



ONLY
BUS





SAFE STREETS 4 ALL ACTION PLAN



AKRON METROPOLITAN AREA TRANSPORTATION STUDY
1 CASCADE PLAZA | SUITE 1300
AKRON, OHIO 44308

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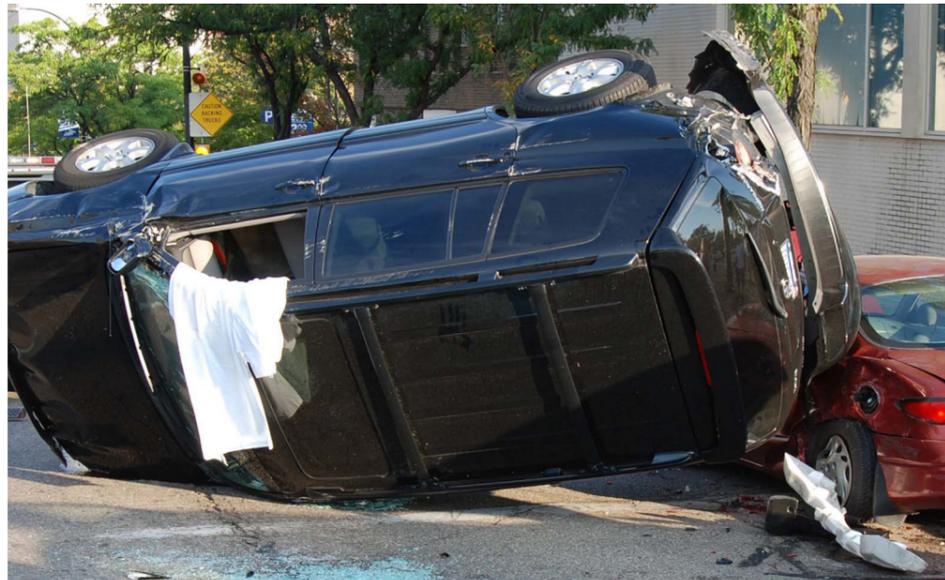
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INTRODUCTION

In the five-year period between 2017 and 2021, 1,854 crashes resulting in a fatality or serious injury occurred within the Greater Akron area. Together, these crash events resulted in 1,902 serious injuries and 291 deaths. Consider, bluntly, the human impact of this: This is nearly 2,200 lives significantly affected and, in many cases, changed forever. When we consider fatal crashes, each of these victims did not return home and will not get to continue relationships with parents, spouses, children, friends, and other loved ones. All of *their* lives are deeply and permanently affected as well.

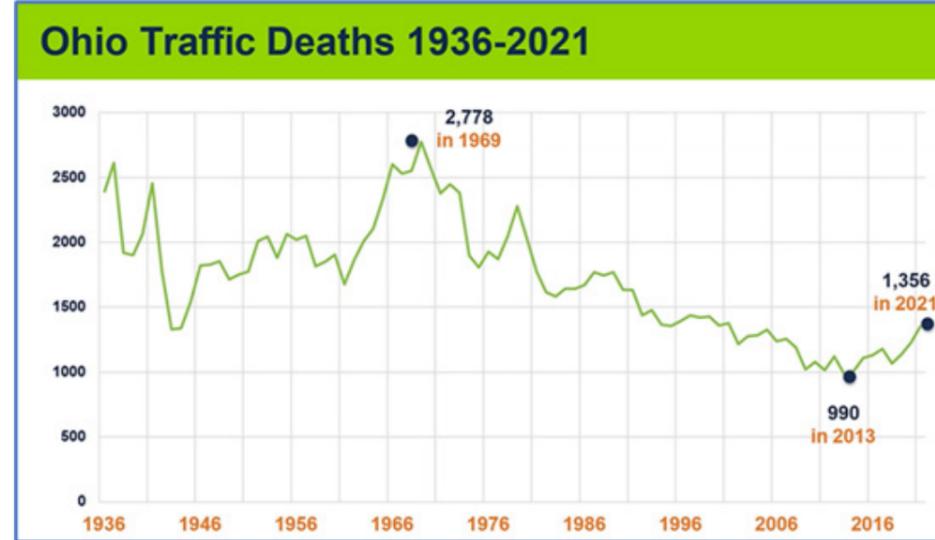
With such a tremendous focus on improving the safety of our transportation system within our region over several decades, coupled with remarkable improvements in the safety of automobiles, it's easy to think that the problem is largely fixed. Indeed, fatalities on our roadways are significantly lower than they were many decades ago, despite a larger regional population. But, again, the fact that nearly 300 people have been killed on our region's roadways over the past five years plainly demonstrates that there is still much work to do in making our region's roadways safer.



As local officials, planners, engineers, and other transportation stakeholders seek to understand transportation safety issues, some trends provide hope while other trends are sobering. An optimistic viewpoint can focus on how integral safety is to the funding of both AMATS and State funding programs. In fact, the state of Ohio devotes more funding to safety investments per capita than any other state. On a regional level, AMATS' longstanding *Three-Year Crash Report*, which is updated annually, provides its members with a deep analysis of where, how, when, and why area crashes occur. This report is a valuable resource for the region's decisionmakers and directly affects which projects are prioritized. It also promotes a deep, collective knowledge of any problem areas. This knowledge can be used to improve or eliminate design shortcomings. One can also point to macro-level changes in the design of automobiles. Many safety improvements have been incorporated into automobiles to reduce injuries and deaths, and even avoid crashes. Active and passive safety features keep improving and are clearly making motorized vehicles much safer. This technology helps to prevent collisions with other vehicles, bicycles, and pedestrians, and reduce roadway departure incidents.

Despite all that is being done to reduce serious crashes, fatal and serious injury crashes are increasing. This is true both regionally and nationally. And, as shown in the chart below, it is also true at the state level. Behavior is changing, particularly the rise of distracted driving. A growing reliance or even addiction to personal cellular phones, more complicated and less

intuitive automotive controls, increases of drug addiction, and mental distractions are but a few examples of potential distractions that can diminish individuals' focus on driving. Behavior is the underlying cause of many crashes, and there is compelling evidence to suggest that behavioral issues are increasing.



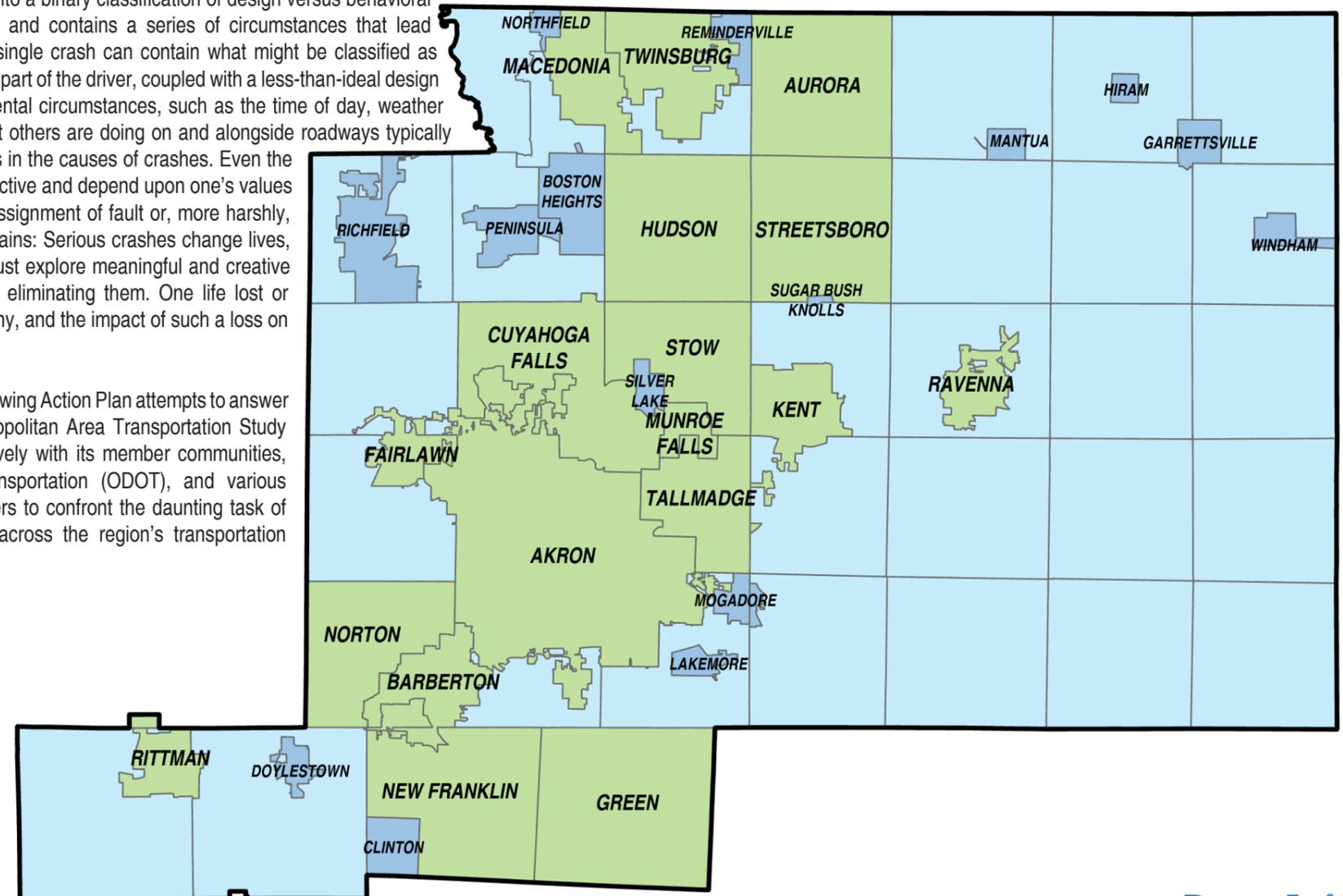
This is not to simplify crashes into a binary classification of design versus behavioral causes. Each crash is unique and contains a series of circumstances that lead to the event. Frequently, one single crash can contain what might be classified as behavioral shortcomings on the part of the driver, coupled with a less-than-ideal design of a roadway. Other environmental circumstances, such as the time of day, weather conditions, or reactions to what others are doing on and alongside roadways typically play primary or secondary roles in the causes of crashes. Even the perception of fault can be subjective and depend upon one's values and experiences. Beyond an assignment of fault or, more harshly, *blame* for a crash, the fact remains: Serious crashes change lives, and the Greater Akron area must explore meaningful and creative solutions toward reducing and eliminating them. One life lost or permanently affected is too many, and the impact of such a loss on survivors is profound.

So, *what* can be done? The following Action Plan attempts to answer this question. The Akron Metropolitan Area Transportation Study (AMATS) is working cooperatively with its member communities, the Ohio Department of Transportation (ODOT), and various other transportation stakeholders to confront the daunting task of measurably improving safety across the region's transportation network.

About AMATS

AMATS is the Metropolitan Planning Organization (MPO) for the Greater Akron area. This includes all of Summit and Portage counties as well as a portion of Northeastern Wayne County. MPOs such as AMATS were established within urban areas with more than 50,000 residents. These federally mandated MPOs are responsible for prioritizing transportation investments within the region through a continuing, cooperative, and comprehensive planning process. AMATS' committees are comprised of local and regional elected officials, planners, engineers and other transportation stakeholders. These committees lead this regional planning process by setting transportation policies, overseeing the responsible and equitable distribution of federal funds, and discussing a variety of transportation planning issues.

Among the core missions of AMATS is ensuring a safe transportation system for all users. Numerous examples of how AMATS focuses on safety will be demonstrated throughout this report. It cannot be overstated how central a role safety plays in the organization's discussions, reports and decisions.



Safe Streets and Roads for All and Vision Zero

When the federal government passed the Bipartisan Infrastructure Law (BIL) in late 2021, one of the most notable new programs was Safe Streets and Roads for All—commonly abbreviated as “SS4A.” Detailed information about the SS4A program can be found in the following chapter (Chapter 2: Process). SS4A commits large amounts of federal funding toward transforming the safety of corridors, municipalities and regions through a series of planning and implementation grants. A fundamental component of SS4A is its alignment of a Vision Zero approach to safety. Vision Zero is based on the principle that it is not acceptable that people are killed or seriously injured when moving throughout the transportation network. Simply put, *Vision Zero* is a commitment to move toward zero deaths. This initiative recognizes that the responsibility for a safe transportation network is shared between users and transportation system designers, and that behavioral and design issues are both important to understand and address. AMATS strongly supports a Vision Zero approach to safety.

Communities seeking SS4A funding must have a compliant Safety Action Plan. A significant portion of the overall SS4A program is devoted to funding Action Plans. In AMATS’ case, the agency decided to create the plan internally without requesting SS4A funding. AMATS staff and committees carefully considered all federal SS4A guidance during the planning process to ensure that this report is in accordance with all required and suggested SS4A Action Plan components.

With this plan’s completion, AMATS and its members may decide to pursue SS4A Implementation Grants. This portion of the SS4A funding can fund a large variety of safety projects and strategies identified in this Action Plan that address roadway safety problems. Even if the region’s communities do not apply or do not receive SS4A Implementation Grants, this plan will provide the tools needed to address safety issues in many new ways.

A Comprehensive Safety Plan

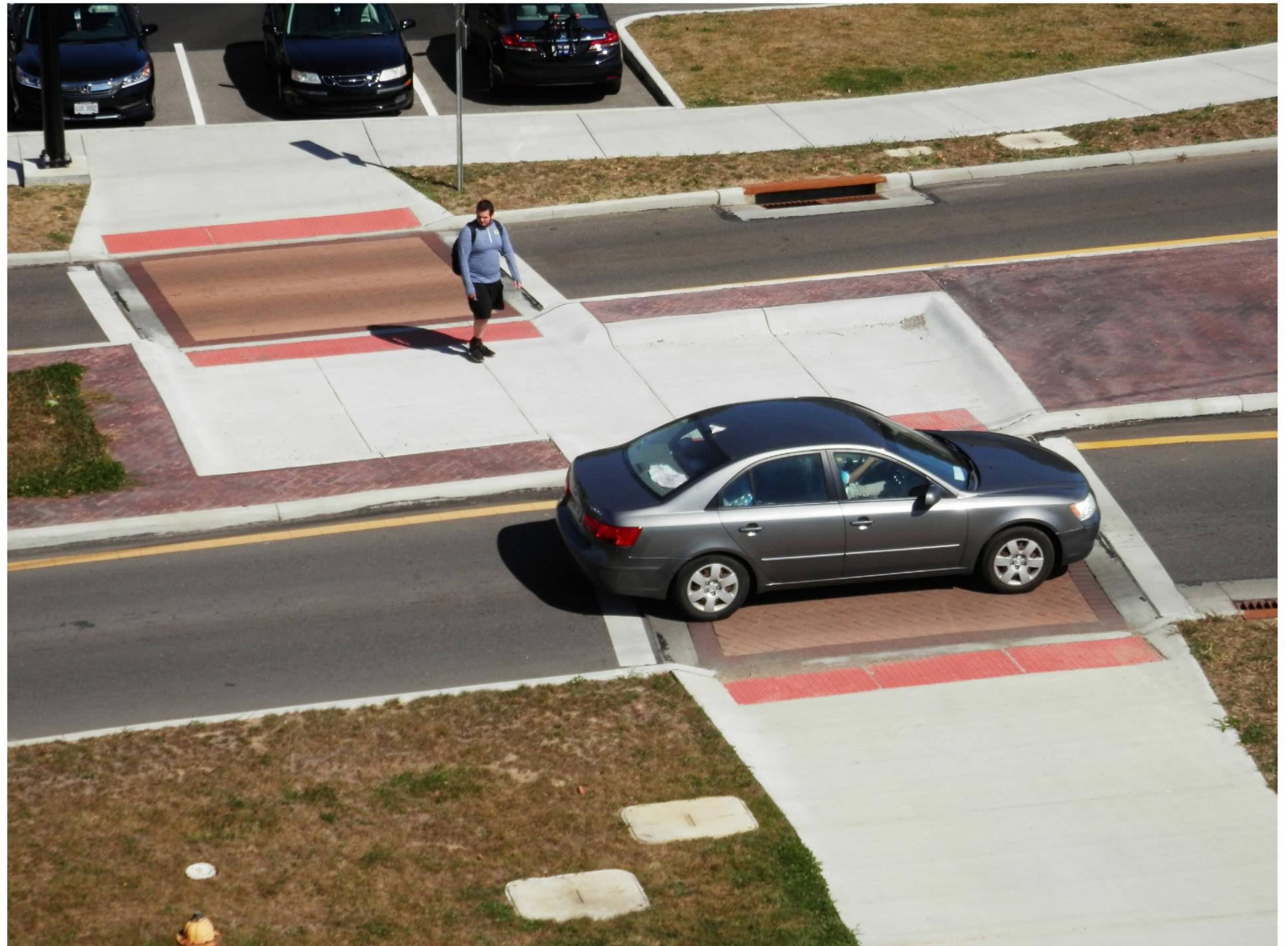
The following chapters will demonstrate how AMATS analyzed the existing regional safety conditions and how regional safety can be improved in the future. Some of this Action Plan’s key points include:

- Providing an overview of the SS4A planning process, what it means and why it’s important to AMATS (Chapter 2)
- Sharing the results of a successful and wide-ranging stakeholder and public outreach effort and summarizing what AMATS learned (Chapter 3)
- Establishing a new High-Injury Network (HIN) methodology that evaluates the region’s segments and intersections with higher numbers of fatal and serious-injury (FSI) crashes (Chapter 4)
- Summarizing five years of data—why, when, how, where fatalities and crashes occur, the populations involved, and behavioral characteristics of crashes (Chapter 4)
- Demonstrating AMATS’ efforts to consider equity seriously as part of the planning process by discussing the experiences of traditionally underserved populations and understanding geographic trends such as the correlations between FSI crashes and traditionally underserved population communities (Chapter 5)
- Reviewing the existing AMATS funding policies and suggesting where safety can play a more important role in the selection and prioritization of projects (Chapter 6)
- Establishing a framework to recommend a list of potential safety projects by considering the existing HIN, existing safety projects, corridors of concern, and past planning efforts (Chapter 7)

- Outlining several safety countermeasures and describing where they might be deployed for maximum effectiveness (Chapter 7)
- Recommending a variety of other, non-project strategic improvements that improve safety by changing behavior and identifying the responsible parties to implement these efforts (Chapter 7)
- Detailing how the plan will be updated in the future, how AMATS’ effectiveness at implementing the plan will be measured, and how these updates will be demonstrated to the public and other stakeholders (Chapter 8)

Summary

This Action Plan represents the first step taken by the Greater Akron area on its long journey to Vision Zero’s goals of no fatalities and no serious injuries. AMATS will modify this plan in the coming years to adjust to changing realities as circumstances may warrant. Future versions of this plan will be crafted by the region’s various stakeholders including, most notably, the public which AMATS serves.



PROCESS

BIL SS4A Grant

The federal Bipartisan Infrastructure Law (BIL), passed in November 2021, provided large amounts of funding to public transit, passenger rail, bridge repair, and other infrastructure investments. Many of these historic investments took form as discretionary programs. One of these programs established the new Safe Streets and Roads for All (SS4A) discretionary program, which was appropriated \$5 billion in funds over the next five years. SS4A was established in response to a growing, nationwide trend of serious crashes and represents a fundamentally new perspective to transportation safety planning.

Incorporating the *Vision Zero* philosophy, which sets a goal to eliminate fatalities and serious injuries, SS4A is a bold new initiative that will reframe how planning agencies around the country approach safety planning. The purpose of the SS4A Program is to improve roadway safety by significantly reducing or eliminating roadway fatalities and serious injuries through safety action plan development. These action plans should focus on all users of transportation including transit riders, pedestrians, cyclists, vehicle users, and motorists.

The SS4A Program provides funding for two types of grants: Action Plan Grants and Implementation Grants. Action Plan Grants are used to develop, complete, or supplement a comprehensive safety action plan. Implementation Grants are available to implement strategies or projects that are consistent with an existing Action Plan.

Applicants for Implementation Grants can self-certify that they have in place one or more plans that together are substantially similar to and meet the eligibility requirements for an Action Plan. To apply for an Implementation Grant, an applicant must first have a completed Action Plan in place.

AMATS Regionwide SS4A Plan

In the spring of 2022, AMATS and its member communities initiated discussions regarding the SS4A Program and the development of an SS4A Action Plan. During the May 2022 AMATS Policy Committee and Technical Advisory Committee (TAC) meetings, AMATS staff presented information about the *Vision Zero* philosophy and SS4A initiatives to educate its members. As transportation safety is a critical goal of AMATS, communities were quick to embrace the SS4A Program principles and *Vision Zero* goals. Through the summer of 2022, AMATS engaged several communities and discovered there was significant interest in developing an action plan in-house.

As a result, at the next AMATS Policy Committee and TAC meetings in August 2022, a *Vision Zero* resolution was approved: Resolution 2022-16. This resolution set a goal of zero roadway fatalities and serious injuries by 2050 aligning with AMATS long-range transportation plan, *Transportation Outlook 2050*. With the adoption of a *Vision Zero* target, AMATS Staff began work developing a SS4A Action Plan with the goal to complete the plan by May 2023.

In the fall of 2022, AMATS formed a SS4A Taskforce to oversee the development of the SS4A Action Plan. The Taskforce, comprised of municipal leaders and planning staff, initially met in October 2022 to establish the purpose and timeline for the plan. The Taskforce guided the AMATS Staff in establishing the scope of the safety analysis, recommending policy changes, and reviewing progress throughout the development of the plan. The Taskforce met on October 19, Jan. 5, and Feb. 15 throughout the action plan development process to provide input and serve as the action plan's planning structure.



As community engagement is critical to the SS4A process, the AMATS Staff and the SS4A Taskforce developed an engagement strategy to incorporate relevant stakeholder and public feedback. Engagement efforts included a regionwide survey and multiple focus groups comprising various transportation-oriented organizations. More details about this process can be found in the Chapter 3.



The AMATS Staff performed a safety analysis of all crashes in the Greater Akron area between 2017 and 2021. As a result of the analysis, a High Injury Network (HIN) was developed. The purpose of the HIN was to identify roadways in the AMATS area that have the highest rates of fatal and serious injury crashes. More information about the HIN and equity considerations are detailed in Chapters 4 and 5.

Reviews of the *AMATS Funding Policy Guidelines*, *Transportation Improvement Program*, and *Transportation Outlook 2050* were also undertaken, specifically focusing on opportunities to incorporate SS4A principles into the regional transportation planning process. Following this review, a strategy that prioritized safety was developed to apply to projects in the current project planning process. Chapters 6 and 7 are dedicated to illustrating how this strategy will apply to projects.

Finally, AMATS developed a method to measure progress over time after the plan is developed and to ensure ongoing transparency with stakeholders and the public. This method is detailed in Chapter 8 of this report.



AMATS and its member communities are committed to working toward the *Vision Zero* goal of eliminating fatal and serious injury crashes. Although improving safety has always been a central component of the area's transportation planning, this Action Plan represents an important next step in achieving this goal. The SS4A Taskforce has worked diligently to analyze crash data, engage stakeholders and the public, review AMATS policies and procedures, identify projects that will improve safety outcomes, and develop methods to measure progress in the future. AMATS and its member communities understand that this SS4A Plan will lead the region toward planning a safer transportation network and deliver important outcomes.

STAKEHOLDER AND PUBLIC ENGAGEMENT

Any successful planning process relies on a meaningful level of engagement with other groups and individuals. This allows for a more robust understanding of both the concerns and opportunities that exist and provide a necessary qualitative balance to the more quantitative data analysis. This Action Plan’s process involved several levels of engagement with the SS4A Taskforce, various stakeholders, and the general public. Coordination took place through a series of meetings, focus groups, and a two-part online public survey. Summaries and key findings of these efforts are described in the following paragraphs, and the complete results of the plan’s engagement process are outlined in Appendix A.

Taskforce

A SS4A Taskforce was developed to guide the overall planning process. This group, comprised of municipal and agency officials throughout the planning region, was instrumental in providing direction and reacting to ideas and information provided by the AMATS staff. This group met four times and offered feedback via email numerous times throughout the planning process.

Stakeholder Engagement

Early in the planning process, AMATS staff and the Taskforce compiled a large list of potential stakeholders. The resulting group of identified stakeholders was broad and diverse, and there was a particular focus on engaging agencies who work with traditionally underserved populations.

To elicit initial feedback from the identified stakeholders, six focus groups were held in November 2022. Each focus group covered a particular topic and participants could join in-person or online via Zoom. A summary of the key findings of each focus group are described below. The complete list of attendees and focus group meeting summaries can be found in Appendix A.

Focus Group Topic	Targeted Attendees
Transit	Public transit agencies, transportation companies, social services with clients who use public transit
Active Transportation	Cycling advocacy groups, planning agencies, groups promoting multimodal transportation networks and complete streets
First Responders	Incident response teams (e.g. police, fire, paramedics)
K-12 Schools	School district officials, Safe Routes to School coordinators
Community Development and Social Services	Neighborhood development corporations, non-profits, miscellaneous social service agencies
Institutional and Campus Facilities Planning	Transportation hubs such as Higher Education institutions and major employers

Transit

This focus group was well attended by staff from the Summit and Portage County transit agencies, METRO and PARTA. A few social service agencies with transit-reliant populations and municipal officials also participated. Access to transit and issues with sidewalk gaps and lighting were areas of focus. Another primary topic was the interaction between impatient drivers and transit. Many points of conflict exist because of vehicular driver behavior, and this is

clearly the biggest safety issue that the transit agencies face. The agencies reported issues with transit riders being hit by personal vehicles as they onboard or offload, buses are regularly rear-ended, and impatient drivers often illegally go around stopped buses. Generally, both transit agencies are cognizant of any gaps in safe pedestrian access and have made considerable efforts to locate their stops in convenient and safe locations. It was, however, noted that many senior housing complexes could have better access to transit. Land-use decisions that have expanded housing and employment to further-out suburban fringes sites have greatly affected the efficacy of a good public transit system by decentralizing transit-dependent populations and making pedestrian access to transit much more difficult.

Active Transportation

Representatives from the cities of Akron and Kent, Neighborhood Network, Summit Public Health, and the Trail Advocates of Summit County (TASCForce) attended this focus group session. The group established a base line of great places to walk and bike by listing dedicated bike trails/lanes, raised sidewalks, wide sidewalks, and various other amenities. Essentially, separation of bicycle and pedestrian traffic from roadways improves the experience significantly and attendees felt that further investments in building up the active transportation network are essential. There was a significant discussion about designing amenities for physically and cognitively disabled populations; flat surfaces, audible pedestrian signals, ramps and similar amenities are very important. There was some discussion about additional cyclists along our roadways are necessary to make this mode more visible. Places such as W. 25th Street and Detroit Avenue in Cleveland and Main Street in Akron were demonstrated as corridors that allow safe spaces for bicycle traffic. Also mentioned was the idea of continuous/similar design along a corridor. Changing conditions (narrowing roadways, disappearing sidewalks or bike lanes, etc.) create points of potential conflict and do not encourage active transportation traffic. Education and roadway/intersection design were noted as important considerations in active transportation planning.

First Responders

Representatives from the Streetsboro and Kent police departments, the Streetsboro Fire Department, and the city of Kent participated in this session. First responders mentioned that driver inattention, rerouting traffic, and sending out detour notices are the biggest concerns when responding to a situation. In terms of traffic, the biggest safety issues are speed, distracted or impaired driving, and visibility. Most said that roadway design plays a small role in most crashes. Certain locations were mentioned that have high crash counts: State Route 14 close to Interstate 480, State Route 14 at State Route 303, and State Route 43/River Street. All participants noted that distracted driving is increasing because numbers of rear-end crashes, and people going through red lights are increasing. Further, all agreed that education campaigns do not have an impact overall.

K-12 Schools

Representatives from the cities of Kent and Akron, Kent City Schools, Springfield Schools, and Cuyahoga Falls Schools were present for this session. While there is no formal education around pedestrian and bicycle safety in Springfield, reps from Kent and Cuyahoga Falls both said that safety is taught once a year. None of the districts have champions to lead new initiatives, but there is interest in Kent. The school district representatives said that plowing sidewalks (allowing for safe wintertime walking) and congestion (on and around school campuses) are the biggest transportation obstacles. They also noted a significant increase in vehicular pick-ups and drop offs over the last several years, particularly since the COVID-19 Pandemic. In terms of off-campus traffic safety, most schools have crossing guards at intersections near schools. None of the districts participating in the focus group have a Safe Routes to Schools plan, but they are interested in encouraging more active transportation.

Community Development and Social Services

Representatives of the Akron Metropolitan Housing Authority (AMHA), METRO, the city of Akron, Kent Social Services, and Kenmore Neighborhood Alliance participated in this session. Transportation needs among the various groups’ clients varied from students walking and biking to bus riders needing safe access to the bus. Representatives indicated that local businesses need good lighting and crosswalks for retail customers. The top safety concerns consistently cited were good lighting, sidewalks, and signage. A discussion surrounding willingness to embrace major changes was lively with stories told about residents’ initial excitement followed by significant frustration. Consistency of roadway and signage design was emphasized at the end as an essential component of transportation safety.

Institutional and Campus Facilities Planning

Representatives from Kent State University (KSU), The University of Akron (UA), AMHA, and the city of Kent attended this session. College representatives stated they seriously consider active transportation for their users. KSU has redesigned several roadways towards cycling and pedestrian usage. UA undergraduate student government encourages bus and scooter usage. College representatives and AMHA also mentioned that high-speed arteries surrounding campuses (e.g. Exchange Street in Akron and E. Main Street in Kent) are their top safety concerns. Proven methods to improve traffic safety were noted as roundabouts and “yield to pedestrian” signs placed in crosswalks on roadways. E-scooters were discussed as a growing userbase and there is some confusion about where they are allowed to ride. There are also concerns about potential safety problems and conflicts with pedestrians as e-scooter users increase. There was a consensus on the importance of good leadership, communication to the public about changes, and the amount of time for public behavior to change.

The project team again communicated with the identified stakeholders (regardless of whether they attended the focus groups) once a draft report was compiled. A virtual stakeholders meeting was held on April 17, 2023. Approximately 15 stakeholders, taskforce members and staff attended this meeting. AMATS staff summarized the planning process that culminated in the completion of a draft Action Plan. AMATS staff presented the draft Action Plan during the meeting, highlighting several sections of the plan. Stakeholders provided a few questions and minor comments related to the plan, and AMATS staff requested that any further comments be provided over the following weeks. Based on this feedback, the plan was updated to reflect stakeholder recommendations.

Public Engagement

Online Survey Outreach

Gathering public opinion was an integral part of this planning effort. Although crash data can provide decisionmakers with precise data about what has already happened, it does not convey potential issues, near-misses, and areas of concern. Further, it is not able to provide the necessary information about how and why people are making their transportation decisions. Public engagement, therefore, becomes an important and complementary part of the data gathering process.

The Taskforce discussed ways of ensuring a robust and meaningful level of public engagement, ultimately deciding that a public online survey should be the primary method of gathering this information. It was decided that a central piece of the survey would involve respondents being able to communicate location-specific concerns by using an online interactive map. ArcGIS’s Survey123 platform was chosen to host the online survey and a variety of questions were developed.

Several methods were utilized to promote the survey:

- Links were shared with all stakeholders and Taskforce members, and they were asked to share within and outside of their respective organizations. Both the stakeholders and taskforce members were encouraged to post these links on municipal and organizational websites and social media pages. They were also emailed and/or provided a postcard-sized printout with a QR code promoting the survey.
- AMATS' Public Information Coordinator wrote a press release and distributed to a large list of local and regional media outlets. Subsequently, a couple of media outlets interviewed staff and produced content about the survey.
- Staff reports were provided at three December 2022 AMATS MPO Committee meetings (Technical Advisory Committee, Citizens Involvement Committee, and Policy Committee). Postcards with the QR code were also available at the TAC meeting.
- Information about the survey, including direct links, was prominently displayed on the AMATS website's homepage—amatsplanning.org.
- The survey was shared through AMATS' Twitter account; several tweets about the survey were created during the survey's open period.
- Several posts were created on AMATS' Facebook page. AMATS paid to boost these posts three times to allow for a significant reach outside its usual followers.

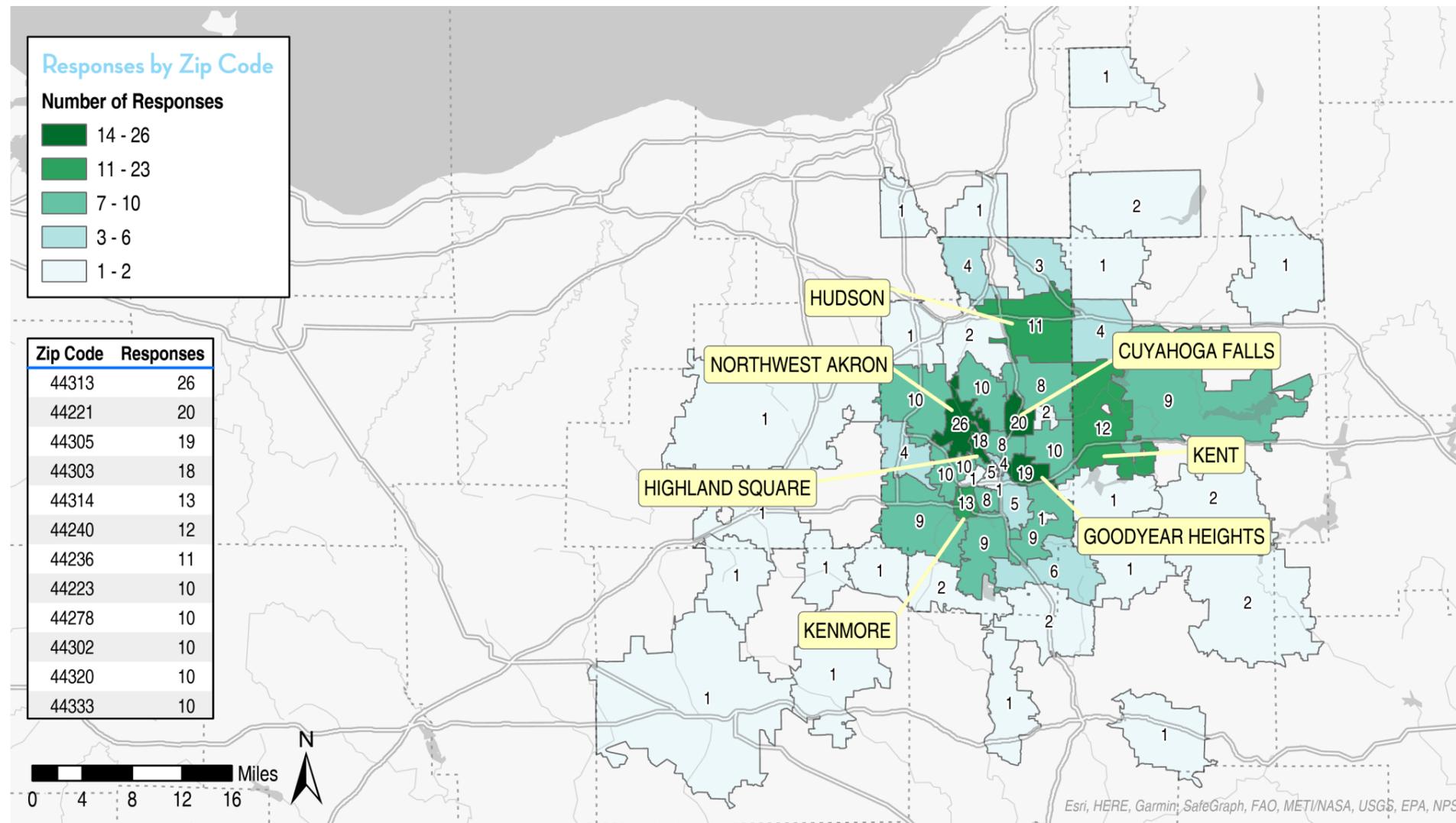
The survey, which is included as Appendix A was designed to ask questions about how people used the regional transportation system.

Online Survey Results

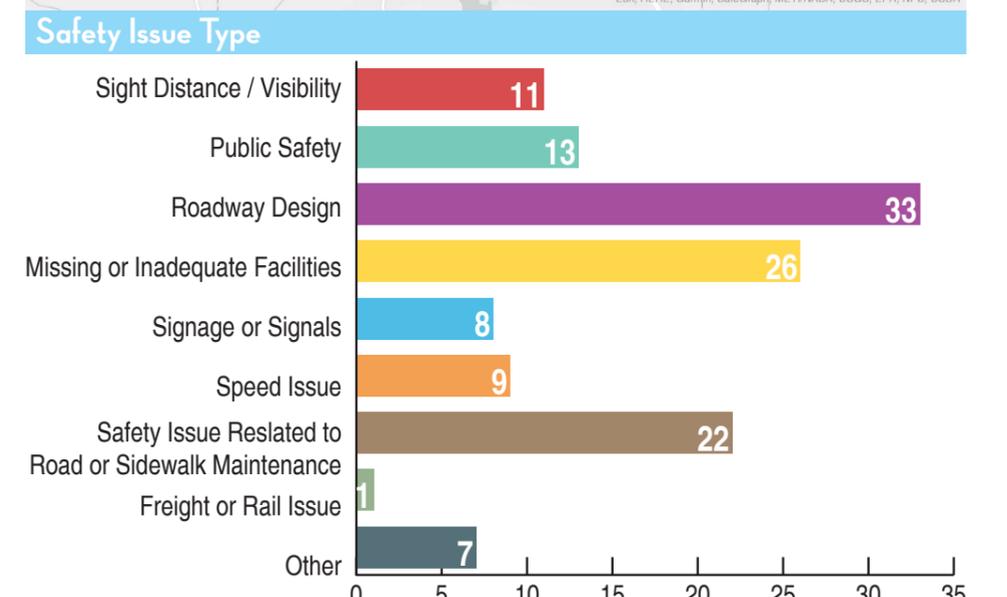
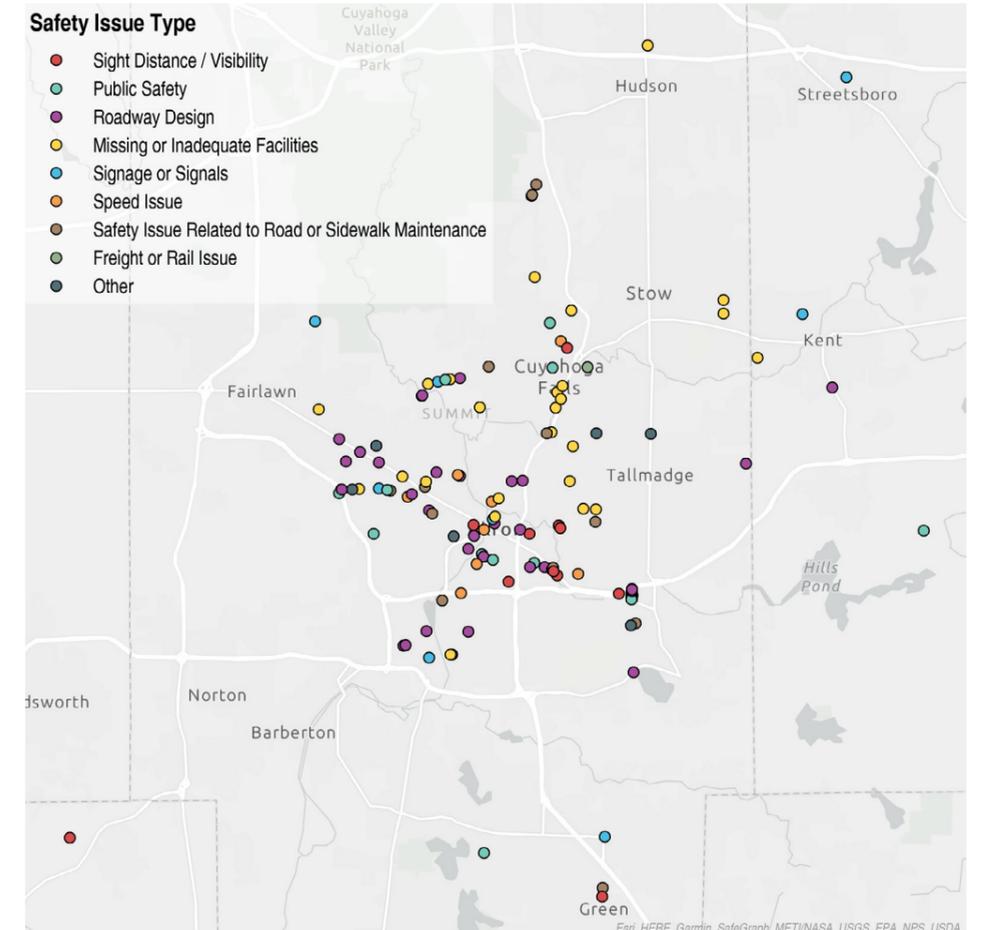
The survey went live on November 29, 2022 and was open for nearly a month and a half. When the survey closed on January 13, 2023, a total of 301 unique responses were collected. In addition, 130 location-specific areas of concern were collected.

Responses came from 55 different zip codes. The vast majority were from within the planning region (Summit, Portage, and NE Wayne counties), although many came from surrounding counties (particularly within Medina, Wayne, Stark and Cuyahoga counties). As shown on the map and table below, the highest response rates came from neighborhoods within Akron and the cities of Cuyahoga Falls, Kent, and Hudson.

ZIP CODE	AREA	# OF RESPONSES
44313	NW Akron (Wallhaven, Merriman Valley, etc.)	26
44221	Cuyahoga Falls	20
44305	East Akron (Goodyear Heights, Middlebury)	19
44303	NW Akron (Highland Square, West Hill, Merriman Hills)	18
44314	SW Akron (Kenmore)	13
44240	Kent	12
44236	Hudson	11



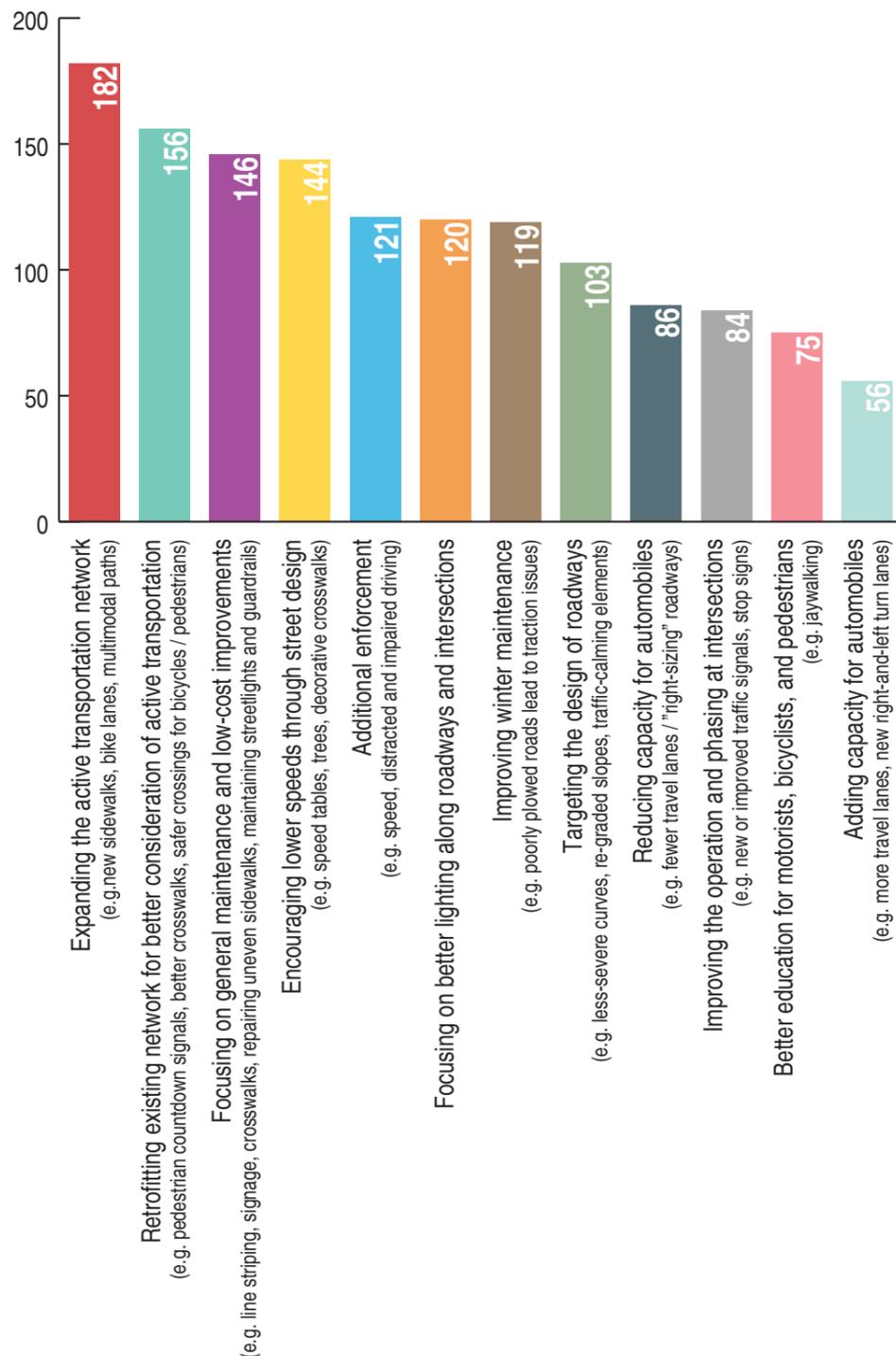
The 130 location-specific comments were collected throughout the planning region, but the vast majority were related to concerns within the cities of Akron and Cuyahoga Falls. Respondents were asked to categorize their submitted issues as shown in the chart below. Twenty-five percent of all locations submitted concerned roadway design issues, 20% were categorized as missing or inadequate facilities, and 17% were road or sidewalk maintenance issues. Staff reviewed the individual concerns to understand if and how they fit into existing recommendations or planned projects. Comment details are contained within the *Public Input: Safety Issues* layer on the SS4A WebApp (see Chapter 4, page 16).



A Cultural Shift?

Perhaps the most striking finding was that those who completed the survey clearly support the continued investment in active transportation modes, as shown in the chart below. Respondents were asked to select their top five strategies to improve the transportation network's safety most effectively within the region. This included both the construction of new facilities such as trails and sidewalks, and the retrofitting of the existing network allowing for safe bicycle and pedestrian travel. Adding capacity to the road network through road widening and additional turning lanes was particularly unpopular among those surveyed. The latter approach defined

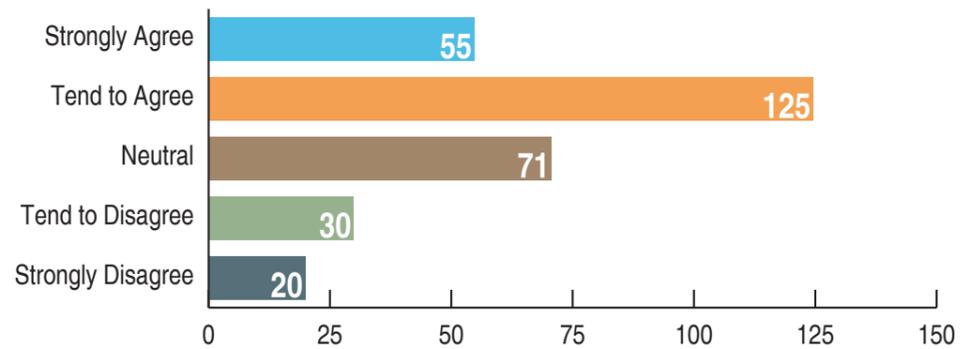
Top 5 Most Effective Strategies for Improving Safety



both regional and national transportation investment philosophies throughout the latter half of the twentieth century. This finding certainly highlights a major departure from the more traditional approach of accommodating the efficient movement of vehicles, something that would have likely been popular even a decade or two ago. More importantly, it demonstrates that this multimodal approach is supported by the community; rather than merely planners and regional decisionmakers.

