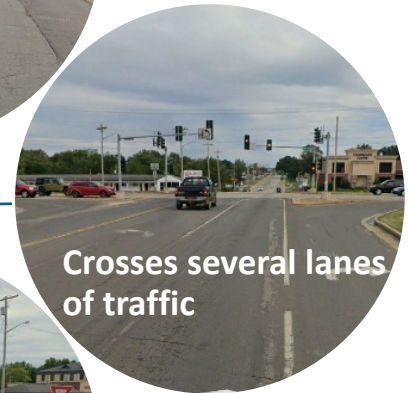


Intersections/Crosswalks (Rank 1 through 7) in Priority Order:

1. Scenic Rivers Blvd. and Hwy 19 – the intersection of Highway 19 and Scenic Rivers Blvd./Hwy 32 is the largest and busiest intersection in the community. As noted below, any existing sidewalk is located along the perimeter of the four corners and does not direct anyone to a pedestrian crossing. With local and tourist traffic, the stakeholders identified this intersection as the highest need.



No existing sidewalks at intersection



Crosses several lanes of traffic

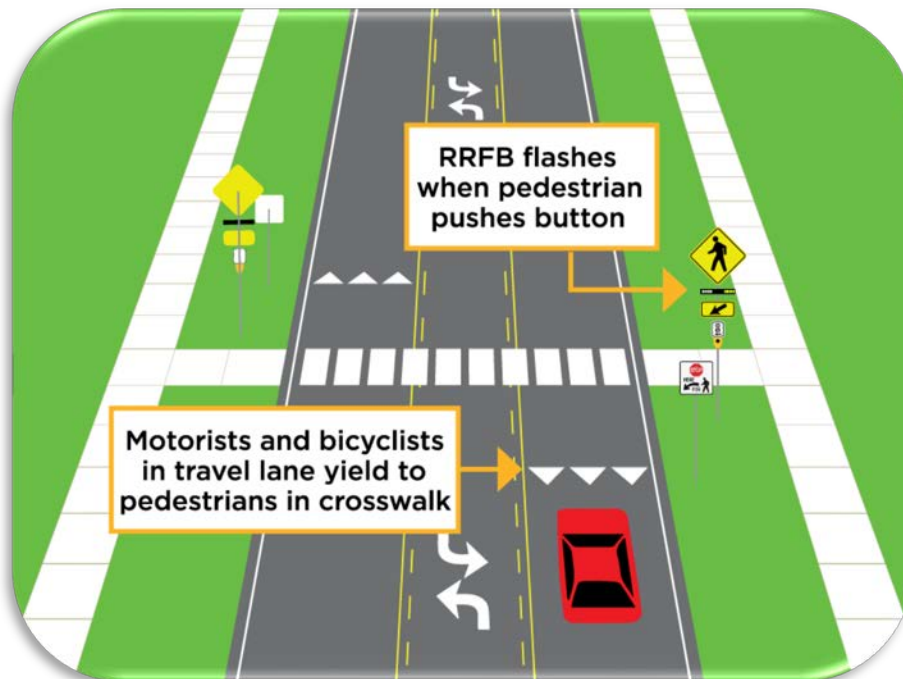


No access to commercial area on S side of highway

While MoDOT controls the right-of-way in this location and improvements would require cooperation between entities, recommendations for this area include a variety of potential layouts. This intersection will require the largest amount of signage, striping and lighting in Salem. One of the best examples is to follow the crosswalk pattern built at the intersection of Hwy 72 and Bishop Avenue (Hwy 63) in Rolla. This example provides pedestrian islands in similar places to the existing lights on Hwy 19 and Hwy 32; however, it is recommended to use a traditional stripe at each crosswalk instead of utilizing the lines as shown in the Rolla example above.



2. Roosevelt St. and Hwy 19 – The second priority crosswalk would provide safe access for residents and students crossing S Hwy 19 from Roosevelt St to the east and west. This intersection is also on the Dent County priority list of unfunded needs as a safety concern due to the short sight-distance from northbound traffic and the speed of traveling vehicles. Since this is a highly traveled area, it is recommended to include a Rectangular Rapid Flashing Beacon (RRFB) pedestrian crosswalk system.



RRFB example from TAPCO RRFB – FHWA crosswalks

This improvement would require pedestrians and cyclists to use a button that would trigger a flashing light to stop oncoming traffic. However, it is also recommended that warning lights, rumble strips and signs be placed at a distance far enough in advance to warn vehicles, especially those driving north along Hwy 19. Sidewalks are also proposed along Roosevelt St. to the west as shown in Map 4.4. It is also possible to utilize brighter colors or alternate materials (brick, block design, etc.) at the intersection, add turn lanes or other improvements to differentiate between the pedestrian pathway and roadway to encourage vehicles to slow down.



City of Tampa, FL crosswalk painting

3. Scenic Rivers Blvd. and Askins St. – similar to Hwy 19 and 32, this crosswalk would provide safe pedestrian access from the residential areas to the north and the shopping to the south (Wal-Mart, etc.). This crosswalk would likely be a one-sided crosswalk and need to be situated along the west side of the intersection due to the visibility issues for vehicles traveling west.



4. Franklin St. and Hwy 19 – this intersection is at a slight angle but would connect neighborhoods from the east and west across the commercial corridor. The picture to the right is an example of a RRFB intersection with warning lights across three lanes of traffic.



FHWA – RRFB example

5. Rolla Rd. and Railroad Trail – this intersection is considered a mid-block intersection. Possible improvements include extending the trail pathway from the north side to the road, moving the trash receptacle on the Senior Center parking lot that blocks the path, relocation of a utility pole on the north side and curb extensions that would act as traffic calming devices, as well as be consistent with Complete Streets designs. A warning light may be required for oncoming traffic due to hills and sight distance issues heading into the crosswalk. A picture of the existing intersection and a proposed layout are shown below.



6. Scenic Rivers Blvd. and Babb Lane– this crosswalk would provide access from the southeast side of the community across Scenic Rivers Blvd./Hwy 32 to the grocery store on the north; however, this crosswalk is likely to be the least traveled of all proposed crosswalks. The location is also based on a need for a potential connection to the East Spring Creek Trail and the fact the next closest crosswalk across Scenic Rivers Blvd. is approximately 0.5 miles to the west (Doss Rd.). The biggest difficulty with the construction of this improvement is that it is proposed at an intersection with no current traffic lights and crosses 80 feet of right-of-way (ROW). Based on the ROW width alone, a crosswalk with a lighted three-way intersection would be required.



7. Center St. and Main St./Hwy 19 – the last prioritized crosswalk is proposed at a three-way stop intersection on a curve along the main north/south corridor through town. The intersection is shown below in the aerial image. Another crosswalk currently exists two blocks to the north at Second St.; however, stakeholders highlighted this specific intersection as an area where several pedestrians cross without a safe path to do so.



