Traffic Safety Strategies

Traffic Safety

Transportation safety and security encompasses everything from minor incidences to major pile ups and fatalities across all the roads in the County. Traffic accidents are an inevitable part of travel and happen universally across all ranges of weather, traffic patterns, days of the week, and times of the year. No amount of road engineering can eliminate vehicle accidents, but trends in traffic and accident data can show where issues can be addressed. This report analyzes crash data provided by the Michigan State Police, collected from reported traffic accidents in Genesee County between 2019-2023 and provides strategies and recommendations to reduce the number of accidents that happen each year. While the majority of fatalities occur on expressways, it is important for local agencies to consider all traffic safety strategies to minimize trageties on local roads.

Trends and Mitigation Strategies

General trends for Genesee County show that the total number of accidents has decreased from 10,656 in 2019 to 10,059 in 2023, and the number of fatalities has increased from 49 in 2019 to 57 in 2023. One major factor in the number of accidents in a county is the annual volume of traffic, or the annual Vehicle Miles Traveled (VMT). Trends show that as VMT decreases the number of traffic accidents also decreases. As the economy in Genesee County continues to recover from the national COVID-19 pandemic, people are driving more, but VMT still falls short of what it was prior to COVID. The annual VMT for Genesee County decreased from 4,142,587 in 2019 to 3,900,977 in 2023. People in Genesee County are driving less resulting in a decrease in traffic accidents.

In the Fall of 2022, Genesee County Metropolitan Alliance was awarded a Safe Streets For All Action Plan Grant through the Federal Highway Administration to create a Transportation Safety Action Plan addressing safety issues on roadways throughout the County. The Action Plan will analyze safety concerns and provide recommendations for prioritizing safety needs and projects within the County as part of the Federal Highway Toward Zero Death Goal initiative. The Safety Action Plan is anticipated to be completed in the Fall of 2025 and will provide information and safety improvement recommendations to local road agencies within Genesee County. This Action Plan will be leveraged into applying for Implementation Grant funding through the Safe Streets for All Program in order to fund the recommended safety projects. The following provides more detail regarding the top transportation safety issues facing Genesee County and how they compare with counties in the state with similar characteristics.

Age

Genesee County is ranked 5th in Michigan for crashes involving 15 to 17-year olds with 83 fatal or serious injury crashes over the past five years, and 5th for crashes involving 18 to 20-year olds with 152 fatal or serious injury crashes over the past five years. Traffic crashes are the number one cause of injury and death for teens. While crash rates are highest for 16-year old drivers, drivers 21 and older have crash rates nearly six times higher than drivers 70 and older. To reduce the number of crashes caused by new drivers, local agencies should consider adjusting laws pertaining to young drivers, conducting social media campaigns, assisting parents in managing teen driving, improving the graduated driving licensing system, or designing affordable driving programs for cost burdened families.

Total Accidents — **2019: 10,656** / **2023: 10,059**

Total Fatalities — **2019: 49** / **2023: 57**

VMT — **2019: 4,142,587** / **2023: 3,900,977**

Impaired and Distracted Driving

Genesee County is ranked 5th in Michigan for alcohol related crashes with 292 fatal or serious injury crashes over the past five years. Impaired driving crashes are disproportionately more severe than other crashes, constituting 40 to 45 percent of all fatal crashes each year. According to AAA Exchange, after alcohol, marijuana is the most frequent impairing substance among drivers. Even though marijuana is legal for recreational use in Michigan, driving under the influence of

5 Year County Ranking	Fixed Object		Ages 15-17		Age 18-20		Pedestrian		Controlled Intersections		Drinking		Vehicle Miles Traveled	
	KA	State Rank	KA	State Rank	KA	State Rank	KA	State Rank	KA	State Rank	KA	State Rank	VMT (Thousands)	State Rank
Genesee Co	316	4	83	5	152	5	153	5	102	8	292	5	3,900,977	5
Washtenaw Co	203	7	41	10	98	9	91	8	40	16	165	7	3,816,952	7
Oakland Co	451	2	100	4	258	3	279	2	224	3	447	3	12,203,985	2
Kent Co	377	3	138	2	310	2	240	3	267	2	494	4	6,109,521	3
Ingham Co	192	8	31	15	130	6	94	7	116	6	162	10	2,184,353	8