Three in five survey respondents agreed or strongly agreed that there has been an increase in bicycle and pedestrian traffic in recent years. Whether this is just an evolutionary acceptance of more active transportation or a reaction to the pandemic when non-motorized travel and recreational activity both increased is difficult to ascertain. Regardless, this change in culture helps to justify the multimodal investments that have become increasingly typical.

Respondant Observed an Increase in Bicyclists and Pedestrians



Other Active Transportation Highlights

Among the sample of survey respondents, over 75% reported that they walk and just under 60% ride a bicycle, a clear majority for both modes. Those who reported they walk or ride a bicycle were then asked some follow up questions. Some of the more notable findings include:

- Nearly 62% of pedestrians tended to agree or strongly agreed that the region has an adequate number of bike/hike trails. Among bicyclists, 52% tended to agree or strongly agreed. More than a quarter of pedestrians and bicyclists—approximately 26%-31% respectively—stated that they disagreed or strongly disagreed.
- Few bicyclists felt that the region does a good job of incorporating bicycle accommodations into the overall transportation network. Fewer than 19% tended to agree or strongly agreed while nearly 62% disagreed or strongly disagreed with this statement. One illustration of this: nearly three-fourths of cyclists (73%) noted that they do not believe that the region has an adequate number of bicycle lanes.
- Nearly half of pedestrians (49%) stated that they generally feel unsafe when walking and feel that pedestrians are not adequately accommodated within the design of the region's roadways.
- Only 12% of bicyclists generally feel safe when bicycling around the region and 65% disagreed or strongly disagreed with this sentiment.
- 148 out of 179 bicyclists (nearly 83%) noted that they would ride more often if there were more safe places to do so.

Transit Highlights

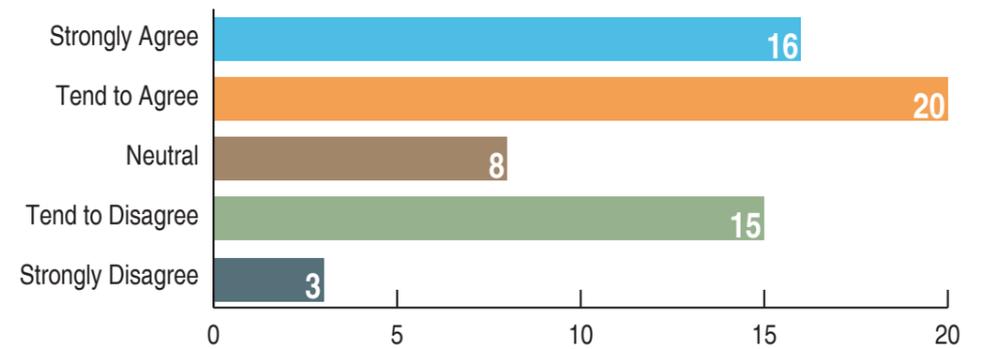
62 out of 301 respondents (21%) use public transit.

- 65% of these respondents stated that transit stops are generally well-located.
- Those taking transit would do so more often if service were more convenient. More than 50% strongly agreed and another 23% tended to agree. It should be noted that

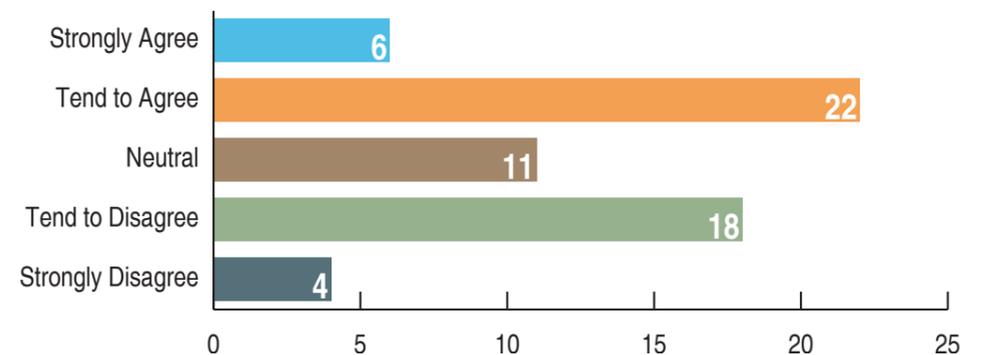
this does not mean that service is inconvenient. This more likely reflects the reality that most transit systems involve some degree of patience and compromise because buses often do not provide door-to-door service and waiting for the next bus is a necessary part of the transit experience.

- Sentiments around the ease of navigating schedules and fare collection varied wildly, as shown below. While a majority (58%) agreed or strongly agreed this is easy, many also disagreed or at least had no strong opinion either way.
- As discussed during the Transit focus group discussion, survey respondents also noted there is still work to be done on obtaining safe and adequate access to transit stops. As noted in the graph below, responses were strong in all five categories. While nearly half (46%) agreed or strongly agreed that access to transit is generally adequate and safe, a significant number felt differently.

Navigating Public Transit is Easy (Knowing Schedules, Paying)



Access to Transit is Generally Adequate and Safe

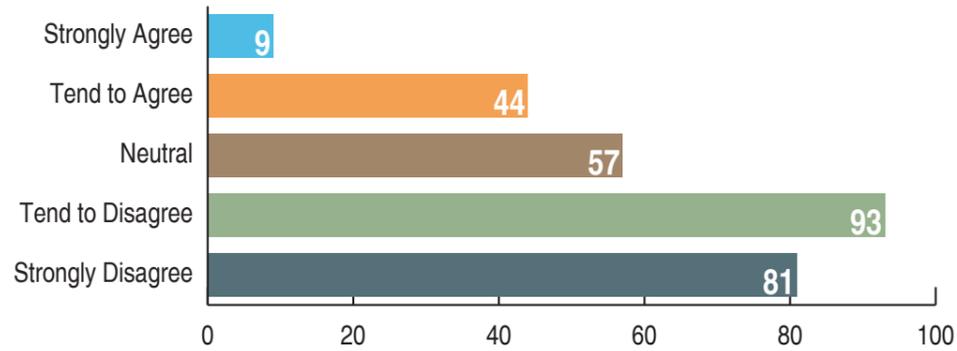


Vehicular Transportation Highlights

95% of survey respondents reported that they drive a vehicle.

- The majority of respondents (56%) felt positively that roads driven most often feel safe and are adequate designed for safe travel. However, by far the most respondents noted that they "tend to agree" with this statement (48%).
- When driving, well over half of respondents (61%) disagree that other modes (bicycles and pedestrians) are visible and the transportation system adequately accommodates them. Eighty-one respondents, or 29%, disagree strongly. As shown in the graph below, few agree with this statement.

Other Modes of Transportation are Visible When Driving



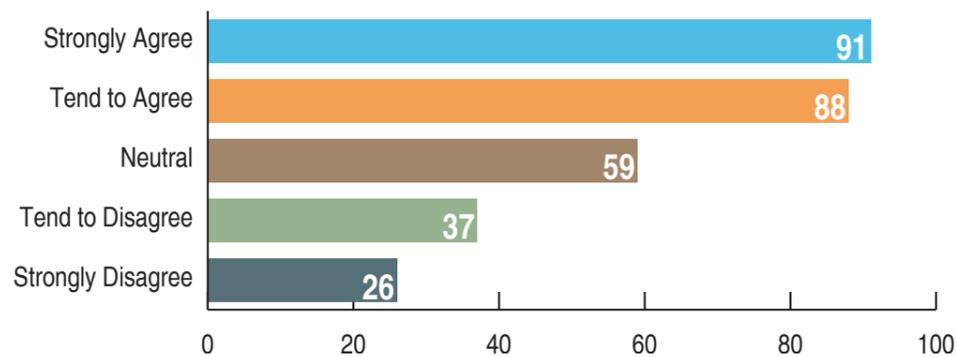
- Drivers were asked if they felt communities and the Ohio Department of Transportation make safety a priority when new projects were being built. Responses tended to be strongest in the three middle categories—“neutral” being the strongest—with relatively few strongly agreeing or disagreeing.
- Respondents were relatively positive about their thoughts on the road network being able to handle freight traffic safely. While, again, most responses were in the mild categories, fewer than one-quarter (23%) of all respondents either tended to disagree or disagree strongly.

Other Findings

All respondents were asked a few questions at the end of the survey regarding their observations and opinions on a few trends in transportation.

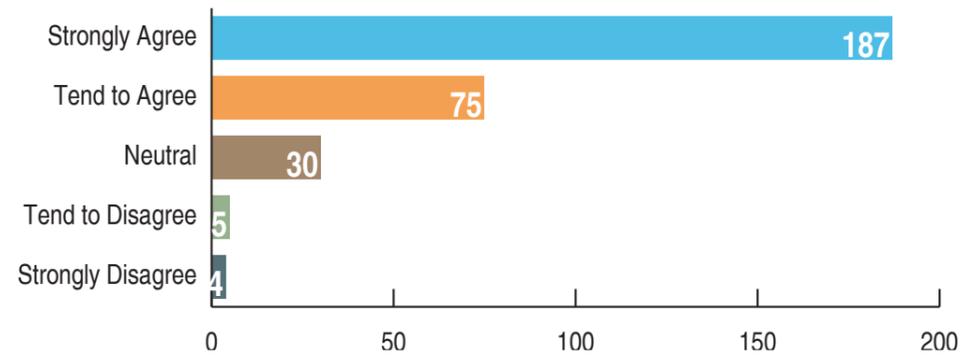
One of the more interesting findings was that, despite their tendency to elicit strong and often negative opinions, most respondents had positive feelings around the efficacy of roundabouts in making intersections safer. As shown below, comparatively few respondents disagreed that they make intersections safer. In fact, three out of five either agreed strongly or tended to agree that they do. It would appear that public acceptance is catching up with the positive national data on roundabout safety. The survey did not ask further questions about single-lane vs. double-lane roundabouts, though there is evidence to support that simpler single-lane roundabouts tend to be more positively embraced than more complex roundabouts with multiple lanes that require additional processing and increased potential for driver error.

In Most Instances, Roundabouts Make Intersections Safer



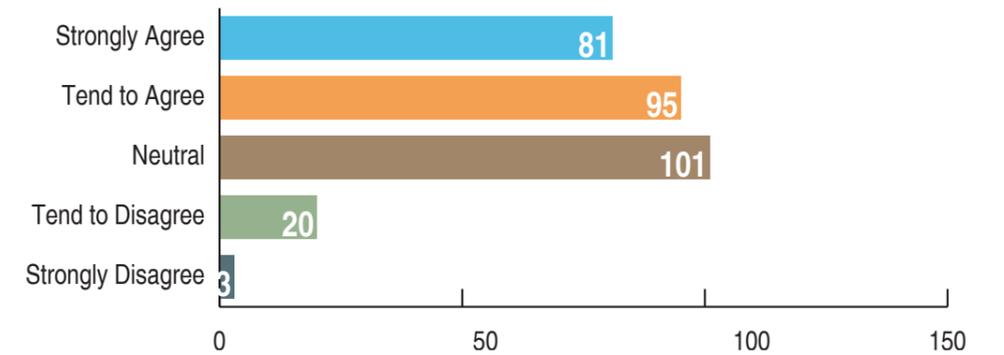
Those surveyed were also asked about crashes overall and the rise of distracted driving. Very few respondents (fewer than 8%) disagreed with the notion that they have observed more crashes in recent years. As shown on the graph below, the remaining responses were similar in the remaining three categories. Perhaps the most emphatic, though perhaps not surprising,

Distracted Driving Has Increased in Recent Years



agreement in the entire survey centered around distracted driving. Nearly all respondents (87%) agreed that distracted driving is increasing, with over 62% strongly agreeing that it is increasing. The charts below illustrate these findings.

Number of Crashes Observed Has Increased in Recent Years



Where Do We Go From Here? Strategy and Recommendation Highlights

The items discussed in the previous section provide regional planners and decisionmakers with great information on how users interact with and perceive the transportation system around them. Going the next step of deciding what this all means is also very important. The *Recommendations* chapter later in this report will pull together all these findings, along with the other data collection findings, in detail. However, a few of the main takeaways from the survey, focus group, and taskforce engagement processes are summarized below:

- Further significant investment in expanding the bicycle network is strongly supported. This might be through relatively basic projects such as the striping of additional bike lanes, adding countdown signals, or construction of bicycle-safe storm sewer grates. But more significant connector projects also are warranted. Although the area already has an enviable number of separated shared-use paths, there clearly is a desire to build more, and evidence through this survey sample that additional facilities would lead to additional ridership.
- Similarly, investing in pedestrian connections is embraced and would lead to a better network of viable transportation alternatives. Strategies of filling in sidewalk gaps, improving or widening existing sidewalks, creating new multimodal paths (which also improves the aforementioned bicycle network) and creating more complete streets is no longer a radical idea.
- Access to transit remains an important issue to address. Though the data collected indicates the two transit operators—METRO and PARTA—do a commendable job of targeting their transit routes and stops to where the population’s needs are, safely accessing bus stops remains a challenge. This reflects previous land use decisions and

the location of facilities such as sidewalks, adequate lighting, and similar amenities. Therefore, further planning and focused investment toward safe routes to transit stops needs to take place.

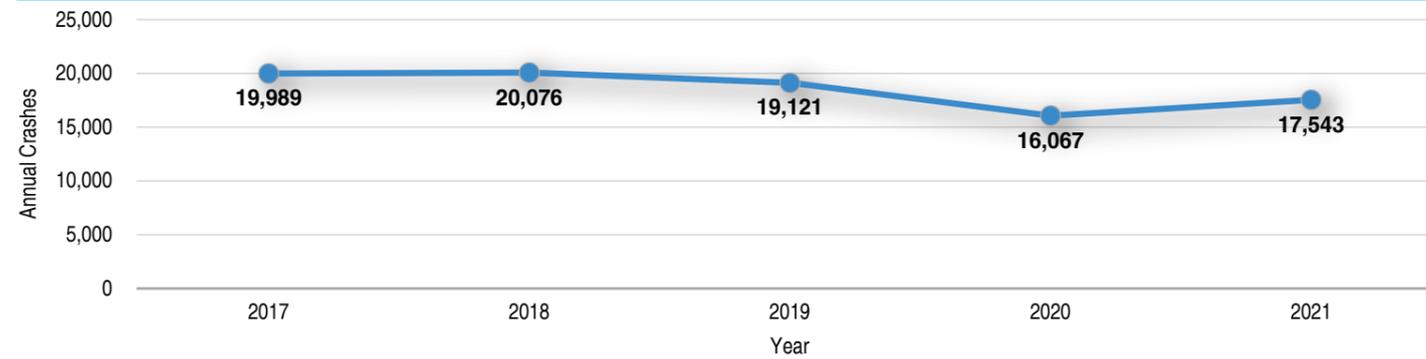
- Distracted driving is clearly an issue. Not only were the survey results compelling, but this is something the staff heard in nearly every focus group. A variety of behavioral trends are causing the issue, so it’s up to the region to consider a variety of strategies, notably educational efforts, aimed at minimizing these unhealthy behaviors. As non-motorized transportation increases, there is increased risk of serious crashes because individuals not protected from within a vehicle are much more likely to be injured or killed.
- Likewise, because drivers seem to be taking more risks, the transportation system itself must account for this. Many of the known safety design issues have been eliminated or improved through recent investments (e.g. improving an intersection’s alignment, eliminating poor sight distance, building roundabouts), but there is national evidence to support that taking a more systemic approach would yield positive results. A series of improvements along a single corridor, implemented strategically and repeatedly, can help to reduce speeds, or help to correct unsafe behavior. Systemic improvements are often small things like rumble strips or signage improvements or pedestrian refuge islands. But to be most effective, improvements must be visible and recurring to change the overall character of the roadway or series of roadways.

SAFETY ANALYSIS

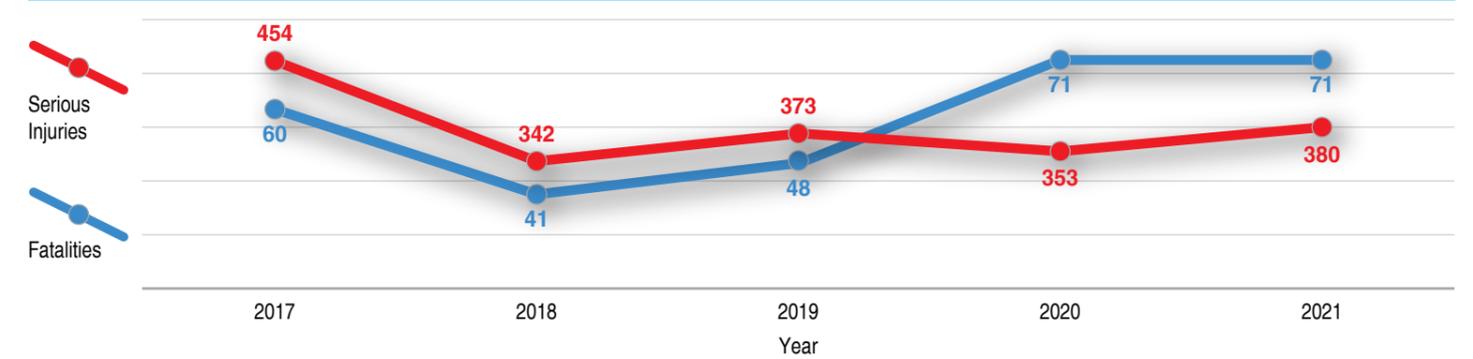
All Crash Data Analyzed between 2017 and 2021

There were 92,796 total crashes occurring in the AMATS area between 2017 and 2021. Crashes decreased significantly in 2020 during Covid when many people were staying home and also working from home. Although crashes decreased between 2017 and 2020 they begin to inch upward in 2021 again. Although traffic and crashes were down in 2020 there was an unexpected spike in fatalities that carried over into 2021. Safety experts are still not sure why this occurred but hypothesize it was most likely a combination of factors. Less traffic resulted in less congestion and higher speeds and perhaps an increase in the use of both prescription and recreational drugs may be culprits. The graphs below show total crashes and then fatalities and serious injuries.

Total Crashes (2017-2021)



Fatalities and Serious Injuries (2017-2021)

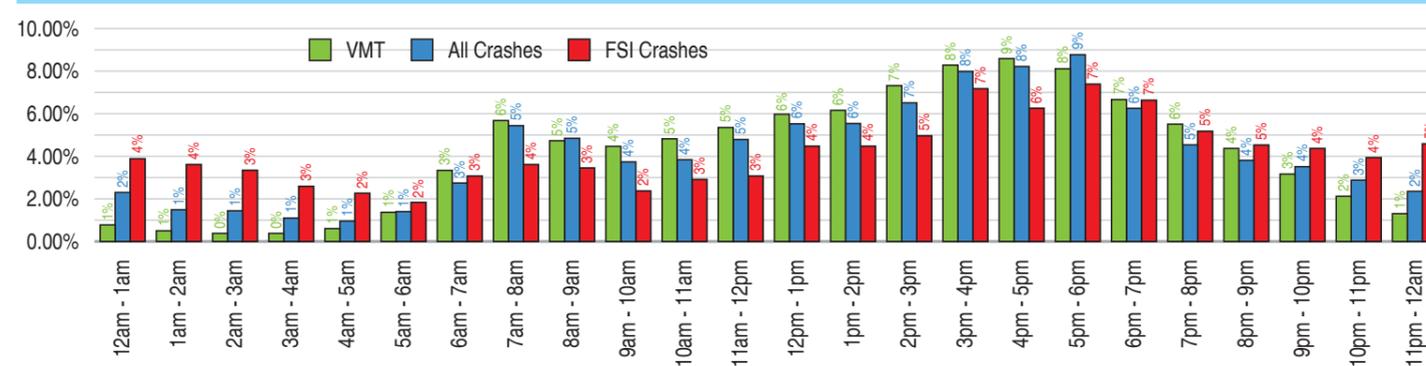


Crashes by Hour of Day and Vehicular Miles Traveled

The crashes are compared on a graph as a percentage because of raw number of each is too difficult to graph because of scale. Over the five-year period there were 93,024 crashes in the AMATS area and 1,854 of them were FSI crashes. During the morning and evening peak hours there is a higher percentage of all crashes because there is more traffic on the highway and thus a higher likelihood of crashes. Many of these are rear-end crashes caused in part by congestion. In the late evening, nighttime, and early morning hours there is a higher percentage of FSI crashes. There are many reasons for this which will be discussed later in the analyses.

Vehicular miles traveled (VMT) is a measure of not only traffic volume, but also the length of trips taken. In the past this has been a very difficult unit to calculate because it was very hard to determine trips lengths taken. With the development of new technologies that track vehicle trips by GPS devices in vehicles, VMT is now attainable. The occurrence of crashes in general follow the same pattern as VMT volumes. However, FSI crashes have a higher percentage of occurring when VMT is low. During these hours, less traffic can encourage speeding while also drinking and drug use may be involved.

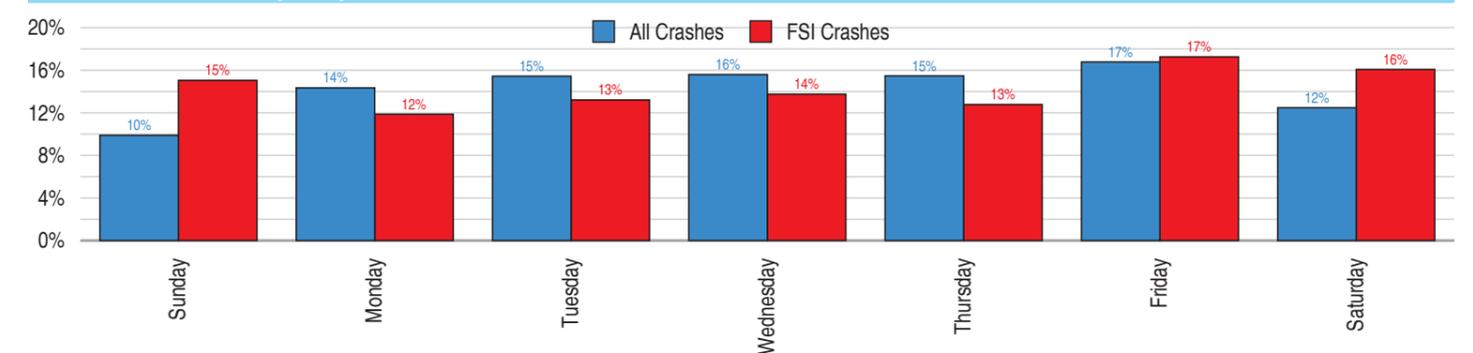
Percent VMT vs Percent All Crashes and Percent FSI Crashes



Crashes by Day of Week

During the weekdays there is a higher percentage of all crashes than FSI crashes, but on weekends the percentage of FSI crashes is higher. This is when it is likely that there is more alcohol and drug use along with more recreational driving which leads to more severe outcomes. It could also be the time when there is more long distance travel where drivers are on roads they are not familiar with. The following graph shows how the percentage of all crashes compares to the percentage of FSI crashes.

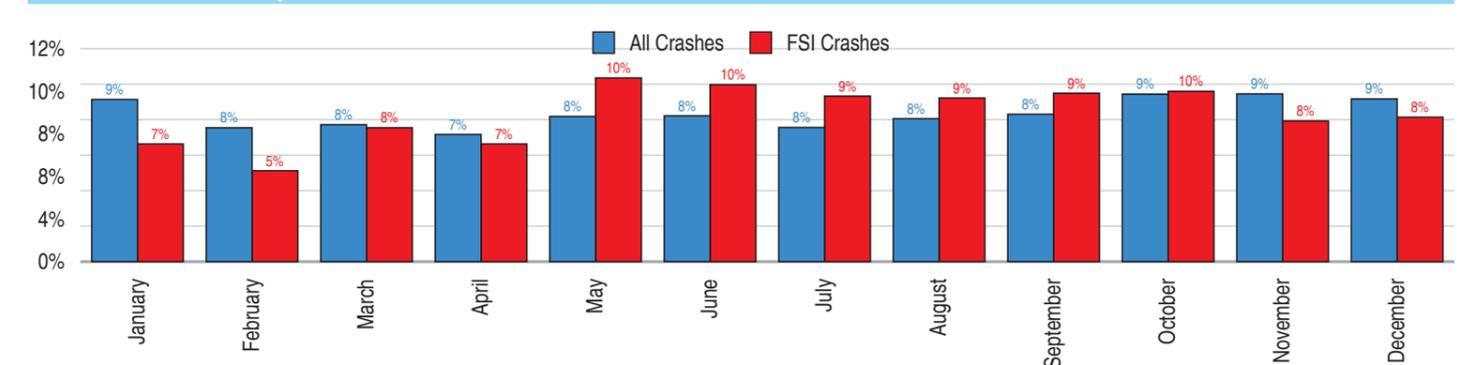
Percent Crashes by Day of Week



Crashes by Month of Year

During the winter months of November through March there is a higher percentage of all crashes while in the summer months there is a higher percentage of FSI crashes. One possibility of this could be winter weather causing minor crashes and less motorcycles and other recreational vehicles on the during those months. The following graph shows the comparison of all crashes and FSI crashes by month.

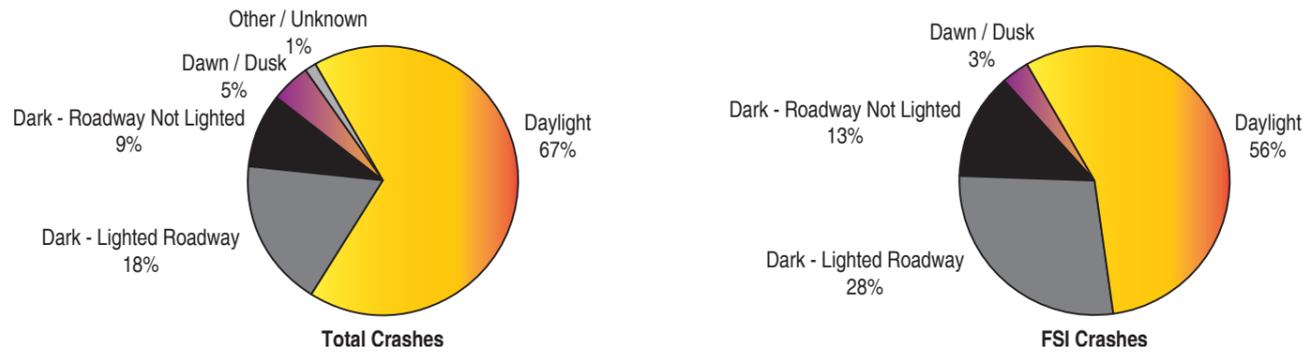
Percent Crashes by Month



Crashes by Light Conditions

A higher percentage of FSI crashes occur under dark conditions than all crashes in general. As noted in the Time of Day graphs, there is a disproportionate amount of FSI crashes in the late night and very early morning hours. Dark conditions include crashes that happen under all light conditions other than daylight. It also includes roads that are lighted. Approximately 32 percent of all crashes occur under dark conditions while 44 percent of FSI crashes happen then.

Percent Crashes by Light Condition



Crashes by Weather Conditions

The weather conditions when all crashes occur compared to FSI crashes are nearly the same. One might expect that FSI crashes occur under more unfavorable conditions but actually the opposite is true. Slightly more FSI crashes occur under clear conditions and slightly less under rain and snow.

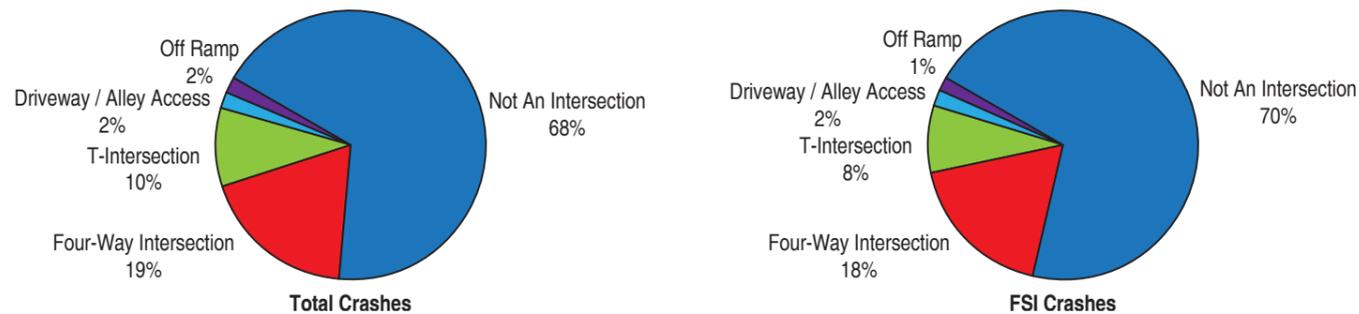
Percent Crashes by Weather Condition



Crashes by Location

Crashes occur at a higher percentage as non-intersection or segment crashes. However the nature of the crashes are different which will be reviewed in the next section.

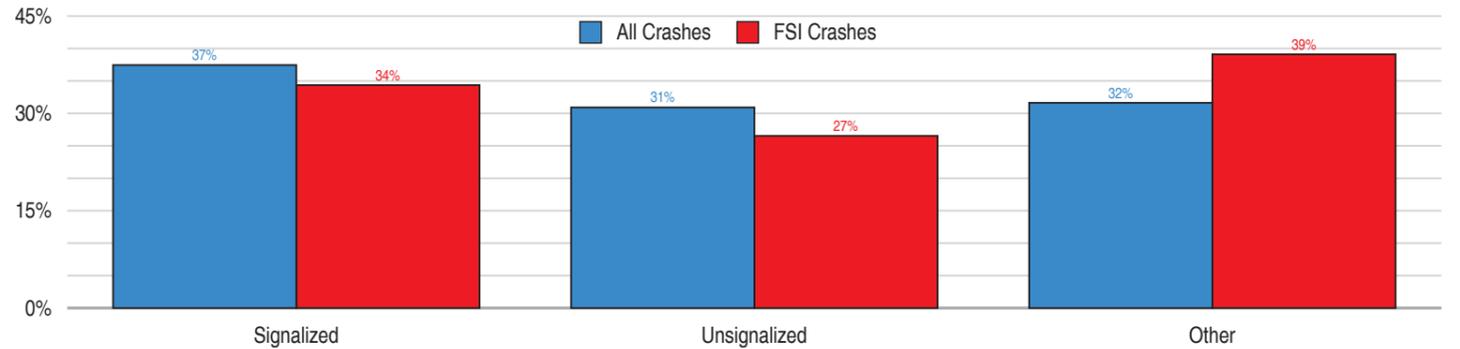
Percent Crashes by Location



Intersection Crashes by Type of Control

Of the crashes that are classified intersection, the graphs below show if it was signalized. A higher percentage of FSI crashes occur at unsignalized intersections where possibly the presence of a stop sign is ignored. Often FSI intersection crashes involve one road with high speeds.

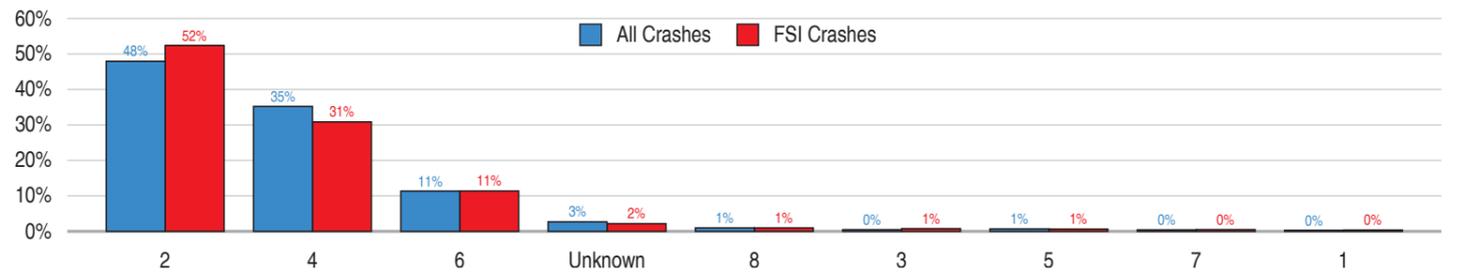
Percent Crashes by Intersection Control



Crashes by Roadway Number of Lanes

FSI crashes occur at a slightly higher percentage on two-lane roads than all crashes and slightly less on four-lane roads. All others were nearly the same.

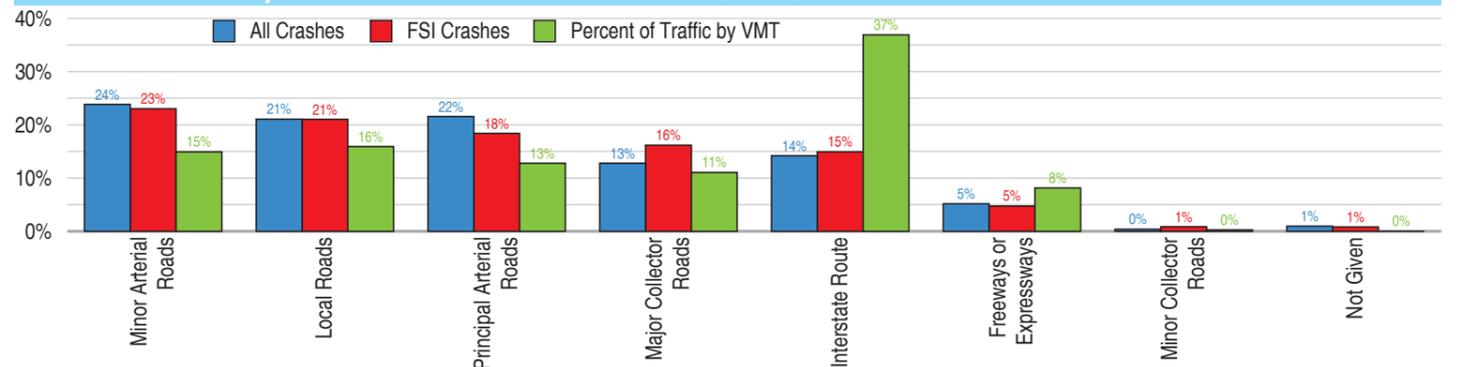
Percent Crashes by Number of Lanes



Crashes by Federal Functional Classification

Although Interstate Routes carry the most traffic by Vehicle Miles Traveled (VMT), they do not account for the highest percentage of crashes compared to VMT. This is probably because over the years they have been updated with safety features that other roads may be lacking. Minor Arterial Roads account for the highest percentage of crashes compared to VMT.

Percent Crashes by Federal Functional Classification (FFC)



Types of FSI Crashes

The Fixed-object crash followed by the angle crash is the most common FSI crash type. Many of these involve only one vehicle and also have attributes of speed, alcohol and drug use, and unbelted occupants.

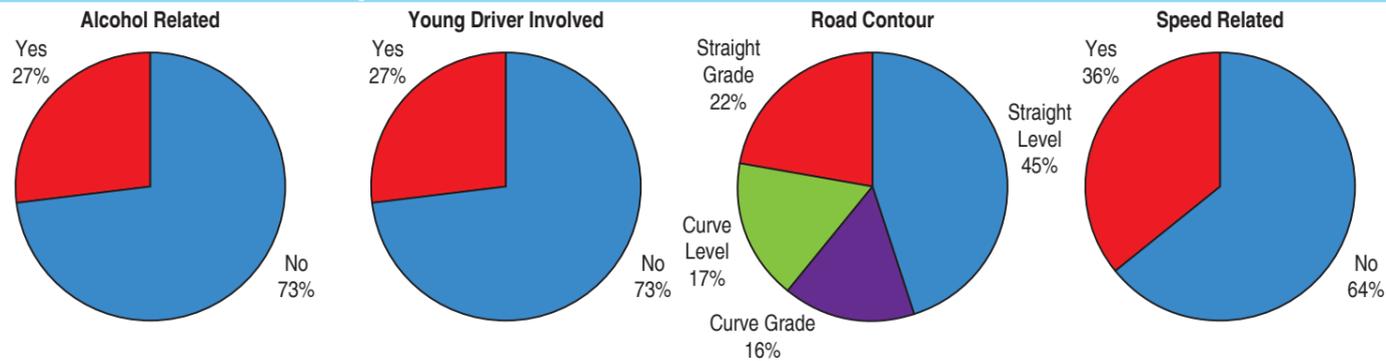
Crash Type	Fatal	Serious Injury	Total
Fixed Object	83	478	561
Angle	39	259	298
Rear End	28	196	224
Pedestrian	37	134	171
Left Turn	15	121	136
Head On	27	99	126
Sideswipe - Passing	10	107	117
Overturning	8	48	56
Pedalcycles	9	37	46
Parked Vehicle	7	31	38
Other Non-Collision	1	28	29
Right Turn	1	23	24
Animal	0	14	14
Unknown	0	4	4
Other Object	0	3	3
Backing	0	3	3
Sideswipe - Meeting	1	2	3
Train	1	0	1
Grand Total	267	1,587	1,854

Fixed-Object Crashes

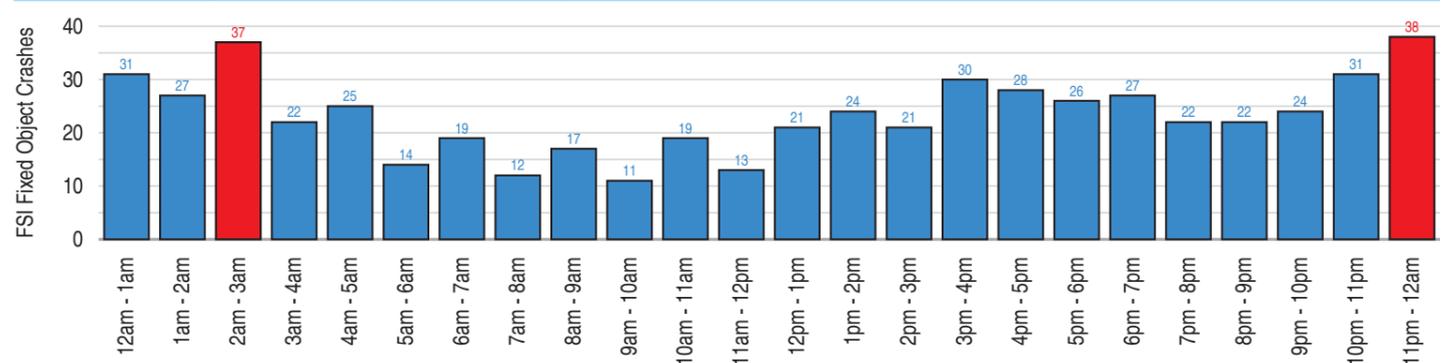
Fixed-object crashes account for 30% of all FSI crashes and 31% of all fatalities. The following characteristics of fixed-object FSI crashes were discovered when examining them closer.

Only one vehicle was involved in 98% of fixed-object FSI crashes. This most common objects struck were trees (25%) and utility poles (16%). It is also interesting to note the time of day fixed-object crashes peak. They peak between 11:00-12:00 PM and then again between 2:00-3:00 AM.

Characteristics of Fixed-Object FSI Crashes

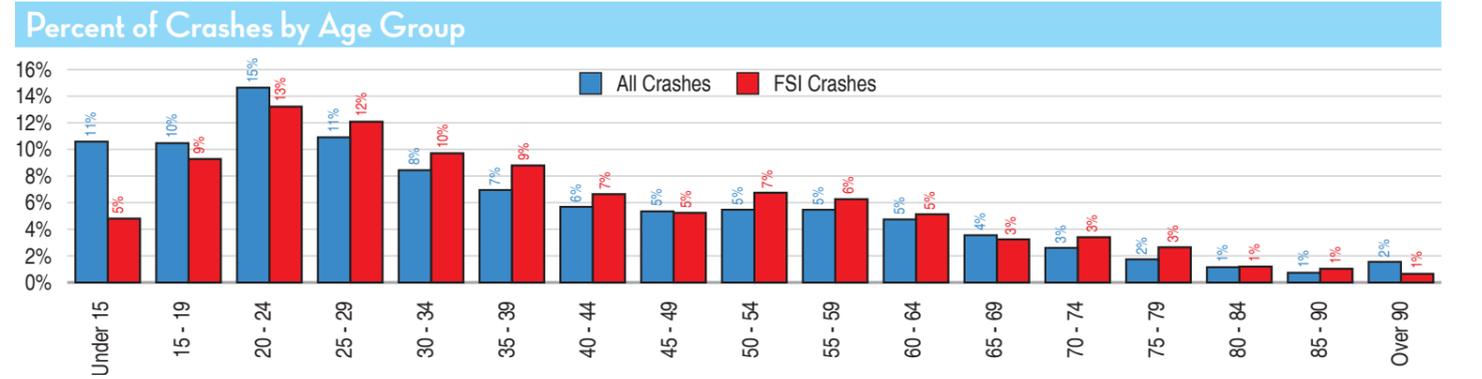


FSI Fixed-Object Crashes by Hour of Day



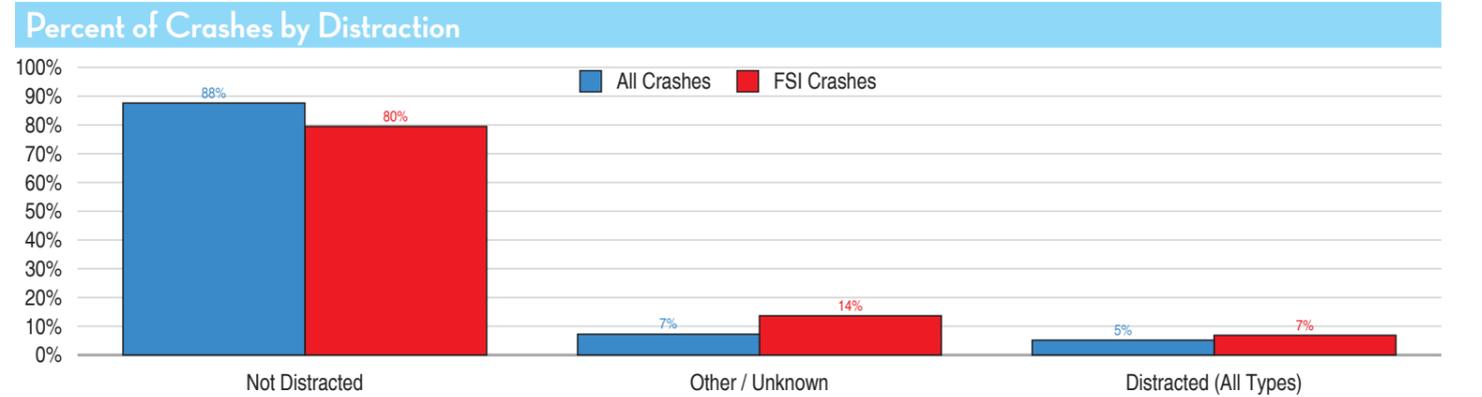
Crashes by Age Group

The following graph shows crashes by age group. Based on percentage of crashes, FSI crashes begin to outpace all crashes in the 25-29 year old age group. This trend tends to continue until reaching the 65-69 year-old age group.



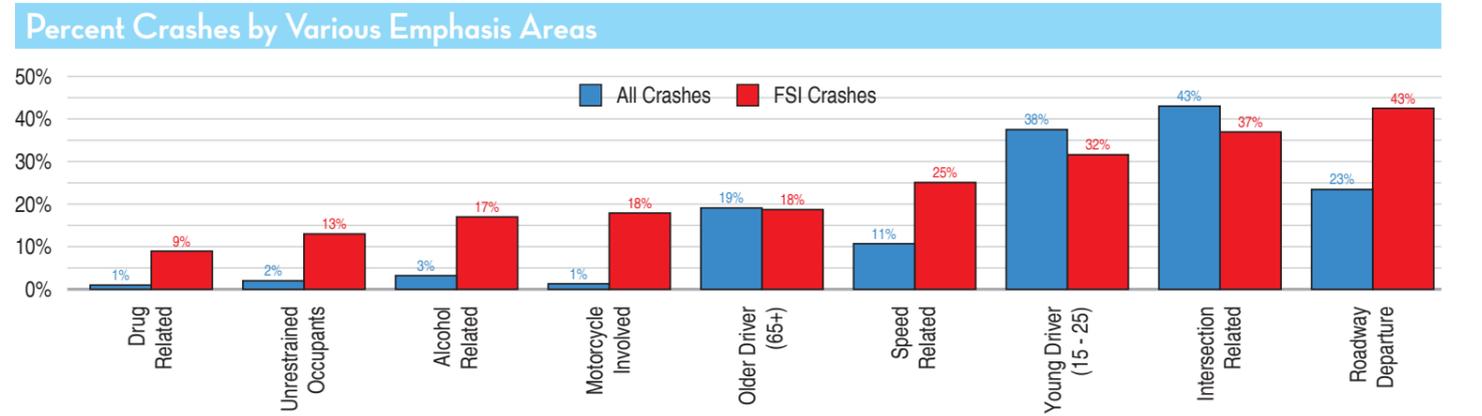
Distracted Driving

As cell phone use and texting while driving increases crashes caused by distracted driving has become a big concern. Distracted driving is probably under reported because the reporting officer depends on witnesses and self-admission to know if it was a factor. The following graph show that a high percentage of all crashes (88%) and FSI crashes (80%) did not involve a distraction.



Crashes by Various Emphasis Areas

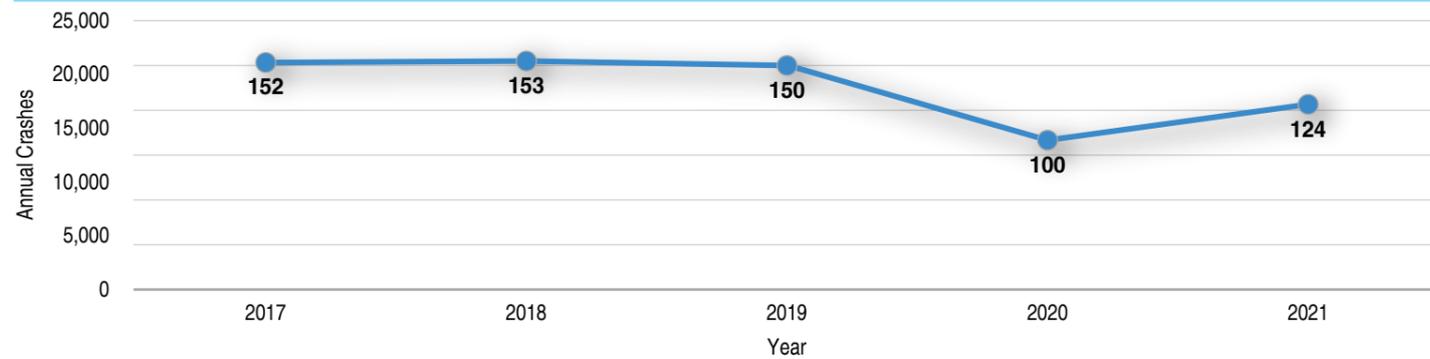
The following graph shows a comparison of various Emphasis Areas as defined by ODOT's Strategic Highway Safety Plan. Focusing on Emphasis Areas helps to direct resources to safety areas with the greatest needs. FSI crashes outpace all crashes in all the categories except for Young Drivers and Intersection Related.