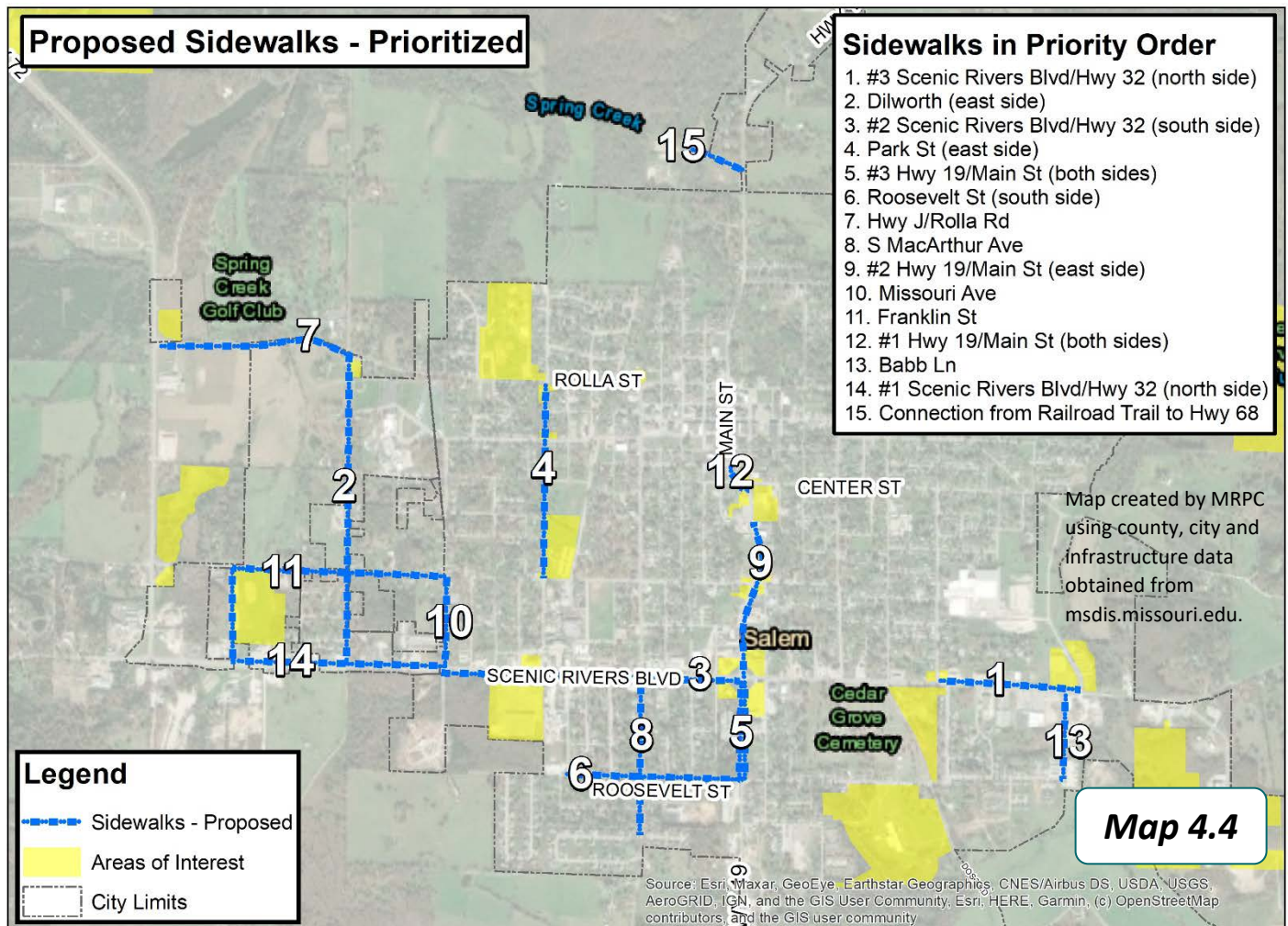
After additional consideration and review, it is recommended that the crosswalk be located at the northern intersection with Main St./Hwy 19 and West Center St. This location would provide the greatest visibility for both directions of traffic and would be the safest route for pedestrians.



Existing Crosswalk Updates/Improvements:

1. Scenic Rivers Blvd./Hwy 32 and Doss Rd. - the intersection has crosswalk buttons, but the striping has faded significantly over time. This area needs to be re-striped to ensure it meets ADA accessibility and current design standards for crosswalks.

The last grouping of prioritized projects focuses on sidewalk expansions and new locations in Salem. The stakeholder group discussed 15 locations throughout the city. All proposed sidewalks improve connectivity throughout the community by providing access to commercial, recreation, business and residential areas. As was identified for many of the trails, preliminary costs for materials (concrete and gravel only) are listed below each proposed improvement. Additional engineering, ROW and grading costs are not factored into these estimates. All sidewalks along Scenic Rivers Blvd./Hwy 32 are recommended to be a minimum of six-feet wide and eight-feet in busier areas to accommodate two-way multimodal traffic. Map 4.4 depicts each of the proposed sidewalks.



Sidewalks (Rank 1 through 15) in Priority Order:

1. #3 Scenic Rivers Blvd./Hwy 32 (north side) – runs east/west from Carty St. to Craig Industrial Dr. This section is approximately 1,910 ft. in length. A six-foot sidewalk on the north side of the highway would cost around \$84,040 for materials only. An increase to eight feet would raise the cost of materials to \$112,053.
2. Dilworth (east side) – runs north/south from Hwy J to Scenic Rivers Blvd. This section provides additional connectivity between the high school and the commercial areas to the south. It also connects to a TAP funded project along Hwy J for the school. The five-foot stretch of sidewalk along the east side of the road would be approximately 4,220 feet in length and cost \$154,733. Since it is one of

the longer stretches of proposed sidewalk in the community and provides a north/south connection between two major roadways, it could be widened to eight feet to accommodate more pedestrian modes of traffic and act as a western trail connector. The cost for an eight-foot path would be around \$247,573 and would likely require more ROW acquisition.

3. #2 Scenic Rivers Blvd./Hwy 32 (south side) – runs east/west from Hwy 19 to Missouri Ave. A six-foot sidewalk on the south side of the highway would cost approximately \$147,372 for 3,963 lineal feet.
4. Park Ave. (east side) – runs north/south from Hwy J/Rolla Rd. to Franklin St. The Park Avenue sidewalk provides another north/south connection between two major roadways in Salem. The 2,685 feet of length would cost \$98,450 for a five-foot path. The section also connects the City Park to the Southern Baptist University Campus on Franklin St. and Grand Ave.



5. #3 Hwy 19/Main St. (both sides) – runs north/south from Scenic Rivers Blvd. to Roosevelt St. Each side of five-foot sidewalk would be approximately 1,340 feet in length. This continues a north/south connection from the commercial areas to more residential areas on the south side of Salem. The cost for a total of 2,680 feet of concrete sidewalk is \$98,267.

6. Roosevelt St. (south side) – runs east/west from Wines St. to Hwy 19. Approximately 2,318 feet of five-foot sidewalk is proposed as a connector to the sidewalk along E Roosevelt, which connects to Upper Elementary School. Concrete and rock base for this section costs just under \$85,000.
7. Hwy J/Rolla Rd. – runs east/west on south side of road from Dilworth to Hwy 72. To provide a connection between downtown Salem and Hwy 72 along the west side of town, a five or six-foot sidewalk is recommended between where the sidewalk ends near Dilworth and Hwy 72. The 2,665-foot concrete sidewalk would have an estimated cost of \$117,260 at a six-foot width.
8. S MacArthur Ave. – runs north/south from Scenic Rivers Blvd. to Brady Ln. Approximately 2,122 feet of five-foot concrete sidewalk is proposed as another connector from Scenic Rivers Blvd./Hwy 32 and the southern part of Salem. At an estimated cost of \$77,807 for materials, this section is one of the lower cost improvements proposed.
9. #2 Hwy 19/Main St. (east side) – runs north/south from south of Center St. to Scenic Rivers Blvd. The proposed five-foot sidewalk along the main north/south road in Salem runs for approximately 2,807 feet from Center Street. This improvement, at a cost of \$102,923, would provide sidewalks on both sides of the street.



10. Missouri Ave. – runs north/south between Franklin St. and Scenic Rivers Blvd. One of the shortest proposed sidewalk expansions continues the sidewalk along Missouri Ave. at Franklin St., south to Scenic Rivers Blvd./Hwy 32. The 1,193 ft. stretch of five-foot sidewalk would cost approximately \$43,743.
11. Franklin St. – runs east/west from Missouri Ave. to Chafin Ave./Al Brown Fields. A 2,902-foot sidewalk connection is proposed to connect new sidewalks proposed along Missouri Ave. to Al Brown sports fields. At a cost of \$106,407, the sidewalk would provide much needed pedestrian access to a local recreation facility.



12. #1 Hwy 19/Main St. (both sides) – runs north/south between 1st St. and Center St. The shortest section of sidewalk proposed by the stakeholder group is the small distance between these two streets on a curve. Approximately 774 feet of five-foot sidewalk is proposed. While some sidewalk exists on the west side, it would potentially have to be reconfigured to accommodate an updated path at a cost of \$28,380 for concrete and rock alone.



13. Babb Ln – runs north/south from Scenic Rivers Blvd. to Roosevelt St. A 1,152 five-foot sidewalk would connect pedestrians to the proposed crosswalk at Babb Lane and Scenic Rivers Blvd./Hwy 32, as well as provide additional sidewalk access for residents in the southeastern most parts of Salem. The cost is estimated at \$42,240 for this section.
14. #1 Scenic Rivers Blvd./Hwy 32 (north side) – runs east/west from Missouri Ave. to Chafin Ave./Al Brown Fields. This half-mile stretch (2,869 feet) of six-foot sidewalk costs approximately \$118,316. The sidewalk provides another pedestrian connection between a commercial corridor in Salem and the Al Brown Fields/recreational area.
15. Railroad Trail Connector to Hwy 19 – runs east/west from the Railroad Trail to Hwy 19. This final sidewalk connector is just under 750 feet and would connect the trail back to the highway for cyclists and other pedestrians at an approximate cost of \$33,000 for a six-foot concrete path. While most proposed sidewalks are concrete, this connection could be a rock path/trail connection instead. Any future improvements along this gravel street could be constructed of either material.