KA Represents Fatalities and Serious Injury Crashes this drug is illegal. The NHTSA estimates that 56% of drivers involved in serious injury and fatal crashes tested positive for at least one drug. Despite decades of work, impaired driving remains a devastating traffic safety and public health problem. To combat impaired driving, local agencies are encouraged to implement a combination of actions including saturation patrols, officer training programs, public outreach and education, partner with national programs, as well as support transit and rideshare efforts. A recent study published in the Journal of the American Medical Association found the number of vehicle crash traumas has decreased by 38.9% due to the extensive use of ridesharing services. Reports of distracted driving also continue to become more prevalent, specifically drivers using cellphones. IIHS reports that crash risks were 2-6% greater when drivers were distracted by a handheld device versus when they were completely focused on the road. IIHS also reports that there was an increase in crash risk for drivers under 30 years old and for drivers over 64. With funding for police services being cut, distracted and impaired driving puts more travelers at risk on the roadways.

Lane Departure

Genesee County is ranked 4th in Michigan for fixed object crashes with 316 fatal or serious injury crashes over the past five years. Fixed object crashes are one of several lane departure type crashes. A lane departure crash is defined as a crash that occurs after a vehicle crosses an edge line, center line, or otherwise leaves the traveled way. While lane departure crashes represent a relatively modest proportion of all traffic crashes, they result in a greatly disproportionate percentage of fatal and serious injury crashes. Nationally, over 50 percent of all traffic fatalities are the result of lane departure crashes. In 2023, Genesee County experienced a total of 43,866 lane departure crashes, including single vehicle crashes, multiple vehicle crashes, and parked vehicle crashes.

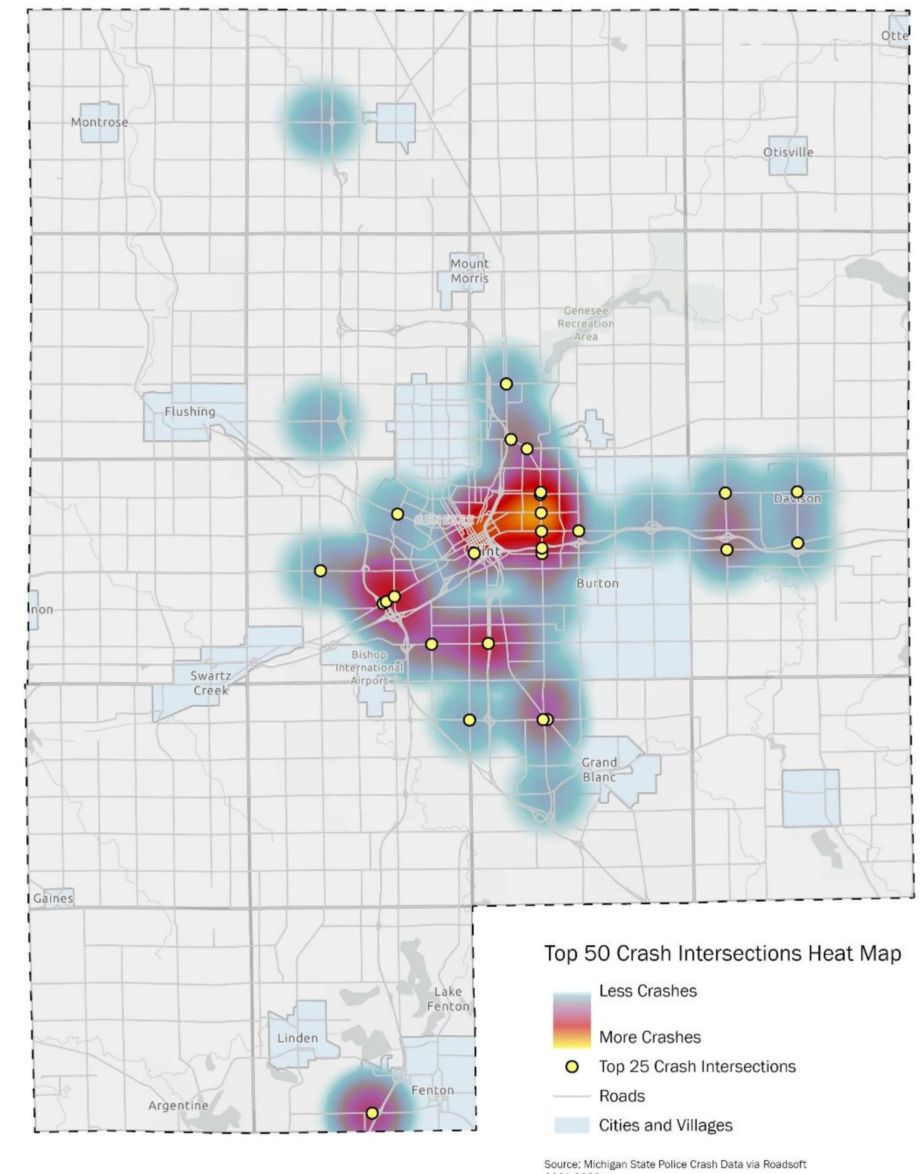
Many factors contribute to lane departure crashes including driver fatigue and drowsiness, distracted driving, poor traction between vehicle and road surfaces, as well as poor visibility. To mitigate lane departure crashes, local agencies should consider implementing a ranked and prioritized list of high-risk lane departure segments, conduct road safety audits on high-risk segments, develop lane departure outreach materials, and promote lane departure focused engineering countermeasures. Some examples of engineering countermeasures that local road agencies could implement to target lane departure crashes include shoulder and center line rumble strips, safety edges on roadways, high friction surface treatments, as well as curve delineation. Wider roads lead to higher speeds and a higher risk of collisions. Local agencies should consider narrowing roadways and exploring other traffic calming strategies where frequent accidents happen.