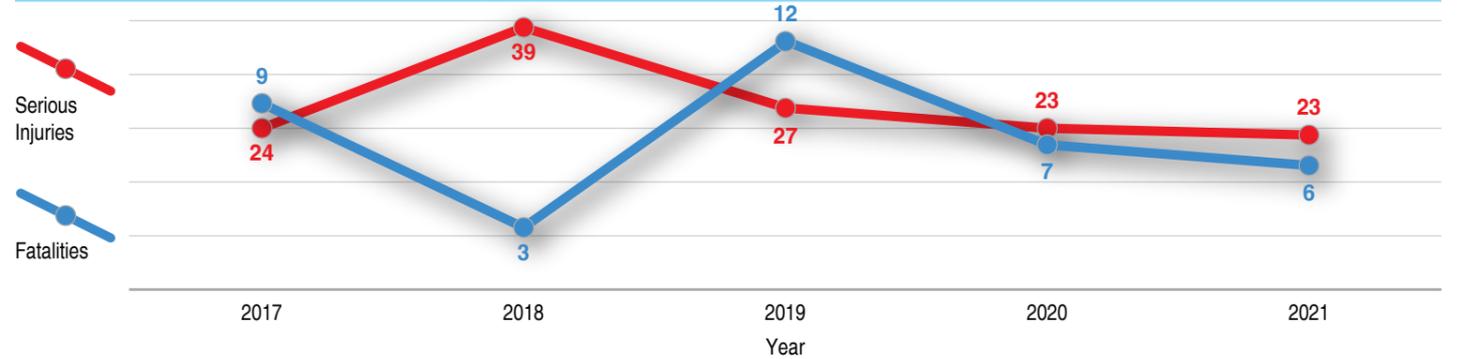
Pedestrian-Involved Crash Data Analyzed between 2017 and 2021

There were 679 total pedestrian crashes occurring in the AMATS area between 2017 and 2021. Pedestrian crashes decreased in 2020 during Covid and then increased again in 2021. Although total pedestrian crashes are less than 1 percent of all crashes that occurred during this time period, they account for over 9 percent of all fatal crashes and over 8 percent of all severe injury crashes.

Total Pedestrian Crashes (2017-2021)



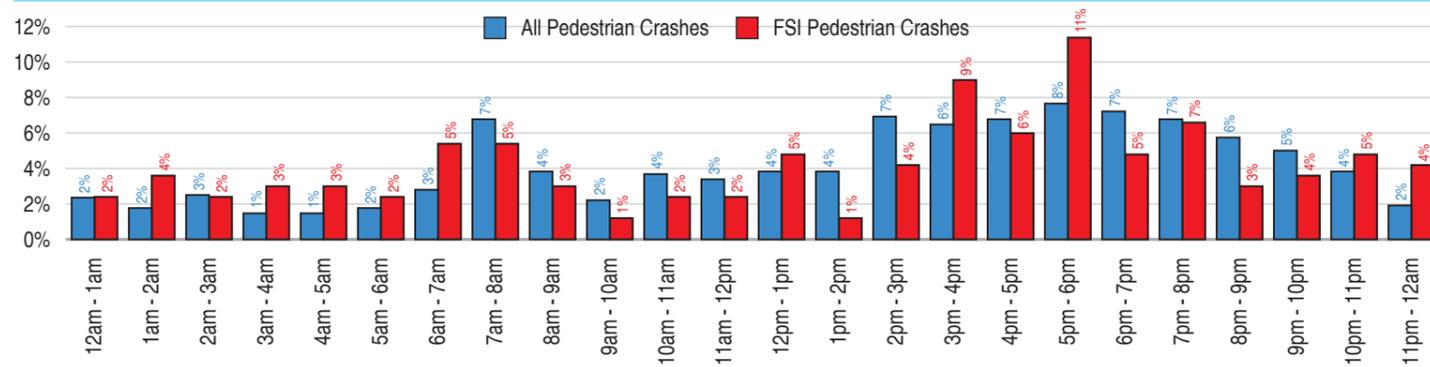
Pedestrian Fatalities and Serious Injuries (2017-2021)



Pedestrian-Involved by Time of Day

Pedestrian crashes tend to have peaks similar to vehicular traffic. Between 7:00-8:00 AM there is a rise in pedestrian-related crashes which is also a busy time for traffic. During the afternoon there is a daily peak between 5:00 and 6:00 PM. This is usually the busiest time for traffic also. It is difficult to determine an actual peak hour for pedestrians, but it is probably also around this time. People are leaving work in vehicles and as pedestrians. In addition there are also many recreational pedestrians out around this time. The following graph shows all pedestrian crashes and FSI pedestrian crashes as percentages by hour of day.

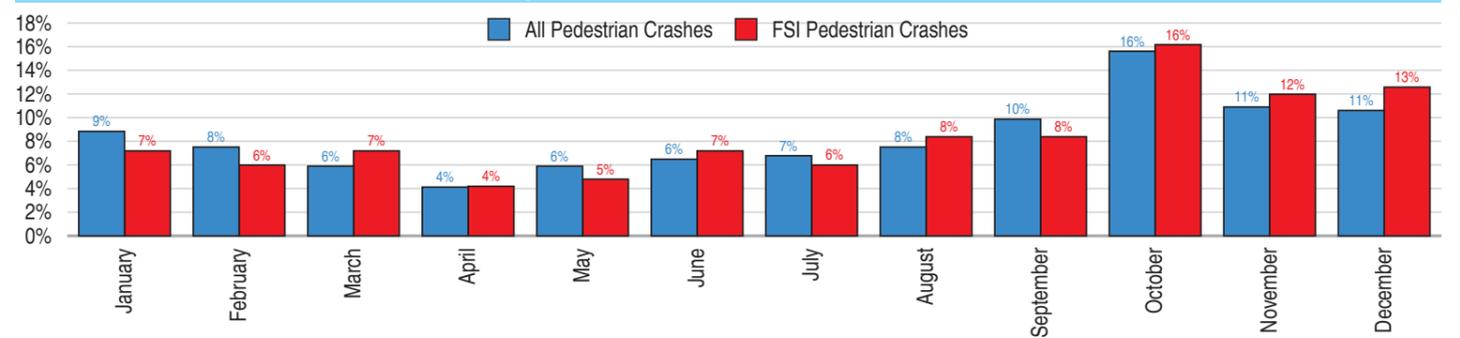
Percent Pedestrian-Involved Crashes by Hour of Day



Pedestrian-Involved by Month of Year

Pedestrian-related crashes have a significant increase in the month of October and then decrease in the months of November and December. One possible reason for this is shorter hours of daylight while the weather is still nice and pedestrians are still active.

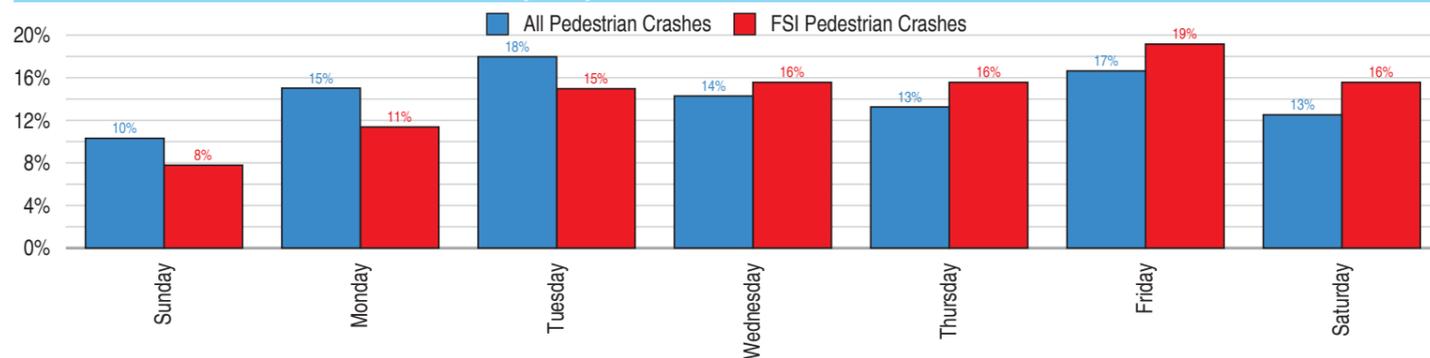
Percent Pedestrian-Involved Crashes by Month



Pedestrian-Involved by Day of Week

Pedestrian crashes in general peak on Tuesday, but FSI pedestrian crashes peak toward the end of the week on Friday and Saturday.

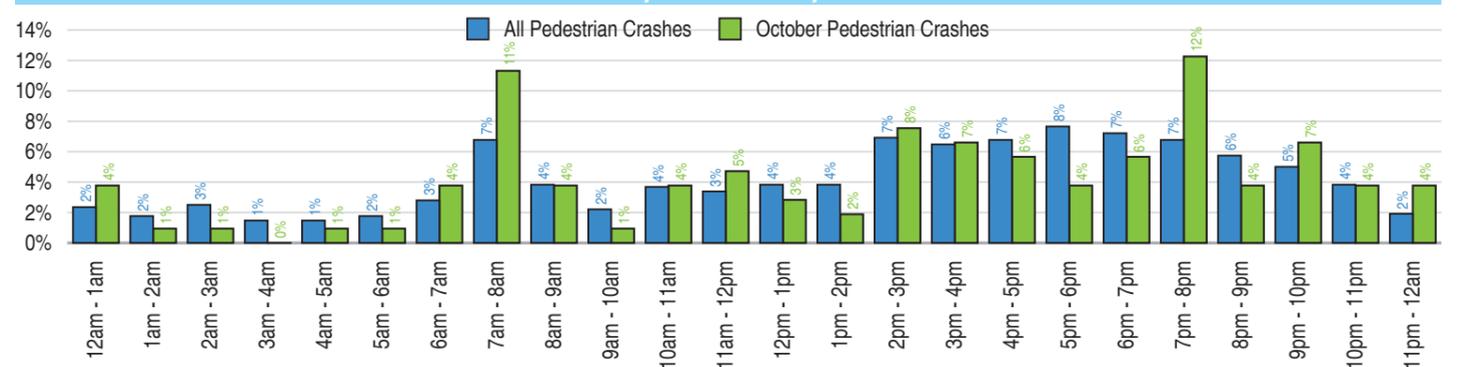
Percent Pedestrian-Involved Crashes by Day of Week



Pedestrian-Involved October Crashes

The following graph shows October crashes by hour of day. There is a greater increase in crashes in the morning hour of 7:00-8:00 AM and another significant increase at 7:00-8:00 PM. Toward the end of October, the sunrise is approaching 8:00 AM and the sunset is around 6:30 PM of later. At 7:00 AM it is still mostly dark, especially on a cloudy day, and at 7:00 PM it is also getting dark. However, the mean high temperature for October is still 66°F which is very pleasant for outdoor activities.

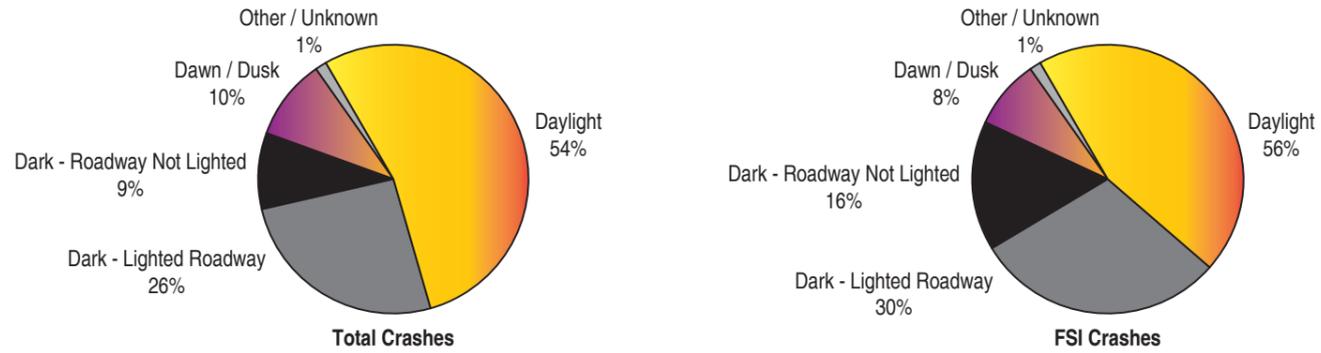
Percent October Pedestrian-Involved Crashes by Hour of Day



Pedestrian-Involved by Light Conditions

A high percentage of pedestrian-related crashes occur under dark conditions. Pedestrians often wear dark clothing which reduces their visibility, especially at night. A higher percentage of FSI occur under dark conditions as the pie charts below show.

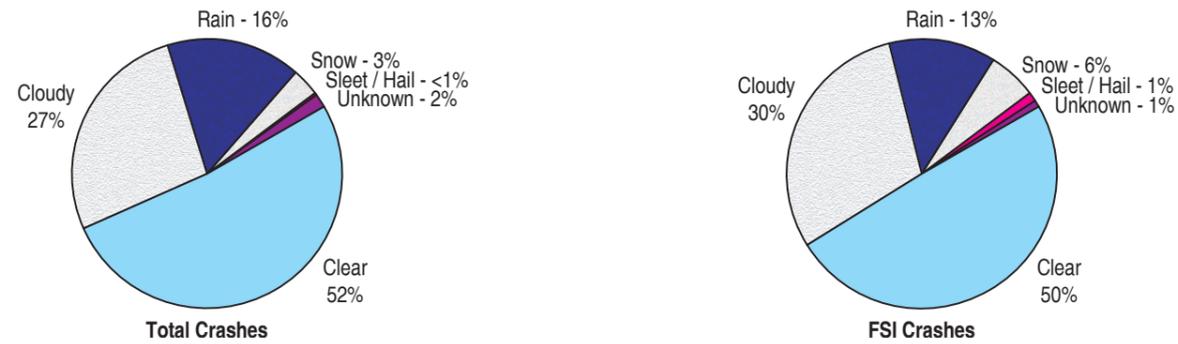
Percent Pedestrian-Involved Crashes by Light Condition



Pedestrian-Involved by Weather Conditions

Pedestrian involved crashes occur during clear weather and dry conditions. This is logically when pedestrians are most likely to be active. Around 50% of pedestrian crashes occur under clear conditions. There are roughly 167 days, or 46% of the year, that has at least a partly clear day in this area. The following pie charts show the weather conditions that pedestrian-involved crashes occur.

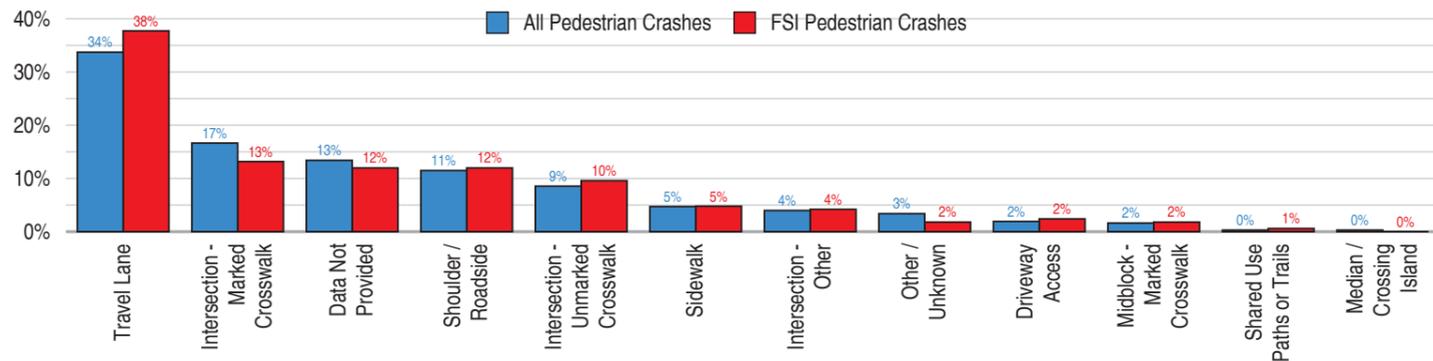
Percent Pedestrian-Involved Crashes Weather Condition



Location of Pedestrian-Involved Crashes

Pedestrian-related crashes occur where there is greatest conflict with vehicles. Travel lanes, intersections, and roadside shoulders are the highest ranking locations. All pedestrian-related and FSI pedestrian-related rank closely in each location category. FSI crashes rank highest in those incidents that occur in travel lanes. This is also where the speed of the vehicle would be greatest.

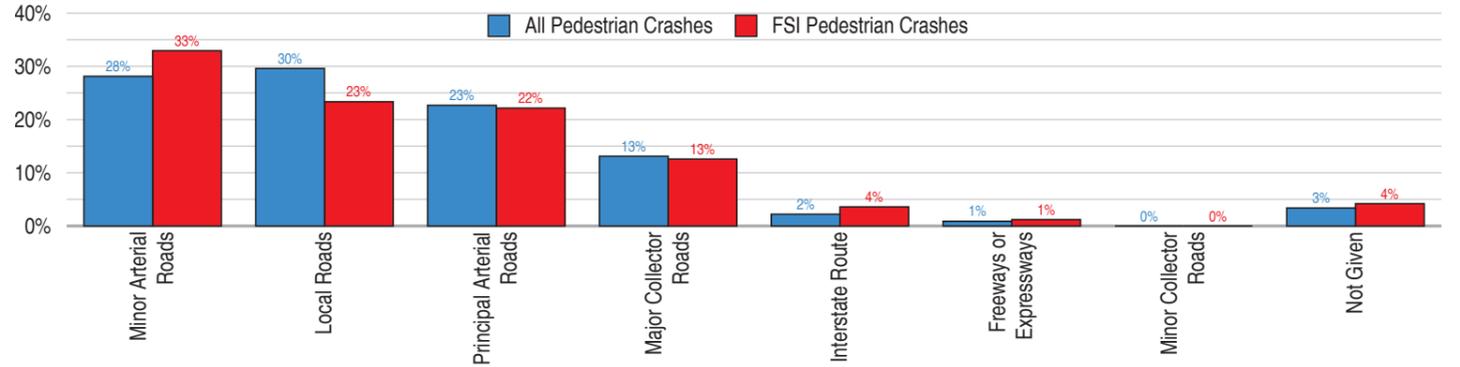
Percent Pedestrian-Involved Crashes by Location



Pedestrian-Involved by Federal Functional Classification (FFC)

Most pedestrian-related crashes occur on Minor Arterial Roads and on Local Roads. FSI pedestrian-related crashes occur most frequently on Minor Arterial Roads. Often times these are roads that are narrow, have little or no shoulder, and are lacking sidewalks.

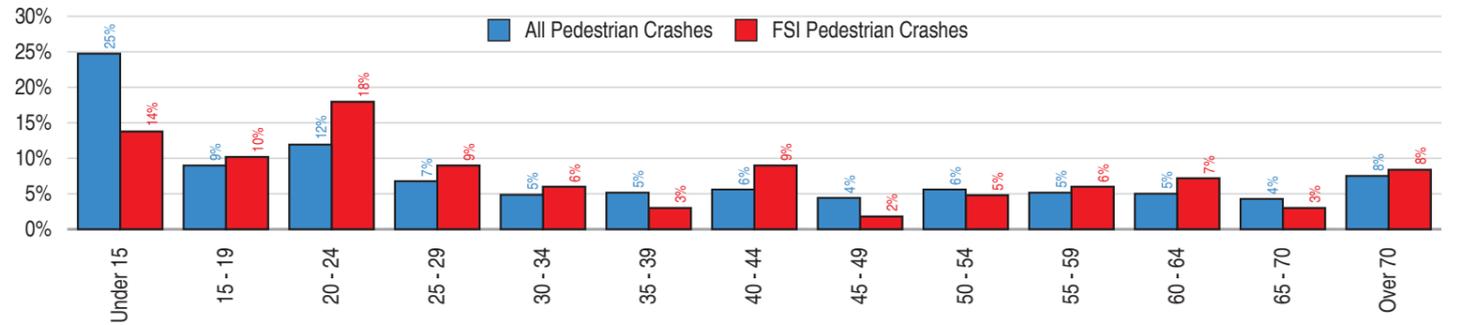
Percent Pedestrian-Involved Crashes by Federal Functional Classification (FFC)



Pedestrian-Involved Crashes by Age Group

Pedestrians younger than 15 years old were most likely to be involved in an incident. Pre-driving individuals may depend more on walking as transportation while not understanding the rules that should be followed. The 20-24 year old age group was involved in the most FSI pedestrian-related crashes.

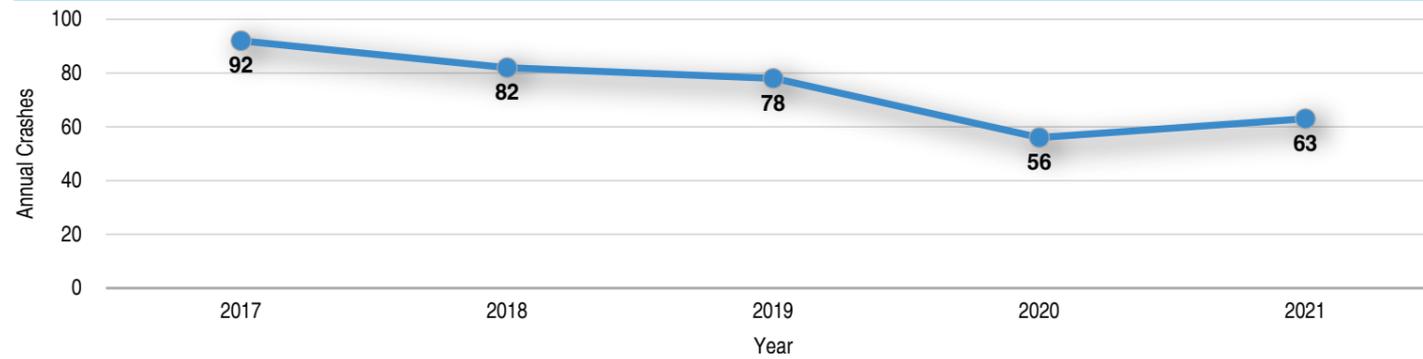
Percent Pedestrian-Involved Crashes by Age Group



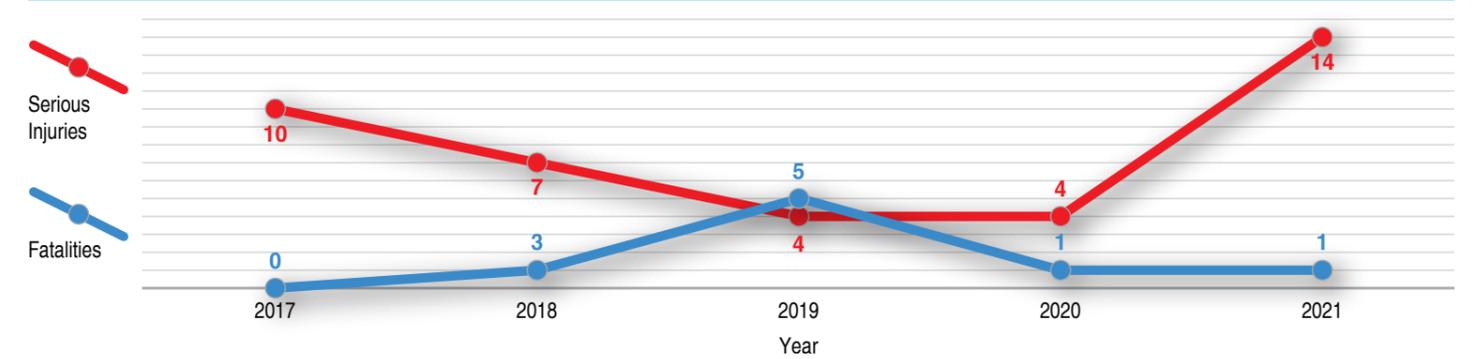
Bicycle-Involved Crash Data Analyzed between 2017 and 2021

There were 370 total bicycle-involved crashes occurring in the AMATS area between 2017 and 2021. Out of this total, 45 were considered fatal or severe injury crashes. Bicycle-involved crashes decreased in 2020 during Covid and then increased again in 2021. Serious injuries were seeing a decrease from 2017 to 2020, but then a sharp increase in 2021. Fortunately bicycle-related crashes do not result in as many fatalities as pedestrian crashes do.

Total Bicycle Crashes (2017-2021)



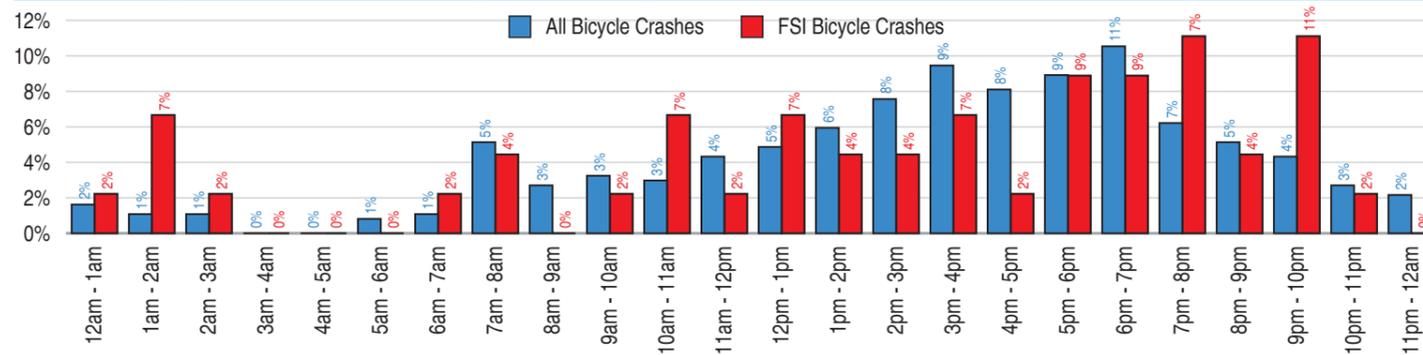
Bicycle Fatalities and Serious Injuries (2017-2021)



Bicycle-Involved by Time of Day

Bicycle-involved crashes in general tend to have peaks similar to vehicular traffic. However, FSI bicycle-involved crashes have peaks later in the evening. There is also an interesting peak between 1:00-2:00 AM. This is surprising since this odd hour is not a time of day that one would think of traveling by bicycle.

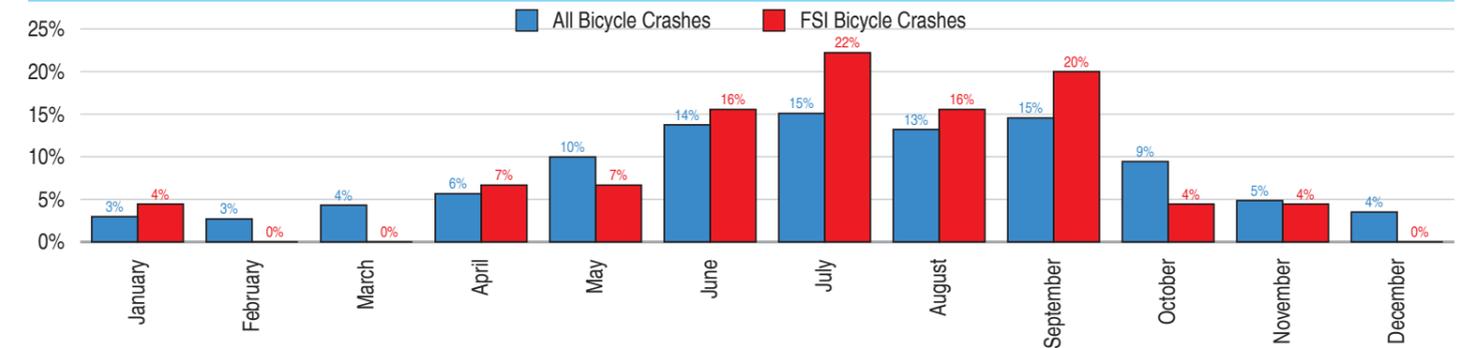
Percent Bicycle-Involved Crashes by Hour of Day



Bicycle-Involved by Month of Year

Bicycle riding is more dependent on good weather than pedestrian activity and bicycle riding occurs at higher numbers in the summer during good weather months. This is true for bicycle-involved crashes in general and for FSI crashes.

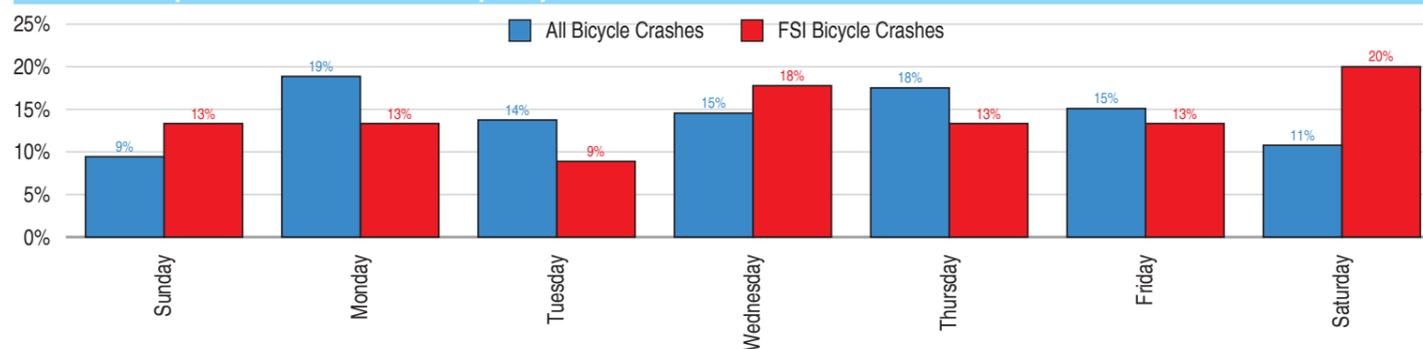
Percent Bicycle-Involved Crashes by Month



Bicycle-Involved by Day of Week

Bicycle-involved crashes in general have peaks on Mondays and Thursdays. FSI bicycle-involved crashes have peaks on Wednesdays and Saturdays.

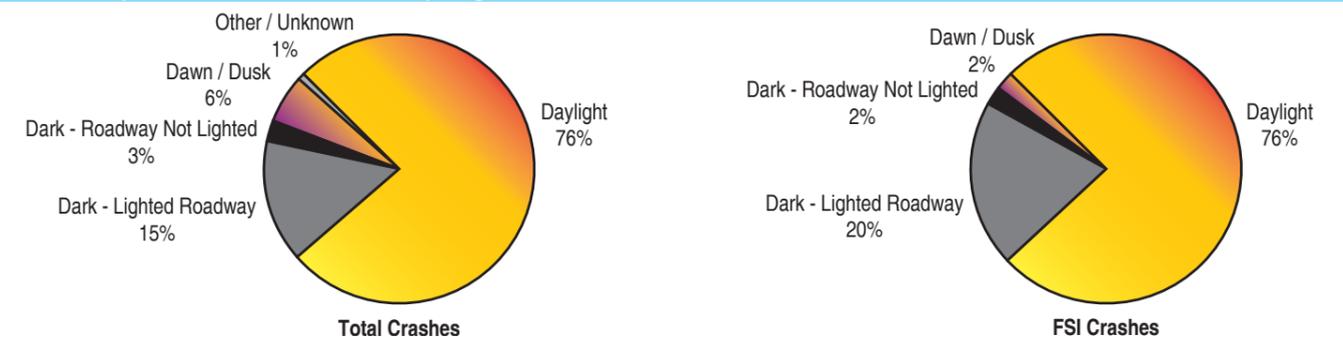
Percent Bicycle-Involved Crashes by Day of Week



Bicycle-Involved by Light Condition

The majority of bicycle-involved crashes occur under daylight conditions. Bicycle riding is preferred to be done under daylight conditions. However, those who are riding bicycles as a form of transportation may find it necessary to do so in dark conditions. Similar to pedestrians, bicycles are hard to see under unfavorable lighting conditions which may lead to some of the crashes under dark conditions.

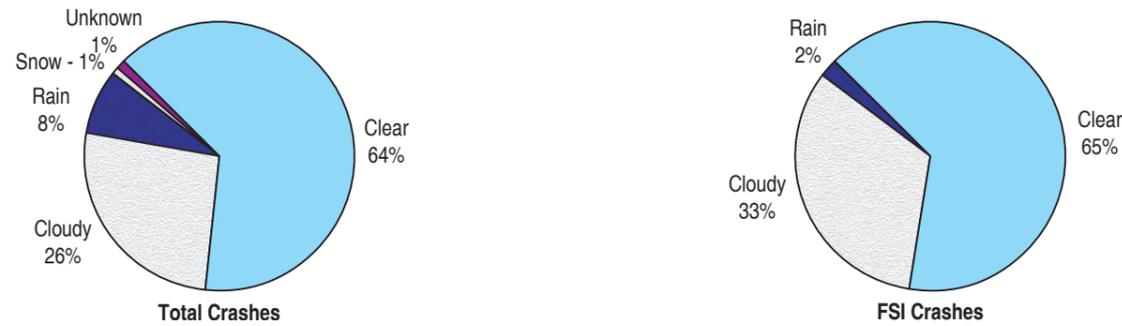
Percent Bicycle-Involved Crashes by Light Condition



Bicycle-Involved by Weather Condition

Similar to lighting conditions, most bike riders not only prefer daylight conditions, but also good weather. As the pie charts show, most bicycle-involved crashes occur under clear conditions because this is when bike riding is most popular.

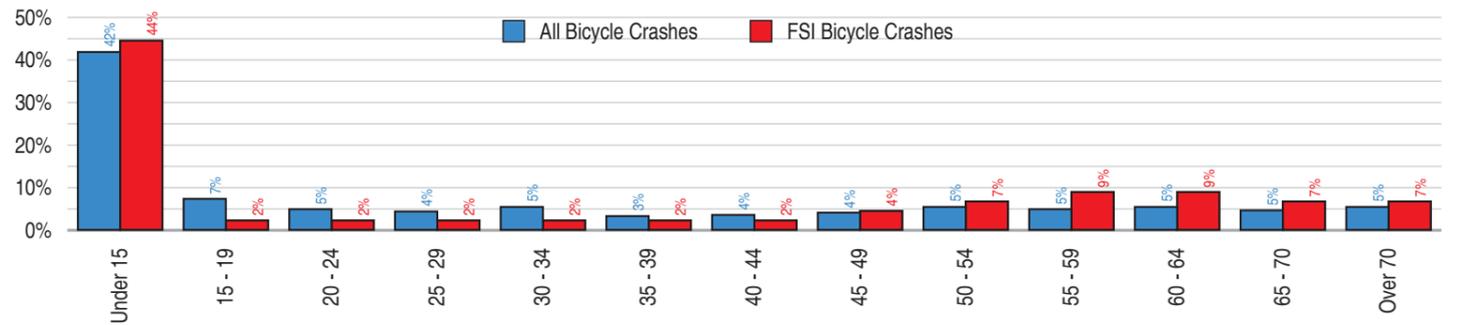
Percent Bicycle-Involved Crashes by Weather Condition



Bicycle-Involved Crashes by Age Group

By far most bicycle-involved crashes involve those in the less than 15-year-old age group. The reason for this could possibly be that this is also the age group that is not driving yet and are not aware of the rules of the road or realize the dangers that result from carelessness around vehicular traffic.

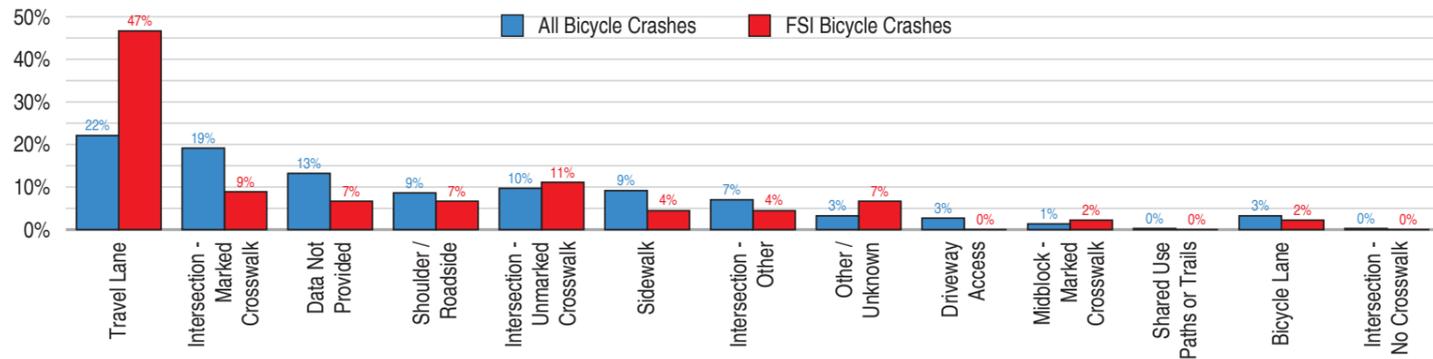
Percent Bicycle-Involved Crashes by Age Group



Location of Bicycle-Involved Crashes

The majority of bicycle-involved crashes occur in the travel lane of the roadway where there is direct conflict with vehicles. Most FSI bicycle-related crashes also occur at this location since many of vehicles that collide with bicycles are travelling at high rates of speed.

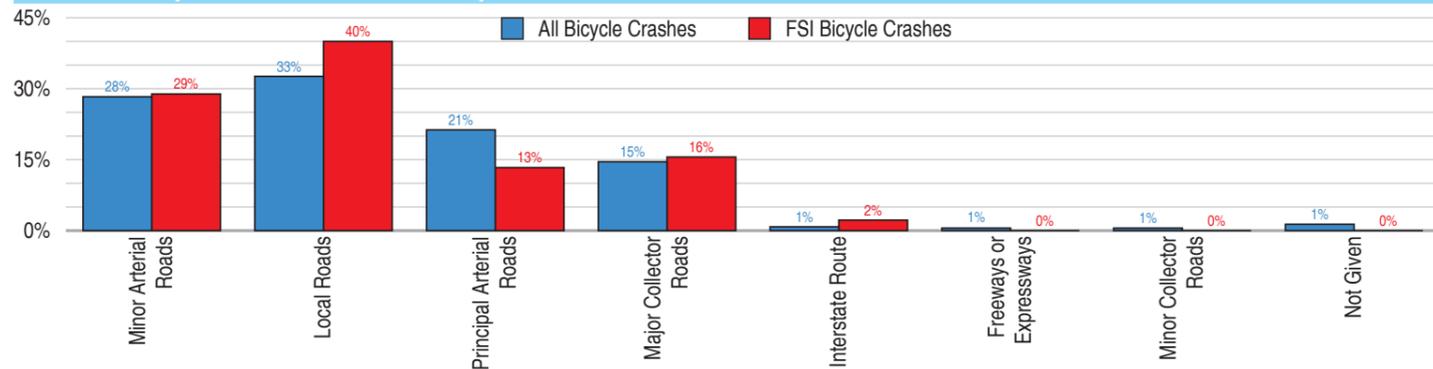
Percent Bicycle-Involved Crashes by Location



Bicycle-Involved Crashes by Federal Functional Classification (FFC)

Most bicycle-related crashes occur on Local Roads followed by Minor Arterial Roads. These are the roads that tend to have low traffic volumes and generate the least amount of anxiety when bicycling. They are also the roads that are most easily accessible to those wishing to bicycle. Minor Arterial Roads also have low levels of traffic and anxiety that bicycle riders find favorable.

Percent Bicycle-Involved Crashes by Federal Functional Classification (FFC)



High Injury Network

In addition to documenting the characteristics of crashes within the AMATS planning area, one of the key components of a Safe Streets for All (SS4A) Action Plan is the establishment of a High Injury Network (HIN). A HIN is simply the network showing the region's fatal and serious injury (FSI) crashes. The preceding safety analysis provides information on the population characteristics of those involved in crashes, when crashes occurred, and the types of crashes that occurred. Establishing the HIN allows for additional analysis on where crashes occurred and can also provide much more detailed information on particular crash events.

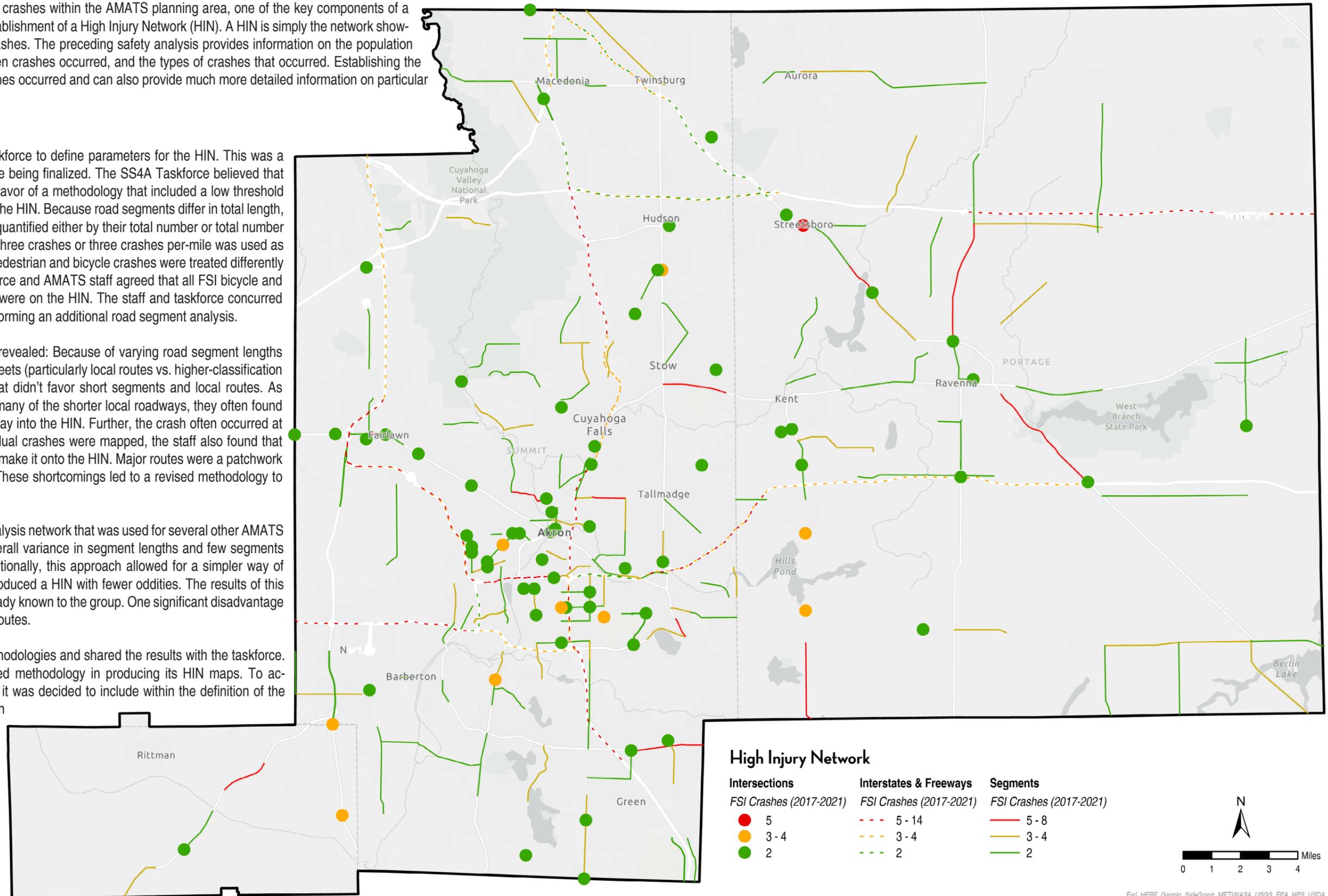
Process

AMATS staff worked closely with the SS4A Taskforce to define parameters for the HIN. This was a process that went through a few iterations before being finalized. The SS4A Taskforce believed that all FSI crash events were important and was in favor of a methodology that included a low threshold number of crashes in order to be included within the HIN. Because road segments differ in total length, the methodology also allowed for crashes to be quantified either by their total number or total number per mile within the reportable period. Originally, three crashes or three crashes per-mile was used as the minimum, but this was later revised to two. Pedestrian and bicycle crashes were treated differently because of their lower total numbers. The taskforce and AMATS staff agreed that all FSI bicycle and pedestrian crashes should be treated as if they were on the HIN. The staff and taskforce concurred that this approach made greater sense than performing an additional road segment analysis.

A significant shortcoming with this method was revealed: Because of varying road segment lengths and other variables between different types of streets (particularly local routes vs. higher-classification roadways), it was difficult to establish a HIN that didn't favor short segments and local routes. As AMATS staff looked into specific crash data on many of the shorter local roadways, they often found that a singular crash may have kicked the roadway into the HIN. Further, the crash often occurred at the intersection of a more major road. As individual crashes were mapped, the staff also found that many corridors with multiple FSI crashes did not make it onto the HIN. Major routes were a patchwork of short segments rather than longer corridors. These shortcomings led to a revised methodology to develop the HIN.

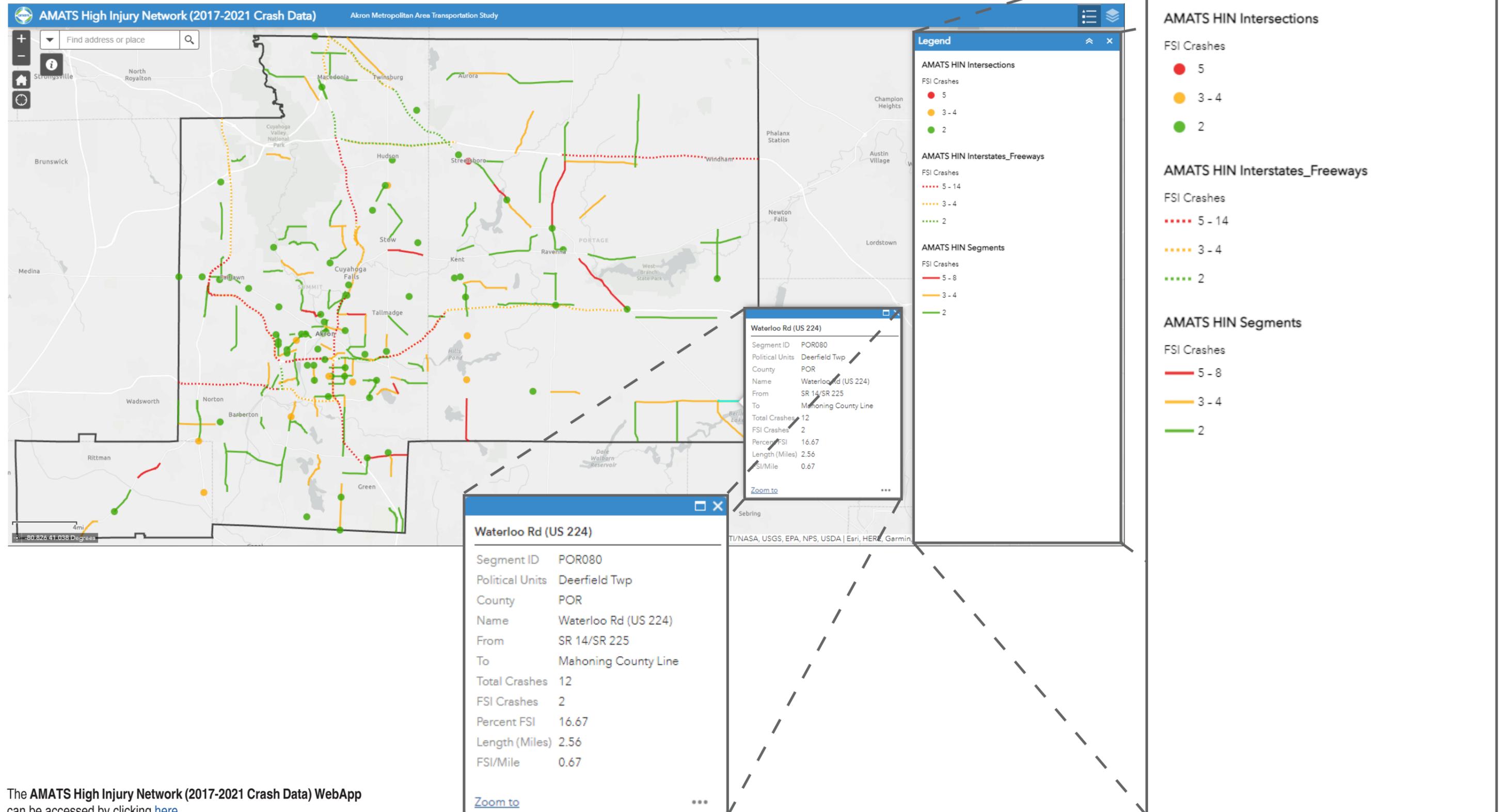
AMATS staff chose to utilize its existing crash analysis network that was used for several other AMATS analyses. This pre-defined network has less overall variance in segment lengths and few segments that are less than a quarter mile in length. Additionally, this approach allowed for a simpler way of transferring raw data into attribute tables and produced a HIN with fewer oddities. The results of this approach better reflected the crash hotspots already known to the group. One significant disadvantage remained: This network would not include local routes.