Section 5: Implementation

Project Implementation Strategies

The Active Transportation Plan focuses primarily on larger infrastructure improvements that will require engineering, concrete, and other materials. Planning for projects to be incorporated during routine maintenance will give the city of Salem the opportunity to implement projects at a faster rate than waiting on grant funding. Recommendations regarding implementing Salem's proposed projects include:

- Coordination with street striping schedules during routine maintenance. While this plan does not address bike lane striping, other striping projects could include crosswalks for trail and other locations as prioritized on Map 4.2.
- Coordination with planned resurfacing. While street resurfacing is less frequent than restriping, all streets require regular maintenance and repair. It is likely that most streets in Salem will require resurfacing over the course of implementation of the Active Transportation Plan. These resurfacing projects can be aligned with recommended pedestrian improvements to minimize additional costs, especially those projects outlined on Map 4.4 as priority sidewalks.
- Coordination with private partners. This is another strategy for project implementation where new and redevelopment projects are often responsible for infrastructure improvements adjacent to their development. This could include new or upgraded sidewalks and trails. Currently, the city of Salem does not codify this requirement for development; however, it is an opportunity to identify for future code amendments. As Salem walking and biking projects are implemented over the course of several years, this creates an opportunity to coordinate private development site improvements with plan recommendations.

It is also recommended that prioritized projects listed in this plan be incorporated into existing plans and programs that include active transportation infrastructure such as:

- MRPC's Comprehensive Economic Development Strategy (CEDS)
- MRPC's Regional Transportation Plan
- Dent County's list of High Priority Unfunded Transportation/Multimodal Needs on the state system
- Comprehensive Planning for Salem
- Ordinance adoption and updates
- Salem Capital Improvement Plans
- Other Salem Community Plans
- School District Plans



Project Funding Opportunities

Salem has demonstrated success in fundraising as a Transportation Alternatives Program (TAP) grant recipient in 2021, as well as in years past, and should continue applying for TAP funds in the future. However, several other funding opportunities exist through state and federal programs. A complete list of pedestrian and bicycle funding opportunities can be found in Appendix B of this report and at the following link:

https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.pdf

The table was compiled by the Federal Highway Administration and is up to date as of Sep. 9, 2022. Links to each grant program are provided in the table. The list of funding opportunities identified below have additional potential to assist with the projects listed in this report.

- Missouri State Parks Recreational Trail Program (RTP) - This grant is useful for trails or alternative transportation, as well as trailhead construction or other recreational activities. It requires an 80/20 match that goes up to \$250,000 (whereas TAP has a maximum of \$500,000).
- Land and Water Conservation Fund (LWCF) - This fund can be used for trail construction or park amenities in municipal parks. This grant requires a 50/50 match with a \$500,000 maximum request.
- Missouri Department of Conservation Land Conservation Partnership Grant Outdoor Recreation Infrastructure Program - This grant can be used for enhancing public access and citizen engagement in conservation-related outdoor recreation through the development of outdoor recreation infrastructure. It could be useful for developing the trail, trail amenities such as benches, and native habitat development. This grant requires a 50/50 match and there is not a set award dollar limit at this time.
- PeopleForBikes - The PeopleForBikes Community Grant Program supports bicycle infrastructure projects and targeted advocacy initiatives that make it easier and safer for people of all ages and abilities to ride.
- Rails to Trails Conservancy - This program offers a trail building tool to assist communities with a variety of trail building topics including the basics of trail buildings, organizing/building community interest, funding, and maintenance. The toolkit is available here: railstotrails.org/build-trails/trail-building-toolbox/. They also offer grant funds.

Where do we go from here?

The recommendations in this Active Transportation Plan, in total, could take anywhere from one year to decades to complete. Implementation is entirely dependent upon political will, funding, and other factors. However, some of the recommendations may come to fruition faster than others as the city currently has a codified Complete Streets policy [§510.170](#). This policy encourages walking, bicycling, and other non-motorized forms of transit to be considered during the design, construction, and maintenance process for public transportation projects.

Additionally, sidewalk and trail infrastructure improvements will continue to be at the forefront of local planning efforts so long as the planning stakeholders continue to meet and prioritize projects. It is recommended that the group meet annually, as appropriate, to monitor progress and update the Active

Transportation Plan. City staff will be responsible for initiating plan reviews and inviting local stakeholders, as well as a representative from the Meramec Regional Planning Commission. The group should also monitor changes in local priorities based on future development within Salem.

Ongoing

- Neighborhood sidewalk connectors, with possible crosswalks and/or on-street bicycle lanes, should be considered (or other improvements) alongside the city's resurfacing and restriping schedule.

Short-Term (0-5 Years)

- Sidewalk and trail improvements that can be constructed with the assistance of TAP and RTP grant funds should be pursued for this time period. These include the completion of trail loops around the high school, shorter sections of connecting sidewalks and crosswalks which would greatly improve the pedestrian safety along major corridors

Mid-Term (6-10 Years)

- Sidewalks connecting Areas of Interest as shown within this plan should be implemented within 6-10 years in order to maintain connectivity throughout the city of Salem.

Long-Term (10+ Years)

- Larger projects such as trail construction over a mile in length (i.e. Spring Creek to Shawnee Mac Connector Trail, Spring Creek Trail, etc.) should continue to be planned for but are likely long-term projects due to the amount of easements/right-of-way acquisition and construction costs.

Appendix A: Community Survey Responses

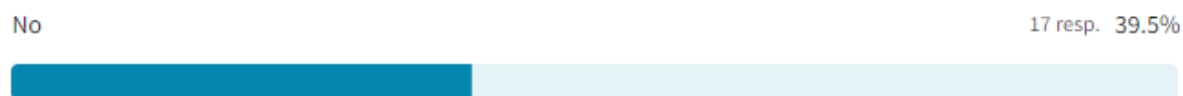
Salem Active Transportation Survey

43 responses



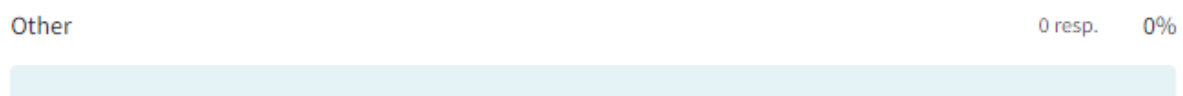
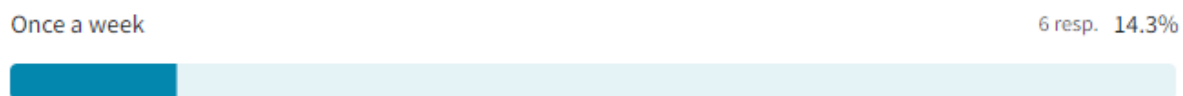
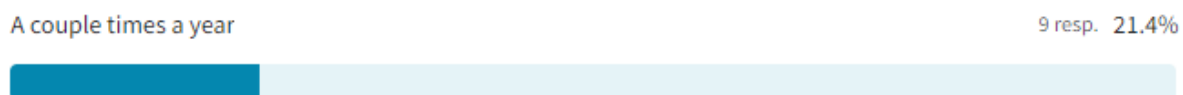
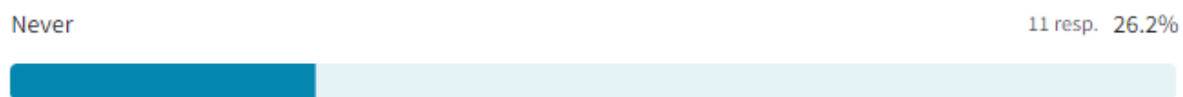
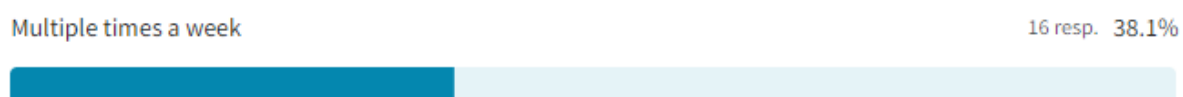
The primary focus of this survey is to assess active transportation within the city of Salem. Do you live in the city of Salem?

43 out of 43 answered



How often do you walk or bike to reach destinations in the community and/or to engage in physical activity?