2021-2023 Top 25 Accident Prone Intersections		
Rank	Intersection Location	Total Crashes
1	E Hill Rd & W Hill Rd & Fenton Rd	91
2	Corunna Rd & S Linden Rd	74
3	Davison Rd & N Dort Hwy	69
4	Cesar Chavez Dr & Robert T Longway Blvd	67
5	Lapeer Rd & S Dort Hwy	67
6	Robert T Longway Blvd & N Dort Hwy & S Dort Hwy	63
7	E Hill Rd & S Saginaw Rd	59
8	Lapeer Rd & S State Rd	56
9	Owen Rd & Silver Pkwy	55
10	Miller Rd & Miller/N I75 Ramp & W I69/Miller Ramp	54
11	S Dort Hwy & E Court St	53
12	Dort Hwy & Stewarts Ave & E Stewarts Ave & N Dort Hwy	53
13	Miller Rd & Austins Pkwy	53
14	E Carpenter Rd & N Dort Hwy	52
15	W Flint St & E Flint St & N State Rd	52
16	Dort Hwy & E Hill Rd & S Dort Hwy	52
17	Flushing Rd & N Ballenger Hwy	51
18	S Center Rd & E Court St	51
19	Churchill Ave & N Dort Hwy	50
20	N Dory Hwy & Richfield Rd	49
21	E Bristol Rd & S Grand Traverse St	49
22	Miller Rd & S Ballenger Hwy	49
23	S Irish Rd & Lapeer Rd	49
24	N Grand Traverse St & W 5th Ave	49
25	Van Slyke Rd & W Bristol Rd	48

Pedestrian and Bicycle

Genesee County is ranked 5th in Michigan for vehicle to pedestrian crashes with 153 fatal or serious crashes over the past five years. People who travel by foot, wheelchair, bike, or other non-motorized means are among the most vulnerable road users. To address issues associated with pedestrian and bicycle safety, various countermeasures should be considered. These include sidewalks or separated walkways and pathways, signs and pavement markings, promoting safer routes to school programs, targeted enforcement of all road users, and traffic calming. Traffic calming is the combination of physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users. Since the speed of a vehicle is a major determinant in the severity of a crash, lowering speeds can assist in reducing non-motorized related crashes. Traffic calming techniques should strongly be considered in problematic areas with a high number of non-motorized accidents.