AMATS ran several comparisons of the two methodologies and shared the results with the taskforce. The taskforce directed staff to utilize the revised methodology in producing its HIN maps. To account for the omission of local routes, however, it was decided to include within the definition of the HIN any segments or intersections where it can be demonstrated that two or more FSI crashes per-mile occurred within the reportable five-year period. This includes all local routes. This allows for inclusion of any areas that have been left off because of differences between route segmentation and actual project limits. This also allows communities to focus on any local issues they are aware of or wish to research further. If three FSI crashes per-mile can be demonstrated, any segment or intersection can be considered a recommended project.



HIN Visualization

To display the HIN, AMATS staff created a GIS web application, depicted below, that shows the locations of (1.) all arterial and collector corridors, (2.) intersections, and (3.) Interstate corridors which met the threshold of three total crashes or three crashes per-mile for the HIN. The web application allows users to review specific information about each crash on the HIN by clicking on a segment or intersection. Segments and intersections are color-coded based on the total numbers of FSI crashes. A red color indicates the high-end of number of crashes while the darker green color indicates FSI crashes on the lower end of the qualifying spectrum, or fewer crashes. The number of crashes for each category is shown in the image below.



The AMATS High Injury Network (2017-2021 Crash Data) WebApp can be accessed by clicking [here](#).

Layer List

Layers

- AMATS Fatal Crashes (2017-2021)
- AMATS Serious Injury Crashes (2017-2021)
- AMATS Minor Injury Crashes (2017-2021)
- AMATS Property Damage Only Crashes (2017-2021)
- AMATS Bicycle Crashes (2017-2021)
- AMATS Pedestrian Crashes (2017-2021)
- AMATS HIN Intersections
- AMATS HIN Interstates_Freeways
- AMATS HIN Segments
- AMATS Boundaries
- SS4A Underserved Communities Census Tracts
- Minority Population by Census Block Group
- Elderly Population by Census Block Group
- Equity Areas Census Block Groups
- Low-Income Population by Census Block Group
- Disabled Population by Census Block Group
- Careless Households by Census Block Group

The web application also includes a variety of other information that will be useful to communities, agencies, and members of the public who are interested in understanding the area's crash patterns and HIN:

- Data layers were created to display all 2017-2021 reportable crashes individually within the AMATS planning area. Vehicular crashes are classified into four categories: fatal, serious injury, minor injury, and property damage only. Similar to how HIN corridors can be clicked to view additional information, individual crashes can be clicked to view additional data.

Legend

- AMATS Fatal Crashes (2017-2021)
- AMATS Serious Injury Crashes (2017-2021)
- AMATS Minor Injury Crashes (2017-2021)
- AMATS Property Damage Only Crashes (2017-2021)

- Pedestrian and bicycle crashes are also individually shown. Separate layers were created for each mode of transportation and the respective layer automatically displays the four types of crashes: fatal, serious injury, minor injury, and property damage only. Any pedestrian or bicycle crashes that resulted in a fatality or serious injury are automatically considered to be part of the HIN.

Legend

- AMATS Bicycle Crashes (2017-2021)
 - Fatal
 - Serious Injury
 - Minor Injury
 - Property Damage Only
- AMATS Pedestrian Crashes (2017-2021)
 - Fatal
 - Serious Injury
 - Minor Injury
 - Property Damage Only

- Various layers are included on the web application that consider population equity, which is the fair, just, and impartial treatment of all individuals. Each of these layers is described in greater detail in Chapter 5.

- Location-specific comments received from the online survey (discussed in Chapter 3) are included on the web application. When individual locations are clicked, the written comment becomes viewable.

Legend

- Public Input: Safety Issues
 - Sight Distance / Visibility
 - Public Safety
 - Roadway Design
 - Missing or Inadequate Facilities
 - Signage or Signals
 - Speed Issue
 - Safety Issue Related to Road or Sidewalk Maintenance
 - Freight or Rail Issue
 - Other

EQUITY CONSIDERATIONS

Environmental Justice and Transportation

Equity

Environmental justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Federal agencies are required to achieve Environmental Justice by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations.

Equity in transportation planning is similar to the definition of EJ, but expands the definition to be more specific about underserved populations. The Safe Streets and Roads for All (SS4A) Notice of Funding Opportunity (NOFO) defines equity as:

The consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, Indigenous and Native Americans, Asian Americans and Pacific Islanders, and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.

EJ and Equity are important not only at the federal level, but have played a meaningful role in the development of AMATS' plans and programs. The SS4A rightfully makes equity a central consideration in the safety planning process. This has been demonstrated in previous chapters: Chapter 3 (Stakeholder and Public Engagement) discussed AMATS' efforts to engage both the general public and a variety of stakeholders, particularly those who serve traditionally underserved populations. Chapter 4 (Safety Analysis) described the characteristics of past crashes and introduced the High Injury Network (HIN), providing some insight into the regional composition of crashes.

Changing Approaches to Equity

AMATS has historically performed equity analyses by looking at the demographic characteristics of the regional population. Factors such as race, income, age, disability, and whether households own at least one personal vehicle served as the foundation for these analyses. AMATS has utilized data available at the Block Group (BG) level for each of these characteristics. Maps and summaries of each of these demographic characteristics can be found in Appendix B.

Concurrent with the initial Fiscal Year (FY) 2022 Notice of Funding Opportunity (NOFO) for SS4A, the federal government developed and fine-tuned ways of assessing equity and defining underserved populations. Myriad tools were developed and updated that assessed a broader definition of equity, and data was uniformly shared at a more general Census Tract level of geography. Increased emphasis was placed on utilizing these tools as the way to measure equity.

The FY 2023 SS4A NOFO was announced in early April 2023, shortly after the draft Action Plan was written. The FY 2023 NOFO was clear in its guidance about assessing equity. This guidance prompted AMATS to make significant revisions to its initial draft Action Plan. Per the

FY 2023 NOFO, regional analyses were no longer valid; underserved communities must be identified using one of the following tools:

- The interim USDOT Equitable Transportation Community Explorer (ETCE);
- Any subsequent iterations of the ETCE released during the NOFO period; or
- The Climate and Economic Justice Screening Tool (CEJST) to identify disadvantaged communities

As a result of this mandate, AMATS pivoted to fully rely upon the tools mentioned above and omit any additional regional analysis. GIS data layers from both methods are included on the AMATS Safety Network web application, which allows regional communities the opportunity to quickly view whether specific HIN locations are located within the defined disadvantaged communities. The following sections describe the current/interim ETCE and the CEJST.

Method 1—Equitable Transportation Community Explorer (ETCE)

The ETCE, as of this writing, is in a state of flux. In 2022, the United States Department of Transportation (USDOT) developed a methodology that defined Historically Disadvantaged Communities based on six indicators. This was superseded by the ETCE in 2023, and most likely will be refined in the coming months. Currently, the ETCE defines disadvantaged communities using existing, publicly available data sets. All population data is analyzed at a Census Tract (CT) level of geography.

Through the ETCE, Community Disadvantage is defined through a large combination of data. Five “areas of disadvantage” serve as the basis of the ETCE. Each area of disadvantage has numerous indicators—40 in total—that were used in the development of each indicator. The areas of disadvantage and their respective indicators, also listed directly on the ETCE, are currently defined as follows:

Transportation Insecurity occurs when people are unable to get to where they need to go to meet the needs of their daily life regularly, reliably, and safely. Nationally, there are well-established policies and programs that aim to address food insecurity and housing insecurity, but not transportation insecurity. A growing body of research indicates that transportation insecurity is a significant factor in persistent poverty. Circumstances contributing to Transportation Insecurity are:

- Transportation Access
- Transportation Cost Burden
- Transportation Safety

The **Environmental Burden** component of the index includes variables measuring factors such as pollution, hazardous facility exposure, water pollution and the built environment. These environmental burdens can have far-reaching consequences such as health disparities, negative educational outcomes, and economic hardship. Circumstances contributing to a community's Environmental Burden include:

- Ozone Level
- PM 2.5 Level
- Diesel PM Level
- Air Toxics Cancer Risk
- Hazardous Sites Proximity
- Toxics Release Sites Proximity
- Treatment & Disposal Facility Proximity
- Risk Management Sites Proximity

- Coal Mine Proximity
- Lead Mines Proximity
- Pre-1980s Housing
- High-Volume Road Proximity
- Railways Proximity
- Airports Proximity
- Ports Proximity
- Impaired Surface Water

Social Vulnerability is a measure of socioeconomic indicators that have a direct impact on quality of life. This set of indicators measure lack of employment, educational attainment, poverty, housing tenure, access to broadband, and housing cost burden. Other indicators include identifying household characteristics such as age, disability status and English proficiency. Social Vulnerability indicators include:

- 200% Poverty Line
- No HS Diploma
- Unemployment
- House Tenure
- Housing Cost Burden
- Uninsured
- Lack of Internet Access
- Endemic Inequality
- 65 or older
- 17 or younger
- Disability
- Limited English Proficiency
- Mobile Homes

The **Health Vulnerability** category assesses the increased frequency of health conditions that may result from exposure to air, noise, and water pollution, and lifestyle factors such as poor walkability, car dependency, and long commute times. Conditions impacting Health Vulnerability include:

- Asthma Prevalence
- Cancer Prevalence
- High Blood Pressure Prevalence
- Diabetes Prevalence
- Low Mental Health Prevalence

Climate and Disaster Risk Burden reflects sea level rise, changes in precipitation, extreme weather, and heat which pose risks to the transportation system. These hazards may affect system performance, safety, and reliability. As a result, people may have trouble getting to their homes, schools, stores, and medical appointments. Circumstances impacting Climate and Disaster Risk include:

- Anticipated Changes in Extreme Weather (Future Extreme Weather Risks)
- Annualized Disaster Losses (Annualized Losses Due to Hazards)
- Impervious Surfaces (from Land Cover)

As with previous USDOT online tools, the ETCE's Map Viewer uses a threshold approach to denote which areas qualify as disadvantaged, meaning census tracts either are shaded to denote that they qualify or are unshaded if they do not. However, the ETCE allows users,

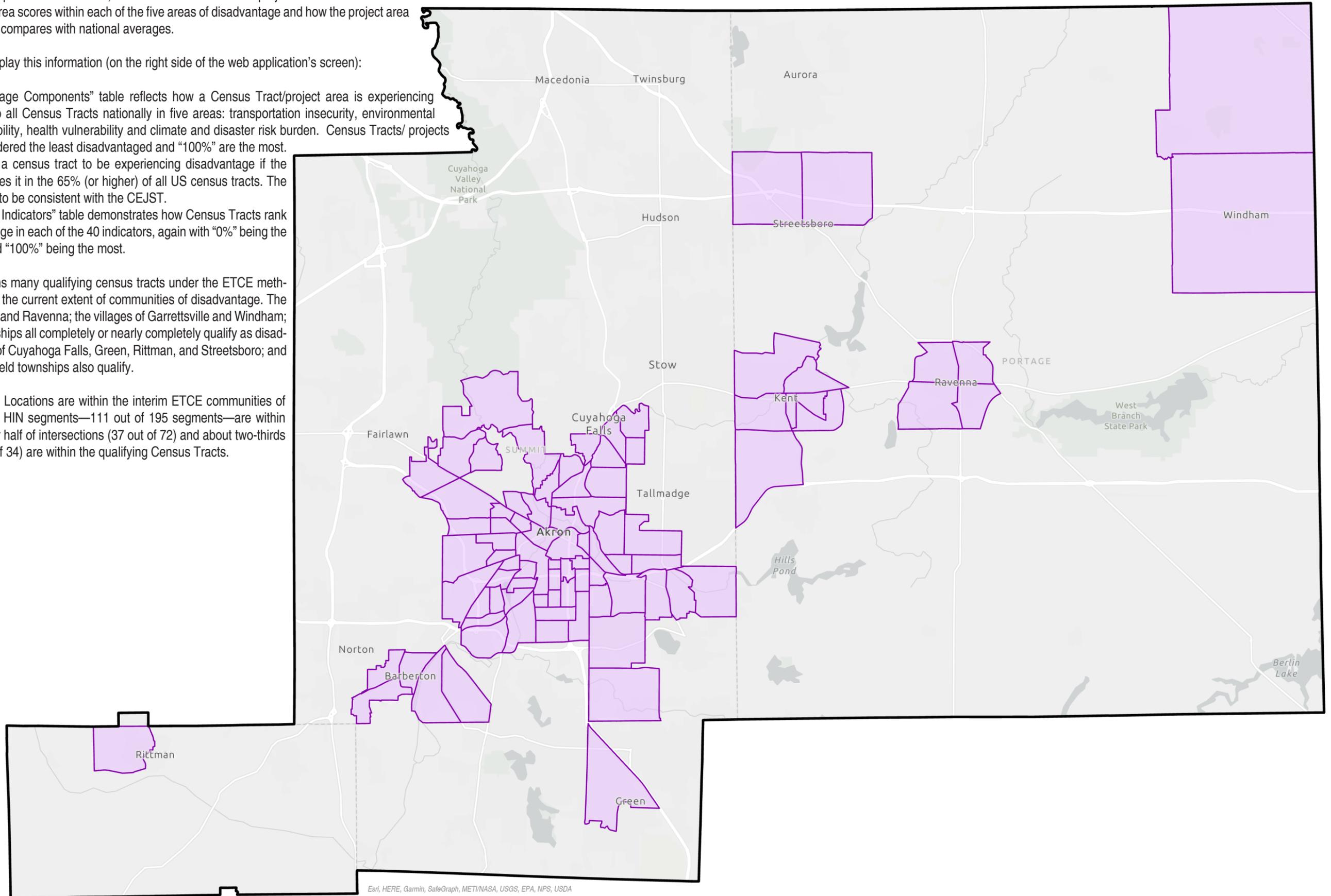
including applicants for SS4A Implementation Grants, to select an area of interest/project location. The ETCE will immediately calculate how the area scores within each of the five areas of disadvantage and how the project area (one or multiple Census Tracts) compares with national averages.

Within the ETCE, two charts display this information (on the right side of the web application's screen):

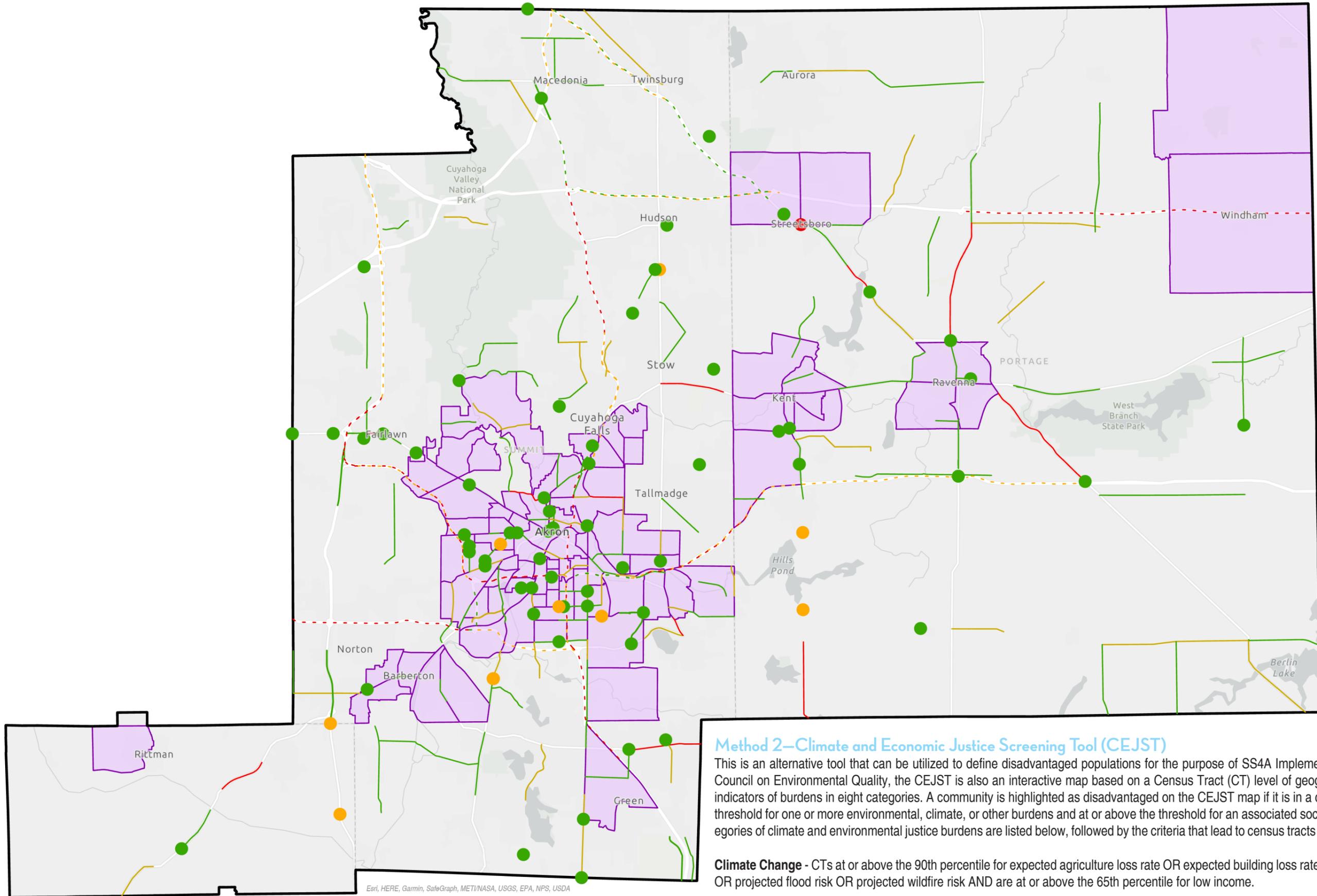
- The “Overall Disadvantage Components” table reflects how a Census Tract/project area is experiencing disadvantage relative to all Census Tracts nationally in five areas: transportation insecurity, environmental burdens, social vulnerability, health vulnerability and climate and disaster risk burden. Census Tracts/ projects areas at “0%” are considered the least disadvantaged and “100%” are the most. The USDOT considers a census tract to be experiencing disadvantage if the overall index score places it in the 65% (or higher) of all US census tracts. The 65% cutoff was chosen to be consistent with the CEJST.
- The “Percentile Ranked Indicators” table demonstrates how Census Tracts rank nationally for disadvantage in each of the 40 indicators, again with “0%” being the least disadvantaged and “100%” being the most.

The Greater Akron area contains many qualifying census tracts under the ETCE methodology. The map below shows the current extent of communities of disadvantage. The cities of Akron, Barberton, Kent, and Ravenna; the villages of Garrettsville and Windham; and Nelson and Windham townships all completely or nearly completely qualify as disadvantaged. Portions of the cities of Cuyahoga Falls, Green, Rittman, and Streetsboro; and Brimfield, Coventry and Springfield townships also qualify.

A significant number of the HIN Locations are within the interim ETCE communities of disadvantage. Well over half of HIN segments—111 out of 195 segments—are within areas of disadvantage, just over half of intersections (37 out of 72) and about two-thirds of Interstate segments (23 out of 34) are within the qualifying Census Tracts.



Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA



Method 2—Climate and Economic Justice Screening Tool (CEJST)

This is an alternative tool that can be utilized to define disadvantaged populations for the purpose of SS4A Implementation Grants. Developed by the Council on Environmental Quality, the CEJST is also an interactive map based on a Census Tract (CT) level of geography that uses datasets that are indicators of burdens in eight categories. A community is highlighted as disadvantaged on the CEJST map if it is in a census tract that is at or above the threshold for one or more environmental, climate, or other burdens and at or above the threshold for an associated socioeconomic burden. The eight categories of climate and environmental justice burdens are listed below, followed by the criteria that lead to census tracts being identified as disadvantaged.

Climate Change - CTs at or above the 90th percentile for expected agriculture loss rate OR expected building loss rate OR expected population loss rate OR projected flood risk OR projected wildfire risk AND are at or above the 65th percentile for low income.

Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA

Energy - CTs at or above the 90th percentile for energy cost OR PM2.5 in the air AND are at or above the 65th percentile for low income.

Health - CTs at or above the 90th percentile for asthma OR diabetes OR heart disease OR low life expectancy AND are at or above the 65th percentile for low income.

Housing - CTs that have experienced historic underinvestment OR are at or above the 90th percentile for housing cost OR lack of green space OR lack of indoor plumbing OR lead paint AND are at or above the 65th percentile for low income.

Legacy Pollution - CTs that have at least one abandoned mine land OR Formerly Used Defense Sites OR are at or above the 90th percentile for proximity to hazardous waste facilities OR proximity to Superfund sites (National Priorities List (NPL)) OR proximity to Risk Management Plan (RMP) facilities AND are at or above the 65th percentile for low income.

Transportation - CTs at or above the 90th percentile for diesel particulate matter exposure OR transportation barriers OR traffic proximity and volume AND are at or above the 65th percentile for low income.

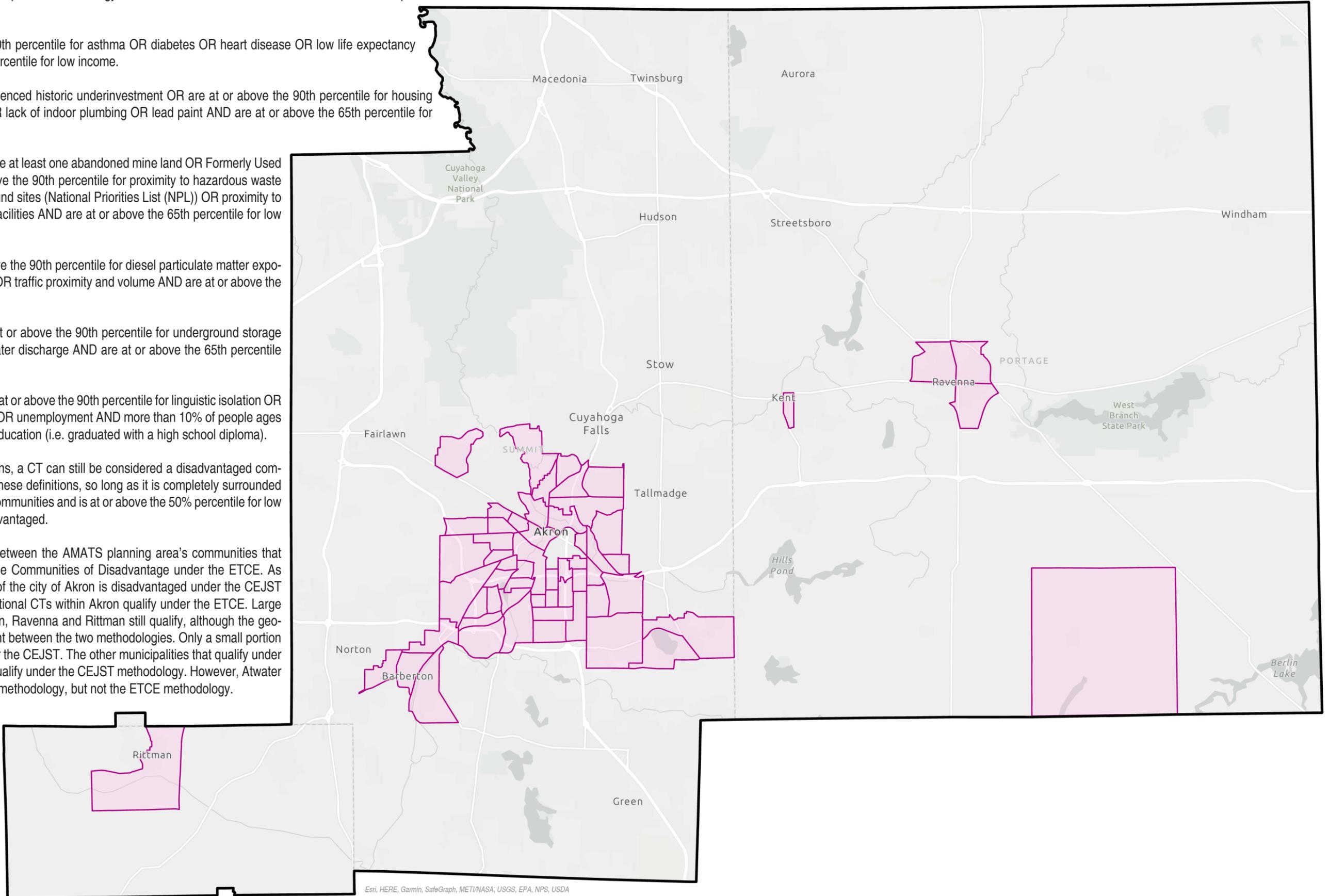
Water and Wastewater - CTs at or above the 90th percentile for underground storage tanks and releases OR wastewater discharge AND are at or above the 65th percentile for low income.

Workforce Development - CTs at or above the 90th percentile for linguistic isolation OR low median income OR poverty OR unemployment AND more than 10% of people ages 25 or older have a high school education (i.e. graduated with a high school diploma).

In addition to the above definitions, a CT can still be considered a disadvantaged community if it does not meet all of these definitions, so long as it is completely surrounded by neighboring disadvantaged communities and is at or above the 50% percentile for low income is also considered disadvantaged.

There is considerable overlap between the AMATS planning area's communities that qualify under the CEJST and the Communities of Disadvantage under the ETCE. As shown in the map below, most of the city of Akron is disadvantaged under the CEJST methodology, though a few additional CTs within Akron qualify under the ETCE. Large portions of the cities of Barberton, Ravenna and Rittman still qualify, although the geographical boundaries are different between the two methodologies. Only a small portion of the city of Kent qualifies under the CEJST. The other municipalities that qualify under the ETCE methodology do not qualify under the CEJST methodology. However, Atwater Township is included under this methodology, but not the ETCE methodology.

A significant number of the HIN Locations are within the CEJST's areas of disadvantage. Although a small proportion of HIN segments—14 out of 195 segments—are within areas of disadvantage, nearly half of intersections (31 out of 72) and Interstate segments (16 out of 34) are within the qualifying Census Tracts.



Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA

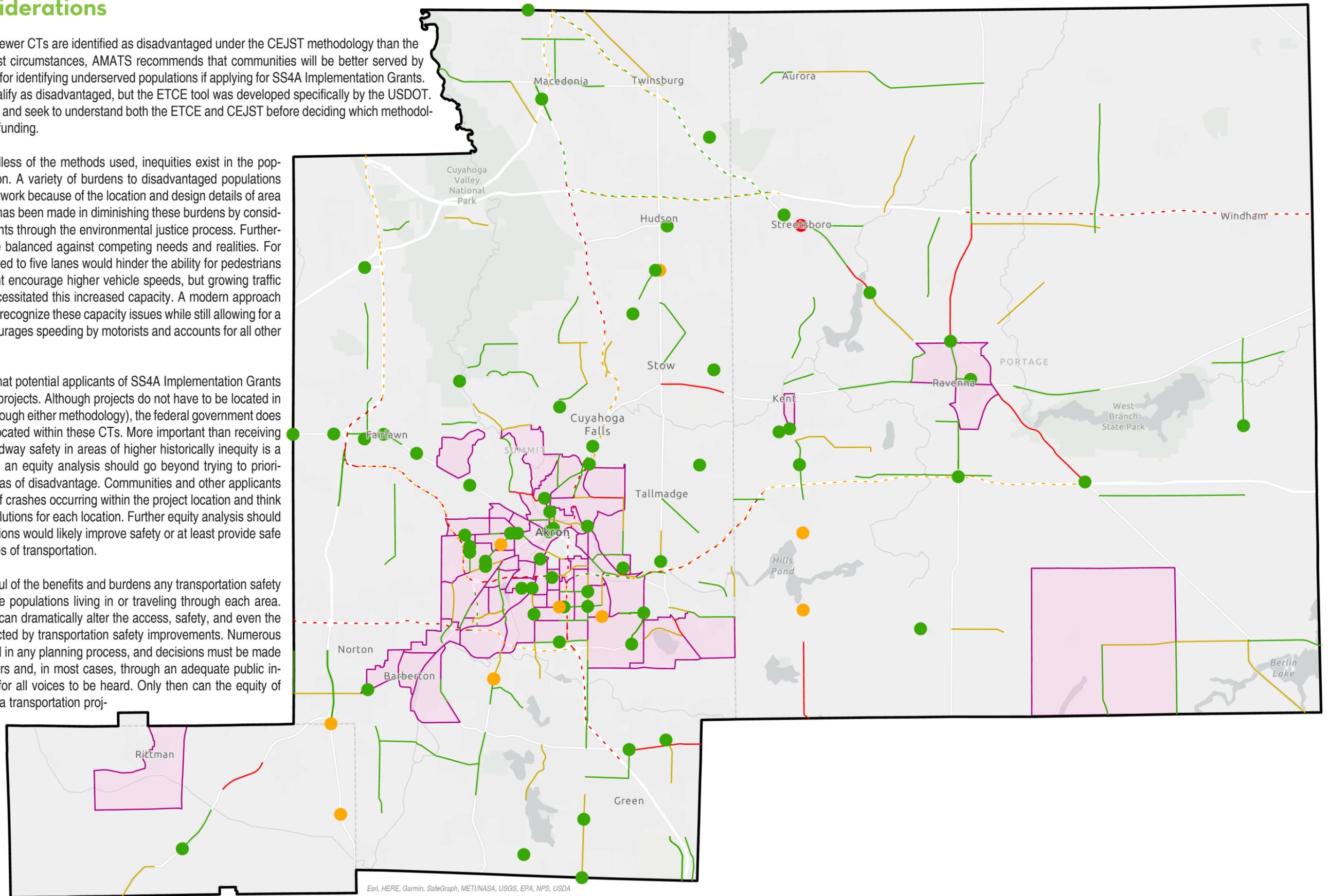
Regional Considerations

Within the Greater Akron area, fewer CTs are identified as disadvantaged under the CEJST methodology than the ETCE methodology. Under most circumstances, AMATS recommends that communities will be better served by utilizing the ETCE methodology for identifying underserved populations if applying for SS4A Implementation Grants. Not only do many more CTs qualify as disadvantaged, but the ETCE tool was developed specifically by the USDOT. Potential applicants should view and seek to understand both the ETCE and CEJST before deciding which methodology to utilize when applying for funding.

AMATS recognizes that, regardless of the methods used, inequities exist in the population's access to transportation. A variety of burdens to disadvantaged populations exist throughout the regional network because of the location and design details of area roadways. Significant progress has been made in diminishing these burdens by considering the quality of life of residents through the environmental justice process. Furthermore, equity considerations are balanced against competing needs and realities. For example, a two-lane road widened to five lanes would hinder the ability for pedestrians to cross a road safely and might encourage higher vehicle speeds, but growing traffic volume demands may have necessitated this increased capacity. A modern approach to transportation planning might recognize these capacity issues while still allowing for a safer roadway design that discourages speeding by motorists and accounts for all other modes of transportation.

AMATS strongly recommends that potential applicants of SS4A Implementation Grants consider equity when selecting projects. Although projects do not have to be located in disadvantaged communities (through either methodology), the federal government does award more points to projects located within these CTs. More important than receiving additional points, improving roadway safety in areas of higher historical inequity is a high regional priority. However, an equity analysis should go beyond trying to prioritize projects located within areas of disadvantage. Communities and other applicants should also assess the details of crashes occurring within the project location and think through the most appropriate solutions for each location. Further equity analysis should consider whether potential solutions would likely improve safety or at least provide safe options for the users of all modes of transportation.

Applicants should also be mindful of the benefits and burdens any transportation safety improvement would have on the populations living in or traveling through each area. The way projects are designed can dramatically alter the access, safety, and even the quality of life of the people affected by transportation safety improvements. Numerous considerations must be weighed in any planning process, and decisions must be made by a broad group of stakeholders and, in most cases, through an adequate public involvement process that allows for all voices to be heard. Only then can the equity of those living near or affected by a transportation project be truly considered.



AMATS POLICY AND PROCESS CHANGES

As part of the Safe Streets and Roads for All (SS4A) process, it is important for AMATS to review its current plans and policies to identify opportunities for improvement as a planning agency. AMATS maintains and updates three policy documents related to transportation safety in the greater Akron area. The AMATS Long-Range Transportation Plan, the *Funding Policy Guidelines*, and the Transportation Improvement Program (TIP).

Transportation Outlook 2045

The long-range transportation plan, also known as *Transportation Outlook 2045 (TO2045)*, was last updated in May 2021. *TO2045* emphasizes safety throughout the document. AMATS states in the goals and objectives of the plan that *TO2045* will maintain a safe, secure, efficient, and integrated transportation system. The plan's objectives are to minimize highway crashes, provide safe travel routes, minimize pedestrian, bicycle, train and vehicle conflicts, and improve the safety of transit facilities and operations.

Safety is discussed throughout *TO2045*. Safety data trends are shown from 2008 through 2019. The plan includes data on the number of crashes, number of fatalities and number of serious injuries over the last decade. Maps are included in the plan displaying identified high-crash segments and intersections. The plan also includes a discussion of performance measures, including the amount of funding through 2045 that is devoted toward meeting the safety performance measure.

TO2045 recommends both projects and policies to improve safety for all users. The plan includes several project-specific recommendations expected to increase the safety of the system. These recommendations include roadway intersection and arterial projects, bicycle and pedestrian projects, and transit projects.

TO2045 also identifies a number of policies that align with the goals of SS4A. These policies include that:

- **Safety Projects are consistent with *TO2045*.** AMATS maintains its policy that projects that improve safety conditions are consistent with the long-range transportation plan. This includes railroad grade separation projects. AMATS has set aside \$40 million over the life of the plan for unspecified improvements.
- **AMATS will continue its Connecting Communities Program.** For the last 10 years, AMATS has maintained its Connecting Communities Planning Grant Program. This program is focused on providing funds for studies that emphasize land use and transportation planning integration. The program has led to multiple infrastructure investments in the Greater Akron area that improve safety, particularly for bicycle and pedestrian users.
- **Communities throughout the Greater Akron area should consider Complete Street principles when planning their transportation projects.** According to Smart Growth America, a complete street is one that is designed with safety in mind for all users - pedestrians, cyclists, transit riders, and vehicles. No two complete streets will likely resemble each other as individual neighborhoods or districts will have different needs. Bike lanes, bus lanes, bus shelters, sidewalks, crosswalks, refuge islands, curb bump-outs, and roundabouts are all components of a complete street that can improve safety for everyone. Making a street welcome to everyone can improve the vitality of an area and make it a place where people want to be.
- **AMATS will encourage communities to develop School Action Plans and commits to make AMATS funding available for SRTS projects.** The Ohio Safe Routes

to School (SRTS) Program supports projects and programs that improve the health and well-being of children by enabling and encouraging them to walk and bicycle to school. SRTS programs examine conditions around schools and conduct projects and activities that work to improve safety and accessibility in the vicinity of schools.

- **AMATS supports communities considering ways to make their streets safer for pedestrians/bicyclists.** Traffic calming measures should be considered in areas that experience high volumes of pedestrian and bicycle traffic. Traffic calming is a concept that reduces the speed and volume of vehicular traffic through an area to make neighborhoods safer, more pleasant, and more livable.
- **AMATS supports the development of road diets.** A road diet is a technique that can be used to achieve traffic calming and improve safety. It involves the reduction of travel lanes and typically repurposes this space for other travel modes.

TO2045 placed a strong emphasis on safety and prioritized both project and policy level recommendations to promote safety. It is appropriate, however, to assess how these recommendations and policies could be improved or updated to reflect the priorities of the *SS4A Action Plan*. AMATS will implement the following policy changes in its next long-range transportation plan, *Transportation Outlook 2050 (TO2050)*:

- ***TO2050* will reflect AMATS' new focus on Vision Zero.** The AMATS Policy Committee approved a *Vision Zero* goal in August 2022. The *Vision Zero* goal is to reduce all fatal and serious injury crashes to zero by the year 2050. Resolution 2022-16 is a commitment by AMATS to invest heavily on improving safety in the Greater Akron area by reducing fatal, serious injury, and bicycle and pedestrian crashes.
- **AMATS will pursue increasing the amount of funding provided for projects that improve the safety of the transportation system.** *TO2045* devoted \$175 million in projects that improved transportation safety. AMATS will strive to increase that amount to at least \$200 million and emphasize safety recommendations that promote the region's *Vision Zero* goal.
- **The Connecting Communities Grant Program will incorporate the goals of the SS4A Action Plan.** While the current program includes safety considerations, a greater emphasis will be put on *Vision Zero*.
- **AMATS will continue to promote traffic calming measures, road diets, and bicycle and pedestrian improvements that prioritize safety and improve the transportation system for all users.**

AMATS Funding Policy Guidelines and the Transportation Improvement Program (TIP)

Infrastructure investments made to increase safety are critically important to meet the region's *Vision Zero* goals. AMATS annually receives around \$22 million to invest in transportation infrastructure. Projects are selected every two years based on *AMATS Funding Policy Guidelines*. Once projects are selected, they are included in the region's TIP. The last *Funding Policy Guidelines* update was completed in July 2021. AMATS will be updating the document again in the summer of 2023.

The *Funding Policy Guidelines* include project scoring criteria for three AMATS funding programs. The Surface Transportation Planning Block Grant (STBG) Program funds are eligible for almost all types of surface transportation projects. Transportation Alternatives Set Aside

(TASA) Program funds are eligible for bicycle and pedestrian enhancements. Resurfacing Program funds are limited to simple resurfacing projects. The SS4A review of the *Funding Policy Guidelines* will focus on the STBG and TASA programs. Below are descriptions regarding the STBG and TASA programs.

STBG Program

STBG funds are the most versatile and may be used for any project that is recommended in or consistent with the AMATS Long-Range Transportation Plan. STBG funds can be used on any federal-aid roadway classified above a local road or a rural minor collector and bridge projects on any public road.

STBG projects can include highway projects and bridge improvements (construction, reconstruction, rehabilitation, resurfacing, restoration, and operational), transportation system management, public transit capital improvement projects, commuter rail, carpool projects, bus terminals and facilities, bikeways, pedestrian facilities and planning studies.

The current scoring criteria for the AMATS STBG Program is documented in the table to the right.

The current scoring criteria is made up of nine categories. Each category emphasizes a different element of transportation or relates to part of the project development process. The maximum project score is 120 points. Transportation safety is the second highest weighted category with an eligible point maximum of 20 points if the project is among the 50 percent of high-crash locations identified in the annual *AMATS Traffic Crash Report*.

AMATS also provides additional points for project elements that promote complete streets,

SURFACE TRANSPORTATION BLOCK GRANT		
Project Evaluation Criteria		
Roadway Condition		Points
PCI Value		
0-50		30
50-60		25
61-70		20
71-80		15
81-100		0
Bridge Condition		
0-4		20
Signal Upgrade		20
Roadway Safety		Points
High-crash location listed in AMATS/ODOT Traffic Crash Reports		
Top 50% of list		20
Bottom 50% of list		15
Bridge/Road Closed		20
Bridge Load Restricted		15
Documented Landslide Endangering Road		15
Delay Reduction		Points
Recommended Capacity Improvement in the 2020 CMP		10
Weighted Average Daily Traffic		Points
15,000 or more		15
0 to 14,999	Divide ADT by 1,000	
Project Readiness		Points
Stage 3 Plans complete (Traditional or Non-Traditional LPA)		15
ODOT LPA Project Scope Form submitted to AMATS		5
Complete Streets Components		Points
Bicycle, Pedestrian and Transit (Maximum of 10 points)		
Transit Improvements	Full	Partial
Bus Signal Priority/Preemption	4	2
Enhanced Bus Shelters	4	2
Dedicated Transit Lane	4	2
Bus Rapid Transit Lanes	4	2
ADA Sidewalk Extensions at Bus Stops	4	NA
Other Transit Enhancements	4	2
Bicycle and Pedestrian Improvements		
Cycle Track/Shared-use Path	4	NA
New Sidewalks	4	2
On Street Bicycle Lane	4	2
Connecting Communities Project		Points
Project recommended in Connecting Communities Planning Grant		5
Equitable Distribution of Funds		Points
The Ratio of Funds Received (and Programmed) to a Target Budget		
Percentage		
0-50		10
51-60		9
61-70		8
71-80		7
81-90		6
91-100		5
101-110		4
111-120		3
121-130		2
131-150		1
Greater than 150		0
Priority Project Selection		Points
Priority Project Selected by Sponsor		5
Other Projects		0

including on-street bicycle lanes, new sidewalks, ADA sidewalk extensions at bus stops and shared-use paths. A project application may receive an additional 10 points for incorporating those design elements to the project. Overall safety criteria make up 25 percent of the total points available for an STBG project application.

In assessing the *Funding Policy Guidelines* STBG Program Scoring Criteria, AMATS should consider several strategies to promote greater emphasis on safety, *Vision Zero* and the goals of SS4A. The following strategies would enhance and promote projects that prioritize the goals of SS4A:

- **Increase the weight of safety in the overall scoring criteria.** Currently, safety makes up 25 percent of the overall scoring criteria. The current safety criteria could be increased to a larger portion of the overall scoring criteria. For example, the weight of the safety criteria could be increased to 40% of the overall total.
- **Emphasis placed on AMATS new High-Injury Network of roadways identified in the SS4A Action Plan.** Instead of providing points for projects listed on the *AMATS Traffic Crash Report*, a project application would need to be listed on the SS4A High Injury Network to receive points in the safety category. This would promote investing in areas with fatal and serious injury crashes over property damage only crashes.
- **Increase the weight of Complete Streets elements in the scoring criteria.** Currently, the Complete Streets category only makes up 8 percent of the STBG Program scoring criteria. Increasing the points for complete streets would incentivize measures supported by SS4A. Complete Street elements have been proven to improve traffic safety by providing better access for all users of the roadway and by slowing traffic down.
- **Add additional Complete Street components to the STBG Program scoring criteria.** While AMATS provides additional points in its scoring criteria for shared-use paths, sidewalks, and curb ramps, it does not provide points for other traffic calming measures. These measures could include bump outs, rapid flashing beacons, HAWK signals or other measures identified to calm traffic and lower speed.
- **Incorporate equity into the scoring criteria.** Equity is a critical factor in the SS4A process. Focusing on equity helps transportation agencies address gaps in transportation infrastructure in areas that have been typically underserved. The current scoring criteria does not take equity into account. AMATS should consider developing an equity component to its scoring criteria that would prioritize project applications that improve transportation safety in underserved areas, as identified through an AMATS Environmental Justice Analysis.

TASA Program

The TASA Program is used primarily to fund bicycle and pedestrian improvements in the Greater Akron area. Project types include sidewalks, bike lanes, shared-use paths and Safe Routes to School infrastructure projects.

The *Funding Policy Guidelines* scoring criteria in TASA emphasizes the completion of the regional trail network through the Greater Akron area. It also prioritizes funding projects that connect to existing bicycle and pedestrian infrastructure. Project applications receive more points if they are consistent with existing plans, like a Connecting Communities plan or a Safe Routes to School plan. Projects receive five points if there is a history of bicycle and pedestrian crashes.

The current criteria for the AMATS TASA Program is documented in the table to the right.

While safety is a consideration of the TASA scoring criteria, it is not the driving goal of the program. AMATS should consider several strategies to promote greater emphasis on safety in its TASA selection process. The following strategies would enhance and promote projects that

prioritize the goals of SS4A:

- **Increase the weight of the safety in the overall scoring criteria.** Currently, safety makes up less than 5 percent of the overall scoring criteria total. The current safety criteria could be increased to be a larger portion of the overall scoring criteria. AMATS should consider increasing the weight of safety in the TASA selection criteria to 25 percent of the total score.
- **Increase the weight of the Safe Routes to Schools (SRTS) projects in the overall scoring criteria.** SRTS is a funding program that promotes walking and bicycling to school through infrastructure improvements, enforcement, tools, safety education, and incentives to encourage walking and bicycling to school. The funding policy provides only five points for projects that were developed as part of an SRTS program. These points could be increased to prioritize bicycle and pedestrian projects that emphasize the safety of school age children.
- **Invest in projects that incorporate USDOT's proven safety countermeasures.** TASA funds are currently restricted to funding shared-use paths and sidewalks. AMATS should consider accepting applications for projects that make roadways safer for bicyclists and pedestrians. This could mean funding Complete Street elements to augment projects that receive STBG funds or applying TASA funds to a new project to Complete Street design principles for bicycle and pedestrian safety. Complete street elements can include rapid flashing beacons, mid-block crossings, curb bump outs and other improvements that make streets safer for active transportation users.
- **Incorporate equity into the scoring criteria.** Equity is a critical factor in the SS4A process. Focusing on equity helps transportation agencies address gaps in transportation infrastructure in areas that have been typically underserved. The current scoring criteria does not take equity into account. AMATS should consider developing an equity component to its TASA scoring criteria. This criteria should prioritize project applications that improve transportation safety in underserved areas as identified through an AMATS Environmental Justice Analysis.

TRANSPORTATION ALTERNATIVE SET ASIDE PROGRAM	
The following types of projects are eligible for TAP funding (includes PE, RW & CO):	
Facilities	Points
Regional Trail	25
(Towpath, Portage, Headwaters, Bike and Hike)	
Secondary Trail / Sidewalk / Bike Lane	15
Project Type / Logical Termini	Points
Project connects to two existing bike / ped facilities	25
Project connects to one existing bike/ped facility	20
Project is sidewalk replacement	15
Project is a stand alone project (ex.new trail, trailhead)	20
Trail project is an asphalt upgrade from limestone	15
<i>Connections must be trail to trail or sidewalk to sidewalk. Trails connecting to sidewalks or vice versa will not receive maximum points.</i>	
Level of Use	Points
How much use is the facility projected to have?	0 - 20
<i>Considers density of population, existence of goat paths, popularity of trails</i>	
Consistency with Plans	Points
Project recommended in Connecting Communities Planning Grant	5
Project is specifically recommended in Transportation Outlook 2040	5
Project is recommended as part of Ohio SRTS Travel Plan	5
Project is on an existing transit line	5
Project area has a history of bicycle/pedestrian accidents	5
Connecting Communities Project	Points
Project recommended in Connecting Communities Planning Grant	5
Equitable Distribution of Funds	Points
The Ratio of Funds Received (and Programmed) to a Target Budget	
Percentage	
0-50	10
51-100	7
101-150	3
<i>Fair Share Target Budget calculation is described under Program Administration</i>	

Conclusion

Reducing fatal and serious injury crashes and increasing safety for all roadway users has consistently been an AMATS goal. The agency recognizes that it can do more to promote and emphasize safety in the Greater Akron area. The suggested changes outlined in the preceding pages will be considered by the AMATS Policy Committee as various planning documents and programs are revised in the coming years.