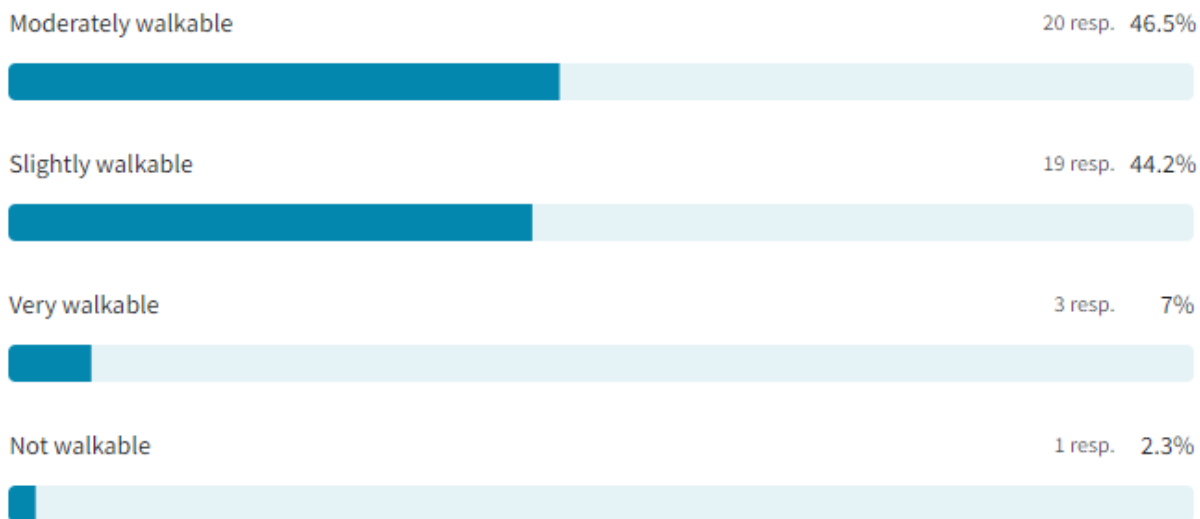
42 out of 43 answered





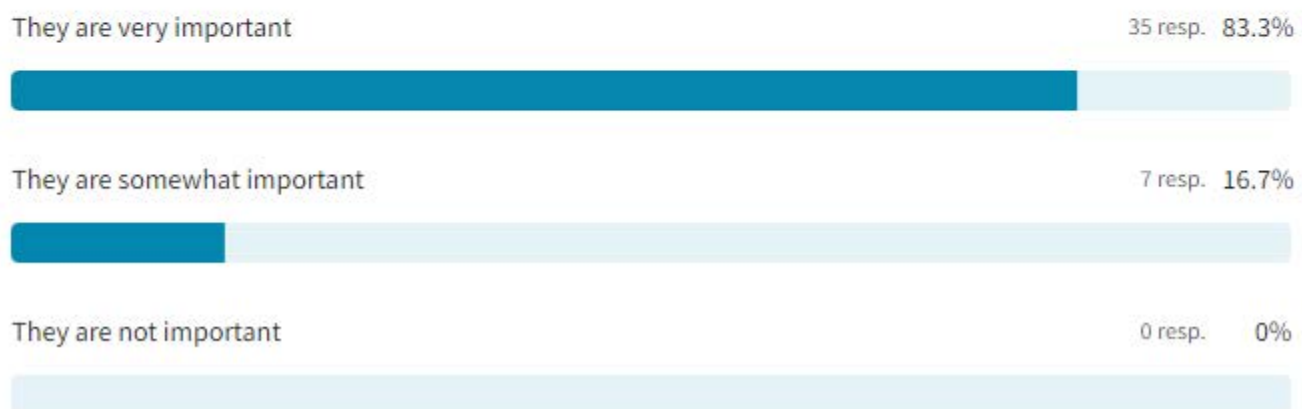
How “walkable” is Salem (Consider sidewalk routes, sidewalk conditions, and safety)

43 out of 43 answered



Are sidewalks important to you?

42 out of 43 answered



List any streets you believe need sidewalk improvements or have a lack of sidewalks.

26 out of 43 answered

- East and West Scenic Rivers Blvd & Craig Industrial Drive
- 4th Street – uneven tripping hazard
- As assessment needs to be made of streets needing sidewalks, and the deteriorated condition of those with sidewalks - including the downtown Salem area.
- Doss Road along the upper elementary school; E Roosevelt between Mildred & Jennifer; both sides of S Hickory
- W 4th Street, Rolla Road, Scenic Rivers Blvd, South Macarthur, South Main from W 4th St to Scenic Rivers Blvd
- East side of Salem
- Several need limbs/brush trimmed
- Hwy 19 north part of town
- Hwy 19, south of Hwy(s)n72/32. Sections of Hwy(s) 72/72. Hwy. HH south of Hwy(s) 72/32. A route towards Shawny Mac Lakes State Park.
- Henderson St.
- 3rd st, Pershing
- MacAurthur, Scenic Rivers Blvd, 4th Street, Hwy 19
- Fourth Street
- East 11th Street
- Hwy 19 North from northern city limits into to Rolla Rd. partial sidewalks but not all, and many people walk or bike into town (due to limited transportation). it would also help connect to the existing walking trail that starts by the treatment plant. better signage and road markings at the walking trail crossing on Rolla Rd, and also at the armory from the sidewalk/parking lot on the south side of Rolla Rd across to the armory. Franklin Street from Al Brown fields to existing sidewalks
- All Streets
- Scenic Rivers Blvd (Hwy 32-72), Dilworth, Franklin, Roosevelt, Wines, Iron Mountain Road & Babb Lane
- Most side streets
- Scenic Rivers Boulevard
- W Roosevelt, Park St
- WASHINGTON, WILLIAM
- West Roosevelt needs a sidewalk. It's a narrow road and highly trafficked.
- Scenic Rivers Blvd., Roosevelt St., Park St.
- Park, Franklin, Scenic Rivers Blvd, 19 Hwy S



Do you value marked bike lanes on the road?

42 out of 43 answered

Yes, they are useful 20 resp. 47.6%



Maybe, they could be useful 15 resp. 35.7%



No, I do not see the need 5 resp. 11.9%



Other 2 resp. 4.8%



- Rural roads and Salem roads are not compatible with bike traffic. We need a good bike trail.

How often to you utilize the Salem Community Center @ the Armory?