Top Crash Intersections



Intersections

Genesee County is ranked 8th in Michigan for controlled intersection crashes with 102 fatal or serious injury crashes over the past five years. Intersections contain points of conflict in roadways where people, whether in vehicles or walking, cross as they travel. Intersections make up an extremely small portion of the road network, yet many traffic accidents are attributed to these locations. Strategies to address intersection safety are diverse, with most using an engineered-based approach. These strategies include developing a region-wide intersection inventory, creating a ranked and prioritized list of high-risk intersections, conducting road safety audits of high-risk intersections, and applying roundabouts at certain locations. Studies have shown that roundabouts have reduced serious injury crashes by 75% percent when they replace stop signs or signals, and reduced fatality collisions by about 90 percent. The list above shows the top 25 most accident-prone intersections in Genesee County from 2019-2023. These intersections are overlaid on the map. The map also highlights areas of high accident density. It is obvious from the map that the largest concentration of accidents occurred at intersections. Accidents are also focused toward the more highly traveled roads. These intersections and road segment locations, with their high number of accident occurrences, should be the focus of potential mitigation strategies.

Roundabouts

A roundabout is a circular intersection where entering traffic yields to vehicles traveling counterclockwise around a central island. Roundabouts are designed to promote slow and consistent speeds for all movements which allows higher capacity while also improving safety. According to the Michigan Department of Transportation (MDOT), there are four primary advantages of roundabouts:

1. Safety: roundabouts reduce vehicular speeds, as well as the number of conflict points. Roundabouts eliminate head-on/left turn and angle type crashes which frequently result in serious or fatal injuries. See the conflicts infographic to the right for a visual representation.

2. Operations: with the use of yield signs vehicles can enter the roundabout when there are adequate gaps in the traffic flow. This reduces the number of vehicles which must stop, the time vehicles are stopped and the amount of conflict points between vehicles and pedestrians.

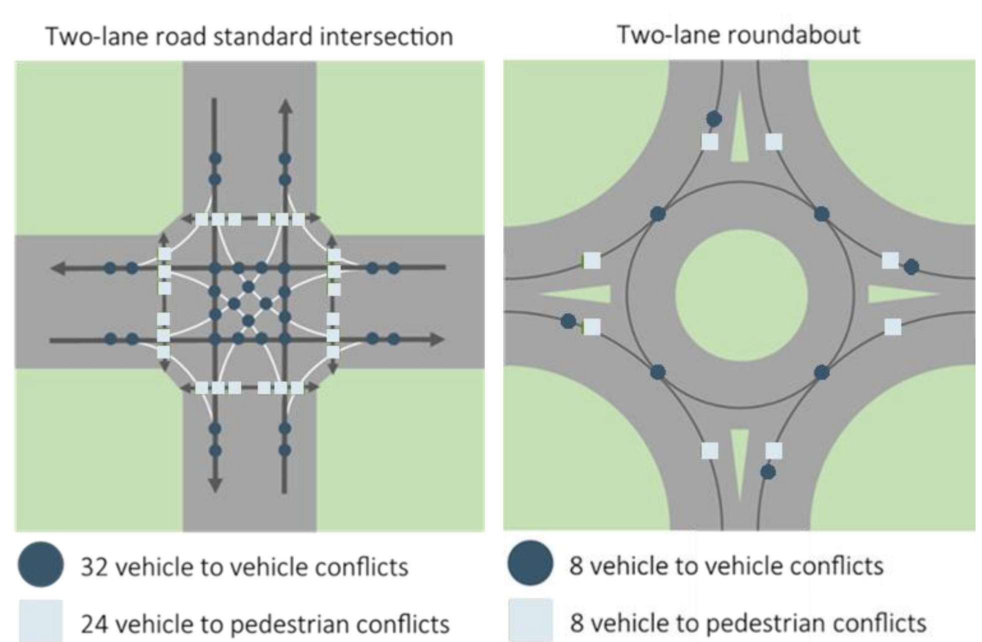
3. Maintenance: roundabouts reduce long-term operational and maintenance costs associated with traditional signalized intersections. There are no traffic signals to power and maintain, which can amount to savings of approximately $5,000 per year.

4. Aesthetics: roundabouts create an area for communities to provide green space and landscape architecture. There are no large poles, overhead wires, or signals cluttering the visual environment.