The AMATS *Funding Policy Guidelines* will be revised in the summer of 2023, which will present the first major opportunity to incorporate some of the suggested changes of the SS4A Action Plan. AMATS will update and seek board approval of its long-range transportation plan, *TO2050*, in May 2025.

STRATEGY AND PROJECT RECOMMENDATIONS

The SS4A Action Plan must contain effective strategies and project recommendations to achieve Vision Zero. Investments in engagement, education, and infrastructure all play a critical role to reduce fatal and serious injury crashes in the Greater Akron area. AMATS has conducted an extensive analysis of its crash safety data (Chapter 4), developed an extensive engagement process (Chapter 3), and reviewed its existing program and policies (Chapter 6) which culminate into the following strategy and project recommendations.

In 2022, AMATS passed a Vision Zero resolution with the goal of reducing fatal and serious injury crashes to zero by 2050. Vision Zero is not just a goal. It reframes the way AMATS and its local communities view transportation safety. Vision Zero promotes thinking about transportation safety holistically, considering all transportation users, and incorporating strategies and recommendations that are more than just infrastructure.

The SS4A Action Plan recommendations were developed through engagement with the public. AMATS, the SS4A Taskforce, Stakeholder Group and the public were all invited to participate in the process and review the draft recommendations. The SS4A Action Plan is about people and it is important the recommendations of the plan reflect that.

In developing recommendations for the SS4A Action Plan, AMATS reviewed strategies to reduce fatal and serious injury (FSI) crashes endorsed by state and federal officials. This review ensured that the AMATS SS4A Action Plan is in alignment with the U.S. Department of Transportation (USDOT) and the Ohio Department of Transportation (ODOT). The plan incorporates USDOT's Proven Safety Countermeasures and recommendations from ODOT's State Highway Safety Plan.

The recommendations of the SS4A Action Plan are divided into three major sections, project recommendations, strategy recommendations, and transit-specific recommendations. The project recommendations were developed using the AMATS High Injury Network (HIN) and USDOT's proven safety countermeasures. The project recommendations are prioritized as short-term, mid-term, and long-term recommendations. The strategy recommendations are categorized by emphasis area.

Project Recommendations

Proven Safety Countermeasures

The Federal Highway Administration (FHWA) has identified 28 countermeasures that are proven to reduce fatalities and serious injuries on United States roadways effectively. These proven safety countermeasures (PSCs) are broken into five categories: speed management, pedestrian and bike, roadway departure, intersections, and crosscutting.

Mid-term projects list which countermeasure(s) should be explored as those projects are developed. Any SS4A Implementation Grant applicants within the AMATS planning area should carefully review the PSCs and determine which countermeasures they propose to use as they develop their projects. Every project is different and requires context sensitive design to identify which countermeasures make the most sense at each location.

The matrix below lists and describes each of these countermeasures and highlights the characteristics of roadways where they might be effective solutions. More information on FHWA's PSCs can be found at [Proven Safety Countermeasures | FHWA \(dot.gov\)](#).

PROVEN SAFETY COUNTERMEASURES					
Source: U.S. Department of Transportation Federal Highway Administration Proven Safety Countermeasures					
- Safety Focus Areas					
Countermeasure	Description	Types of Crash Mitigation	Typical Locations for this Treatment	Additional Considerations	
Speed Management					
	Appropriate Speed Limits for All Road Users	A growing body of research shows that speed limit changes alone can lead to measurable declines in speeds and crashes.	Various	Anywhere where appropriate, though particularly in urban areas where various modes of transportation are utilizing the road.	Agencies with designated authorities to set speed limits can establish non-statutory speed limits or designate reduced speed zones, and a growing number are doing so. FHWA provides further direction on how to do this.
	Speed Safety Cameras	Speed safety cameras use speed measurement devices to detect speeding and capture photographic or video evidence of vehicles that are violating a set speed threshold.	Rear end, sideswipe, and roadway departure crashes caused by aggressive driving	Expressways, freeways, and principal arterials, particularly on corridors where speeding is a concern (high-crash freeways, school zones, etc.).	Requires regular evaluation to measure effectiveness; can be unpopular and controversial so public trust and siting important to ensure underserved populations are not unfairly targeted.
	Variable Speed Limits	Variable Speed Limits are speed limits that adapt to changing conditions in a short period of time, such as congestion, weather, or crashes, and are often part of an Active Traffic Management (ATM) plan.	Rear end and sideswipe crashes	Urban or rural expressways, freeways, and other higher-speed corridors, especially where recurring congestion or variable weather conditions can affect traffic flow.	Often implemented as part of Active Traffic Management plans.
Pedestrian / Bicyclist					
	Bicycle Lanes	Dedicated facilities to be used by bicyclists to reduce conflicts with vehicles.	Bicycle/vehicle crashes	Recommended on a large variety of road locations and functional classifications, particularly where lane repurposing allows (either through a road diet or lane narrowing). Can be warranted where bicycle traffic is already high or where cycling is encouraged.	Lanes separated from roadway using a lateral offset and painted buffer provide added effectiveness and, generally, the more removed bicycles are from the travel lanes, the better. In rural areas, rumble strips can negatively affect bike lanes.
	Crosswalk Visibility Enhancements	Enhancements that make crosswalk users more visible to drivers, including lighting, signage, and pavement markings.	Pedestrian/vehicle crashes	Enhanced crosswalks and lighting can be implemented anywhere pedestrian traffic exists or is could exist; multi-lane arterials typically demand more robust enhancements. Signage within the street is most effective on lower-speed two-or-three-lane roads.	Most effective when deployed in repeated locations along a single corridor (versus a more random approach). Can effectively calm traffic if properly designed.
	Leading Pedestrian Interval	An adjustment to signal timing that gives crosswalk users 3-7 seconds to enter the crosswalk before vehicles are given a green light.	Pedestrian/ turning vehicle crashes	Intersections with high turning vehicle volumes. Tend to be in areas of higher pedestrian traffic, such as city and village centers and surrounding neighborhoods. Can be especially effective for aged and disabled populations who require more time to cross.	Low cost when only signal timing alteration is required.
	Medians and Pedestrian Refuge Islands in Urban and Suburban Areas	A defined area between opposing lanes of traffic to separate motorized and non-motorized users of the roadway. A pedestrian refuge island is intended to protect non-motorized road users.	Head-on Pedestrian/vehicle crashes	Curbed urban and suburban multilane roadways, particularly in areas with a significant mix of pedestrian and vehicle traffic, traffic volumes over 9,000 vehicles per day, and travel speeds 35 mph or greater.	The width of refuge islands must be at least 4', but 8' or wider is optimal for pedestrian comfort. Refuge islands can be defined simply through pavement markings, but raised medians or islands allow for increased pedestrian buffering from vehicular traffic.
	Pedestrian Hybrid Beacons	At midblock crossings, or intersections without signals, this beacon allows a pedestrian to cross the roadway safely. With two red lights above a yellow light, it is activated by a pedestrian to stop vehicular traffic and allow the pedestrian the right-of-way.	Head-on Pedestrian/vehicle crashes	Locations where it is difficult for pedestrians to cross a roadway, such as when gaps in traffic are not sufficient or speed limits exceed 35 miles per hour. They are effective multi-lane arterials and where daily traffic volumes exceed 9,000 vehicles.	Marked crosswalks and pedestrian countdown signals must also be installed. Agencies should conduct education and outreach before installation in areas where this concept is unfamiliar.

PROVEN SAFETY COUNTERMEASURES

Source: U.S. Department of Transportation Federal Highway Administration Proven Safety Countermeasures

- Safety Focus Areas

Countermeasure	Description	Types of Crash Mitigation	Typical Locations for this Treatment	Additional Considerations	
Pedestrian / Bicyclist (continued)					
	Rectangular Rapid Flashing Beacons (RRFB)	RRFBs have two rectangular-shaped yellow lights that, when activated, flash alternately to warn drivers of pedestrians trying to cross	Head-on Pedestrian/vehicle crashes	Applicable at many areas with high pedestrian volumes, but particularly effective on multilane roadways with speed limits of 40 or below. Can be teamed with school or trail crossing signs and locations.	Should not be used for approaches or egress from a roundabout. Can be activated through pushbuttons or passive (e.g. video, infrared) pedestrian detection. Can be exceptionally effective at increasing motorist yield rates.
	Road Diets (Roadway Configuration)	Restriping a road to reduce the number of dedicated vehicle lanes allows for the addition of facilities for alternative purposes, such as bicycle lanes, on-street parking, transit stops, and pedestrian refuge islands.	Pedestrian and bicycle/vehicle crashes; rear-end, left-turn and right- angle crashes	Multilane roadways, typically in urban or suburban areas where pedestrian and/or bicycle traffic exists or could exist. FHWA notes a 25,000 vehicle-per-day maximum, although rarely considered regionally unless volumes are well-under this threshold.	Typically involves the conversion of a four-lane roadway to one travel lane in each direction plus a center two-lane left-turn lane and bicycle lanes. Often implemented in conjunction with a new pavement overlay.
	Walkways	Any defined path meant to be used by pedestrians, including sidewalks, shared-use paths, and roadway shoulders.	Pedestrian/vehicle crashes	Any non-freeway roadway locations except where exceptional circumstances exist. Most notable sidewalk gaps (where demand exists) can be found in suburban areas.	In rural areas where walkways/sidewalks are not feasible, a widened and walkable shoulder is acceptable but not preferable. Maintaining an accessible walkway is an important consideration.
Roadway Departure					
	Enhanced Delineation for Horizontal Curves	For the purpose of alerting drivers to upcoming curves, the direction of the curve, and the speed at which to travel, several strategies can be implemented including pavement markings, chevron signs, warning signs, etc.	Roadway departure crashes	Any horizontal curve locations with high crashes. Specific signage or pavement markings may be more applicable to particular corridor types or geographic locations, but the general countermeasure is applicable across the roadway system.	Recommended to be applied systemically (e.g. target all locations with smaller curve radii, where intersections are along or adjacent to the curve, locations within a daily traffic range).
	Longitudinal Rumble Strips and Stripes on Two-Lane Roads	Rumble strips are raised elements in the pavement to alert drivers that they have left the travel lane, through sound and vibration. Rumble strips can be painted over the strips to make them more visible.	Roadway departure (edge and center line rumble strips) and head-on crashes (center line rumble strips)	Most commonly used on higher-speed two-lane roadways, particularly in lower-density/rural areas.	Generally not recommended in higher-density residential areas because of the noise they generate. FHWA asserts that there is no evidence to support that rumble strips deteriorate pavement more quickly or that ice/snow/rain buildup has caused issues.
	Median Barriers	Longitudinal barriers that separate opposing traffic to prevent collisions	Roadway departure incidents, particularly those that lead to angle and head-on crashes	Moderate-to-high-speed divided highways. Typically used on higher-volume highways but can be effective on any highways where cross-median crashes occur.	Decisions to choose cable, metal guiderails, or concrete barriers will vary depending upon traffic volume, land-use context, available space and cost.
	Roadside Design Improvements at Curves	Treatments that target the high risk of roadway departure along the outside of horizontal curves, including added or widened shoulders, a widened clear zone to provide the opportunity to regain control of a vehicle, or flattened sideslopes.	Roadway departure crashes	Any horizontal curve locations with high crashes, particularly in locations with higher speeds and where drivers can recover from roadway departures before hitting a fixed object or a drastic change in elevation.	Not all roadside hazards can be eliminated through design improvements and expanding recovery zones, so installing barriers should still may be the preferred solution for areas where fixed objects or steep embankments exist.
	SafetyEdge sm	Reducing the risk of edge drop-offs by shaping the edge of the pavement with a 30 degree angle to provide a gentle slope, preventing a vehicle from becoming unstable.	Roadway departure crashes	Roadways where curbs and guiderails are not present. Typically prioritized on rural routes and higher speed roadways but universally recommended on un-curbed roads.	SafetyEdge will wear over time due to erosion, settling, and tire wear, but still will provide a gentler slope for when roadway departures occur.
	Wider Edge Lines	Wider edge lines are increased from a normal width of 4 inches to a maximum normal width of 6 inches. The purpose of a wider edge line is to increase the visibility of the edge of the road.	Roadway departure crashes	All conditions: freeways, divided and undivided multi-lane highways, and two-lane highways. Have been proven most effective on rural two-lane highways. Can be especially useful on roads with narrow shoulders.	Wider edge lines may provide better guidance for automated and connected vehicle sensors as those technologies advance.
Intersections					
	Backplates with Retroreflective Borders	A backplate with a retroreflective border makes a traffic signal head more visible to drivers, especially those drivers who are older or deficient in color vision.	Any type of intersection crashes caused by running a red signal	Any signalized intersections. FHWA recommends making this a standard treatment for all signals within a jurisdiction.	Can also be useful by improving an intersection's conspicuity during power outages and in night-time or dark driving conditions. Agencies should consider the existing signal support system to ensure its design is sufficient to support the additional wind load.
	Corridor Access Management	A set of techniques to manage entry and exit points along a roadway to improve safety for all users, reduce conflict points, reduce congestion, minimize traffic delay, and facilitate bicycle and pedestrian movements.	Various crashes caused by vehicles entering and exiting the dominant roadway	An important consideration for most locations, but particularly on suburban corridors with significant commercial development and a high number of ingress/egress points. Should especially be considered on multi-lane arterial roadways.	Successful access management must balance the overall safety and mobility of all users with the needs of adjacent land uses.
	Dedicated Left- and Right-Turn Lanes at Intersections	Separating turning-traffic lanes from through-traffic lanes reduces crashes and improves traffic flow. These auxiliary lanes can also store vehicles that are stopped and waiting to turn.	Intersection-related crashes, most notably side-impact or angle crashes as well as rear-end crashes	Most locations where significant turning volume exists, where there is a history of turn-related crashes, or major road approaches at a stop-controlled, 3-4 leg intersection. Offset turn lanes are particularly effective on higher-speed, high volume corridors.	The safety and convenience of pedestrians and bicylists should be considered. Additional turning lanes, especially offset turning lanes, will lengthen crossing distances for these users.
	Reduced Left-Turn Conflict Intersections	Minor road traffic is restricted to making a right turn on a high-speed or high-volume corridor, followed by a U-turn at a designated location. The designated location for the U-turn can be signalized or unsignalized.	Head-on and angle crashes, and other potentially severe, high-speed crashes	High volume arterial corridors. Most commonly used on higher-speed suburban and rural multi-lane corridors, but has been shown to be effective even on some urban applications and corridors with multimodal usage.	Studies have demonstrated that there are often measurable travel time improvements where this is applied. Can create more crossing opportunities for bicyclists and pedestrians. An effective and less-expensive alternative to constructing an interchange.

PROVEN SAFETY COUNTERMEASURES

Source: U.S. Department of Transportation Federal Highway Administration Proven Safety Countermeasures

- Safety Focus Areas

Countermeasure	Description	Types of Crash Mitigation	Typical Locations for this Treatment	Additional Considerations	
Intersections (continued)					
	Roundabouts	A type of intersection with a circular configuration with a center island meant to promote safety and efficiency. Incoming traffic must yield to traffic already in the roundabout, thereby reducing speeds. Additionally, roundabouts reduce conflict points for all modes of transportation.	All types of intersection-related crashes	Wide range of applications. Most often constructed at moderate-volume intersections replacing stop control or signalized intersections. Effective at calming traffic and in transition-zone environments (e.g. urban-rural, speed limit changes).	Single-lane roundabouts are much simpler and involve less processing. Multi-lane roundabouts are still effective, but increase chances for minor collisions. Despite traffic calming characteristics, roundabouts often help to reduce overall corridor travel time.
	Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections	This approach involves adding multiple low-cost improvements to several intersections within an area or jurisdiction, such as advanced intersection warning signs on the left and right of the roadway, enhanced pavement markings, retroreflective sheeting on sign posts, and other improvements.	All types of intersection-related crashes	Any stop-controlled intersections where intersection crashes occur. Can be particularly effective on higher-speed roadways and are often in suburban or rural areas.	Large variety of solutions for both through approaches and stop approaches. Best when applied systematically across a corridor or entire jurisdiction.
	Yellow Change Intervals	The speed of approaching vehicles, vehicle deceleration, intersection geometry, and driver-perceived reaction time should all be considered when analyzing the best timing for the yellow light interval.	All types of intersection-related crashes	Any signalized intersections where red-light running is common.	Imperative that yellow change interval is appropriately timed. A too-brief interval can lead to unsafe stops or unintentional red-light running. A too-long interval may lead to drivers treating the yellow as an extension of the green phase and invite red-light running.
Crosscutting					
	Lighting	With nighttime fatality rates being much greater than daytime rates, lighting can be applied to reduce the incidence of crashes. Lighting also improves safety for pedestrians, bicyclists, and other mobility device users.	Various; notably pedestrian-related night crashes	Can be applied in most locations as research indicated continuous lighting along a rural or urban corridor has an established safety benefit. Important for locations with pedestrian and bicycle traffic, both for their safety crossing roads and their personal safety.	Jurisdictions and agencies are encouraged to engage with underserved populations to determine where and how new or improved lighting can benefit their communities. Modern lighting gives precise control with reduced amounts of light pollution.
	Local Road Safety Plans	A Local Road Safety Plan (LRSP) addresses safety issues and concerns on local roads with actions and improvements to reduce risks and enhance safety. FHWA developed a LRSP website to assist local communities in the process of creating and implementing a LRSP.	Planning efforts can focus on reducing all crashes that occur on local roadways	All locally-owned roadways within the plan's coverage area.	This can be an effective framework for considering the safety of local roadways, which often have less funding availability to address issues.
	Pavement Friction Management	Pavement Friction Management is the process of collecting and analyzing data to better design, construct, and maintain a roadway. Friction affects how a vehicle will interact with a roadway, and can reduce crashes. High Friction Surface Treatments (HFST) can be applied to improve safety performance.	Various; notably roadway departure crashes and intersection approach crashes	Pavement Friction Management can be applied system-wide. HFSTs are applied in locations with increased friction demands including horizontal and vertical curves, intersection approaches, and locations with history of wet weather & rear end crashes.	HFST is applied on existing pavement so no new pavement area is added. Lifespan of HFST will be reduced if underlying pavement is unstable. Application of HFST systemically in multiple locations can significantly reduce cost-per-mile installation.
	Road Safety Audit (RSA)	A Road Safety Audit (RSA) can be performed in any phase of project development, taking into account all road users, their capabilities, and other human factors in order to identify potential safety concerns. This evaluation is performed by an independent, multidisciplinary team.	Planning efforts can focus on reducing all types of crashes.	Any corridors with documented safety issues, particularly those that communities and agencies plan to improve (e.g. those listed on the regional Long-Range Transportation Plan).	Although RSAs can be performed in any phase of project development, agencies are strongly encouraged to perform RSAs at the earliest point possible, prior to design alternatives and project options being determined.

Short-Term Project Recommendations

Short-term recommendations include projects scheduled to be completed through Fiscal Year (FY) 2027. These projects are listed in the AMATS FY 2024-2027 Transportation Improvement Program, and include PSCs as part of the project design. All of the project locations meet at least one of the two criteria: (1.) they are part of the AMATS High Injury Network (HIN) and/or (2.) contain safety recommendations for bicycle or pedestrian improvements. In addition, many of these projects have received dedicated Highway Safety Improvement Program funding through ODOT's discretionary safety programs. The table below reflects the project location, limits, description, number of crashes, number of fatal and serious injury crashes, and if they are included as areas of disadvantage through the federal methodologies (the ETCE and CEJST) described in Chapter 5.

SHORT-TERM PROJECT RECOMMENDATIONS										
PID	Political Unit	County	Name	From	To	Project Description	Total Crashes	FSI Crashes	ETCE	CEJST
102745	Stow	SUM	Darrow Rd (SR 91)	Stow South Corp Limit	South of Norton Ave	Reconstruction and sidewalks	469	6	No	No
108141	Northfield Center Township	SUM	Valley View Rd	SR 8	Olde Eight Rd	Intersection Improvement	52	0	No	No
108240	Barberton	SUM	Wooster Rd W	Hudson Run Rd	2nd St W	Road diet	209	5	Yes	Yes
112026	Kent	POR	E Main St (SR 59)	Willow St	Horning Rd	Boulevard, access management, two roundabouts, bicycle and pedestrian improvements	307	1	Yes	Yes
112716	Akron	SUM	N Main St (SR 261)	Olive St	Riverside Dr	Reconstruction and road diet	326	5	Yes	Yes
112788	Fairlawn	SUM	Cleveland Massillon Rd	Medina Rd (SR 18)	Springside Dr	Sidewalk	171	2	No	No
112869	Tallmadge	SUM	East Ave	Community Rd	Portage County Line	Median turn lane, sidewalks	104	1	No	No
113161	Macedonia	SUM	Highland Rd	at Valley View Rd Intersection		Intersection improvement	35	1	No	No
113165	Macedonia	SUM	Ravenna Rd	at Shepard Rd / Broadway Ave / Richmond Rd Intersection		Intersection improvement	16	1	No	No
114845	Brimfield Township	POR	Old Forge Rd	at Mogadore Rd Intersection		Roundabout	21	1	No	No
116212	Milton Township	WAY	SR 57	at SR 604 Intersection		Roundabout	22	1	Yes	Yes
116254	Streetsboro	POR	SR 303	West of Diagonal Rd (W)	East of Diagonal Rd (W)	Intersection Improvement	38	2	Yes	No
116457	Bath Township	SUM	Springside Dr	Medina Rd (SR 18)	Cleveland Massillon Rd	Sidewalk	133	0	No	No
116460	Green	SUM	S Main St	at Forest Cove Dr Intersection		Pedestrian hybrid beacon and cross walk	5	0	No	No
116742	Cuyahoga Falls	SUM	Wyoga Lake Rd	E Steels Corners Rd	Seasons Rd	Reconstruction, turn lanes, new bicycle and pedestrian infrastructure	119	0	No	No
116917	Green	SUM	S Arlington Rd	South of Boettler Rd	North of September Dr	Widening and two roundabouts	71	0	Yes	No
116929	Hudson	SUM	Darrow Rd (SR 91)	at Terex Rd Intersection		Intersection improvement	52	3	No	No
117173	Streetsboro	POR	SR 14	at SR 303 / Ranch Rd Intersection		Intersection Improvement	59	0	Yes	No
117269	Hudson	SUM	SR 303	Boston Mills Rd	Main St (SR 91)	Road diet and access management	180	1	No	No
118008	Chippewa Township	WAY	SR 94	at SR 604 Intersection		Roundabout	24	1	No	No
118287	Green	SUM	S Arlington Rd	at Mt Pleasant Rd Intersection		Roundabout	15	3	No	No

SHORT-TERM ACTIVE TRANSPORTATION PROJECT RECOMMENDATIONS				
PID	County	Name	CETC	CEJST
106539	SUM	Wooster Rd/Robinson (Towpath Trail connector)	Yes	Yes
116841	WAY	Heartland Trail, Phase 4A	No	No
105556	POR	The Portage Trail - Ravenna Rd Bridge	No	No
102796	SUM / POR	Freedom Trail/Middlebury Connector	No	No
107930	SUM	Freedom Trail Phase 4	Yes	Yes
113016	SUM	Stow Silver Lake Cuyahoga Falls Bike Connector	No	No
116464	SUM	Rubber City Heritage Trail PH 2	No	No
116868	SUM	Veteran's Trail Rails to Trails	No	No

AMATS also recognizes the importance of developing the active transportation (AT) network to increase transportation modal options. The construction of additional trails and sidewalks will allow pedestrians and bicyclists new opportunities to travel safely by reducing the number of conflict points with motorists and building dedicated infrastructure for AT users. All remaining programmed trail projects are also included as short-term recommendations. These projects are shown in the table below.

The projects in the table to the left will contribute to the reduction of fatal and serious injury crashes. These projects are all shovel-ready to be constructed by FY 2027.

Mid-Term Project Recommendations

Mid-term project recommendations are projects that are not currently funded but will be considered in the mid-term future of FY 2028 through FY 2035. These projects are located on the HIN and have a minimum of three fatal or serious injury crashes. While the identified project locations have not yet been designed, AMATS has included potential PSCs for each HIN location. When any projects are considered involving any of these HIN corridors or intersections, project sponsors should carefully review the potential PSCs listed for the respective HIN corridors or intersections.

MID-TERM INTERSECTION RECOMMENDATIONS (3 or More FSI Crashes)									
Political Unit	County	Street 1	Street 2	Total Crashes (2017-2021)	FSI Crashes (2017-2021)	CETC Equity	CEJST Equity	Potential Proven Safety Countermeasures to Consider	
Representation of possible countermeasures for communities to consider. Local officials are encouraged to work closely with AMATS and ODOT to refine appropriate countermeasures as projects develop.									
Streetsboro	POR	SR 14 / SR 303	SR 43	172	5	Yes	No	Yellow change intervals, crosswalk visibility enhancements, leading pedestrian interval	
Akron	SUM	Diagonal Rd	East Ave	24	4	Yes	Yes	Backplates with retroreflective borders, roundabouts, crosswalk visibility enhancements, yellow change intervals, lighting	
Akron	SUM	Triplett Blvd (SR 764)	Kelly Ave / Lindsay Ave	44	4	Yes	Yes	Backplates with retroreflective borders, roundabouts, crosswalk visibility enhancements, yellow change intervals, road diets	
Akron	SUM	Brown St	Archwood Ave	37	3	Yes	Yes	Backplates with retroreflective borders, crosswalk visibility enhancements, lighting, (improved) walkways, yellow change intervals, roundabouts	
Brimfield Township	POR	SR 43	Old Forge Rd	24	3	No	No	Dedicated left-turn lanes, roundabouts, yellow change intervals, lighting	
Chippewa Township	WAY	SR 21	Clinton Rd	18	3	No	No	Reduced left-turn conflict intersections, appropriate speed limits for all users, roadway safety audits, systemic application of multiple low-cost countermeasures at stop-controlled intersections	
Coventry Township	SUM	Manchester Rd (SR 93)	Robinson Ave	45	3	No	No	Yellow change intervals, roundabouts, corridor access management, walkways, crosswalk visibility enhancements	
Norton	SUM	SR 21	Eastern Rd	34	3	No	No	Yellow change intervals, reduced left-turn conflict intersections, appropriate speed limits for all users, roadway safety audits	
Suffield Township	POR	SR 43	Trares Rd	16	3	No	No	Dedicated left-turn lanes, systemic application of multiple low-cost countermeasures at stop-controlled intersections, pavement friction management	

MID-TERM SEGMENT RECOMMENDATIONS (3 or More FSI Crashes)									
Political Unit	County	Name	From	To	Total Crashes (2017-2021)	FSI Crashes (2017-2021)	CETC Equity	CEJST Equity	Potential Proven Safety Countermeasures to Consider
Representation of possible countermeasures for communities to consider. Local officials are encouraged to work closely with AMATS and ODOT to refine appropriate countermeasures as projects develop.									
Stow	SUM	Kent Rd (SR 59)	Darrow Rd (SR 91)	Fishcreek Rd	150	8	No	No	Dedicated left-turn lanes at intersections, crosswalk visibility enhancements, roundabouts, RRFBs
Suffield Township	POR	SR 43	Stark County Line	US 224	48	7	No	No	Longitudinal rumble strips, wider edge lines, lighting, systemic low-cost countermeasures at stop-controlled intersections, pavement friction management
Fairlawn	SUM	W Market St (SR 18)	Cleveland-Massillon Rd	Smith Rd	152	6	No	No	Roadway reconfiguration, crosswalk visibility enhancements, medians and pedestrian refuge islands
Springfield Township	SUM	Canton Rd (SR 91)	Waterloo Rd (US224)	Akron SCL	46	6	No	Yes	Corridor access management, walkways, bicycle lanes, wider edge lines, lighting, crosswalk visibility enhancements, road diets/reconfiguration
Akron	SUM	E Tallmadge Ave (SR 261)	Home Ave	Brittain Rd	81	6	No	Yes	Corridor access management, road diets, lighting, bicycle lanes, speed safety cameras, medians and pedestrian refuge islands
Streetsboro	POR	SR 14	Diagonal Rd	Streetsboro East Corp Line	52	6	No	No	Enhanced delineation for horizontal curves, roadside design improvements at curves, pavement friction management, longitudinal rumble strips
Akron	SUM	Memorial Pkwy / W Tallmadge Ave	Merriman Rd	Cuyahoga Falls Ave	64	5	Yes	Yes	Pavement friction management, lighting, roadside design improvements at curves, enhanced delineation for horizontal curves, RRFBs
Chippewa Township	CHI	Akron Rd (SR 585)	Mt Eaton Rd N Jct (SR 94)	Doylestown Rd (CR 70)	31	5	No	No	Logitudinal rumble strips, enhanced delineation for horizontal curves, roadside design improvements at curves, dedicated left and right turn lanes
Green	SUM	E Turkeyfoot Lake Rd (SR 619)	Massillon Rd (SR 241)	Green East Corp Line	55	5	No	No	Dedicated left-turn-lanes at intersections, bicycle lanes, walkways, lighting, pavement friction management
Shalersville Township	POR	SR 44	SR 14	SR 303	94	5	No	No	Longitudinal rumble strips, systemic low-cost countermeasures at stop-controlled intersections, wider edge lines, lighting
Edinburg Township	POR	SR 14	SR 5	I-76	115	5	No	No	Systemic low-cost countermeasures at stop-controlled intersections, wider edge lines, longitudinal rumble strips, pavement friction management
Twinsburg	SUM	Ravenna Rd	Shepard Rd	Chamberlin Rd	31	4	No	No	Bicycle lanes, systemic low-cost countermeasures at stop-controlled intersections
Coventry Township	SUM	Manchester Rd (SR 93)	Robinson Ave	Carnegie Ave	106	4	Yes	No	Corridor access management, bicycle lanes, walkways, crosswalk visibility enhancements, lighting, reduced left-turn conflict intersections
Akron	SUM	S Arlington St	E Archwood Ave	2nd Ave	83	4	Yes	Yes	Road diets, crosswalk visibility enhancements, medians and pedestrian refuge islands, corridor access management, lighting
Springfield Township	SUM	US0224 (Waterloo Rd)	Akron ECL	Canton Rd (SR 91 / CR 66)	103	4	No	Yes	Bicycle lanes, roadside design improvements at curves, pavement friction management, speed safety cameras
Milton Township	WAY	SR 585	Fulton Rd	Benner Rd	39	4	No	No	Roadside design improvements at curves, enhanced delineation for horizontal curves, wider edge lines, longitudinal rumble strips, systemic low-cost countermeasures at stop-controlled intersections
Norton	SUM	Johnson Rd	Norton West Corp Line	Wooster Rd W	18	4	No	No	Dedicated left turn lanes, walkways, bicycle lanes, wider edge lines, lighting
Deerfield Township	POR	Waterloo Rd (US 224)	SR225 / Alliance Rd (CR 125)	SR 14 / SR 225	22	4	No	No	Longitudinal rumble strips (edge line; center line already exist), systemic low-cost countermeasures at stop-controlled intersections, wider edge lines, appropriate speed limits for all road users
Twinsburg	SUM	Ravenna Rd	Chamberlin Rd	Aurora Rd (SR 82) / Cannon Rd	68	4	No	No	RSA, crosswalk visibility enhancements, roundabouts, pavement friction management
Deerfield Township	POR	SR 14	US 224	Mahoning County Line	41	4	No	No	Lighting, pavement friction management, enhanced delineation for horizontal curves, roadside design improvements at curves

MID-TERM SEGMENT RECOMMENDATIONS (3 or More FSI Crashes)

Political Unit	County	Name	From	To	Total Crashes (2017-2021)	FSI Crashes (2017-2021)	CETC Equity	CEJST Equity	Potential Proven Safety Countermeasures to Consider
									Representation of possible countermeasures for communities to consider. Local officials are encouraged to work closely with AMATS and ODOT to refine appropriate countermeasures as projects develop.
Ravenna	POR	W&E Main St (SR 59)	Sycamore St	Prospect St	55	3	Yes	Yes	Crosswalk visibility enhancements, RFFBs, medians and pedestrian refuge islands (limited feasibility)
Akron	SUM	E Tallmadge Ave (SR 261)	Gorge Blvd	Home Ave	70	3	Yes	Yes	Corridor access management, road diets, lighting, bicycle lanes, medians and pedestrian refuge islands
Akron	SUM	Albrecht Ave	Canton Rd (SR 91)	Akron Corp Line	14	3	Yes	Yes	Systemic low-cost countermeasures at stop-controlled intersections, crosswalk visibility enhancements, RFFBs, lighting
Akron	SUM	S Arlington St	Bruce Rd / Akron SCL	E Waterloo Rd	31	3	Yes	Yes	Road diets, crosswalk visibility enhancements, medians and pedestrian refuge islands, corridor access management, lighting
Akron	SUM	E Market St (SR 18)	Seiberling St	Mogadore Rd	38	3	Yes	Yes	Corridor access management, road diets, crosswalk visibility enhancements, bicycle lanes
Akron	SUM	Darrow Rd (SR 91)	Newton St	Akron Corp Line	41	3	Yes	Yes	Road diets, bicycle lanes, corridor access management, walkways (improved)
Cuyahoga Falls	SUM	E Steels Corners Rd	State Rd	Cuyahoga Falls Corp Line	50	3	No	No	Wider edge lines, dedicated left-turn lanes, lighting, bicycle lanes, walkways, pavement friction management
Akron	SUM	Kelly Ave	E Archwood Ave	3rd Ave	42	3	Yes	Yes	Road diets, bicycle lanes, walkways (east side, partial), speed safety cameras, lighting, roundabouts, crosswalk visibility enhancements
Cuyahoga Falls	SUM	W Portage Trail Ext	Akron-Peninsula Rd	Northampton Rd	47	3	Yes	Yes	Dedicated left-turn-lanes at intersections, bicycle lanes, walkways, lighting, pavement friction management
Mogadore	SUM	N Cleveland Ave (SR 532)	Mogadore Rd	Mogadore North Corp Line	20	3	Yes	Yes	Wider edge lines, dedicated left-turn lanes, lighting, bicycle lanes, walkways, enhanced delineation for horizontal curves, roadside design improvements at curves
Akron	SUM	S Main St	Wilbeth Rd (SR 764)	S Broadway St	62	3	Yes	Yes	Medians and pedestrian refuge islands, RFFBs, crosswalk visibility enhancements, speed safety cameras, corridor access management
Akron	SUM	South St/Johnston St	Brown St	S Arlington St	32	3	Yes	Yes	Bicycle lanes, crosswalk visibility enhancements, roadside design improvements at curves, enhanced delineation for horizontal curves
Akron	SUM	Brittain Rd	Eastwood Ave	E Tallmadge Ave (SR 261)	99	3	Yes	Yes	Road diets, dedicated left-turn-lanes at intersections, bicycle lanes, walkways
Akron	SUM	Vernon Odom Blvd (SR 261)	S Hawkins Ave	East Ave (SR 93)	53	3	Yes	Yes	Road diets, bicycle lanes, dedicated left-turn lanes at intersections, crosswalk visibility enhancements, speed safety cameras
Akron	SUM	Kenmore Blvd	W Wilbeth Rd	Manchester Rd	55	3	Yes	Yes	Corridor access management, improvements/better mode separation for existing road diet, crosswalk visibility enhancements, enhanced delineation for horizontal curves
Stow	SUM	Hudson Dr	Graham Rd	E Steels Corners Rd	54	3	No	No	Enhanced delineation for horizontal curves, roadside design improvements at curves, bicycle lanes, walkways, wider edge lines, lighting
Coventry Township	SUM	S Main St (CR 50)	Warner Rd (CR156)	Waterloo Rd	50	3	No	No	Appropriate speed limits, road diets (northern end) enhanced delineation for horizontal curves, roadside design improvements at curves, bicycle lanes, walkways, wider edge lines, lighting
Green	SUM	Mayfair Rd	Graybill Rd	Turkeyfoot Lake Rd (SR 619)	17	3	No	No	Walkways, bicycle lanes, enhanced delineation for horizontal curves, roadside design improvements at curves, designated left-turn lanes at intersections, lighting
Akron	SUM	E North St	N Howard St	N Arlington St	19	3	Yes	Yes	Enhanced delineation for horizontal curves, roadside design improvements at curves, bicycle lanes, wider edge lines, lighting, pavement friction management
Akron	SUM	Akron-Peninsula Rd	Portage Trail	Theiss Rd	20	3	Yes	No	Bicycle lanes, walkways, enhanced delineation for horizontal curves, wider edge lines, pavement friction management, lighting
Akron	SUM	Romig Rd	Akron Corp Line	Vernon Odom Blvd (SR 261)	65	3	No	Yes	Road diets, bicycle lanes, speed safety cameras, crosswalk visibility enhancements
Peninsula	SUM	Main St (SR 303)	Peninsula West Corp Line	Riverview Rd	33	3	No	No	Pavement friction management, lighting, roadside design improvements at curves, enhanced delineation for horizontal curves, wider edge lines
Northfield Ctr Township	SUM	Olde Eight Rd (CR 16)	E Highland Rd (CR 111)	Aurora Rd (SR 82) / Brandywine Rd	50	3	No	No	Dedicated left-turn lanes, bicycle lanes, walkways, speed safety cameras
Randolph Township	POR	Waterloo Rd (CR 87)	SR 44	US 224	9	3	No	No	Wider edge lines, longitudinal rumble strips (in less-dense areas), bicycle lanes (or wider shoulders)
Ravenna Township	POR	SR 88	Peck Rd (CR 167)	Limeridge Rd (CR 222)	27	3	No	No	Wider edge lines, longitudinal rumble strips pavement friction management, low-cost countermeasures at stop-controlled intersections
Ravenna Township	POR	SR 14	Streetsboro East Corp Line	Cleveland Rd (CR 171)	70	3	No	No	Pavement friction management, road safety audits, lighting, roadside design improvements at curves
Green	SUM	S Main St	Center Rd	Turkeyfoot Lake Rd (SR 619)	66	3	No	No	Roadside design improvements at curves, enhanced delineation for horizontal curves, rumble strips (in less-dense areas), wider edge lines, pavement friction management
Aurora	POR	Garfield Rd E (SR 82)	Chillicothe Rd (SR 306)	Town Line Rd	35	3	No	No	Rumble strips (eastern portion), bicycle lanes, wider edge lines, speed safety cameras, lighting
Atwater Township	POR	Waterloo Rd (US 224)	SR 183	SR 225 / Alliance Rd (CR 125)	13	3	No	Yes	Appropriate speed limits, wider edge lines, dedicated left-turn lanes
Green	SUM	Arlington Rd	Green South Corp Line	Greensburg Rd	31	3	No	No	Wider edge lines, longitudinal rumble strips (in less-dense areas), pavement friction management, roadside design improvements at curves, enhanced delineation for horizontal curves (northern end)
Shalersville Township	POR	Diagonal Rd (CR 155)	SR 303	Menonite Rd	84	3	No	No	Roadside design improvements at curves, enhanced delineation for horizontal curves, wider edge lines, longitudinal rumble strips, bicycle lanes
Brimfield Township	POR	Meloy Rd (TR 92)	SR 43	Sandy Lake Rd	23	3	No	No	Wider edge lines, enhanced delineation for horizontal curves, pavement friction management, bicycle lanes, roadside design improvements at curves
Freedom Township	POR	SR 303	SR 44	SR 88	86	3	No	No	Wider edge lines, longitudinal rumble strips, systemic low-cost countermeasures at stop-controlled intersections, lighting

Long-Term Project Recommendations

Projects considered long-term project recommendations are HIN locations with a minimum of two fatal or serious injury crashes. These projects are anticipated to be completed between FY 2036 and FY 2050. As this is the longest period, it also includes the largest number of recommended projects. AMATS, the SSFA Task Force and Stakeholder groups believed it was critical to incorporate all locations that met the two fatal and serious injury thresholds as the goal is to reduce fatal and serious crashes to zero. While these projects are considered long-term, AMATS will support these projects as quickly as they can be developed. While these locations have fewer fatal and serious injury crashes than the mid-term recommendations, they are no less important for achieving *Vision Zero*.

LONG-TERM INTERSECTION RECOMMENDATIONS (2 FSI Crashes)						
Political Unit	County	Street 1	Street 2	Crashes (2017-2021)	CETC Equity	CEJST Equity
Akron	SUM	S Hawkins Ave	W Exchange St	26	Yes	Yes
Akron	SUM	S Hawkins Ave	Slosson St	10	Yes	Yes
Akron	SUM	S Hawkins Ave	Thurston St	7	Yes	Yes
Akron	SUM	W Tallmadge Ave	Carpenter St	2	Yes	Yes
Akron	SUM	Diagonal Rd	Superior Ave	17	Yes	Yes



LONG-TERM INTERSECTION RECOMMENDATIONS (2 FSI Crashes)						
Political Unit	County	Street 1	Street 2	Crashes (2017-2021)	CETC Equity	CEJST Equity
Akron	SUM	S Broadway St	Rosa Parks Dr	67	Yes	Yes
Akron	SUM	E South St	Sumner St	5	Yes	Yes
Akron	SUM	Archwood Ave	Neptune Ave	6	Yes	Yes
Akron	SUM	E Waterloo Rd	Brown St	33	Yes	Yes
Akron	SUM	E Waterloo Rd / US 224	George Washington Blvd (SR 241)	107	Yes	Yes
Akron	SUM	Vernon Odom Blvd (SR 261)	Superior Ave	45	Yes	Yes
Akron	SUM	Copley Rd (SR 162)	Diagonal Rd / S Portage Path	36	Yes	Yes
Akron	SUM	E Market St (SR 18)	Main St	50	Yes	Yes
Akron	SUM	S Maple St (SR 162)	W Cedar St	50	Yes	Yes
Akron	SUM	N Arlington St	E North St	14	Yes	Yes
Akron	SUM	Brittain Rd	Bauer Blvd	9	Yes	Yes
Akron	SUM	S Arlington St	Lovers Lane	15	Yes	Yes
Akron	SUM	S Main St	Firestone Blvd	21	Yes	Yes
Akron	SUM	S Arlington St	Archwood Ave	48	Yes	Yes
Akron	SUM	S Broadway St	E Miller Ave	60	Yes	Yes
Akron	SUM	N Howard St	Glenwood Ave	46	Yes	Yes
Akron	SUM	Darrow Rd (SR 91)	Congo St	6	Yes	No
Akron	SUM	Triplett Blvd (SR 241 / SR 764)	Hilbish Ave (SR 241)	36	Yes	Yes
Akron	SUM	Copley Rd (SR 162)	Frederick Blvd	28	Yes	Yes
Akron	SUM	W Miller Ave	Princeton St	4	Yes	Yes
Akron	SUM	Riverview Rd	W Bath Rd	11	Yes	No
Akron	SUM	MLK Jr. Blvd (SR 59)	N Broadway St (SR 261)	68	Yes	Yes
Barberton	SUM	Wooster Rd W	31st St	53	Yes	Yes
Bath Township / Copley Township	SUM	Medina Rd (SR 18)	Heritage Woods Dr	29	No	No
Brimfield Twp	POR	SR 43	E Howe Rd	37	Yes	No
Chippewa Twp	WAY	SR 57	SR 585	26	No	No
Cuyahoga Falls	SUM	Portage Trail	State Rd	120	No	No
Cuyahoga Falls	SUM	2nd St	Chestnut Blvd	10	Yes	No
Cuyahoga Falls	SUM	Howe Ave	SR 8 SB Ramps	37	Yes	Yes
Edinburg Twp	POR	SR 14	I-76 WB Ramps	11	No	No
Fairlawn	SUM	W Market St (SR 18)	Hampshire Rd	24	No	No
Fairlawn	SUM	Brookmont Dr	Brookwall Dr	27	No	No
Fairlawn	SUM	W Market St (SR 18)	Smith Rd	52	No	No
Bath Twp / Copley Twp	SUM	Medina Rd (SR 18)	Medina Line Rd	36	No	No
Green	SUM	S Arlington Rd	Mount Pleasant Rd	15	No	No
Green	SUM	Mayfair Rd	Long Rd	2	No	No
Green	SUM	Massillon Rd (SR 241)	E Turkeyfoot Lake Rd (SR 619)	55	No	No
Green	SUM	S Arlington Rd	Nimisila Rd	18	Yes	No
Hudson	SUM	Hudson Dr	Terex Rd	27	No	No
Hudson	SUM	E Streetsboro Rd (SR 303)	Oviatt St	18	No	No
Kent	POR	S Water St (SR 43)	Beryl Dr	22	Yes	Yes
Kent	POR	SR 261	Franklin Ave / Sunnybrook Rd	27	Yes	No
Macedonia	SUM	SR 8	I-271 SB Ramps / Macedonia Commons Blvd	44	No	No
New Franklin	SUM	S Main St	Comet St	7	No	No
Paris Twp	POR	SR 225	Cable Line Rd	5	No	No
Randolph Twp	POR	US 224	Hartville Rd	7	No	No
Ravenna	POR	N Freedom St (SR 88)	E Highland Ave	7	Yes	Yes
Ravenna	POR	SR 14	SR 44 / N Chestnut St	61	No	No
Richfield	SUM	Broadview Rd (SR 176)	Wheatley Rd (SR 176) / Brecksville Rd	30	No	No
Rootstown Twp	POR	SR 5 / 44	I-76 WB Ramps	12	No	No
Stow	SUM	Graham Rd	Fishcreek Rd	81	No	No
Stow	SUM	Hudson Dr	McCauley Rd / Hibbard Dr	10	No	No
Streetsboro	POR	SR 14	Brook Valley Trail / Shady Lake Dr	44	Yes	No

LONG-TERM INTERSECTION RECOMMENDATIONS (2 FSI Crashes)						
Political Unit	County	Street 1	Street 2	Crashes (2017-2021)	CETC Equity	CEJST Equity
Streetsboro	POR	SR 14	Price Rd	7	No	No
Tallmadge	SUM	Northeast Ave (SR 261)	E Howe Rd / N Munroe Ave	71	No	No
Twinsburg Twp	SUM	Old Mill Rd	Ravenna Rd	11	No	No
Northfield	SUM	Northfield Rd (SR 8)	Sagamore Rd	10	No	No