43 out of 43 answered

Multiple times a week 15 resp. 34.9%



Never 10 resp. 23.3%



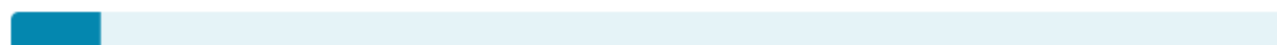
A couple times a year 8 resp. 18.6%



Once a month 7 resp. 16.3%

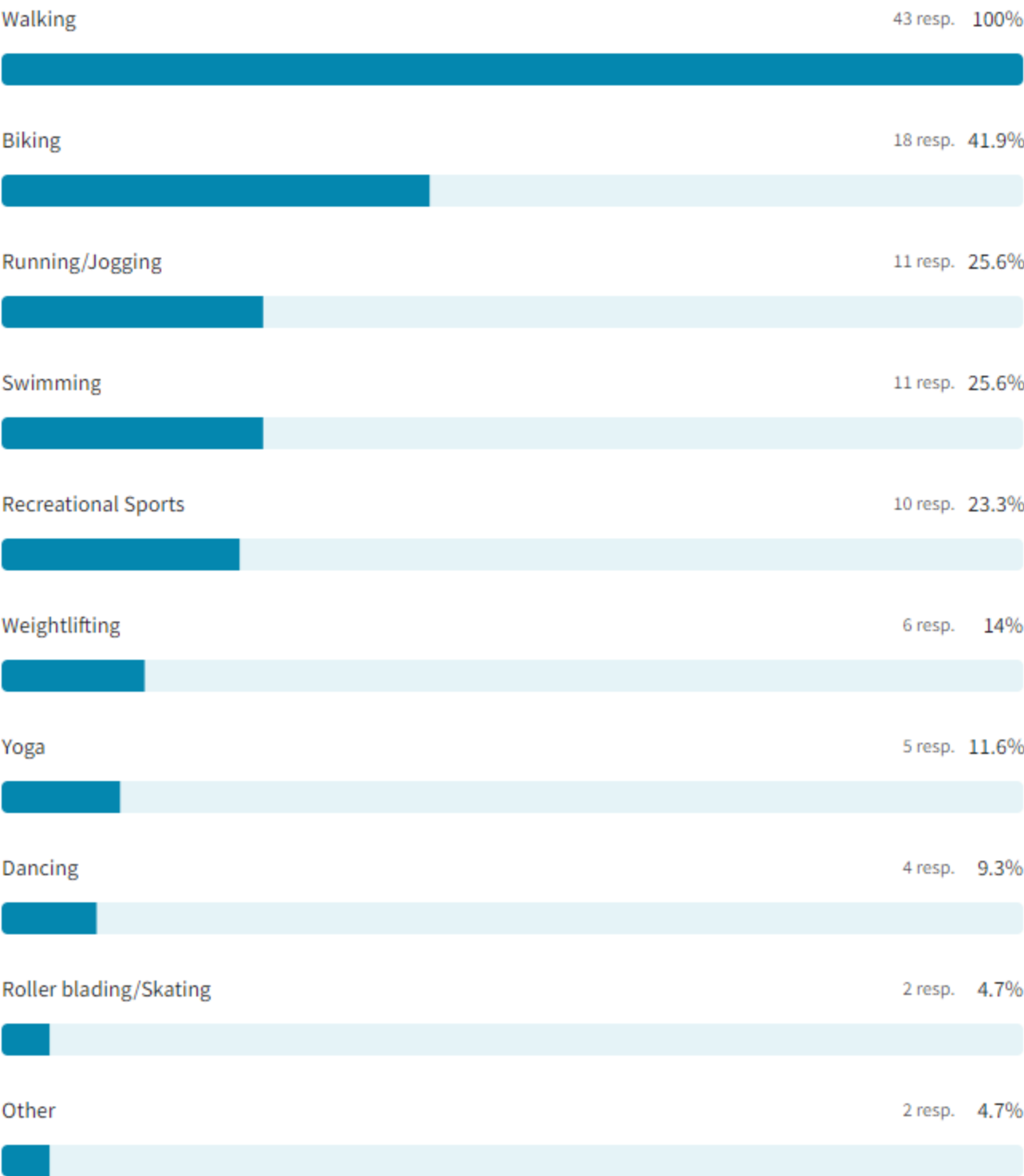


Once a week 3 resp. 7%



What forms of physical activity do you engage in?

43 out of 43 answered



- Hiking
- Hunting, hiking, backpacking

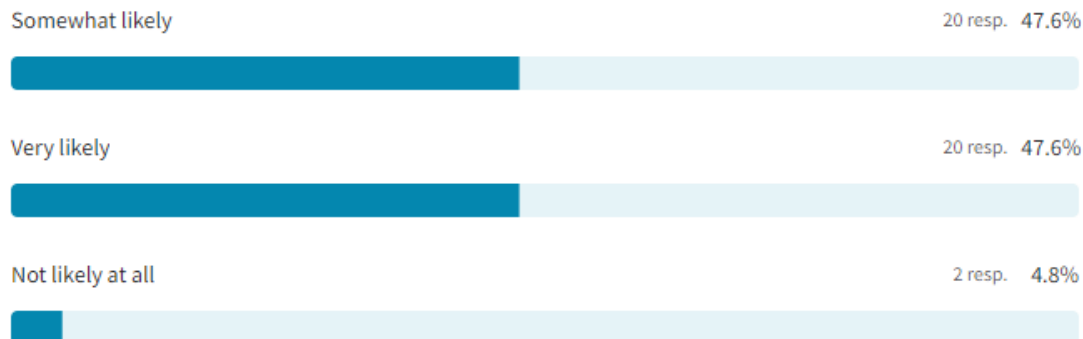
Have you been to any of the following locations in Salem for activities, community events or outdoor exercise?

42 out of 43 answered

	Yes	No, but I want to	No, I'm not interested
Shawnee Mac Conservati...	83.3%	14.3%	2.4%
Tiger Trail @ Upper Elementar...	65%	17.5%	17.5%
Salem Senior Center	43.3%	10%	46.7%
City of Salem Park/Pool	90.2%	2.4%	7.3%
Frisco Trail	57.1%	34.3%	8.6%
Bonebrake Center/Trail	63.6%	33.3%	3%

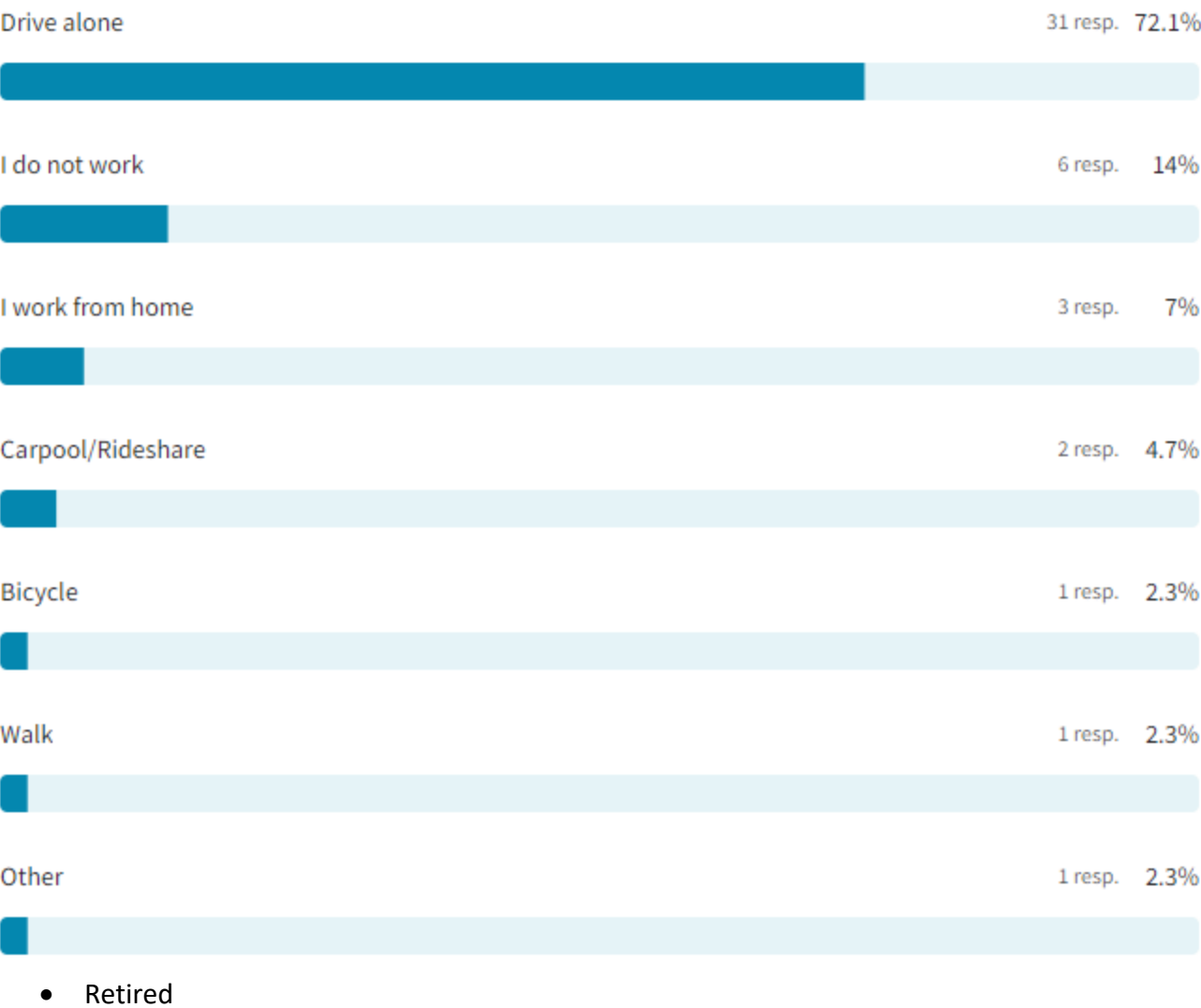
How likely would you be to walk/bike to reach a destination and/or engage in physical activity if sidewalk, trail and bicycle improvements were made in Salem?

42 out of 43 answered



How do you get to work?

43 out of 43 answered



Please share any comments, concerns, and/or ideas that were not covered in the previous questions.

15 out of 43 answered

- We enjoy the trail by the Senior Center. We were eaten by insects on the Upper Elementary trail. It could use some improving.
- Also need public transportation to / from Salem to Rolla and St Louis
- A lighted pedestrian sign with a button people can push to cross at Doss & Roosevelt would greatly improve safety of accessing the Tiger Trail. That intersection is kind of blind and people go fast through it.
- More options to medical appointments outside of Salem (Columbia, St. Louis)
- We need to make sure the trail systems all interconnect to create a better experience with stores along the routes.
- Bike paths would be a great improvement for the city. I see many residents using the streets to walk, bike and use their motorized Cart (Seniors/disabled) to get around town.
- I feel Salem could use other improvements in other departments before sidewalks. Al browns softball feilds have been needing improvements for years. The leagues are dying because no one is doing anything to improve them. When I was younger, this was a major thing for Salem. After living in the city, inviting bikers to ride on the roads are a disaster. This is even with bike lanes.
- We need public transportation
- The road crossing on the Frisco needs some sort of advance warning for vehicles coming over the hill. On slower and wider trikes it is hard to clear the road safely
- The downtown Salem square, 4 way stop at 4th Street and Hwy 19 needs better sidewalks, crossing signage and bumpouts or something to make it easier to see pedestrians and to be a pedestrian to cross. I like to walk downtown but it's such a huge crossing and poorly designed stop for cars that it's difficult. So much opportunity for improved trails for walkers and bikers, and I think we could benefit as residents but also to tourists if we had more available and better advertised. The Frisco trail doesn't seem safe after dark, no lights. The crossing at Franklin and Hwy 19, and at Hwy 32/19 light are problematic and main crossings for residents and especially tourists.
- The sidewalks have many dips due to driveway entrances, some where there are no driveways. Some have uneven sections. Anyone with walking problems from arthritis, knee problems, back problems, feet problems are going to have trouble on these sidewalks. It's easier walking in the streets.
- Good idea
- A night life of some type, for kids
- My main concern is for people who want to walk daily for exercise. Sidewalks are a very important part of that safety and motivation to get out and be healthy. It needs to be safe and welcoming.
- N/A

Appendix B: Pedestrian Funding Opportunities

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds

September 9, 2022

This table indicates potential eligibility for pedestrian and bicycle activities and projects under U.S. Department of Transportation surface transportation funding programs. Activities and projects need to meet program eligibility requirements. See notes and basic program requirements below, with links to program information. Project sponsors should integrate the safety, accessibility, equity, and convenience of walking and bicycling into surface transportation projects.