LONG-TERM SEGMENT RECOMMENDATIONS (2 FSI Crashes)							
Political Unit	County	Name	From	To	Crashes (2017-2021)	CETC Equity	CEJST Equity
Akron	SUM	M.L. King Blvd (SR 59)	W Market St Overpass	N Broadway St	36	Yes	Yes
Akron	SUM	Copley Rd / S Maple St (SR 162)	Diagonal Rd / S Portage Path	W Exchange St	26	Yes	Yes
Akron	SUM	Copley Rd (SR 162)	Storer Ave	East Ave	42	Yes	Yes
Akron	SUM	E Cuyahoga Falls Ave	Front St	Akron Corp Line	15	Yes	Yes
Akron	SUM	E Archwood Ave	S Arlington St	Kelly Ave	9	Yes	Yes
Akron	SUM	S Arlington St (SR 764 part)	E Wilbeth Rd (SR 764)	E Archwood Ave	67	Yes	Yes
Ravenna	POR	E Highland Ave	N Chestnut St	Freedom St (SR 88)	7	Yes	Yes
Brimfield Township	POR	SR 43	Tallmadge Rd (CR 18)	I-76	32	No	No
Akron	SUM	W Exchange St	Rhodes Ave	Dart Ave	47	Yes	Yes
Cuyahoga Falls	SUM	Front St	Cuyahoga Falls Ave	Second St	19	Yes	No
Springfield Township	SUM	Arlington Rd (CR 15)	I-77 / Green NCL	Killian Rd (CR135)	104	Yes	No
Akron	SUM	Manchester Rd (SR 93)	Wilbeth Rd (SR 764)	SB ramp to old Manchester Rd	46	Yes	Yes
Copley Township	SUM	Medina Rd (SR 18)	I-77 centerline	Cleveland-Massillon Rd (CR 17)	243	No	No
Fairlawn	SUM	W Market St (SR 18)	Smith Rd	Ghent Rd	52	No	No
Richfield Township	SUM	W Streetsboro Rd (SR303)	Richfield ECL (S)	Black Rd (CR169)	20	No	No
Akron	SUM	W North St	W Market St (SR 18)	N Howard St	16	Yes	Yes
Barberton	SUM	Wooster Rd W	14th St NW	Wooster Rd N	56	Yes	Yes
Ravenna Township	POR	Summit Rd (CR 148)	Diamond St	Prospect St (CR 74)	10	Yes	No
Akron	SUM	Brittain Rd	Newton St	Eastwood Ave	27	Yes	Yes
Barberton	SUM	5th St SE (SR 619)	Barberton Corp Line	Robinson Ave	37	Yes	Yes
Akron	SUM	Triplett Blvd	Seiberling St	Hilbish Ave	20	Yes	Yes
Barberton	SUM	W State St	Wooster Rd N	Barberton Corp Line	39	Yes	Yes
Akron	SUM	E Waterloo Rd	S Main St	Brown St	53	Yes	Yes
Coventry Township	SUM	Manchester Rd (SR 93)	State St (CR162)	Robinson Ave (CR 54)	71	No	No
Akron	SUM	East Ave	Akron Corp Line	Iona Ave	53	Yes	Yes
Akron	SUM	Mogadore Rd	E Market St (SR 18)	Canton Rd (SR 91)	47	Yes	Yes
Akron	SUM	Gorge Blvd	Tallmadge Ave (SR 261)	Cuyahoga Falls Ave	21	Yes	Yes
Green	SUM	Arlington Rd	Turkeyfoot Lake Rd (SR 619)	Green North Corp Line	221	Yes	No
Akron	SUM	Lovers Lane	Brown St	S Arlington St	49	Yes	Yes
Akron	SUM	E Wilbeth Rd (SR 764)	Brown St	S Arlington St	59	Yes	Yes
Akron	SUM	E Cuyahoga Falls Ave	N Main St	Front St	105	Yes	Yes
Cuyahoga Falls	SUM	W Bath Rd	Northampton Rd	Akron Corp Line	16	Yes	No
Akron	SUM	E Archwood Ave	Brown St	S Arlington St	54	Yes	Yes
Akron	SUM	E Waterloo Rd	Brown St	S Arlington St	82	Yes	Yes
Green	SUM	Massillon Rd (SR 241)	Boettler Rd	Turkeyfoot Lake Rd (SR 619)	162	Yes	No
Brimfield Township	POR	Tallmadge Rd (CR 18)	Summit County Line	Sunnybrook Rd (CR 11)	60	No	No
Akron	SUM	All-America Bridge / N Main St (SR 261)	M.L. King Blvd (SR 59)	Olive St (W)	10	Yes	Yes
Kent	POR	Lake St	N Water St	Kent ECL	20	Yes	No
Akron	SUM	E Market St (SR 18)	E Exchange St	Seiberling St	50	Yes	Yes
Akron	SUM	N Case Ave / Newton St	E Market St (SR 18)	Brittain Rd	65	Yes	Yes
Hudson	SUM	Hudson Dr	Hudson South Corp Line	Terex Rd	17	No	No
Cuyahoga Falls	SUM	W Bath Rd	Akron / Cuy Falls CL	Northampton Rd	24	Yes	No
Cuyahoga Falls	SUM	Graham Rd	State Rd	Oakwood Dr / Wyoga Lake Rd	85	No	No

LONG-TERM SEGMENT RECOMMENDATIONS (2 FSI Crashes)							
Political Unit	County	Name	From	To	Crashes (2017-2021)	CETC Equity	CEJST Equity
Mogadore	SUM	Gilchrist Rd	Munroe Falls Rd	Mogadore Rd	11	Yes	No
Akron	SUM	Geo Washington Blvd (SR 241)	E Waterloo Rd (US 224)	Triplett Blvd	23	Yes	Yes
Akron	SUM	N Main St	E Cuyahoga Falls Ave	Akron Corp Line	41	Yes	Yes
Akron	SUM	Smith Rd	Sand Run Rd	Riverview Rd	39	Yes	No
Aurora	POR	Garfield Rd W (SR 82)	W Pioneer Trail	Aurora Rd (SR 43)	21	No	No
Ravenna Township	POR	Wall St (CR 159)	Red Brush Rd (CR 158)	Cleveland Rd (CR 171)	29	Yes	Yes
Akron	SUM	S Hawkins Ave	Vernon Odum Blvd (SR 261)	Copley Rd (SR 162)	55	Yes	Yes
Bath Township	SUM	N Cleveland-Massillon Rd (CR 17)	Medina Rd (SR 18)	Ghent Rd (CR 98)	49	No	No
Ravenna	POR	N Chestnut St	Highland Ave	SR 14 / SR 44	37	Yes	Yes
Akron	SUM	Diagonal Rd	Superior Ave	Copley Rd (SR 162)	58	Yes	Yes
Akron	SUM	Manchester Rd (SR 93)	SB Ramp to old Manchester Rd	East Ave	42	Yes	Yes
Coventry Township	SUM	Portage Lakes Dr (CR 75)	Manchester Rd (SR 93)	S Turkeyfoot Rd (CR123)	26	No	No
Stow	SUM	Fishcreek Rd	Darrow Rd (SR 91)	Stow Rd	31	No	No
Stow	SUM	Stow Rd	Darrow Rd (SR 91)	Fishcreek Rd	27	No	No
Macedonia	SUM	SR 8	I-271 Flyover Ramps	E Aurora Rd (SR 82)	69	No	No
Norton	SUM	S Medina Line Rd	Johnson Rd	Greenwich Rd	7	No	No
Macedonia	SUM	N Bedford Rd	E Aurora Rd (SR 82)	Ledge Rd	13	No	No
Green	SUM	Boettler Rd	Arlington Rd	Massillon Rd (SR 241)	34	Yes	No
Streetsboro	POR	SR 303	Page Rd	Streetsboro East Corp Line	15	Yes	No
Springfield Township	SUM	Arlington Rd (CR 15)	Killian Rd (CR135)	Bruce Rd / Akron SCL	75	Yes	No
Green	SUM	Mayfair Rd	Mt Pleasant Rd	Greensburg Rd	13	No	No
Brimfield Township	POR	SR 43	I-76	Kent South Corp Line	76	Yes	No
Springfield Township	SUM	Albrecht Ave (CR 44)	Akron ECL	S Cleveland Ave (SR532)	26	Yes	No
Green	SUM	Lauby Rd	Mt Pleasant Rd	Greensburg Rd	30	No	No
Chippewa Township	CHI	Akron Rd (SR 585)	Wadsworth Rd (SR 57)	Easton (SR 604) / Mt Eaton (SR 94)	37	No	No
Rootstown Township	POR	Prospect St (CR 74)	SR 5 / 44	Hayes Rd (CR 138)	55	No	No
Macedonia	SUM	E Aurora Rd (SR 82)	N Bedford Rd	Macedonia East Corp Line	72	No	No
Tallmadge	SUM	Southeast Ave	Tallmadge Circle	Eastwood Ave / S Munroe Rd	33	No	No
Cuyahoga Falls	SUM	State Rd	Steels Corners Rd	Wyoga Lake Rd	35	No	No
Copley Township	SUM	SR 21	Copley Rd (SR 162)	I-77	45	No	No
Streetsboro	POR	SR 14	SR 303 (E)	Diagonal Rd	173	No	No
Akron	SUM	Merriman Rd	Memorial Pkwy	N Portage Path	49	Yes	No
Macedonia	SUM	Ledge Rd	SR 8	Shepard Rd	46	No	No
New Franklin	SUM	Manchester Rd (SR 93)	Center Rd	Turkeyfoot Lake Rd (SR 619)	79	No	No
Bath Township	SUM	N Cleveland-Massillon Rd (CR 17)	W Bath Rd (CR 48)	Everett Rd (CR 47)	27	No	No
Cuyahoga Falls	SUM	W Steels Corners Rd	Akron-Peninsula Rd	Northampton Rd	25	No	No
Franklin Township	POR	SR 43	Kent North Corp Line	Streetsboro South Corp Line	138	Yes	No
Atwater Township	POR	SR 183	German Church Rd (TR 49)	Waterloo Rd (US 224)	55	No	Yes
Shalersville Township	POR	SR 44	SR 303	Mantua South Corp Line	30	No	No
Deerfield Township	POR	SR 225	German Church Rd (TR 49)	US 224	25	No	No
Ravenna Township	POR	SR 59	SR 261	Brady Lake Rd (CR 162)	136	No	No
Paris Township	POR	Newton Falls Rd (CR 177)	Wayland Rd	Holcomb Rd	6	No	No
Deerfield Township	POR	Waterloo Rd (US 224)	SR 14 / SR 225	Mahoning County Line	12	No	No
Norton	SUM	SR 21	Eastern Rd	Greenwich Rd	84	No	No
Sagamore Hills Township	SUM	W Aurora Rd (SR 82)	Cuyahoga County Line	Olde Eight Rd (CR 16)	65	No	No
Shalersville Township	POR	Infirmity Rd (CR 164)	Lake Rockwell Rd (CR 154)	SR 303	15	No	No
Copley Township	SUM	Jacoby Rd (CR205)	Summit Rd	Ridgewood Rd	18	No	No
Charlestown Township	POR	SR 5	SR 59	Rock Spring Rd (CR 52)	51	No	No
Paris Township	POR	SR 225	Cable Line Rd (CR 120)	SR 5	10	No	No

LONG-TERM SEGMENT RECOMMENDATIONS (2 FSI Crashes)							
Political Unit	County	Name	From	To	Crashes (2017-2021)	CETC Equity	CEJST Equity
New Franklin	SUM	S Cleveland-Massillon Rd	Clinton North Corp Line	Norton South Corp Line	15	No	No
New Franklin	SUM	Vanderhoof Rd	Cleveland-Massillon Rd	Manchester Rd (SR 93)	16	No	No
Mantua Township	POR	SR 82	Town Line Rd (TR 258)	SR 44	63	No	No
Freedom Township	POR	SR 700	SR 88	SR 82	34	No	No
Rootstown Township	POR	Lynn Rd (TR 99)	Sandy Lake Rd	New Milford Rd	32	No	No
Edinburg Township	POR	Tallmadge Rd (CR 18)	SR 14	SR 225	32	No	No

Strategy Recommendations

While infrastructure plays an important role in achieving AMATS *Vision Zero* goal, strategies that focus on enforcement, education, and engagement are just as critical. To develop strategies for the SS4A Action Plan, AMATS analyzed its crash data, public feedback, and state and federal resources. AMATS leaned heavily on ODOT's Strategic Highway Safety Plan (SHSP) to ensure that strategies were aligned with ODOT's goals.

As part of the Federal Highway Administration's Highway Safety Improvement Program (HSIP), each state is required to develop a Strategic Highway Safety Plan. The Ohio Department of Transportation's SHSP identifies causes of traffic crashes and strategies that will have the greatest impact on reducing traffic deaths and serious injuries. Many of ODOT's findings mirror the findings in the Greater Akron area.

AMATS strategies for achieving *Vision Zero* are included below. The strategies have been organized by areas of concern. AMATS has listed the timeframe based on the expected life of the *SS4A Action Plan*, which will be updated in four years. Supporting organizations are organizations that can help implement recommended strategies. The areas of concern in the Greater Akron area include speed, distracted driving, impairment, seat belts, motorcycles, railroad crossings, and bicycles and pedestrians.

Speed

According to the Ohio's Strategic Highway Safety Plan, 31% of fatalities and 23% of serious injuries are caused by speeding. While enforcement has typically been the way communities have tried to reduce speed, it takes consistent resources and time that law enforcement do not have. It is important that communities consider a number of strategies to reduce speed. Between 2017 and 2021, speed was a factor in 25% of all AMATS region FSI crashes. Many of these crashes involve other factors that attribute to the severity of the crash, such as impairment and roadway departure. Speed is a factor in 36% of fixed object crashes in the AMATS region. The strategies below can be used to reduce speed effectively.

Strategy	Time Frame	Supporting Organizations
Incorporate Complete Street Principles into roadway design	Year 1-4	AMATS, ODOT, Local Communities
Review posted speed limits in HIN locations, review non-through street local ordinances to determine if appropriate for lowering posted speed limits	Year 3-4	AMATS, Local Communities
Identify high visibility safety corridors on arterial streets that focus on speed reduction. Utilize new signage, possible increased enforcement in safety corridor	Year 2-4	AMATS, Local Communities

Distracted Driving

Mobile devices pose a greater threat than traditional distractions such as eating, drinking, or reaching for the radio. Drivers are taking their eyes off the road more often and for longer periods of time to complete a task on their phone. In the Greater Akron area, there has been an increase in crashes caused by distracted driving year over year. Although distracted driving has only been an attributable cause in 7% of all regional crashes, there is reason to suspect distracted driving is under reported. In many cases, distracted driving can be difficult to prove and law enforcement may only further investigate whether cell phone usage contributed on the most serious crashes. The recommendations on the top left of page 32 offer strategies to reduce the amount of distracted driving in the greater Akron area.

Strategy	Time Frame	Supporting Organizations
Encourage area employers to implement strong distracted driving policies for employees	Year 1-4	AMATS, Local Chambers of Commerce
Utilize ODOT's Distracted Driving Simulator at AMATS events to educate the public on distracted driving	Year 1-4	AMATS, ODOT
Support ODOT's efforts to identify and promote the use of distracted driving lesson plans in grades 5-12	Year 1-4	AMATS, ODOT, Local School Districts, Ohio Department of Education

Impairment

This type of driving involves the use of alcohol, illegal drugs, or prescription drugs, and impairs the abilities of the driver. AMATS has seen an increase in this behavior. Alcohol and drug-related fatal and serious injury crashes make up 26% of the crashes in the AMATS region.

Strategy	Time Frame	Supporting Organizations
Support state and county efforts to conduct highly visible alcohol impaired driving enforcement activity at strategic times throughout the year	Year 1-4	AMATS, State Highway Patrol, Local Sheriff's Departments, Municipal Police Departments

Seat Belts

Ohio's seatbelt usage is significantly lower than the national average. Ohio has an 86% usage rate while the nation has a 91% usage rate. Although highly effective at saving lives in traffic crashes, fatal and serious injury crashes too often involve unrestrained drivers or passengers. Thirteen percent of the region's fatal and serious crashes involve unrestrained occupants.

Strategy	Time Frame	Supporting Organizations
Support the enforcement of Ohio's seatbelt law	Year 1-4	AMATS, State Highway Patrol, Local Sheriff's Departments, Municipal Police Departments
Consider a regional media campaign using local statistics to encourage seatbelt usage	Year 3-4	AMATS, ODOT, Local Communities

Motorcycles

Crashes involving motorcycles too often result in serious injuries or death. According to the National Highway Traffic Safety Administration, motorcyclists are 28 times more likely to die in a traffic crash compared to occupants in passenger vehicles. Motorcycle safety can be improved by both motorcyclists and drivers. In the AMATS region, 18% of all fatal and serious injury crashes involved motorcycles.

Strategy	Time Frame	Supporting Organizations
Encourage the use of helmets through a media campaign	Year 1-4	AMATS, ODOT, Local Communities
Support providing basic rider skills training	Year 4	Ohio Bureau of Motor Vehicles

Railway Crossings

Although a small percentage of crashes are highway railroad crashes, they are often severe when they occur. Between 2017 and 2021, there was one fatal crash involving a train in the AMATS region. AMATS and local communities have been aggressive in developing railroad grade separation projects, however, there are still major-at grade rail crossings that can carry 60 trains a day. As trains have gotten longer, the region has also had issues with trains stopped at at-grade crossings and delaying automobile traffic. This can create difficulties with emergency management response.

Recommendation	Time Frame	Supporting Organizations
Support Community efforts to construct grade separation projects and eliminate at grade crossings along the HIN	Year 3-4	AMATS, Local Communities, Ohio Rail Development Commission
Work with railroads to identify potential railroad operational changes to alleviate blocked crossings	Year 1-4	AMATS, Local Communities, Private Rail Operators
Develop a community education campaign regarding rail safety	Year 4	AMATS, Local Communities, Private Rail Operators

Bicycle and Pedestrian

Walking and cycling are healthy modes of travel, but crashes involving pedestrians and cyclists are more likely to result in death or serious injury. Between 2017 and 2021, there were 171 regional pedestrian-related and 46 bicycle-related fatal and serious injury crashes in the Greater Akron area. Although pedestrian crashes make up less than 1% of all crashes, they account for more than 9% of all fatal and 8 % of severe injury crashes.

Strategy	Time Frame	Supporting Organizations
Update AMATS Active Transportation Plan to incorporate SS4A Action Plan Recommendations	Year 1	AMATS, Local Communities
Encourage local communities and school districts to complete Safe Routes to School Travel Plans	Year 1-4	AMATS, Local Communities, Local School Districts
Support Safe Routes To School Activities like walking busses and ride your bike to school day	Year 2-4	AMATS, Local Communities, Local School Districts
Continue AMATS Bike N Brainstorm program with an emphasis on safety	Year 1-4	AMATS, Local Communities
Support educational efforts to increase awareness, understanding, and knowledge of current conditions and opportunities for advancing walking and biking	Year 1-4	AMATS / Switching Gears, ODOT, Local Communities, Local Advocacy Groups
Assist in the development of advocacy programs to encourage motorists' awareness of bicycles, such as "3 Feet" laws	Year 1-4	AMATS / Switching Gears, ODOT, Regional Bicycling Advocacy Groups
Develop and promote educational materials for roadway users on rights and responsibilities impacting pedestrians and bicyclists	Year 1-4	ODOT, Ohio Bureau of Motor Vehicles

Transit Recommendations

A variety of transit-related recommendations were developed during the planning process. Encouraging and incorporating transit into the design of roadways has clear safety benefits for pedestrians and motorists. Higher transit usage correlates with a decreased traffic fatality rate. Transit travel has about a tenth the traffic casualty (death or injury) rate as automobile travel, according to the Journal of Public Transportation's article "A New Transit Safety Narrative," published in 2014. Transit is ubiquitous but context-dependent on roadways, and the ability to provide safe and accessible transit is dependent on roadway design.

AMATS worked closely with the two regional public transportation providers—METRO and the Portage Area Regional Transportation Authority (PARTA)—to develop a variety of transit-related recommendations. Some of these are project-related considerations, typically either items to consider during larger roadway projects or systemic transit safety improvements that could be applied throughout the region's transit routes. The table below lists these recommendations. The timeframe to implement each of these recommendations will vary. Many of the recommendations below are already being implemented, where most appropriate, on larger projects as they are constructed. AMATS supports the continuation of improving transit infrastructure on an ongoing basis.

General Transit Project Considerations and Recommendations

Recommendation	Time Frame	Supporting Organizations
Prioritize lighting improvements to transit stops and nearby areas. Improvements could be up to a one-mile / 20-minute walk of a transit stop but, in most cases, will be closer to transit stops.	Ongoing	AMATS, METRO, PARTA, Summit and Portage County Communities
Complete sidewalk gaps up to a one-mile/20-minute walk of a transit stop walk to increase the population served.	Ongoing	AMATS, METRO, PARTA, Summit and Portage County Communities
Stripe, reconfigure or create accessible crosswalks, installation of pedestrian control devices and high intensity activated crosswalk (HAWK) beacons to improve pedestrian safety near transit stops.	Ongoing	AMATS, METRO, PARTA, Summit and Portage County Communities
Develop Bus Rapid Transit (BRT) within Akron and surrounding communities, based on the corridor recommendations from the ongoing BRT study, by prioritizing the incorporation of BRT design needs into future roadway project plans. Ensure that any future BRT system is designed with the safety of the entire transportation system in mind.	Mid-Term to Long-Term	AMATS, METRO, PARTA, Summit and Portage County Communities

Recommendation	Time Frame	Supporting Organizations
Incorporate transit enhancements, such as bus-only lanes, transit-signal priority, queue-jump lanes, boarding bulbs, islands or pads on transit corridors through coordination between transit agencies and local communities.	Ongoing	AMATS, METRO, PARTA, Summit and Portage County Communities
Install improved bus stop amenities such as bus shelters, benches, ADA boarding areas, heating elements, snow-melt systems, enhanced lighting, bicycle storage, trash receptacles, and other elements to increase the safety of passengers and the general attractiveness of transit.	Ongoing	AMATS, METRO, PARTA, Summit and Portage County Communities

Each transit provider also provided their highest-priority transit corridors for future improvement. These corridors would benefit the most from investment in transit infrastructure. However, all corridors with transit would benefit from any level of investment. Projects that occur on any identified transit corridor should consult the recommendations listed within the previous table to help identify ways to improve the safety of pedestrians and transit riders.

In Summit County, the highest-priority transit corridors include the following, listed in no particular order in the table below. These corridors have 15-minute service, which is the highest available currently in METRO's network.

Corridor	Location
West Market St	Montrose area / I-77 to Downtown Akron
East Market St	Downtown Akron to Canton Rd / SR 91
East Exchange St	Downtown Akron to Middlebury Neighborhood / Arlington Rd
North Main St / South Main St / Howard St / State Rd	Downtown Akron to Portage Trail in Cuyahoga Falls
South High St	Downtown Akron
S Broadway St	Downtown Akron
S Arlington St	Near I-77 Interchange in Green to SR 18 / East Market St in Akron
Grant St	Firestone Park / South Akron area to East Exchange St
Brown St	Firestone Park / South Akron area to East Exchange St
Vernon Odom Blvd	Romig Rd to Downtown Akron / Opportunity Pkwy
Kenmore Blvd / Wooster Rd North	Lake Shore Blvd in Akron to Wooster Rd / Robinson Ave in Barberton
Copley Rd	South Hawkins Ave to West Cedar St in Akron

In Portage County, the highest-priority transit corridors include the following, listed in no particular order:

Corridor	Location
SR 59 / Main St	Portage county line in Kent to east side of Ravenna
Summit St	Franklin Ave to SR 261 in Kent (significant transit upgrades have already been made east of South Willow St)
SR 43 / North Water St / South Water St	SR 261 to Lake St in Kent
North Chestnut St / South Chestnut St	Throughout the city of Ravenna
Lake St	North Water St in Kent to 2nd Ave in Franklin Township

PARTA is in the early stages of conducting a thorough analysis of its routes and service areas. As a result, PARTA's current routes may be adjusted or significantly changed. Specifically, PARTA is considering the viability of adding new routes to provide additional service to Brimfield and Streetsboro. State Route 43 and Tallmadge Road in Brimfield and State Route 14 in Streetsboro are likely potential future priority transit routes.

The remaining recommendations are strategies aimed at improving coordination between agencies to continue to improve the public transportation network. These recommendations are listed in the following table:

Recommendation	Time Frame	Supporting Organizations
Work closely with regional transit agencies to help communicate marketing and branding efforts that facilitate the thoughtful incorporation of transit agencies in future projects.	Ongoing	AMATS, METRO, PARTA
Identify and plan for reducing challenges to regional coordinated transportation, including unmet needs and gaps, by updating the regional Coordinated Public Transit/ Human Services Transportation Plan.	Years 1 & 4	AMATS, METRO, PARTA, other regional managers
Continue to build relationships with state and federal transit agencies in order to grow awareness of funding availability for transit safety and understand best practices.	Ongoing	AMATS, FTA, ODOT
Ensure that transit agencies are involved at the beginning for the planning of any roadway projects along a transit corridor and encourage roadway reconfigurations to prioritize a Complete Streets project where possible.	Ongoing	AMATS, ODOT, METRO, PARTA, regional communities

Conclusion

The projects and strategies recommended in the *SS4A Action Plan* are critical in helping the Greater Akron area reach its *Vision Zero* goal. These recommendations go beyond infrastructure and consider other strategies to educate and engage the public on transportation safety. While these recommendations have included time frames, all these projects and strategies are equally important and necessary. Each one could potentially save a life of a driver, passenger, bicyclist, or pedestrian. The AMATS *SS4A Action Plan* recommendations provide a roadmap for the Greater Akron area to achieve zero fatalities and serious injuries by 2050.

PROGRESS AND TRANSPARENCY

The SS4A Action Plan includes recommendations that should positively impact transportation for all users. As AMATS begins to implement recommendations from the *SS4A Action Plan* it is critical that the agency measure its progress in a fully transparent way. The purpose of this chapter of the *SS4A Action Plan* is to outline how AMATS will measure progress towards a *Vision Zero* goal and discuss how that information will be shared with the public.

Previously Established Progress Measures

Increased safety has always been a defined goal of AMATS. The agency has established methods that track crashes on a yearly basis. The AMATS *Traffic Crash Report* is published every December and outlines all high-crash intersections and segments in the region. The report summarizes fatal and serious injury crashes, bicycle and pedestrian crashes, and property damage only crashes.

Federal legislation requires Metropolitan Planning Organizations (MPOs) such as AMATS to establish performance targets and set targets that demonstrate fatal and serious injury reductions on all public roads. The required performance measures for safety are:

- *Number of fatalities*
- *Fatality rate*
- *Number of serious injuries*
- *Serious injury rate*
- *Number of non-motorized fatalities and serious injuries*

AMATS and the Ohio Department of Transportation (ODOT) use a five-year average to calculate baseline safety statistics. These baseline figures are the benchmarks to which all future calculations will be compared. All future values will also be calculated using five years of data. This five-year rolling average is used to smooth out short-term, year-to-year fluctuations. As part of the federal Performance Based Planning Process (PBPP), AMATS supports ODOT's goal of a 2% reduction in performance measure targets.

SS4A Action Plan Progress Measures

The *SS4A Action Plan* is not intended to be a static plan. As AMATS makes progress on Action Plan recommendations, it must consistently measure the impact of those recommendations on achieving *Vision Zero* for the Greater Akron area.

AMATS will publish an annual report on the progress of the *SS4A Action Plan*. This annual report will be published in December of each year and include the following:

- Updated crash statistics from the previous year with an emphasis on fatal and serious injury crashes and bicycle and pedestrian crashes
- Tables and graphs displaying trend lines from the past five years of crash statistics
- An annual list of projects beginning construction that were recommended as part of the *SS4A Action Plan*
- A narrative describing other efforts by local communities that support the goals of the *SS4A Action Plan*

In addition to developing an annual report, AMATS expects to update its High Injury Network (HIN) every two years. This HIN will ensure that AMATS has an up-to-date network of roadways that reflect the current regional environment.

AMATS intends to do a full update of the *SS4A Action Plan* every four years. This update will include all of the annual reporting and data described here and updated policy and progress recommendations.

Transparency

AMATS has developed the *SS4A Action Plan* with the goal of full transparency. As part of the engagement process, AMATS created a taskforce, regional survey, and focus groups to allow as many voices as possible into the development of the plan. The *SS4A Action Plan* will be posted in final form on the AMATS website, amatsplanning.org. Interim documents like the annual report and updated HIN will also be posted on the AMATS website.

APPENDIX A - PUBLIC ENGAGEMENT

Focus Group Engagement

Focus Group #1 - Transit

Transit Focus Group – November 17, 2022

Attendee	Representing
Bambi Miller	METRO
Quentin Wyatt	METRO
Michelle DiFiore	City of Akron
Chris Jonke	City of Akron
Jim Bowling	City of Kent
Matt Mullen	METRO
Nicholas Miller	METRO
Amy Proseus	PARTA
Dylan Garritano	City of Akron
Mike Lupica	City of Akron
Curtis Baker	AMATS
Dave Pulay	AMATS
Heather Davis-Reidl	AMATS
Matt Stewart	AMATS
David Swirsky	AMATS

Is safe access to transit stops a problem?

Lack of sidewalks, all riders start as pedestrians

Metro- lack of sidewalks. People pulling out in front of the busses. 2019 data- 117 vehicles out on the streets. **Better lighting is a common request.** Suburbs don't have sidewalks. **Stop locations are in conflict with parking, bike lanes, merge lanes, etc.** Metro will be reviewing all stops in network, as part of Reimagine process.

Jim- focus on arterials on high transit usage routes (and higher density) will lead to highest impact.

Jim – **if we can make the arterials safer for pedestrians for transit service, ped crashes are concentrated on arterials, where we send pedestrians to transit stops. To make routes safer for transit, get people to and from transit routes safer and comfortable, which makes transit more efficient.**

Metro- age friendly movement. **Senior communities do not have good access to transit.**

Michelle- *overlay sidewalk network with crash data.* Summit lake is losing a route and residents have to walk further.

Lack of sidewalk connections. Pedestrian islands- city is looking at options for e. market redevelopment.

Jim- vast majority of pedestrian crashes happen within crosswalks in Kent. Driver turning right on red at a signalized crosswalk.

(If so), are there specific locations where pedestrian facilities do not exist but should? (lack of sidewalks, etc.)

Parta- wide lanes along lake street create issues

How are stop locations chosen, and does safe access play a part in those decisions?

Metro- plan routes that have sidewalks. Will be looking for crosswalks, room for ada ramps, adequate room for people to wait, not blocking a driveway. Reduce conflict.

What do the more accessible bus stops share in common? (is it sidewalks, lighting, locations, communities that value transit?)

Jim- crosswalk, pull off area for buses

Metro- **but** the pull off area creates delays for the other riders because it takes longer for the bus to get back into the travel lanes

What partnerships are needed to improve safe access to transit?

Metro- need ODOT to focus on pedestrian safety.

Michelle- talk to ODOT about setting speed limits.

Jim- the industry is changing. We don't know how to redesign streets to actually change driver behavior.

ODOT, communities, and transit agencies need to partner for improved safety. Michelle – community should have more say in speed limits. Jim – speed studies simply look at how fast a car can go safely

Summary – road design has a large impact on safe access to transit. Education is also important. Transit would like customers to get to and from stops safely.

Can anyone speak to the bus drivers' experiences and safety issues on the system or with passengers' access to transit?

Bambi- driver behavior is the biggest issue.

Metro- bus has an audio message that says do not cross in front of the bus. Canton road bus stop being changed because drivers are getting anxious about being stuck in the roundabout for a moment. Pedestrian islands are creating other issues with drivers trying to get in front of busses and then the lane goes away. Kenmore boulevard striping and so much room creates issues. Striping does not change behavior. Bike lanes standards have changed, increasing width.

METRO – drivers make notes. Drivers write up hazard or incident report. METRO then can pull video from the bus, send it to Planning at METRO, then escalate to city for potential improvements

Greenfield expansion is a big issue overall.

Dylan – spending time victim blaming when cars are the ones behaving badly. Need to tighten up the road to prevent room for bad behavior.

City of Akron has streetlights mapped. Several years old.

Active Transportation Focus Group – November 17, 2022

Attendee	Representing
Michelle DiFiore	City of Akron
Chris Jonke	City of Akron
Jim Bowling	City of Kent
Tom Euclide	Former Kent State University Employee; Kent Resident
Dylan Garritano	City of Akron
Mike Lupica	City of Akron
David Clapp	City of Akron
Daniel DeAngelo	City of Akron
Megan DeLong	
Aimee Ward	Kent State University Department of Geography
Kristi Kato	Summit County Public Health
Javonne Bray	Summit County Public Health
Ann Ward	City of Kent Environmental Council
Curtis Baker	AMATS
Dave Pulay	AMATS
Heather Davis-Reidl	AMATS
Matt Stewart	AMATS
David Swirsky	AMATS

What are examples of comfortable places to walk/bike, and what makes them great?

Dedicated bike trails and lanes. Painted bike lanes.
 E. Main St. in Kent- Minimal driveways. Wide buffer between sidewalk and road. Wide sidewalks.
 Main St. in Akron.
 Jim – raised sidewalk is even more comfortable.
 Tom – trails are best for biking, when bike lanes are colored differently, it seemed to help keep drivers and cyclists in their lanes
 Carroll St. in Middlebury- wide sidewalk and buffer between sidewalk and road. Curb cuts.
 Tom – wheelchair users need flat surfaces.
 Jim – blind peds have other needs – audio signals, unexpected obstructions
 Matt- audible signals where are they? Lupica – by request
 Jim – Alleys with different colors to delineate peds and cars
 Megan and Kristi did walk audits in Akron. Curtis asked what people’s experiences were – Middlebury especially, what was surprising? Being afraid of dogs, lighting (daylight vs night), uncomfortable around industrial areas.
 Walking on sidewalk against the roadway felt exposed. Wide streets create fast moving vehicles. Market st Fairmont Developers want to buffer peds.
 David – cars that turn across crosswalk behind my back. Aqueduct N and Market st intersection? Narrow sidewalks on Market in Highland Square are uncomfortable. Market and Merriman is another difficult intersection to cross
 W. 25th and Detroit Ave in Cleveland
 Aimee – roundabouts, Barnes dance crossing just for peds, narrow crossings slow cars and make is easier for peds to cross, include motorists in these convos, “commuters” instead of “cyclists”
 Megan - Sidewalks, trash, safety, lighting are the most used words in walk audits

How do we incorporate equity considerations into active transportation planning?

Income levels. People who don’t own cars. Physical + cognitive disabilities.

Michelle – towpath trail completed? Can you provide a benefit? Its already there with the towpath trail. Jim – handicapped is throughout the system – ADA ramps, prioritize audible signal heads, Income and physical disabilities.
 Kristi – inclusive to cognitive disabilities – what can we do to make things better for them?
 Police regulation, address all needs – Aimee
 Megan – observational counts – listening training studies - why? See how people use the space then summarize it.

What do you feel is most important in terms of active transportation? (facility design, enforcement, education?)

Education – respecting anyone on the road. Sound pollution is a deterrent. Bump outs cause traffic to slow
 David – dedicated bike lanes helps, secure bike parking, need to plow bike lanes and sidewalks
 Jim – city cites people and businesses for leaving snow in intersections.
 Tom – intersection design to have methods for bikes to cue at lights, grooved pavement along the edge of roads is a nightmare for cyclists.

What would make you feel safer riding on roads?

Making drivers more aware of cyclists. Painted bike lanes.
 Dedicated bike lanes. Sharrows. Signage saying bikes may use full lane. Dedicated bike parking.
 Redesigning intersection queue. Gaps in rumble strips.
 Less fragmentation throughout road infrastructure.
 Mike Lupica – we need more cyclists on the road. Park N Rides for cyclists closer to downtown. Education for everyone.
 Curtis – when it comes to safety for cyclists, is the design an issue, driver error, what is the cause for near misses?
 What gives you anxiety? Jim – cars,
 Aimee - abruptly changing infrastructure is bad for her, route fragmentation!! Safety in numbers, we should consider everyone at the same time (cyclists, wheelchairs, skateboards, etc).

First Responder Focus Group – November 29, 2022

Attendee	Representing
Jim Bowling	City of Kent
Kevin Grimm	Streetsboro Fire Department
Tricia Wain	Streetsboro Police Department
Nick Shearer	Kent Police Department
Ben Knorr	Barberton Police Department
Heather Davis-Reidl	AMATS
Matt Stewart	AMATS
David Swirsky	AMATS

What are your biggest concerns for safety when responding to a situation?

Kevin- Build up of notifications. Sending out notices that routes may be blocked.

Tricia- Driver inattention. Rerouting traffic.

Tricia – ACDA is biggest issue, most severe crashes are RT 14 east limits – Project to reduce lanes. Rt 303 and Diagonal is an issue

What do you believe is the biggest traffic safety issue?

Nick – SR 261 crashes are not frequent, but often bad. River St

FSI crashes are single vehicle, speed, distracted or impaired driving. Jim – recent fatalities are vehicles with active transpo user.

Nick – distracted driving seems to be issue, although hard to pinpoint.

Tricia – hopeful a project to reduce lanes on the east will reduce crashes

t-bone accidents when people leave space to allow left turns out, then don't see oncoming traffic from the turn lane

Mondial and 14 – lots of accidents

With FSI crashes, are there any themes or commonalities that exist?

Nick- distracted driving, alcohol related, single car exiting the roadway. 59 drivers are going faster and not expecting pedestrians- 5 lane road.

What role do you believe roadway design plays in most crashes (large role/small role)?

Jim- somewhat, yes. More so if drivers are expecting pedestrians

Tricia- hopeful that reducing lanes in Streetsboro will lower FSI crashes.

Are there specific areas of concern when you think of major crash locations (e.g. "bad" intersections), and do you have thoughts on how best to improve them?

Tricia- 60% of crashes are rear-ends. Route 14, especially close to 480. Route 43. 14 at 303 have the worst FSI crashes.

Traffic lights sometimes cause FSI with confusing protected green light vs permissive green light

Nick- 261 is highest speed road so more FSI crashes. 43/river street, northbound- left turn onto side streets from right lane.

One way roads cause more issues than two way roads. Mantua- gogglar park

Jim- access management. Protected green arrow, median where people are turning left, etc

Preemption?

Nick – would love to see 43 reduced to one lane. River and Gougler have crashes due to people turning left from the far right lane.

Access management – Jim – would limit what drivers can do, reducing accidents

Install median on 14 to reduce left turning movements, protected green arrow (261 and Campus Center).

Median with crosswalk and pavers allows firetruck to turn

Median flush on Summit St to assist firetrucks (this is possible due to one lane in each direction, not possible on 59, There will be curbs and trees).

Do you have thoughts regarding the correlation between ideal lane width and safety?

Preemption - Streetboro has this, but only in their community – can't be used outside of their community. Hudson has it as well. GPS vs light system? Kent has light system – GPS is better?

Kevin uses GPS – and it is easier. Put into project as they upgraded signals, so cost was spread out over projects.

Code White – activate system without turning the lights on. Snow plows work on Code White, too. \$400 to \$600 per vehicle

Nick can also activate system without turning on lights.

Have you observed major changes in driver behavior, such as d/a impairment, distracted driving, etc.?

Nick- anecdotally, yes. Hard to measure. Drivers don't always admit they were distracted. The increase of ACDA, rear ends, shows that there are more distracted drivers.

Kevin- anecdotally, more people are going through yellow lights. Eastbound on route 14, people are going through yellow/red lights regularly. West on route 14- turning left at dunkin donuts is a high crash area.

Jim- cultural shifts, we try to do more with less time. Might be a correlation between rise of substance abuse and FSI crashes within the last few years.

What are the biggest barriers to combating distracted or impaired driving (e.g. manpower, funding, effective educational/PR campaigns, etc.)?

Nick- campaigns do not really move the needle. Moving distracted driving from secondary offense to primary offense would probably help statewide.

Jim- 3 degrees of distraction. Hands off the wheel, eyes off the road, not thinking about driving. Texting is all 3. hands free Bluetooth is only 1

Is there an increase in drug usage? – Nick – type of drugs has changed in 5 years. Came down hard on meth, heroin became preferred. Drugs get harder. Seeing fentanyl in all drugs.

Distracted driving is a secondary offense, state looking to make it a primary offense.

Jim – is it a recommendation to educate people not to drive distracted? Is it a recommendation to make distracted driving a primary offense? Who and How? Communities can apply for SSFA funding to do the HOW.

Have you seen success with temporary or permanent traffic calming solutions (such as mobile or variable speed limit signs, speed tables, design of roadways, etc.)?

Nick- "yield to pedestrians" signs downtown in middle of crosswalks. North water street narrowing has helped slow traffic considerably. Summit street- crashes dropped 60%, speeding also dropped significantly.

Esplanade, willow has a speed table. Less pedestrian crashes than Lincoln, which is similar road

Jim- E. main will have multiple traffic calming

Kent – "Slow" signs downtown (in the street) at crosswalks seem to help – signs come down in winter for snow removal, N Water St corridor narrowing the road slows traffic, Summit St roundabouts have reduced ped crashes.

Kent tracks crashes before and after projects.

Jim – SR 59 will have different traffic calming to see what works. Yield to ped signs at mid block crossings, narrowing lanes to slow traffic, etc.

K-12 Education Focus Group – November 29, 2022

Attendee	Representing
Jim Bowling	City of Kent
David Clapp	City of Akron
Marjorie Johnson	City of Cuyahoga Falls
Jennifer Mapes	Kent State University Department of Geography
Jim Soyars	Kent City School District
Dustin Boswell	Springfield School District
Heather Davis-Reidl	AMATS
Matt Stewart	AMATS
David Swirsky	AMATS

What education is being taught for pedestrian and bicycle safety?

Springfield- no. Kent- once a year in 5th grade. Cuyahoga Falls- once a year.
 “Here comes the bus” app to help parents/students to know where the bus is. Kent City Schools for the last 2 years.

Identifying champions – is it difficult to find people to lead initiatives – i.e. Safe Routes or Bike Bus?

Jim- some interest but not a high priority.
 Phys ed teacher and another parent are willing to help in Kent. Jennifer would like to start a bike bus for her son’s school.

What are the biggest obstacles at your district for student transportation (parking, sidewalks, bussing, bicycle facilities)?

Schools are seeing congestion issues due to parents and others driving, in addition to busses. Springfield allows students to leave early if they have study hall at the end of the day.
 Driver shortages have caused issues for schools to adjust on the fly.
 Plowing sidewalks is an issue in Kent; city plows SR 43, SR 59 sidewalks, still – roads are priority, then the sidewalks can be cleared.
 Bus stops are added temporarily in C Falls while sidewalks are not plowed – bus drivers do this.

How engaged is your district in off-campus traffic safety? Are districts generally aware of where there are traffic safety issues for students once they leave the school campus?

Jim- city hires crossing guards for a few intersections near schools. 43 has a lot of pedestrians and drivers going in and out of the school campus.
 Dustin- lots of foot traffic along sanitarium road, which has no sidewalks

Does your district actively encourage active transportation to your facilities? Are there specific safety barriers to doing so (e.g. lack of sidewalks) and are safer facilities something you are actively pursuing (vs. remaining content with bussing and parent drop-off/pick-up)?

Jim- opportunity for hike + bike trail that could connect various schools.
 Want students to be safe – one mile walk zone for elementary, 2 mile for high school. Kent City Schools looking to improve safety, encourage kids to bike. State minimum is no bussing for high school students, so Kent City is doing better than that
 Obstacles to safety improvements – MONEY
 Kent kids walking north on 43 have to cross to get to schools. Have changed drop off and pick up
 With covid we saw more parents driving kids to school

Springfield transports anyone outside of 2 miles.

Do safe routes to school and active transportation play a role in decision-making if/when any new schools are built? (ask only if pertinent)

Somewhat but no new schools being planned.
 Safe Routes to Schools – does it come into play when choosing new sites? If they were to build – yes, but land and cost would be first concern. Then, they would try to address any safety concerns from there.
 When renovating Kent HS, they rerouted driveway and parking lot for safety reasons.

Community Development and Social Services Focus Group – November 30, 2022

Attendee	Representing
Dylan Garritano	City of Akron
Michelle DiFiore	City of Akron
Bambi Miller	METRO
Heather Coughlin	Akron Metropolitan Housing Authority
Michael Bruder	City of Kent Resident
Tina Boyes	Kenmore Neighborhood Development Corporation
Jason Betts	Summit County Job and Family Services
Heather Davis-Reidl	AMATS
Matt Stewart	AMATS
David Swirsky	AMATS

Besides funding, what are the biggest obstacles to implementing safety improvements in your community?

Bambi- some cities don't want shelters. The shelters must be big enough for ADA access. Maintenance of shelters can be an issue.

Michelle- limited funds via ODOT project. Smaller cities may not have capacity to take on certain projects.

Funding is #1, some communities don't like design, maintaining changes make be an impediment, ROW challenges, some other communities have other things to focus on. MD – ODOT provided safety improvement program. Midblock crosswalks came out of this. If township engineer doesn't have capacity, it may not get done.

What are the biggest transportation needs of those you serve?

Portage County – Water St walkable, but 45 mile hour road, people walking might be elderly or substance abuse issues. PARTA now has safer drop-offs at KSS.

Michael- students walking, and biking, to Kent social services. Seniors live nearby and need access to bus stops.

Bambi- lighting, shelters, benches. Bus riders want to be safe getting on and off the bus.

SCAT demand response is changing (small bus goes wherever big bus goes), want to be safe walking to bus stop,

want to use mobility devices to get to stops, visibility, Age Friendly Initiative (Summit and Akron)

Heather- good sidewalks and lighting. People with physical disabilities being able to get around

Jason- new to the job. Constituents use bus routes often to get to Ohio means jobs building.

Michelle – are lighting requests for lights burned out or for new lights? Bambi – majority are requests for additional

lighting. Heather – don't get much feedback on lighting, but usually additional lighting when they survey in Summit

Lake area. Edison has a place on the site to submit when lights are out. – MD

Tina- lighting is huge, especially for evening dependent businesses. Crosswalks are also important. Connectivity- visual cues.

Prentiss Park is pitch black at night. Some crosswalks, but need more – prefer artistic sidewalks, can AMATS funding

be used to help neighborhoods implement higher visibility paint treatment for crosswalks/bike lanes? MD – Curb

Ramps are important to include in estimates.

What is the top safety concern of your constituents/in your neighborhoods?

Tina- prentiss park is pitch black. Connectivity for pedestrians and cyclists. Safe routes to school

Dylan- consistency of lighting, sidewalks, signage, etc.

How concerned are the residents you serve with safe transportation access to/within your region?

City of Akron asking if we can study when road diets have happened, and how they are working.

Connectivity and consistency of what is there contributes to safety, i.e. lighting, sidewalks

How to people accept roadway design changes – Kenmore, Tina – road diet did not go over well, bus and highway access not well thought out, no enforcement of changes is frustrating. Manchester Rd bike lane added and travel lane removed on overpass. Changes should be highly visible. Need to listen to see how changes actually work.

MD – outreach is important and what does it mean. For Manchester, city heard specific complaints and went out and made changes. Tina – data is important, and helpful.

Kent – is community open to change? Michael – yes. Communication and outreach helps. Change is hard, but worthwhile. Pay attention to naysayers, don't ignore, but push changes for the better.

Akron – change is always controversial. MD sees change. Education on Complete Streets is important. It's not just about the cyclist, it's about making the street safer for everyone.

MD – township roads are managed by county engineers, who are the voices?

How willing are the communities you serve to embrace major changes to the way roadways are designed (e.g. road diets, bike lanes, focusing on new or improved sidewalks, transit facilities)?

Tina- some people just want better access to the highway. Other people are frustrated with lack of enforcement.

People don't like change but they get used to it.

Michelle- communicate the big picture. It's not just about the bike lane, it's about reducing the lanes to slow traffic

and adding a center turn lane to have an overall safer roadway.

If you were given funding to improve transportation safety, where would you start? What would be your top priorities?

Tina- crosswalks and lighting.

Bambi- highest ridership stops that **don't** have shelters, lighting, sidewalks.

Heather- Twinsburg property doesn't have great sidewalks.

Thinking about the area your organization serves, do you feel that roadways overemphasize the automobile (to the detriment of other modes), or does the balance seem fair?

Any locations specifically that lack access/gaps?: AMHA – Twinsburg: housing and jobs, but people can't walk easily or safely, bus stops not around. Lighting and sidewalks, proximity to bus stops is often an issue to the single housing units that AMHA owns.

Tina- somewhat overemphasize cars. More importantly- consistency of visual cues throughout the city and region is essential.

Campus and Institutional Facilities Planning Focus Group – November 30, 2022

Attendee	Representing
Stephen Myers	University of Akron
Larry Jenkins Jr.	Portage County Engineer
Jim Bowling	City of Kent
Tanya Leyman	Akron Metropolitan Housing Authority
Michael Bruder	City of Kent Resident
Anna ???	University of Akron
David Kaplan	Kent State University
Heather Davis-Reidl	AMATS
Matt Stewart	AMATS
Dave Pulay	AMATS
David Swirsky	AMATS

Are institutions actively engaged in developing transportation alternatives for their users?

Michael- have spent 15 years developing infrastructure to encourage active transportation. Lessons learned- play the long game and stick to the vision. Multi-stakeholder problem, collaboration and good leadership is a must.
 Anna (UA)- undergraduate student government is encouraging students to ride bus and use scooters. Spin gives discounts to low-income students.
 Dave (KSU)- campus busses are used often. Campus is being redesigned to be more pedestrian friendly.

What are the top safety concerns of your institution?

Dave (KSU)- student safety. High speed arteries surrounding campus. Scooters have caused some safety issues in and around campus.
 ___ (UA)- Crossing exchange street
 Pulay – police reports do not have a category for scooters, can't track where the accidents are happening. Hopefully in the process of being changed.
 Myers – Exchange St out for bid, improvements happening in 2023, crosswalks are an issue, jaywalking. Akron is difficult due to downtown – people driving to downtown, through campus area
 Bowling – issues with jaywalking on most college campuses, interface between dense population and heavy vehicular population and pedestrians. Have data on Summit St. – no fatalities, reduction in ped crashes, less severe ped crashes, speed after construction is averaging 17 mph, free flow speed was still under the speed limit.
 Tanya (AMHA)- speed is biggest concern in Summit Lake, mainly Lakeshore Blvd. 2 residents hit on bikes in past few months.

What do you believe are the most critical methods to improving traffic safety? (education/enforcement/roadway design)

Kaplan – European countries place speed tables and use them year round, even with snow. Why can't we? Bowling – culture here: Americans don't want to be inconvenienced.
 Myers – tabletops at entrance to Wayne campus
 Bowling – city and school are not receptive to table tops, so not in Jim's toolbox. Jim prefers roundabouts – easier to justify for multiple reasons (safer for peds, less severe crashes, keep traffic moving). Yield to ped signs in roadway are successful. Horning Rd also received a sign, residents were pleased, sign been stolen.

What safety issues, if any, relate to the trips between parking lots/decks and your building(s)?

___ (UA)- car break ins are biggest concern. Sumner/Exchange entrance into campus is being redesigned.
 Bruder – parking on perimeter so you have a walkable campus core, allow cars where appropriate but let ped movements be the primary driver. Property owner partnering with traffic engineer to find the best solution.

Has micromobility changed transportation within your facility? If so, what safety concerns have arisen by these changes and how are you planning for them?

UA/KSU- yes, many more people using scooters, especially students.
 State law says micromobility under 12mph can be on the sidewalk.

Miscellaneous

Bruder – can affect change, but takes a lot of time. Add infrastructure to encourage cycling, eventually saw increase in cycling. Do the work and build it, educate, once built, continue educating and encouraging. Esplanade showed up in plan in 1993, construction in 2003, took 3 summers, now its part of fabric of campus
 Jenkins – N. Water Street road diet is great, Kent residents want to see positive change, things happen here
 Kaplan – make it clear the consequences of not having traffic calming measures, educate.
 Bowling – educate public of traffic fatalities, public needs to be more aware of this. If they know this, they will want to change it.
 Type of vehicle is worth looking into, large SUVs can't see peds and hit is direct. Pulay to look into survival of peds hit by various vehicles.
 Jenkins – quarterly fatal review hearings put on by State Highway Patrol – we need to publicize this.

Public Survey Questions and Full Results

User Experiences

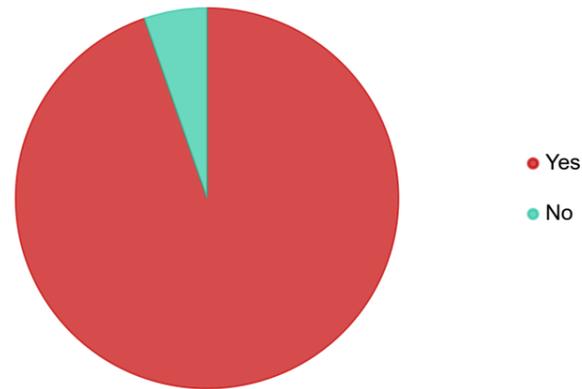
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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

Travel Experiences

Do you Drive? *



Answers	Count	Percentage
Yes	285	94.68%
No	16	5.32%

Yes	285	94.68%
No	16	5.32%

Answered: 301 Skipped: 0

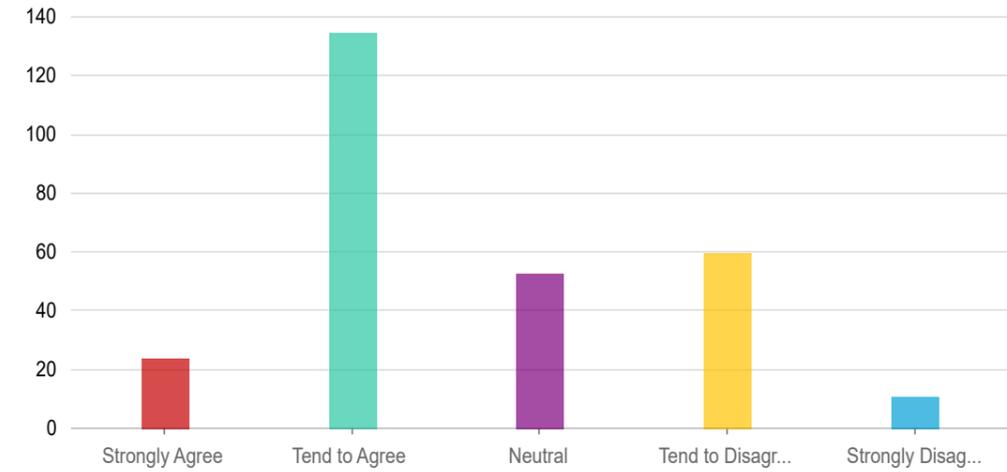
Travel Experiences > Questions for Drivers

In general, the roads I drive the most often feel safe and are adequately...

<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 1/27

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES



Answers	Count	Percentage
Strongly Agree	24	7.97%
Tend to Agree	135	44.85%
Neutral	53	17.61%
Tend to Disagree	60	19.93%
Strongly Disagree	11	3.65%

Strongly Agree	24	7.97%
Tend to Agree	135	44.85%
Neutral	53	17.61%
Tend to Disagree	60	19.93%
Strongly Disagree	11	3.65%

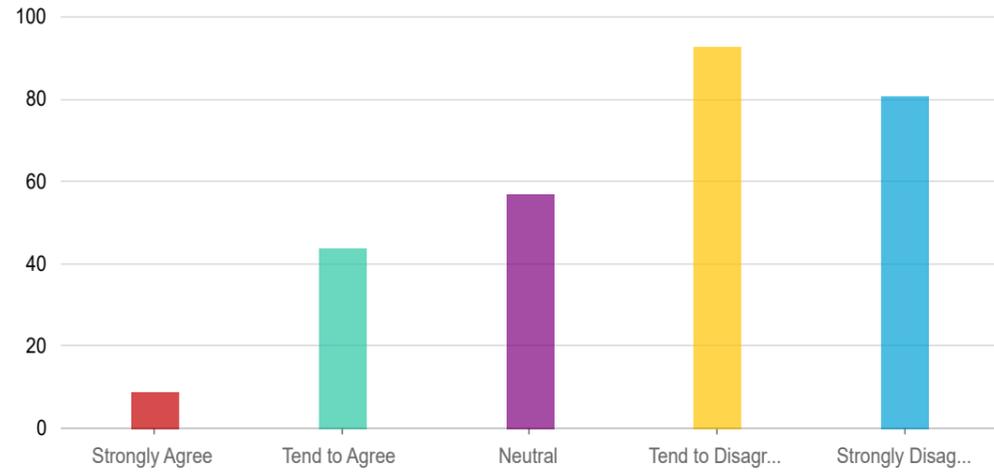
Answered: 283 Skipped: 18

When driving, I feel that other modes of transportation (bicycle,...

<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 2/27

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES



Answers	Count	Percentage
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Strongly Agree	9	2.99%
Tend to Agree	44	14.62%
Neutral	57	18.94%
Tend to Disagree	93	30.9%
Strongly Disagree	81	26.91%

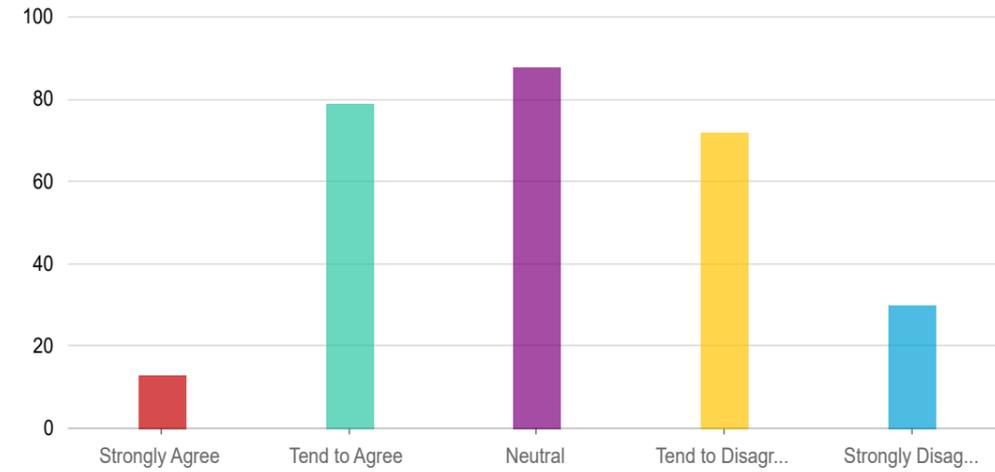
Answered: 284 Skipped: 17

It feels like communities and the Department of Transportation general...

<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 3/27

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES



Answers	Count	Percentage
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Strongly Agree	13	4.32%
Tend to Agree	79	26.25%
Neutral	88	29.24%
Tend to Disagree	72	23.92%
Strongly Disagree	30	9.97%

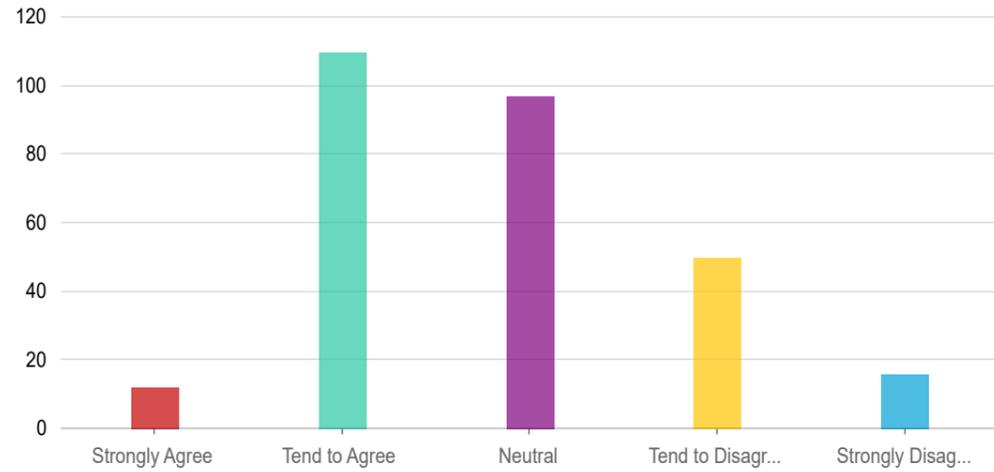
Answered: 282 Skipped: 19

The roadways that have heavier truck traffic generally can accommoda...

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES



Answers **Count** **Percentage**

Answers	Count	Percentage
Strongly Agree	12	3.99%
Tend to Agree	110	36.54%
Neutral	97	32.23%
Tend to Disagree	50	16.61%
Strongly Disagree	16	5.32%

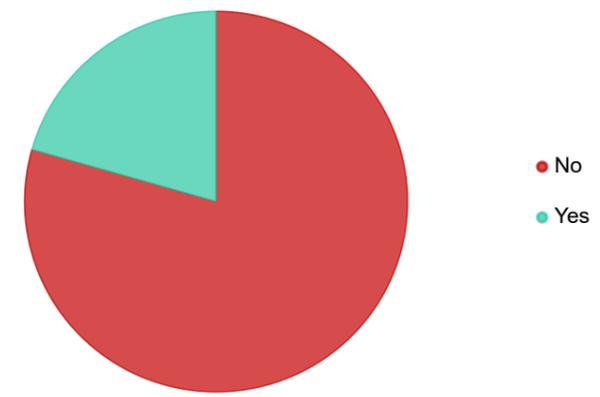
Answered: 285 Skipped: 16

Do you use Public Transit? *

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES



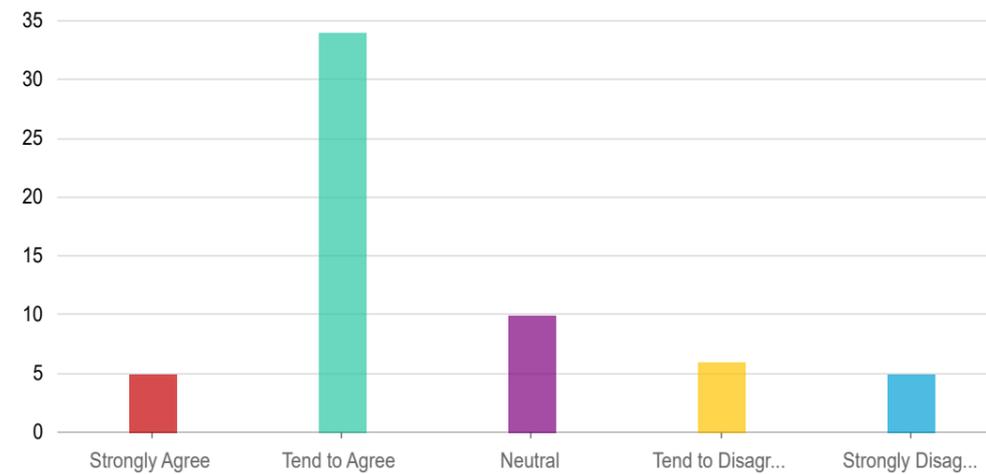
Answers **Count** **Percentage**

Answers	Count	Percentage
No	239	79.4%
Yes	62	20.6%

Answered: 301 Skipped: 0

Travel Experiences > Questions for Transit Riders

Generally, transit stops are well-located.



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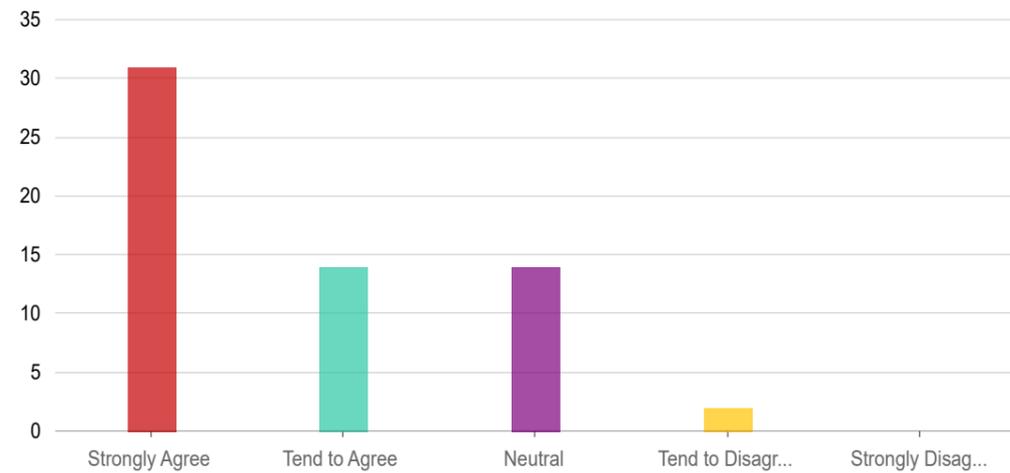
AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

Answers	Count	Percentage
---------	-------	------------

Strongly Agree	5	1.66%
Tend to Agree	34	11.3%
Neutral	10	3.32%
Tend to Disagree	6	1.99%
Strongly Disagree	5	1.66%

Answered: 60 Skipped: 241

I would take public transit more often if service were more convenient.



Answers	Count	Percentage
---------	-------	------------

Strongly Agree	31	10.3%
Tend to Agree	14	4.65%
Neutral	14	4.65%
Tend to Disagree	2	0.66%
Strongly Disagree	0	0%

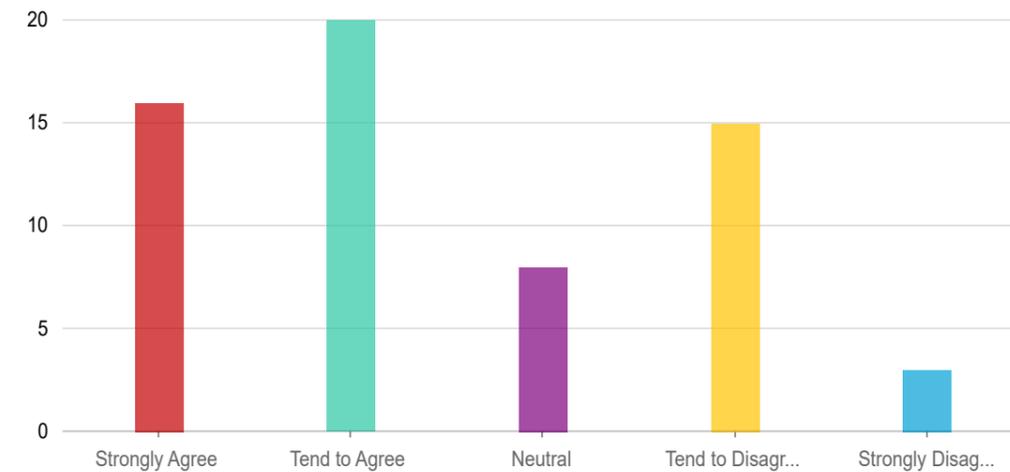
<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 7/27

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

Answered: 61 Skipped: 240

It is easy to navigate public transit (e.g. knowing schedules, paying).



Answers	Count	Percentage
---------	-------	------------

Strongly Agree	16	5.32%
Tend to Agree	20	6.64%
Neutral	8	2.66%
Tend to Disagree	15	4.98%
Strongly Disagree	3	1%

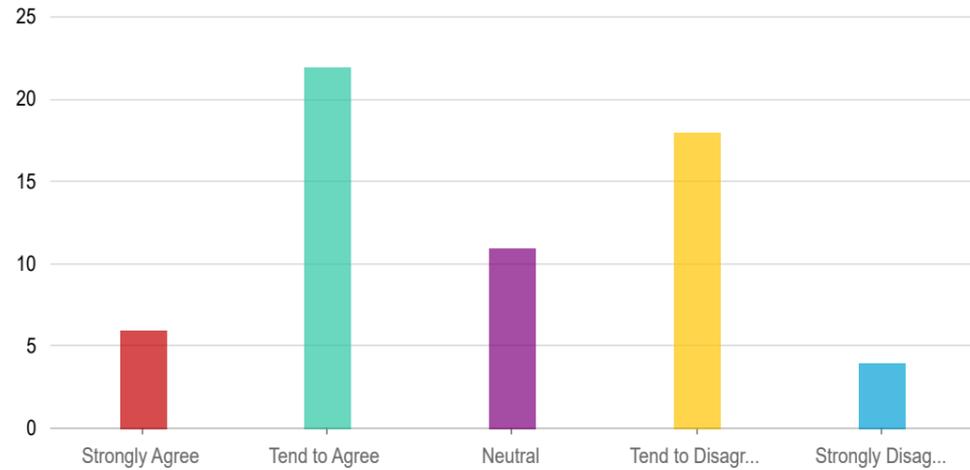
Answered: 62 Skipped: 239

Access to transit (i.e. getting to the transit stops) is generally adequate...

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES



Answers	Count	Percentage
Strongly Agree	6	1.99%
Tend to Agree	22	7.31%
Neutral	11	3.65%
Tend to Disagree	18	5.98%
Strongly Disagree	4	1.33%

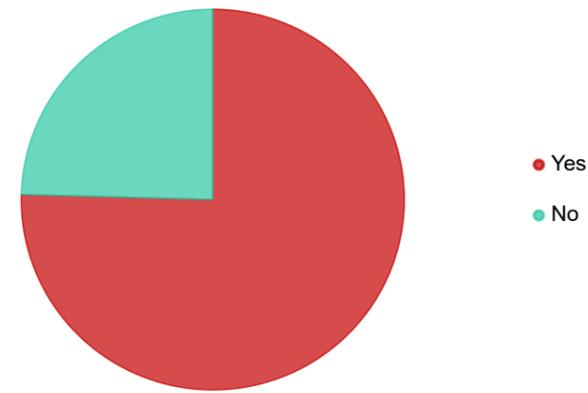
Answered: 61 Skipped: 240

Do you Walk? *

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

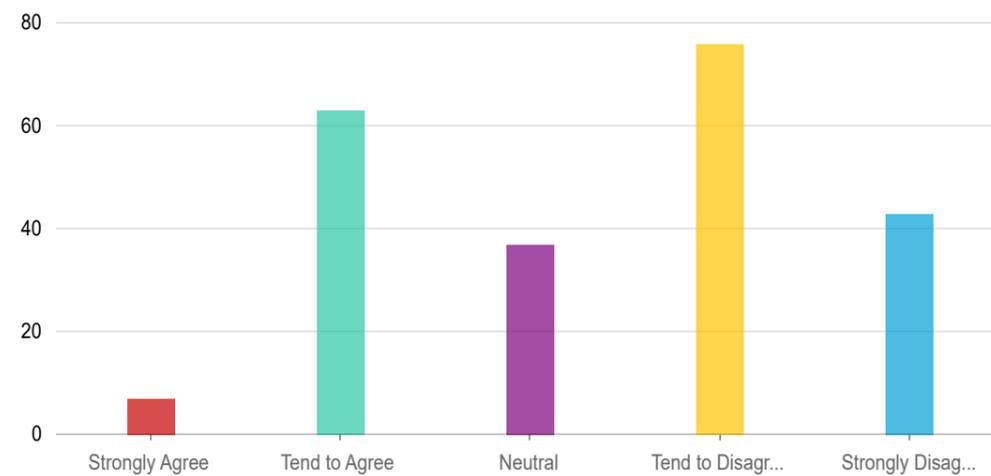


Answers	Count	Percentage
Yes	227	75.42%
No	74	24.58%

Answered: 301 Skipped: 0

Travel Experiences > Questions for Pedestrians

The region's network of sidewalks is adequate overall.



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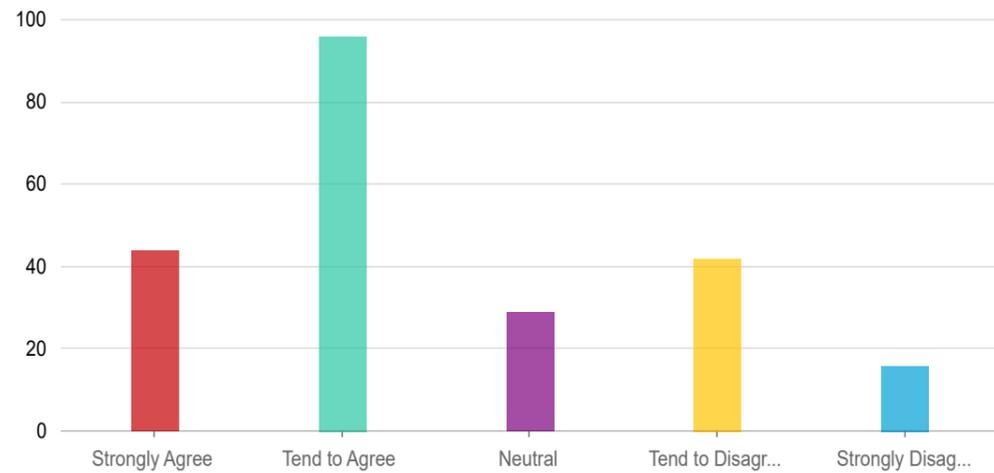
AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

Answers **Count** **Percentage**

Strongly Agree	7	2.33%
Tend to Agree	63	20.93%
Neutral	37	12.29%
Tend to Disagree	76	25.25%
Strongly Disagree	43	14.29%

Answered: 226 Skipped: 75

The region has a good network of bike / hike trails (aka shared-use...



Answers **Count** **Percentage**

Strongly Agree	44	14.62%
Tend to Agree	96	31.89%
Neutral	29	9.63%
Tend to Disagree	42	13.95%
Strongly Disagree	16	5.32%

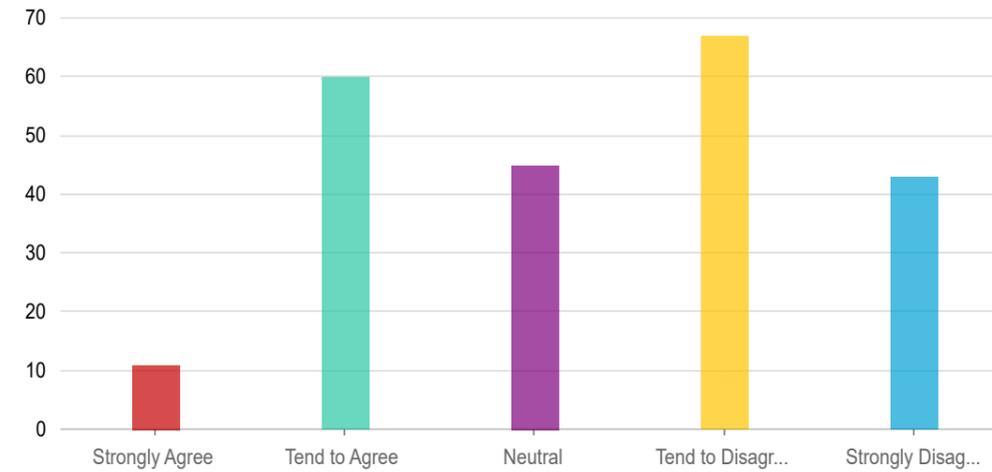
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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

Answered: 227 Skipped: 74

I generally feel safe when walking and feel that pedestrians are...



Answers **Count** **Percentage**

Strongly Agree	11	3.65%
Tend to Agree	60	19.93%
Neutral	45	14.95%
Tend to Disagree	67	22.26%
Strongly Disagree	43	14.29%

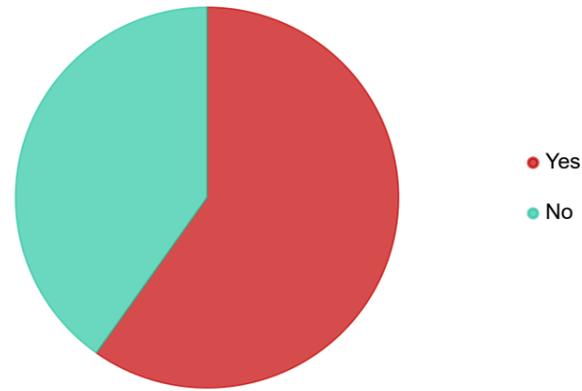
Answered: 226 Skipped: 75

Do you Ride a Bicycle? *

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

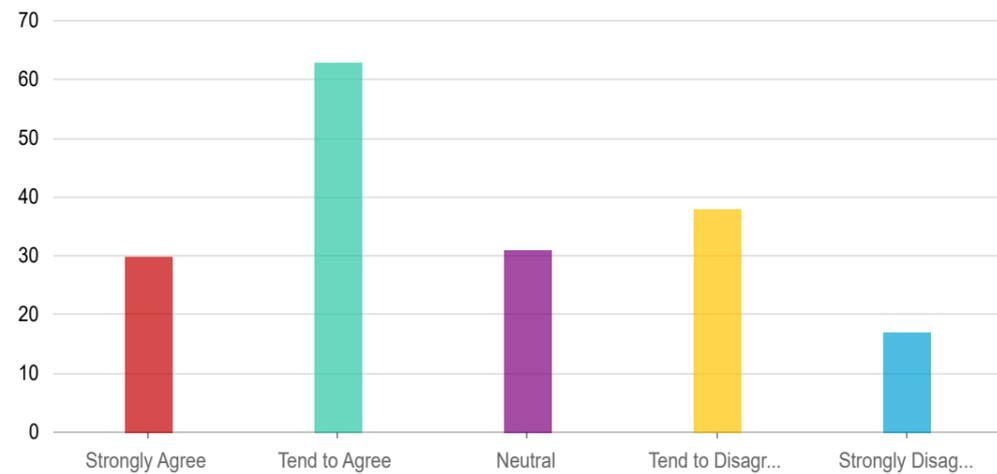


Answers	Count	Percentage
Yes	180	59.8%
No	121	40.2%

Answered: 301 Skipped: 0

Travel Experiences > Questions for Bicycle Riders

The region has a good network of bike trails overall.



<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 13/27

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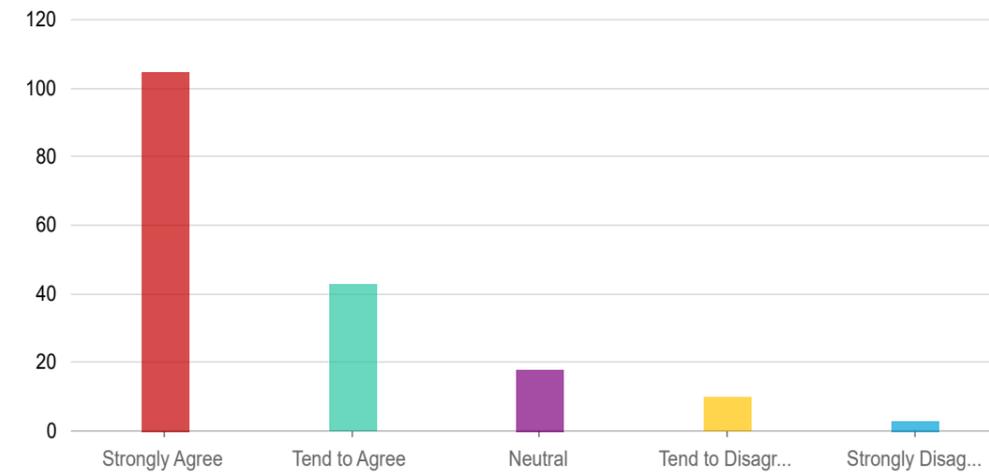
AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

Answers **Count** **Percentage**

Strongly Agree	30	9.97%
Tend to Agree	63	20.93%
Neutral	31	10.3%
Tend to Disagree	38	12.62%
Strongly Disagree	17	5.65%

Answered: 179 Skipped: 122

I would ride a bicycle more often if there were more safe places to do so.



Answers **Count** **Percentage**

Strongly Agree	105	34.88%
Tend to Agree	43	14.29%
Neutral	18	5.98%
Tend to Disagree	10	3.32%
Strongly Disagree	3	1%

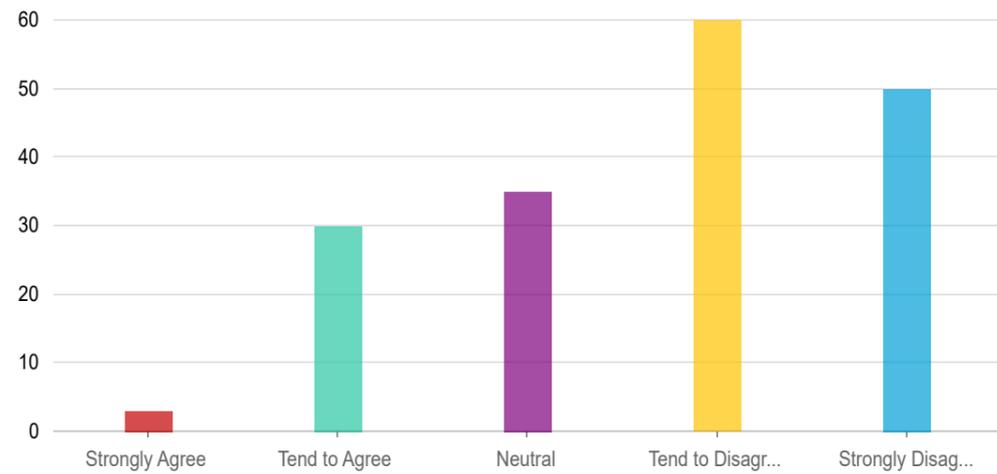
<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 14/27

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

Answered: 179 Skipped: 122

o o The region does a good job of incorporating bicycle accommodations...



Answers	Count	Percentage
---------	-------	------------

Strongly Agree	3	1%
Tend to Agree	30	9.97%
Neutral	35	11.63%
Tend to Disagree	60	19.93%
Strongly Disagree	50	16.61%

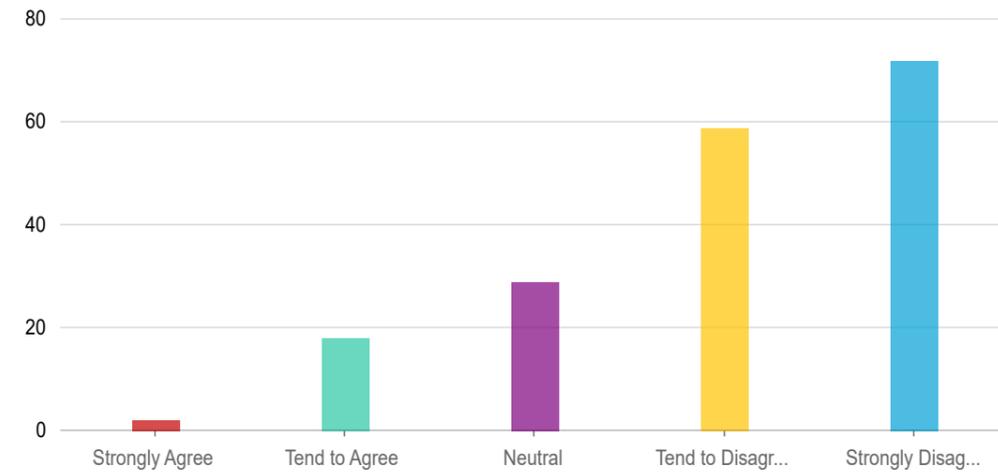
Answered: 178 Skipped: 123

o o The region has an adequate number of bicycle lanes.

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES



Answers	Count	Percentage
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Strongly Agree	2	0.66%
Tend to Agree	18	5.98%
Neutral	29	9.63%
Tend to Disagree	59	19.6%
Strongly Disagree	72	23.92%

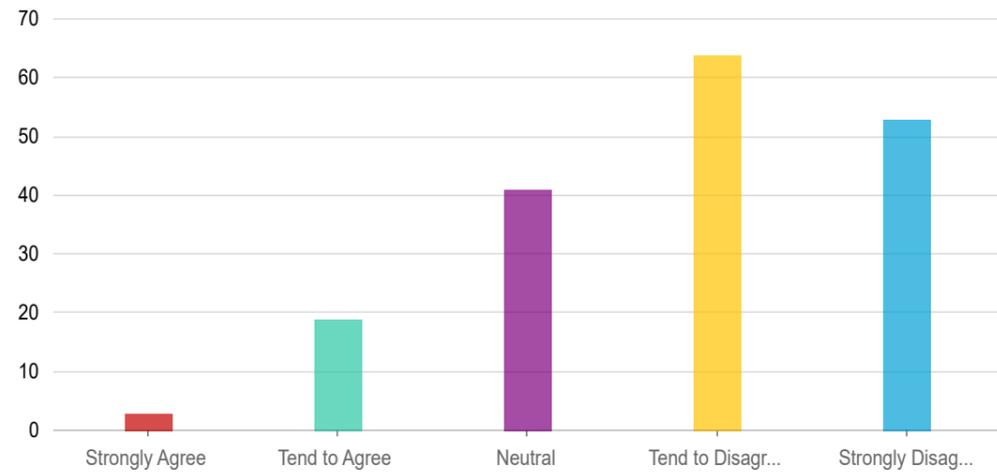
Answered: 180 Skipped: 121

o o I generally feel safe when bicycling around the region.

https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false 16/27

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES



Answers **Count** **Percentage**

Answers	Count	Percentage
Strongly Agree	3	1%
Tend to Agree	19	6.31%
Neutral	41	13.62%
Tend to Disagree	64	21.26%
Strongly Disagree	53	17.61%

Answered: 180 Skipped: 121

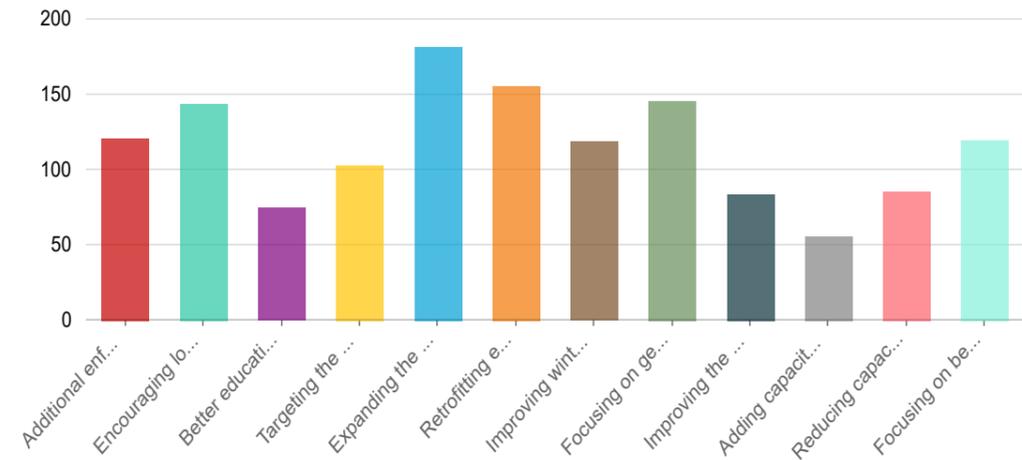
Transportation Improvement Strategies

Please select what you think are the TOP FIVE (5) most effective strategies to improv...

<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 17/27

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES



Answers **Count** **Percentage**

Answers	Count	Percentage
Additional enforcement (e.g. speed, distracted and impaired driving)	121	40.2%
Encouraging lower speeds through street design (e.g. speed tables, trees, decorative crosswalks)	144	47.84%
Better education for motorists, bicyclists, and pedestrians (e.g. Targeting the design of roadways (e.g. less-severe curves, re-graded slopes, traffic-calming elements)	75	24.92%
Expanding the active transportation network (e.g. new sidewalks, bike lanes, multimodal paths)	103	34.22%
Retrofitting existing network for better consideration of active transportation (e.g. pedestrian countdown signals, better crosswalks, safer crossings for bicycles / pedestrians)	182	60.47%
Improving winter maintenance (e.g. poorly plowed roads lead to traction issues)	156	51.83%
Focusing on general maintenance and low-cost improvements (e.g. line striping, signage, crosswalks, repairing uneven sidewalks, maintaining streetlights and guardrails)	119	39.53%
Adding capacity	146	48.5%
Reducing capacity	55	18.13%
Focusing on better...	85	27.5%

<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 18/27

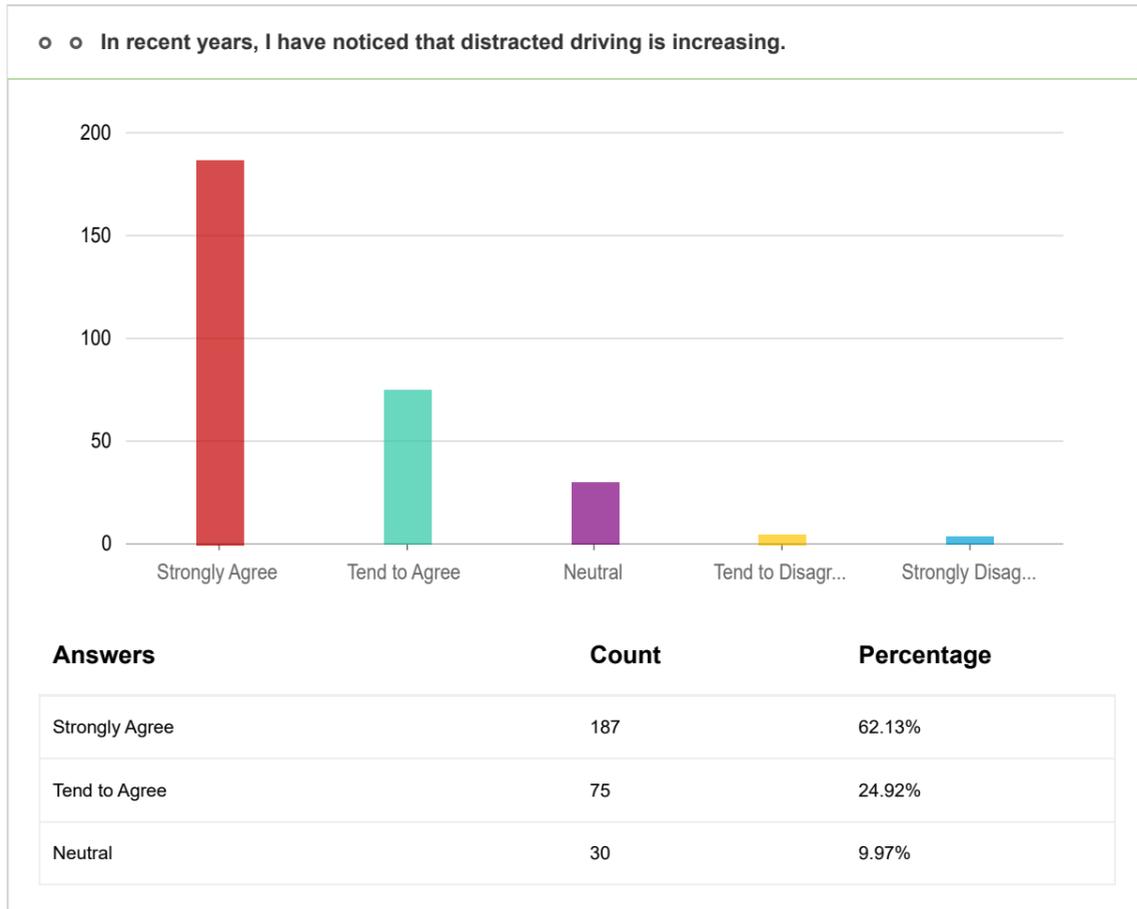
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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

Improving the operation and phasing at intersections (e.g. new or improved traffic signals, stop signs)	84	27.91%
Adding capacity for automobiles (e.g. more travel lanes, new right-and-left turn lanes)	56	18.6%
Reducing capacity for automobiles (e.g. fewer travel lanes / "right-sizing" roadways)	86	28.57%
Focusing on better lighting along roadways and intersections	120	39.87%
		Answered: 301 Skipped: 0

Wrapping Things Up

Wrapping Things Up > Considering the entire Greater Akron region, please answer whether you agree or disagree with the following statements:



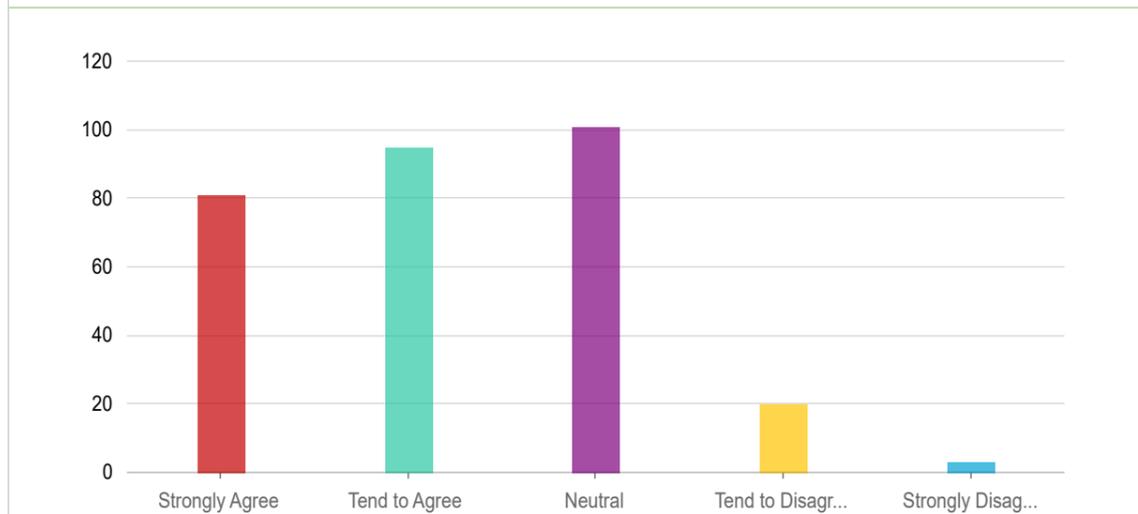
<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 19/27

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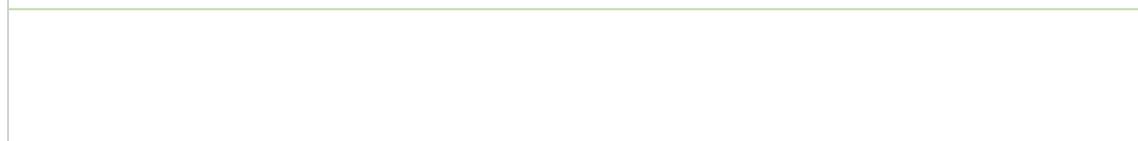
Tend to Disagree	5	1.66%
Strongly Disagree	4	1.33%
		Answered: 301 Skipped: 0

In recent years, I have observed more crashes.



Answers	Count	Percentage
Strongly Agree	81	26.91%
Tend to Agree	95	31.56%
Neutral	101	33.55%
Tend to Disagree	20	6.64%
Strongly Disagree	3	1%
		Answered: 300 Skipped: 1

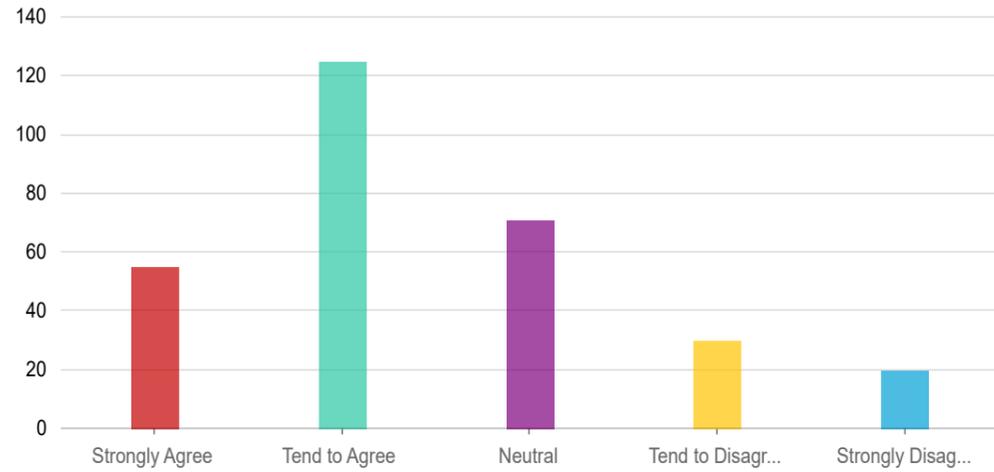
In recent years, I have observed more bicyclists and pedestrians.