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds																														
Key: \$ = Activity may be eligible. Restrictions may apply, see program notes and guidance. ~\$ = Eligible, but not competitive unless part of a larger project.																														
Activity or Project Type	OST Programs										Federal Transit					Federal Highway Administration														
	RAISE	INFRA	RCP	SS4A	Thrive	RRIF	TIFIA	FTA	ATI	TOD	AoPP	402	405	BIP	CRP	CMAQ	HSIP	RHCP	NHPP	PRO	STBG	TA	RTP	SRTS	PLAN	NSBP	ELTTP	TTP	TTPSF	
Access enhancements to public transportation (benches, bus pads)	\$	\$	\$	\$			~\$	\$	\$		~\$					\$	\$			\$	\$	\$					\$	\$	\$	
Americans with Disabilities Act (ADA)/504 Self Evaluation / Transition Plan				\$	TA					\$	\$					\$						\$				\$		\$	\$	
Barrier removal for ADA compliance	\$	\$	\$	\$			~\$	\$	\$	~\$	~\$				\$	\$			\$	\$	\$	\$	\$	\$	\$		\$	\$	\$	
Bicycle plans																														
Bicycle helmets (project or training related)												\$										\$	SSRTS						\$	
Bicycle helmets (safety promotion)																						\$	SSRTS						\$	
Bicycle lanes on road	~\$	~\$	\$	\$			~\$	~\$	\$	~\$	~\$					\$	\$	\$	\$	\$	\$	\$	\$	\$				\$	\$	\$
Bicycle parking (see Bicycle Parking Solutions)	~\$	~\$	\$	\$			~\$	\$	\$	~\$	~\$					\$	\$		\$		\$	\$	\$	\$				\$	\$	\$
Bike racks on transit	~\$	\$	\$	~\$			~\$	~\$	\$	~\$	~\$					\$	\$		\$		\$	\$	\$	\$				\$	\$	\$
Bicycle repair station (air pump, simple tools)	~\$	\$	\$	~\$			~\$	~\$	\$	~\$	~\$					\$	\$		\$		\$	\$	\$	\$				\$	\$	\$
Bicycle share (capital and equipment; not operations)	~\$	\$	\$	~\$			~\$	~\$	\$	~\$	~\$					\$	\$		\$		\$	\$	\$	\$				\$	\$	\$
Bicycle storage or service centers (example: at transit hubs)	~\$	\$	\$	~\$			~\$	~\$	\$	~\$	~\$					\$	\$		\$		\$	\$	\$	\$				\$	\$	\$
Bridges / overcrossings for pedestrians and/or bicyclists	\$	\$	\$	\$			~\$	~\$	\$	~\$	~\$					\$	\$	\$	\$	\$	\$	\$	\$	\$				\$	\$	\$
Bus shelters and benches	\$	\$	\$	~\$			~\$	~\$	\$	~\$	~\$					\$	\$		\$		\$	\$	\$	\$				\$	\$	\$
Coordinator positions (State or local) (limits on CMAQ and STBG)					\$	TA					\$	\$				\$						\$	SSRTS						\$	
Community Capacity Building (develop organizational skills/processes)					\$																				\$				\$	
Crosswalks for pedestrians, pedestrian refuge islands (new or retrofit)	\$	\$	\$	\$			~\$	~\$	\$	~\$	~\$					\$	~\$	\$	\$	\$	\$	\$	\$	\$			\$	\$	\$	\$
Curb ramps	\$	\$	\$	\$			~\$	~\$	\$	~\$	~\$					\$	~\$	\$	\$	\$	\$	\$	\$	\$			\$	\$	\$	\$
Counting equipment	\$	\$	\$	\$																								\$	\$	\$
Data collection and monitoring for pedestrians and/or bicyclists	\$	\$	\$	\$						\$	\$	~\$				\$			\$	\$	\$	\$	\$	\$				\$	\$	\$
Emergency and evacuation routes for pedestrians and/or bicyclists	\$	\$	\$	~\$						~\$	~\$					\$			\$	\$	\$	\$	\$	\$				\$	\$	\$
Historic preservation (pedestrian and bicycle transit facilities)	~\$	~\$	~\$	~\$			~\$	~\$	\$	~\$	~\$					\$												\$	\$	\$
Landscaping, streetscaping (pedestrian/bicycle route; transit access); related amenities (benches, water fountains); usually part of larger project	~\$	~\$	~\$	~\$			~\$	~\$	\$	~\$	~\$					\$			~\$									\$	\$	\$
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	\$	\$	\$	\$			~\$	~\$	\$	~\$	~\$					\$	~\$	\$	\$	\$	\$	\$	\$	\$				\$	\$	\$
Maps (for pedestrians and/or bicyclists)				\$						\$	\$	~\$				\$										\$	\$		\$	\$
Micromobility projects (including scooter share)	\$		\$	~\$			~\$	~\$			~\$					\$													\$	\$
Paved shoulders for pedestrian and/or bicyclist use	\$	~\$	\$	\$			~\$	~\$								\$	\$	\$	\$	\$	\$	\$	\$	\$				\$	\$	\$
Pedestrian plans	\$	~\$	~\$	\$					\$	\$	\$					\$									\$				\$	\$
Rail at-grade crossings	\$	\$	\$	~\$			\$	\$	\$							\$			\$	\$	\$	\$	\$	\$				\$	\$	\$
Recreational trails	\$	\$	\$	~\$												\$												\$	\$	\$
Resilience Improvements for pedestrians and bicyclists	\$	\$	\$	~\$			~\$	~\$		\$	~\$					~\$												\$	\$	\$
Road Diets (pedestrian and bicycle portions)	\$	\$	\$	\$			~\$	\$								\$	\$	\$	\$	\$	\$	\$	\$	\$				\$	\$	\$

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds

September 9, 2022

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Activity or Project Type	OST Programs						Federal Transit						Federal Highway Administration																					
	RAISE	INFRA	RCP	SS4A	Thrive	RRIF	TIFIA	FTA	ATI	TOD	AoPP	402	405	BFP	CRP	CMAQ	HSIP	RHCP	NHPP	PRO	STBG	TA	RTP	SRTS	PLAN	NSBP	ELTTP	ITP	ITPSPF					
Access enhancements to public transportation (benches, bus pads) Americans with Disabilities Act (ADA)/504 Self Evaluation / Transition Plan Barrier removal for ADA compliance Bicycle plans Bicycle helmets (project or training related) Bicycle helmets (safety promotion) Bicycle lanes on road Bicycle parking (see Bicycle Parking Solutions) Bike racks on transit Bicycle repair station (air pump, simple tools) Bicycle share (capital and equipment; not operations) Bicycle storage or service centers (example: at transit hubs) Bridges / overcrossings for pedestrians and/or bicyclists Bus shelters and benches Coordinator positions (State or local) (limits on CMAQ and STBG) Community Capacity Building (develop organizational skills/processes)																																		
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	~\$	~\$	\$	~\$		~\$	~\$	\$	\$	~\$	~\$					\$	\$					\$	\$							\$	\$	\$		
	Counting equipment	\$	\$	\$	\$								\$																					
Data collection and monitoring for pedestrians and/or bicyclists	\$	\$	\$	\$																														
Emergency and evacuation routes for pedestrians and/or bicyclists	\$	\$	\$	\$																														
Historic preservation (pedestrian and bicycle transit facilities)	~\$	~\$	~\$	~\$		~\$	~\$	\$	\$	~\$	~\$																							
Landscaping, streetscaping (pedestrian/bicycle route; transit access); related amenities (benches, water fountains); usually part of larger project	~\$	~\$	~\$	~\$		~\$	~\$	\$	\$	~\$	~\$				\$					~\$	\$	\$							\$	\$	\$	\$		
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	\$	\$	\$	\$		~\$	~\$	\$	\$		~\$				\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Maps (for pedestrians and/or bicyclists)				\$					\$	\$	~\$																							
Micromobility projects (including scooter share)	\$		\$	~\$		~\$	~\$				~\$																				\$	\$	\$	
Paved shoulders for pedestrian and/or bicyclist use	\$	~\$	\$	\$		~\$	~\$							\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$	\$	\$	\$	\$	
Pedestrian plans	\$	~\$	~\$	\$				\$	\$	\$																					\$	\$	\$	\$
Rail at-grade crossings	\$	\$	\$	~\$		\$	\$	\$	\$																						\$	\$	\$	\$
Recreational trails	\$	\$	\$	~\$		~\$	~\$																								\$	\$	\$	\$
Resilience Improvements for pedestrians and bicyclists	\$	\$	\$	\$		~\$	~\$			\$	~\$			~\$		~\$															\$	\$	\$	\$
Road Diets (pedestrian and bicycle portions)	\$	\$	\$	\$		~\$	~\$	\$								\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	