<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 20/27

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES



Answers	Count	Percentage
---------	-------	------------

Strongly Agree	55	18.27%
Tend to Agree	125	41.53%
Neutral	71	23.59%
Tend to Disagree	30	9.97%
Strongly Disagree	20	6.64%

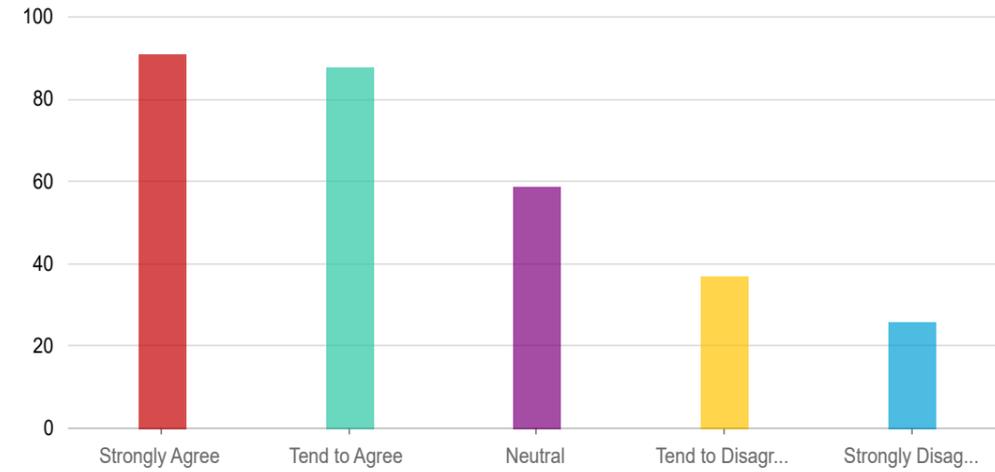
Answered: 301 Skipped: 0

In most instances, roundabouts in our region make intersections safer.

<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 21/27

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES



Answers	Count	Percentage
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Strongly Agree	91	30.23%
Tend to Agree	88	29.24%
Neutral	59	19.6%
Tend to Disagree	37	12.29%
Strongly Disagree	26	8.64%

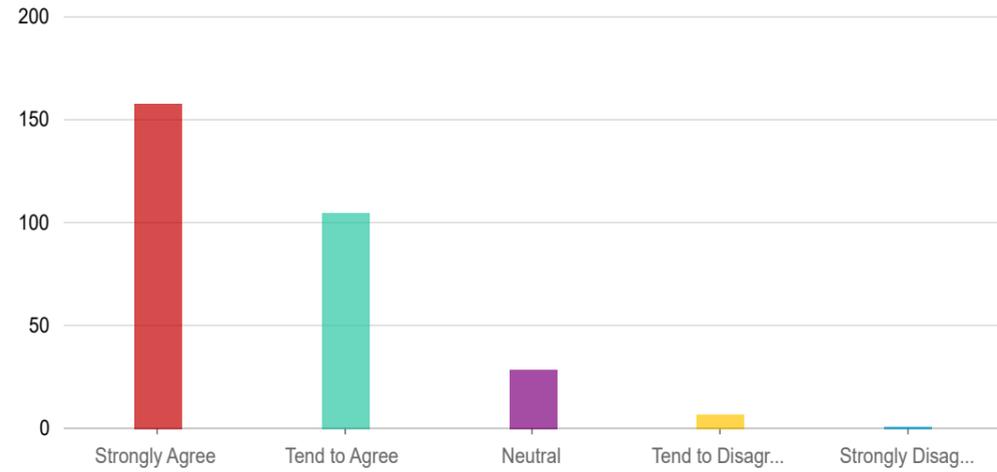
Answered: 301 Skipped: 0

Regional decisionmakers should further incentivize/prioritize the fundi...

<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 22/27

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Answers **Count** **Percentage**

Strongly Agree	158	52.49%
Tend to Agree	105	34.88%
Neutral	29	9.63%
Tend to Disagree	7	2.33%
Strongly Disagree	1	0.33%

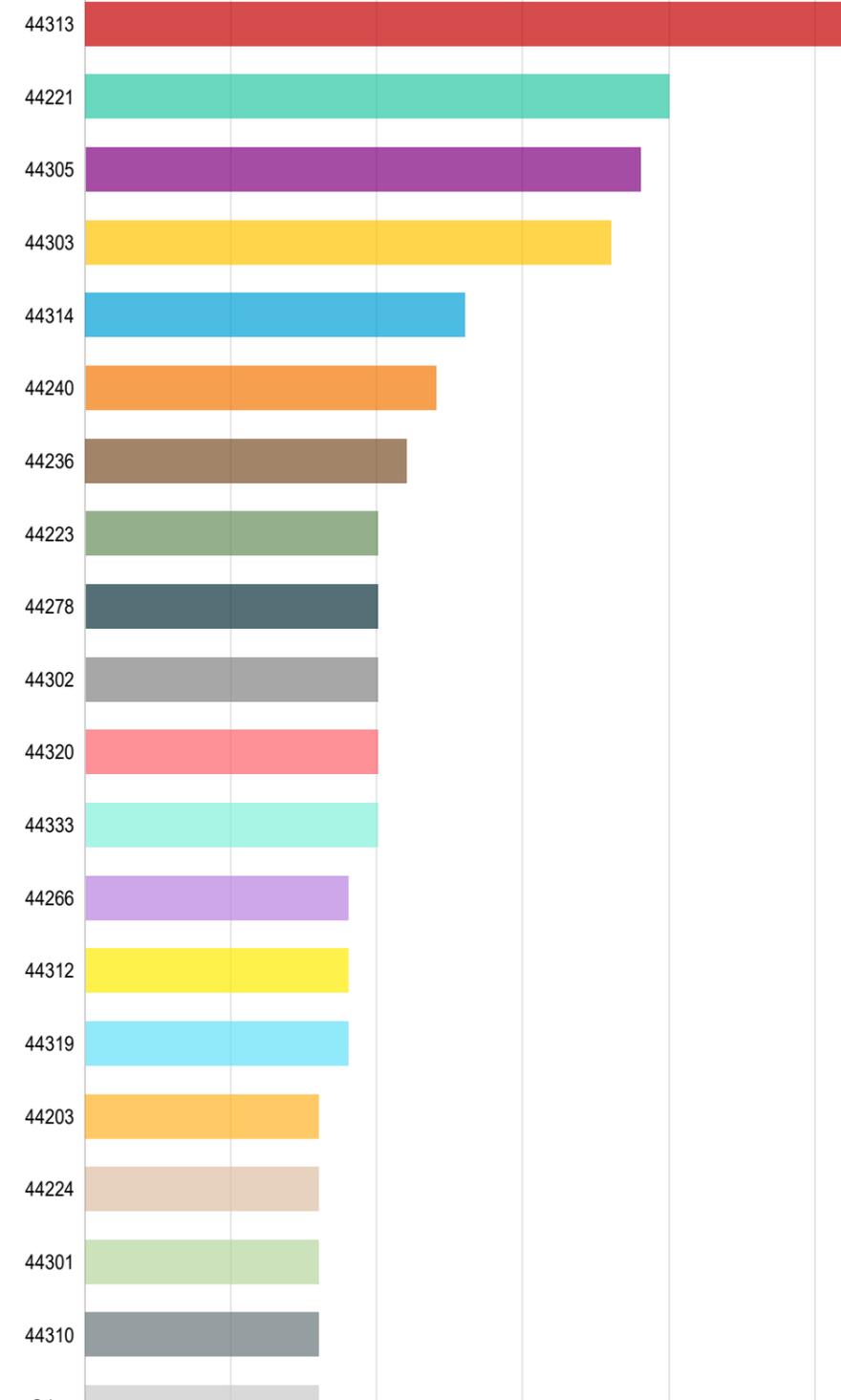
Answered: 300 Skipped: 1

In what ZIP Code do you live? *

<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 23/27

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Answers	Count	Percentage
Other		
44313 44306	26	8.64%
44221	20	6.64%
44305	19	6.31%
44303	18	5.98%
44344 44241	13	4.32%
44240	12	3.99%
44236 44321	11	3.65%
44223	10	3.32%
44278	10	3.32%
44302	10	3.32%
44344 44201	10	3.32%
44333	10	3.32%
44266 44262	9	2.99%
44312	9	2.99%
44204 44319	9	2.99%
44203	8	2.66%
44244 44720	8	2.66%
44301	8	2.66%
44310 44146	8	2.66%
Other	8	2.66%
44202 44685	6	1.99%
44306	5	1.66%

<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 25/27

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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

44308 44230	5	1.66%
44067	4	1.33%
44241 44250	4	1.33%
44304	4	1.33%
44321	4	1.33%
44087	3	1%
44044 44270	2	0.66%
44201	2	0.66%
44216 44286	2	0.66%
44262	2	0.66%
44307 44264	2	0.66%
44601	2	0.66%
44744 44632	2	0.66%
44131	1	0.33%
44146	1	0.33%
44202	1	0.33%
44217	1	0.33%
44230	1	0.33%
44231	1	0.33%
44250	1	0.33%
44256	1	0.33%
44260	1	0.33%
44270	1	0.33%

<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 26/27

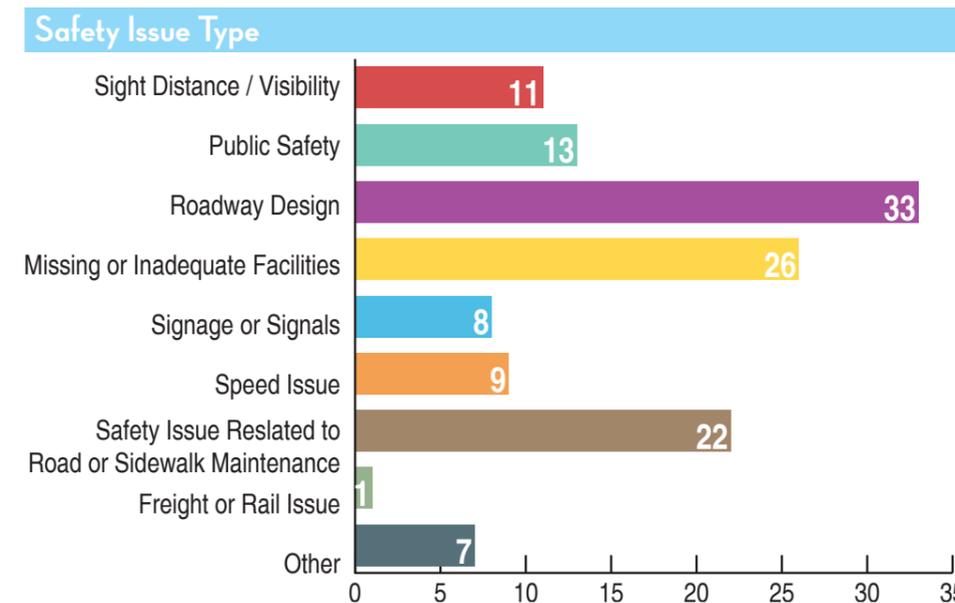
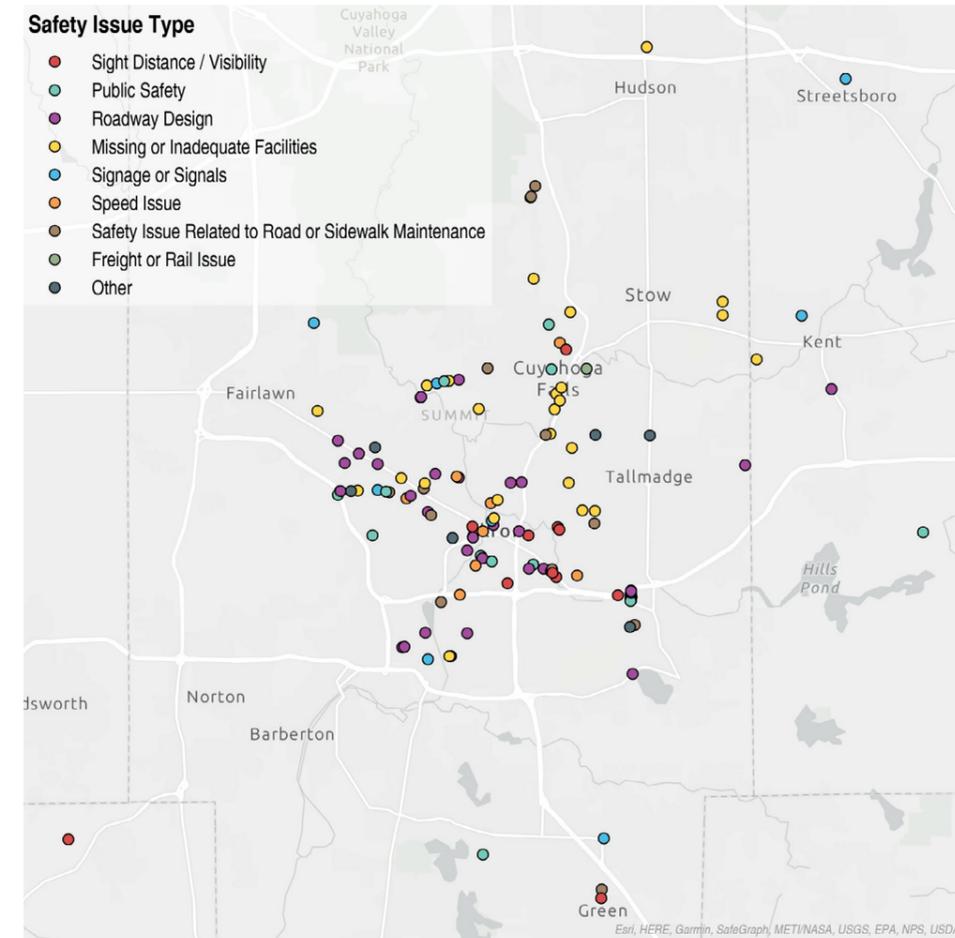
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AMATS Safe Streets 4 All Public Input - USER EXPERIENCES

44273	1	0.33%
44286	1	0.33%
44307	1	0.33%
44311	1	0.33%
44632	1	0.33%
44667	1	0.33%
		Answered: 301 Skipped: 0

Safety Issues

The 130 location-specific comments were collected throughout the planning region, but the vast majority were related to concerns within the cities of Akron and Cuyahoga Falls. Respondents were asked to categorize their submitted issues as shown in the chart below. Twenty-five percent of all locations submitted concerned roadway design issues, 20% were categorized as missing or inadequate facilities, and 17% were road or sidewalk maintenance issues. Staff reviewed the individual concerns to understand if and how they fit into existing recommendations or planned projects. Comment details are contained within the *Public Input: Safety Issues* layer on the SS4A WebApp (see Chapter 4, page 16).



<https://survey123.arcgis.com/surveys/56d2c8783abd46c9b397caca945032c2/analyze?position=0.NumberOfBikeLanesIsADQ&navigation=open:false> 27/27

APPENDIX B - AMATS AREA DEMOGRAPHIC DATA

As a supplement to the federal methodologies defining equity (see Chapter 5), AMATS is providing key regional demographic data analyzed at a Block Group (BG) level of geography. The analysis of five population characteristics is included —minority, elderly, low-income, disabled, and carless households. Data for most demographic analyses comes from the 2017-2021 ACS Five-Year Estimates, which is the most recent ACS data available. Minority data was collected from the 2020 U.S. Census because it was available, very recent, and has a much higher rate of accuracy.

The total regional population (or number of households) of each of the five underserved populations is shown below. It is important to note that the percentage of the regional total's calculation methods vary. Only the Minority population is based on the 2020 U.S. Decennial Census figures. All others are based on the 2017-2021 ACS Five-Year estimates. So, while the total regional population is listed as 723,549 in the Census, it is listed as 724,055 in the ACS. Furthermore, the Disabled Population only counts adults (18 years of age and older), further reducing its universe size to 559,930 (i.e., the total estimated 18+ regional population).

POPULATION	REGIONAL TOTAL	REGIONAL %
Minority	162,929	22.52%
Elderly	128,430	17.74%
Low Income	86,151	12.20%
Disabled	87,385	15.62%
Carless Households	22,981	7.65%

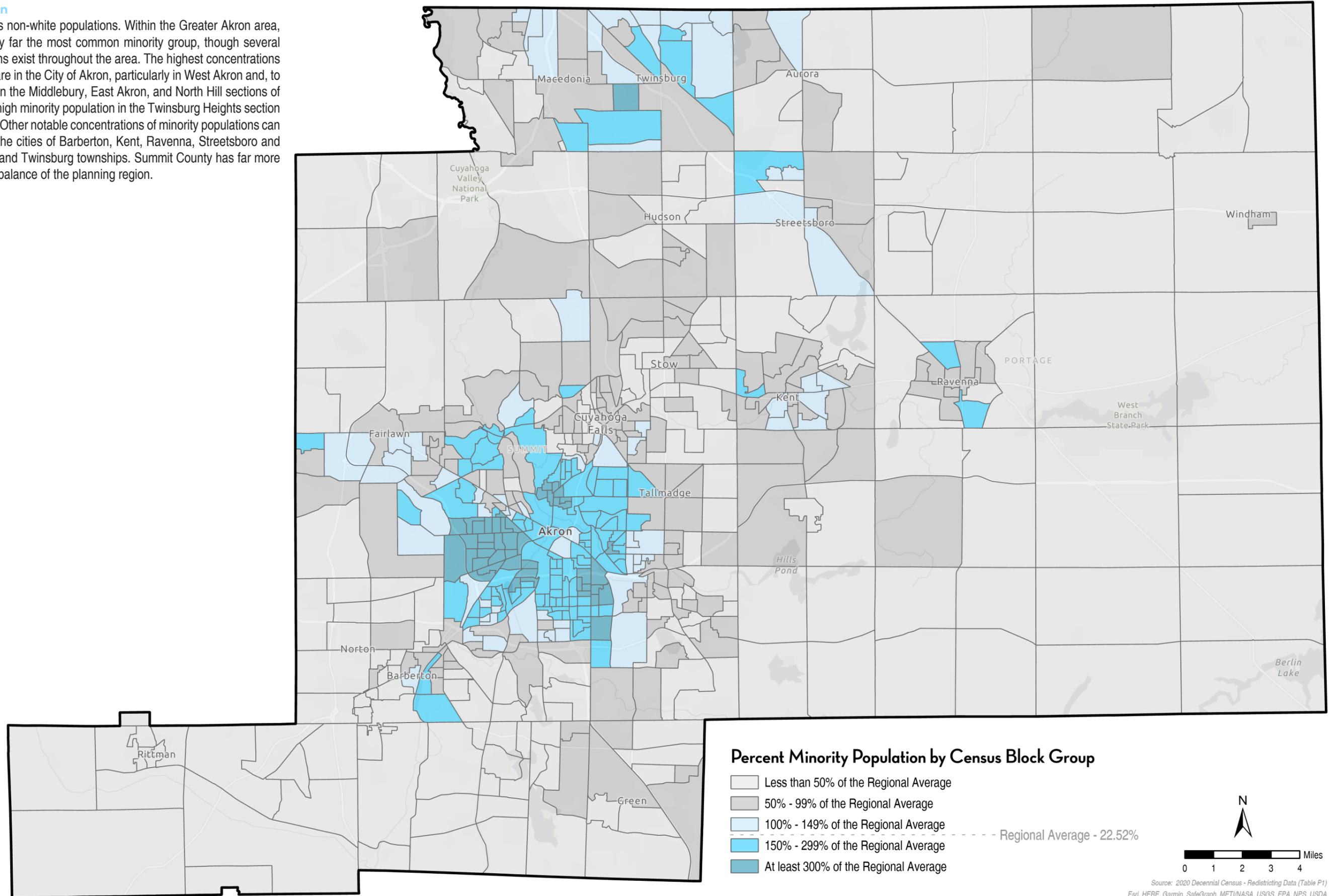
Each of these populations were broken into five classes and mapped as different colors on the AMATS Safety Network web application. The values for each layer vary as noted in the table below:

POPULATION	CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5
Minority	Less than 50%	50% - 99%	100% - 149%	150% - 299%	At least 300%
Elderly	Less than 50%	50% - 99%	100% - 149%	150% - 199%	At least 200%
Low Income	Less than 50%	50% - 99%	100% - 249%	250% - 499%	At least 500%
Disabled	Less than 50%	50% - 99%	100% - 149%	150% - 299%	At least 300%
Carless Households	Less than 50%	50% - 99%	100% - 249%	250% - 499%	At least 500%

A brief summary and regional map of each data layer is given on the following pages.

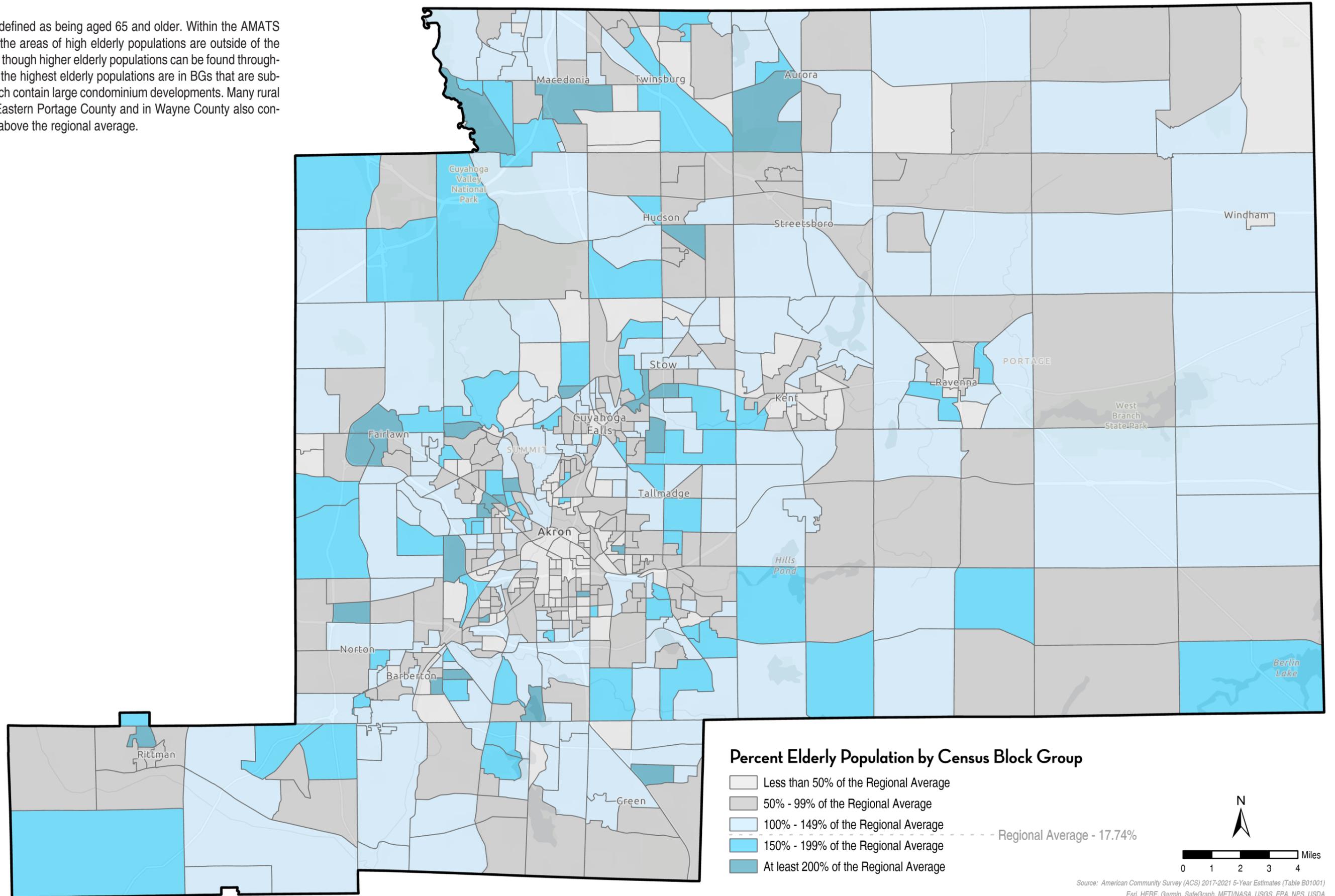
Minority Population

Minorities are defined as non-white populations. Within the Greater Akron area, black populations are by far the most common minority group, though several other minority populations exist throughout the area. The highest concentrations of minority populations are in the City of Akron, particularly in West Akron and, to a slightly lesser extent, in the Middlebury, East Akron, and North Hill sections of the city. There is also a high minority population in the Twinsburg Heights section of Twinsburg Township. Other notable concentrations of minority populations can be found in portions of the cities of Barberton, Kent, Ravenna, Streetsboro and Twinsburg, and Copley and Twinsburg townships. Summit County has far more racial diversity than the balance of the planning region.



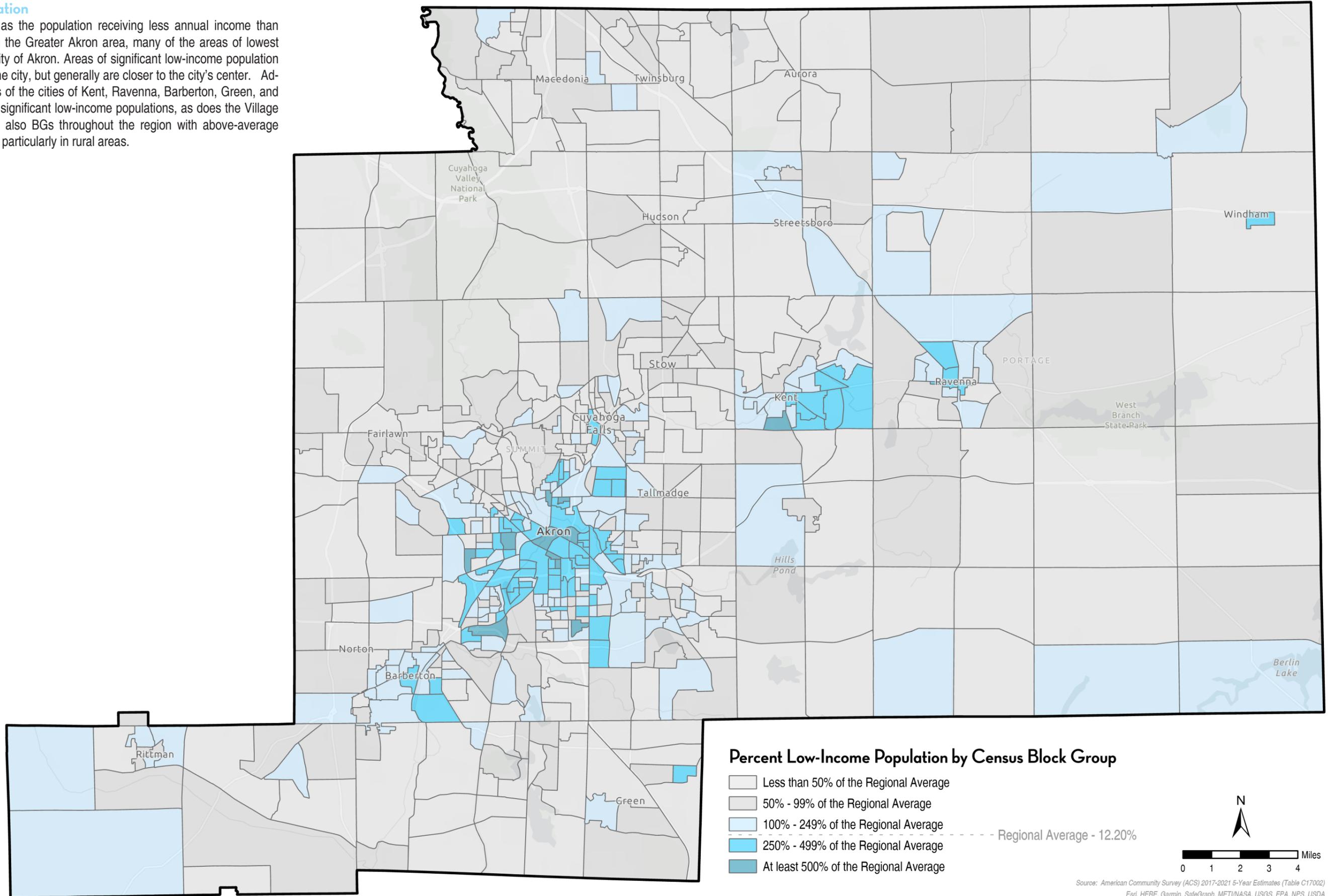
Elderly Population

Elderly populations are defined as being aged 65 and older. Within the AMATS planning area, many of the areas of high elderly populations are outside of the high-density urban core, though higher elderly populations can be found throughout the region. Some of the highest elderly populations are in BGs that are suburban in nature, and which contain large condominium developments. Many rural BGs, such as those in Eastern Portage County and in Wayne County also contain elderly populations above the regional average.



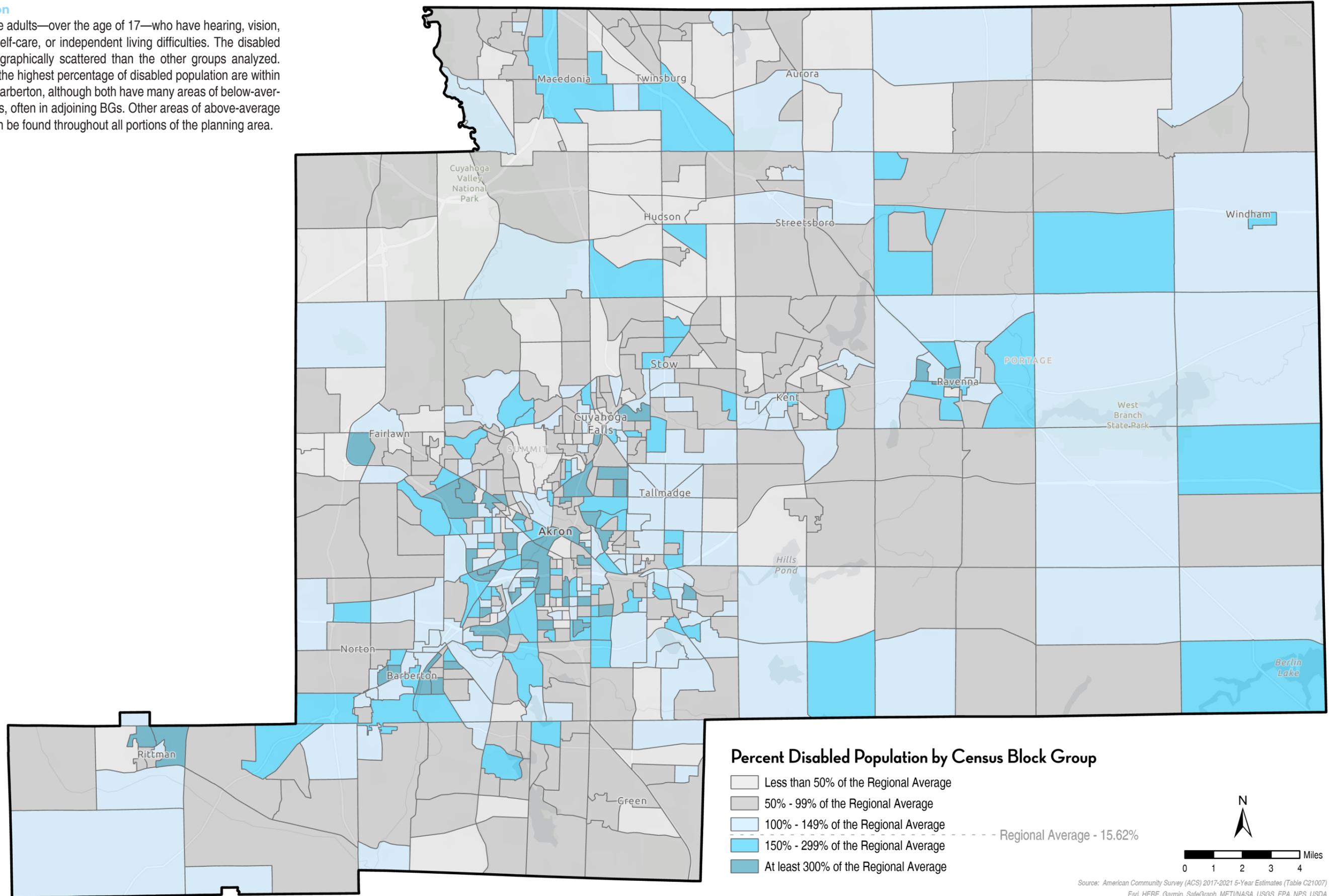
Low-Income Population

Low-Income is defined as the population receiving less annual income than the regional average. In the Greater Akron area, many of the areas of lowest income are within the City of Akron. Areas of significant low-income population are spread throughout the city, but generally are closer to the city's center. Additionally, some sections of the cities of Kent, Ravenna, Barberton, Green, and Cuyahoga Falls contain significant low-income populations, as does the Village of Windham. There are also BGs throughout the region with above-average low-income populations, particularly in rural areas.



Disabled Population

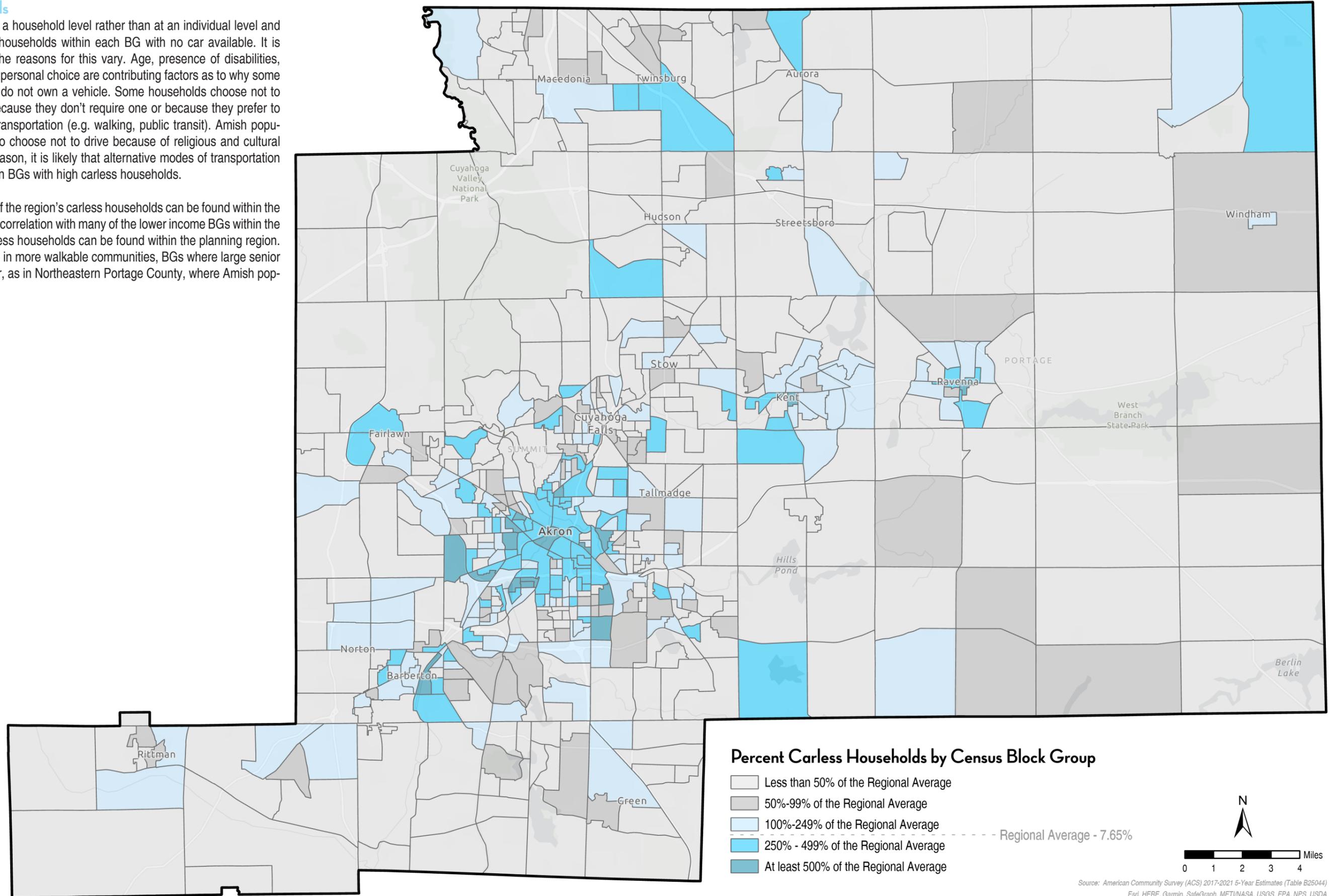
Disabled populations are adults—over the age of 17—who have hearing, vision, cognitive, ambulatory, self-care, or independent living difficulties. The disabled population is more geographically scattered than the other groups analyzed. Some of the areas with the highest percentage of disabled population are within the cities of Akron and Barberton, although both have many areas of below-average disabled populations, often in adjoining BGs. Other areas of above-average disabled populations can be found throughout all portions of the planning area.



Carless Households

This data is collected at a household level rather than at an individual level and is a percentage of the households within each BG with no car available. It is important to note that the reasons for this vary. Age, presence of disabilities, lack of affordability, and personal choice are contributing factors as to why some families and individuals do not own a vehicle. Some households choose not to have a vehicle either because they don't require one or because they prefer to utilize other modes of transportation (e.g. walking, public transit). Amish populations in the region also choose not to drive because of religious and cultural edicts. Regardless of reason, it is likely that alternative modes of transportation are comparatively high in BGs with high carless households.

A strong concentration of the region's carless households can be found within the City of Akron. There is a correlation with many of the lower income BGs within the city. Other areas of carless households can be found within the planning region. Most of these tend to be in more walkable communities, BGs where large senior housing facilities exist or, as in Northeastern Portage County, where Amish populations exist.



APPENDIX C - RESOLUTIONS FOR APPROVAL

Vision Zero - Resolution 2022-16

Attachment 6C

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

MEMORANDUM

TO: Policy Committee
Technical Advisory Committee
Citizens Involvement Committee

FROM: AMATS Staff

RE: Resolution 2022-16 – Adopting a Goal of Zero Fatalities and Serious Injuries by 2050 for the AMATS Area

DATE: August 4, 2022

Over the past several years AMATS has moved toward creating a safer transportation network by adopting complete streets policies, analyzing sidewalk gaps, and focusing on the more vulnerable users of the network. In addition to these efforts, AMATS has increased the off-street trail network and improved the visibility of bicycle infrastructure. Even with these efforts there is still a need to have a collaborative and cohesive planning in order to reduce crashes and fatalities within the AMATS area.

AMATS is requesting that the AMATS Policy Committee approve a resolution supporting a Vision Zero goal for the greater Akron area. Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, and equitable mobility for all. The Vision Zero concept establishes timelines and a commitment to ensure safety for all people as they move about their communities. AMATS goal for Vision Zero is to consistently reduce the number of crashes resulting in severe injury and fatality until reaching the ultimate goal of no deaths on greater Akron roadways by 2050.

As discussed at the June AMATS Committee meetings, the Vision Zero resolution is the first step required for AMATS to develop a Safety Action Plan outlined in the federal grant program, Safe Streets and Roads for All (SS4A). AMATS must also establish a taskforce of membership and stakeholders as the Safety Action Plan is developed. All AMATS membership will be invited to join the SS4A Taskforce as it works on a Safety Action Plan to implement AMATS vision zero goal.

STAFF RECOMMENDATION

Attached to this memo is Resolution Number 2022-16. The Staff recommends approval.

RESOLUTION NUMBER 2022-16

OF THE METROPOLITAN TRANSPORTATION POLICY COMMITTEE OF THE AKRON METROPOLITAN AREA TRANSPORTATION STUDY

Approving Resolution 2022-16 to develop, implement, and monitor a Vision Zero Plan to eliminate traffic fatalities and severe injuries while increasing safe, healthy, and equitable mobility for all.

WHEREAS, the Akron Metropolitan Area Transportation Study (AMATS) is designated as the Metropolitan Planning Organization (MPO) by the Governor, acting through the Ohio Department of Transportation and in cooperation with locally elected officials in Summit and Portage Counties and the Chippewa Township and Milton Township areas of Wayne County; and

WHEREAS, AMATS endorses development, implementation, and monitoring of a Safety Action Plan and Vision Zero goal to eliminate traffic fatalities and severe injuries while increasing safe, healthy, and equitable mobility for all road users with an emphasis on protecting the most vulnerable users; and

WHEREAS, one death or severe injury on AMATS streets is one too many; and

WHEREAS, collisions resulting in death or severe injury are not inevitable but can be prevented through changes in human behavior, technology, and designs that accommodate multimodal uses; and

WHEREAS, a commitment to Vision Zero is a commitment to life and equitable opportunity for all people in the AMATS area; and

WHEREAS, AMATS promotes a focus on reducing single occupancy vehicle rides and encouraging walking, bicycling, transit, and carpooling, and also promotes safety for all roadway users; and

WHEREAS, choosing active transportation options like walking and biking decreases mortality and morbidity from obesity-related diseases such as heart disease and diabetes, and creating safer streets is likely to encourage more active transportation, thereby increasing population health; and

WHEREAS, AMATS has a strong history of prioritizing safety and completing crash studies for all modes of transportation and has made demonstrable progress to improve safety for walking and biking by making systemic changes in the way the transportation network is planned, programmed, designed, constructed, and operated; and

WHEREAS, between 2016 to 2020, the average number of collisions per year in the AMATS area was 17,650 and the average number of collisions resulting in injury was 4,152. Out of the injury crashes 363 per year (or nearly one per day) were considered serious injury; and

WHEREAS, between 2016 to 2020, 37 people walking or in wheelchairs, 10 people riding a bicycle, and 215 people driving or riding in a vehicle have been killed; and

WHEREAS, the number of people dying and suffering serious injuries on our streets is a serious public health problem which necessitates public action; and

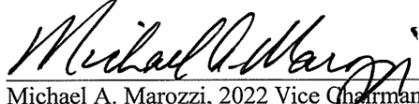
WHEREAS, preventing collisions in the AMATS area necessitates an analytical and systemic approach to street planning, design, policy, enforcement, legal processes, education and communication; and

WHEREAS, implementing a Vision Zero commitment requires the continued support of residents, business owners, and visitors—acting as individuals and collectively through neighborhood or advocacy organizations to improve the safety, comfort, and usability of AMATS streets for all users; and

WHEREAS, AMATS will join other MPO's and government entities around the nation in a commitment to eliminate traffic deaths and severe injuries and promote work which has demonstrated success when coupled with adequate funding, staff resources, and top-down support for its implementation.

NOW THEREFORE BE IT RESOLVED:

1. That this Committee endorses development, implementation, and monitoring of a Vision Zero goal to eliminate traffic fatalities and severe injuries while increasing safe, healthy, and equitable mobility for all road users by 2050.
2. That this Committee acknowledges that achieving this goal requires significant effort and resources.
3. That this Committee affirms that the development of a Safety Action Plan and Vision Zero goal will put equity at its forefront, striving to impact the most vulnerable and dependent users of the most dangerous parts of the transportation network to improve the health and well-being of those traveling on AMATS roads and streets.
4. That this Committee affirms that the Safety Action Plan and Vision Zero goal will use data and best practices to outline steps in planning, engineering, policy, enforcement and education to reach interim steps toward zero deaths.
5. That this Committee affirms that AMATS is dedicated to measuring the progress, challenges, and successes of the Vision Zero commitment and will do so with tangible, reportable metrics that will be reported on a regular basis with progress reports.
6. That this Committee authorizes the Staff to provide copies of this Resolution to the appropriate agencies as evidence of action by the Metropolitan Planning Organization.


Michael A. Marozzi, 2022 Vice Chairman
Metropolitan Transportation Policy Committee

8/11/22
Date

Safe Streets for All - Resolution 2023-08

Attachment 6E

AKRON METROPOLITAN AREA TRANSPORTATION STUDY MEMORANDUM

TO: Policy Committee
Technical Advisory Committee
Citizens Involvement Committee

FROM: AMATS Staff

RE: Resolution 2023-08 –Approval of the *Final Draft Safe Streets for All (SS4A) Action Plan for the Greater Akron Area*

DATE: May 4, 2023

Over the past eight months, AMATS has developed its first *SS4A Action Plan*, a comprehensive safety study aimed at preventing fatalities and serious injuries on Greater Akron area roadways. A SS4A Taskforce, comprised of AMATS committee members, has guided the work of AMATS staff to develop this plan. AMATS staff also relied heavily on the input of transportation stakeholders and the general public during the planning process, which included several focus group meetings and an online survey to understand how people use the transportation network, gauge perceived safety issues, and assess preferred solutions.

An initial draft of the *SS4A Action Plan* was completed in March 2023. This draft was presented to AMATS’ committees, the SS4A Taskforce, various stakeholders, and the general public (via the Citizens Involvement Committee) during the months of March, April and May. Modifications to the draft plan have been made based upon this feedback, which will be highlighted during the May AMATS Committee meetings. A copy of the *Final Draft Safe Streets for All (SS4A) Action Plan for the Greater Akron Area* can be found on AMATS website at [AMATS Safe Streets and Roads for All – AMATS \(amatsplanning.org\)](https://www.amats.org/AMATS-Safe-Streets-and-Roads-for-All-AMATS-amatsplanning.org).

AMATS is requesting that the AMATS Policy Committee approve Resolution 2023-8 approving the *Final Draft Safe Streets for All (SS4A) Action Plan for the Greater Akron Area*. Having an approved Action Plan is a prerequisite for communities and eligible agencies to apply for SS4A Implementation Grants through the federal government.

STAFF RECOMMENDATION

Attached to this memo is Resolution Number 2023-08. The Staff recommends approval.

RESOLUTION NUMBER 2023-08

OF THE METROPOLITAN TRANSPORTATION POLICY COMMITTEE OF THE AKRON METROPOLITAN AREA TRANSPORTATION STUDY

Approving Resolution 2023-08 to approve the Final Draft Safe Streets for All (SS4A) Action Plan for the Greater Akron Area

WHEREAS, the Akron Metropolitan Area Transportation Study (AMATS) is designated as the Metropolitan Planning Organization (MPO) by the Governor, acting through the Ohio Department of Transportation and in cooperation with locally elected officials in Summit and Portage Counties and the Chippewa Township and Milton Township areas of Wayne County; and

WHEREAS, collisions resulting in death or severe injury are not inevitable, but can be prevented through changes in human behavior, technology, and designs that accommodate multimodal uses; and

WHEREAS, the federal Bipartisan Infrastructure Law (BIL) created a new program known as Safe Streets and Roads for All (SS4A); and

WHEREAS, the primary goal of SS4A is to reduce and eventually eliminate all fatal and serious injury crashes through a combination of design improvements and behavioral changes; and

WHEREAS, preventing collisions in the AMATS area necessitates an analytical and systemic approach to street planning, design, policy, enforcement, legal processes, education and communication; and

WHEREAS, AMATS’ Policy Committee formally endorsed, through Resolution 2022-16, a Vision Zero goal to eliminate traffic fatalities and severe injuries while increasing safe, healthy, and equitable mobility for all road users with an emphasis on protecting the most vulnerable users; as well as the development, implementation, and monitoring of a Safety Action Plan and;

WHEREAS, AMATS has been involved in a planning process relating to the development of a SS4A Action Plan since September 2022; and

WHEREAS, AMATS staff has prepared a draft SS4A Action Plan based upon input from the SS4A Taskforce, AMATS Committees, various stakeholders and the general public; and

WHEREAS, the SS4A Taskforce, AMATS Committees, various stakeholders and the general public have had opportunities to provide feedback on the draft SS4A Action Plan during the months of March, April, and May 2023.

NOW THEREFORE BE IT RESOLVED:

1. That this Committee approves the Final Draft Safe Streets for All (SS4A) Action Plan for the Greater Akron Area
2. That this Committee affirms that AMATS is dedicated to measuring the progress, challenges, and

successes of the Vision Zero commitment and will do so with tangible, reportable metrics that will be reported on a regular basis with progress reports.

3. That this Committee authorizes the Staff to provide copies of this Resolution to the appropriate agencies as evidence of action by the Metropolitan Planning Organization.



Mayor Gerard Neugebauer, 2023 Chairman
Metropolitan Transportation Policy Committee

May 18, 2023

Date