Cross-cutting notes

This table indicates potential eligibility for pedestrian, bicycle, and micromobility activities and projects under U.S. Department of Transportation surface transportation funding programs. Activities and projects must meet program eligibility requirements. See notes and links to program information below. Although the primary focus of this table is stand-alone activities and projects, programs also fund pedestrian and bicycle facilities as part of larger projects. Project sponsors are encouraged to consider [Complete Streets and Networks](#) that routinely integrate the safety, accessibility, equity, and convenience of walking and bicycling into surface transportation projects. In these instances, the Federal-aid eligibility of the pedestrian and bicycle elements are considered under the eligibility criteria applicable to the larger highway project. Pedestrian and bicycle activities also may be characterized as environmental mitigation for larger highway projects, especially in response to impacts to a Section 4(f) property or work zone safety, mobility, and accessibility impacts on bicyclists and pedestrians.

- See [FHWA Bicycle and Pedestrian Planning, Program, and Project Development](#) (Guidance)
- Bicycle Project Purpose: 23 U.S.C. 217(i) requires that bicycle facilities “be principally for transportation, rather than recreation, purposes”. However, 23 U.S.C. 133(b)(7) and 133(h) authorize recreational trails under [STBG](#) and the [TA Set-Aside](#); therefore, 23 U.S.C. 217(i) does not apply to trail projects (including for bicycle use) using [STBG](#) or [TA Set-Aside](#) funds. Section 217(i) applies to bicycle facilities other than trail-related projects, and section 217(i) applies to bicycle facilities using other programs ([NHPE](#), [HSIP](#), [CMAQ](#)). The transportation requirement under section 217(i) only applies to bicycle projects, not to any other trail use or transportation mode.
- Signs, signals, signal improvements includes ensuring accessibility for persons with disabilities. See [Accessible Pedestrian Signals](#). See also [Proven Safety Countermeasures](#), such as [Crosswalk Visibility Enhancements](#), [Leading Pedestrian Interval](#) signals, [Pedestrian Hybrid Beacons](#), and [Rectangular Rapid Flashing Beacons](#).
- Occasional DOT or agency incentive grants may be available for specific research or technical assistance purposes.
- Aspects of DOT initiatives may be eligible as individual projects. Activities above may benefit safe, comfortable, multimodal networks; environmental justice; and equity.
- The [DOT Navigator](#) is a resource to help communities understand the best ways to apply for grants, and to plan for and deliver transformative infrastructure projects and services.
- FHWA’s [Policy on Using Bipartisan Infrastructure Law Resources to Build a Better America](#).
- FHWA Links to [Technical Assistance and Local Support](#).

Program-specific notes

Federal-aid and other DOT funding programs have specific requirements that projects must meet, and eligibility must be determined on a case-by-case basis. See links to program guidance for more information.

- [RAISE](#) (Infrastructure Investment and Jobs Act (Pub. L. 117-58) (IIJA), also known as the Bipartisan Infrastructure Law (BIL), § 21202): Funds capital and planning grants.
- [INFRA](#) (IIJA § 11110): For projects that improve safety, generate economic benefits, reduce congestion, enhance resiliency, and hold the greatest promise to eliminate freight bottlenecks and improve critical freight movements.
- [RCE](#) (IIJA § 11509 and div. J, title VIII, Highway Infrastructure Programs, para. (7)): See [RCP Program Notice of Funding Opportunity](#) for full details. Planning grants and Capital Construction Grants must relate to a transportation facility that creates a barrier to community connectivity.
- [SS4A](#) (IIJA § 24112): Discretionary program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. Projects must be identified in a comprehensive safety action plan (§ 24112(a)(3)).
- [Thrive](#) (Department of Transportation Appropriations Act, 2022 (Pub. L. 117-103, div. L, title I): Technical assistance, planning, and capacity-building support in selected communities.
- [RRIF](#) (Chapter 224 of title 49 U.S.C.): Program offers direct loans and loan guarantees for capital projects related to rail facilities, stations, or crossings. Pedestrian and bicycle infrastructure components of “economic development” projects located within ½-mile of qualifying rail stations may be eligible. May be combined with other grant sources.
- [TIFIA](#) (Chapter 6 of title 23 U.S.C.): Program offers secured loans, loan guarantees, or standby lines of credit for capital projects. Minimum total project size is \$10 million; multiple surface transportation projects may be bundled to meet cost threshold, under the condition that all projects have a common repayment pledge. May be combined with other grant sources.
- [FTA / AIT](#) (49 U.S.C. 5307): Multimodal projects funded with FTA transit funds must provide access to transit. See [Bicycles and Transit](#), [Flex Funding for Transit Access](#), the FTA [Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements Under Federal Transit Law](#), and [FTA Program & Bicycle Related Funding Opportunities](#).
 - Bicycle infrastructure plans and projects must be within a 3-mile radius of a transit stop or station. If more than 3 miles, within a distance that people could be expected to safely and conveniently bike to the particular stop or station.
 - Pedestrian infrastructure plans and projects must be within a ½ mile radius of a transit stop or station. If more than ½ mile, within a distance that people could be expected to safely and conveniently walk to the particular stop or station.
 - FTA funds cannot be used to purchase bicycles for bike share systems.
- [FTA/IOJ](#): Provides planning grants to support community efforts to improve safe access to public transportation for pedestrians and cyclists. The grants help organizations plan for transportation projects that connect communities and improve access to transit and affordable housing, not for capital purchases.
- [FTA AoPP](#) (Further Consolidated Appropriations Act, 2020 (Pub. L. 116-94): Consolidated Appropriations Act, 2021 (Pub. L. 116-260)): Promotes multimodal planning, engineering, and technical studies, or financial planning to improve transit services in areas experiencing long-term economic distress, not for capital purchases.
- [NHTSA 402](#) (23 U.S.C. 402): Project activity must be included in the State’s Highway Safety Plan. Contact the [State Highway Safety Office](#) for details. The [Bipartisan Infrastructure Law](#) expanded the eligible use of funds for a Section 405 Nonmotorized Safety grant beginning in FY 2024; however, for FY 2023 grants, FAST Act eligible uses remain in place.
- [NHTSA 405](#) (23 U.S.C. 405): Funds are subject to eligibility, application, and award. Project activity must be included in the State’s Highway Safety Plan. Contact the [State Highway Safety Office](#) for details. The [Bipartisan Infrastructure Law](#) expanded the eligible use of funds for a Section 405 Nonmotorized Safety grant beginning in FY 2024; however, for FY 2023 grants, FAST Act eligible uses remain in place.
- [BEP](#), (IIJA, Div. J, title VIII, para. (1)), [BIP](#) (23 U.S.C. 124), [ERR](#) (Department of Transportation Appropriations Act, 2022): For specific highway bridge projects and highway projects that will replace or rehabilitate a bridge must consider pedestrian and bicycle access as part of the project and costs related to their inclusion are eligible under these programs.
- [CER](#) (23 U.S.C. 175): Projects should support the reduction of carbon dioxide emissions from on-road highway sources.

- [CMAQ](#) (23 U.S.C. 149): Projects must demonstrate emissions reduction and benefit air quality. See the CMAQ guidance at www.fhwa.dot.gov/environment/air_quality/cmaq/ for a list of projects that may be eligible for CMAQ funds. CMAQ funds may be used for shared use paths, but not for trails that are primarily for recreational use.
- [HSIP](#) (23 U.S.C. 148): Projects must be consistent with a State's [Strategic Highway Safety Plan](#) and (1) correct or improve a hazardous road location or feature, or (2) address a highway safety problem. Certain non-infrastructure safety projects can also be funded using HSIP funds as specified safety projects.
- [RHCP](#) (23 U.S.C. 130): Projects at all public railroad crossings including roadways, bike trails, and pedestrian paths.
- [NHCP](#) (23 U.S.C. 119): Projects must benefit National Highway System (NHS) corridors and must be located on land adjacent to any highway on the National Highway System (23 U.S.C. 217(b)).
- [PROTECT](#) (23 U.S.C. 176): Funds can only be used for activities that are primarily for the purpose of resilience or inherently resilience related. With certain exceptions, the focus must be on supporting the incremental cost of making assets more resilient.
- [STBG](#) (23 U.S.C. 133) and [TA Set-Aside](#) (23 U.S.C. 133(h)): Activities marked "SRTS" means eligible only as an SRTS project benefiting schools for kindergarten through 12th grade. Bicycle transportation nonconstruction projects related to safe bicycle use are eligible under STBG, but not under TA (23 U.S.C. 217(a)). There is broad eligibility for projects under 23 U.S.C. 206, 208, and 217.
- [RTP](#) (23 U.S.C. 206): Projects for trails and trailside and trailhead facilities for any recreational trail use. RTP projects are eligible under TA Set-Aside and STBG.
- [SRTS](#) (23 U.S.C. 208): Projects for any SRTS activity. FY 2012 was the last year for dedicated - funds, but funds are available until expended. SRTS projects are eligible under TA Set-Aside and STBG.
- [PLAN](#) (23 U.S.C. 134 and 135): Funds must be used for planning purposes, for example: Maps: System maps and GIS; Safety education and awareness: for transportation safety planning; Safety program technical assessment: for transportation safety planning; Training: bicycle and pedestrian system planning training.
- [NSBP](#) (23 U.S.C. 162): Discretionary program subject to annual appropriations. Projects must directly benefit and be close to a designated scenic byway.
- [ELTTP](#) (23 U.S.C. 201-204): Projects must provide access to or within Federal or tribal lands. Programs include: Federal Lands and Tribal Transportation Programs ([Federal Lands Access Program](#), [Federal Lands Transportation Program](#), [Federal Lands Planning Program](#)) and related programs for Federal and Tribal lands such as the [Nationally Significant Federal Lands and Tribal Projects](#) (NSFLTP) program.
 - [Federal Lands Transportation Program](#) (23 U.S.C. 203): For Federal agencies for projects that provide access within Federal lands.
 - [Federal Lands Access Program](#) (FLAP) (23 U.S.C. 204): For State and local entities for projects that provide access to or within Federal or tribal lands.
- [TTP](#) (23 U.S.C. 202): For federally-recognized tribal governments for projects within tribal boundaries and public roads that access tribal lands.
- [TTPSF](#) (23 U.S.C. 202(e)(1) and 23 U.S.C. 148(a)(4)): Grants available to [federally recognized Indian tribes](#) through a competitive, discretionary program to plan and implement transportation safety projects.

Appendix C: Livable/Complete Streets Policy

Chapter 510. Streets, Sidewalks and Other Public Places

Article IV. Livable Street Policy

Section 510.170. Complete Streets Policy.

[Ord. No. 3379, 4-2-2018]

A. Purpose. The purpose of this policy is to set forth guiding principles and practices for use in all transportation projects, where practicable, economically feasible, and otherwise in accordance with applicable law, so as to encourage walking, bicycling, and other non-motorized forms of transit, in addition to normal motorized transit, including personal, freight, and public transit vehicles. All uses must be designed to allow safe operations for all users regardless of age or ability. The ultimate goal of this policy is the creation of an interconnected network of Complete Streets that balances the needs of all users in pleasant and appealing ways in order to achieve maximum functionality and use.

B. Application and Scope.

- 1.** This policy requires the City Administrator to include complete street elements in the design, construction and maintenance of public transportation projects, improvements and facilities. The Board of Aldermen may exempt a project from this policy provided one (1) or more of the following conditions are met:
 - a.** Non-motorized use of the roadway under consideration is prohibited by law. In this case a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right-of-way or within the same transportation corridor.
 - b.** The cost of inclusion would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent (20%) of the cost of the larger transportation project. This twenty percent (20%) figure should be used in an advisory rather than an absolute sense.
 - c.** The street has severe topographic or natural resource constraints.

In all cases where an exemption has been granted, the City Administrator or other appropriate official shall document the decision and the invoked exemption condition(s) in the project plan.

- 2.** This policy requires consideration of complete streets elements by the Planning and Zoning Board. Accordingly, the City requires all developers and builders to obtain and comply with, as appropriate, these standards.
- 3.** This policy is intended to cover all development and redevelopment in the public domain within Salem, Missouri. This includes all public transportation projects, such as, but not limited to, new road construction, reconstruction retrofits, upgrades, resurfacing, and rehabilitation. This also includes privately built roads intended for public use. As such, compliance with these principles may be factored into decisions related to the City's participation in private projects and whether the City will accept possession of privately built roads constructed after the passage of this Section.
- 4.** The City understands that special considerations and designs are necessary to accommodate older adults and disabled citizens. Accordingly, the City will ensure that those needs are met in all complete streets designs. All public transportation projects involving complete streets elements, where practicable, shall be ADA compliant to help meet those special considerations.

C. Guiding Principles And Practices.

1. "Complete Street" Defined. A complete street is designed to be a transportation corridor for all users: pedestrians, cyclists, transit users, and motorists. Complete streets are designed and operated to enable safe continuous travel networks for all users. Pedestrians, bicyclists, motorists and bus riders of all ages and abilities are able to safely move from destination to destination along and across a network of complete streets. Transportation improvements, facilities and amenities that may contribute to complete streets and that are considered as elements of a complete street include: street and sidewalk lighting; pedestrian and bicycle safety improvements; access improvements, including compliance with the Americans with Disabilities Act; public transit facilities accommodation, including, but not limited, to pedestrian access improvement to transit stops and stations; street trees and landscaping; drainage; and street amenities.

2. The City will strive, where practicable and economically feasible, to incorporate complete streets elements into all public transportation projects in order to provide appropriate accommodation for bicyclists, pedestrians, transit users and persons of all abilities, while promoting safe operation for all users, in comprehensive and connected networks in a manner consistent with, and supportive of, the surrounding community.

3. The City will incorporate complete streets principles into all public strategic plans, upon subsequent updates. The principles, where practicable, shall be incorporated into other public works plans, manuals, rules, regulations, operational standards, and programs as appropriate and directed by the City Administrator. The principles shall be incorporated into appropriate materials and resources no later than two (2) years after the adoption of this Section.

4. It shall be a goal of the City to foster partnerships with the State of Missouri and Dent County in consideration of functional facilities and accommodations in furtherance of the City's complete streets policy and the continuation of such facilities and accommodations beyond the City's borders.

5. The City recognizes that complete streets may be achieved through single elements incorporated into a particular project or incrementally through a series of smaller improvements or maintenance activities over time. The City will attempt to draw upon all possible funding sources to plan and implement this policy and shall investigate grants that may be available to make complete streets elements more economically feasible.

6. The City recognizes that the elements comprising a complete street are only effective when appealing and pleasant to use and will ensure improvements meet those standards.

D. Study/Analysis To Be Undertaken As Part Of Public Transportation Project.

1. During the planning phase of any public transportation improvement project, a designee of the City Administrator (which may be the Street Superintendent, the City's design engineer, or other person or firm deemed appropriate by the City Administrator) shall conduct a study and analysis relating to the addition and incorporation of complete streets elements into the project.

2. The study and analysis shall include cost estimates, whether the elements could be incorporated in a safe and legal manner, the degree that such improvements or facilities may be utilized, the benefit of such improvements or facilities to other public transportation improvements, whether additional property is required, physical or area requirements or limitations and any other factors deemed relevant.

3. Such study and analysis shall be submitted to the City Administrator for consideration in the design and planning of the public transportation project. The City Administrator shall incorporate complete

streets elements in each public transportation project to the extent that such is economically and physically feasible.

E. Administration.

1. The City Administrator shall be responsible for the overall implementation and execution of the complete streets principles and practices.

2. The City Administrator shall collaborate with appropriate staff to adopt a complete streets checklist for use on all public transportation projects. The City requires all developers and builders to obtain and use this checklist.

3. When available, appropriate, and monetarily feasible, the City shall support staff professional development and training on non-motorized transportation issues through attending conferences, classes, seminars, and workshops.