Current Conditions

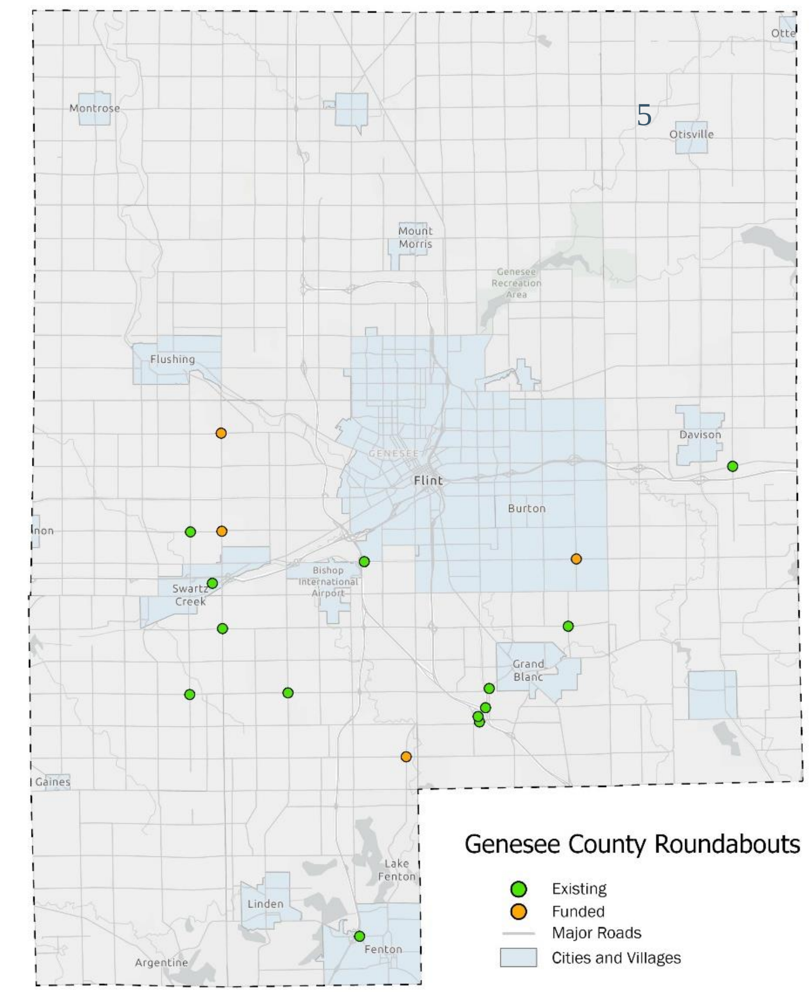
The first roundabout in Genesee County opened in 2015 and is located at Hill Road and Elms Road. Due to their popularity in terms of function and safety, other roundabout projects have been planned in Genesee County. See below for a list of funded roundabouts.

- Bristol Road and Belsay Road – 2025
- Elms Road and Beecher Road – 2026
- Elms Road and Lennon Road – 2026
- Fenton Road and Baldwin Road – 2026



Source: FHWA Roundabouts: An Informational Guide

Roundabout Locations



Source: Genesee County Metropolitan Planning Commission

Current Initiatives

Roundabouts assist MPO's in meeting Safety PM Targets. If an intersection has a history of severe and even fatal crashes, it most likely should be considered for a roundabout. On the other hand, an intersection may not have the crash history, but would work better from a functional standpoint, helping to alleviate traffic issues and promote better air quality due to less carbon emissions from idling vehicles. Although safety and operations are important factors in determining compatible intersections for a roundabout, roundabouts ultimately can be implemented anywhere. There are many site-specific elements at an intersection that can make it compatible.

In the completed 2019 study, Rowe Professional Services identified 14 potential locations for a roundabout in their preliminary engineering phase. Some of which have already been fully funded and completed through local or state funding since the completion of the study. On average, GCMPC receives approximately $1.8 million every year across three programs that can be allocated towards roundabout projects. The average cost of a roundabout is approximately $1.3 million, which means that agencies must look for other funding sources if a roundabout is desired. Additional funding can be applied for through MDOT programs like the Highway Safety Improvement program or the High-Risk Rural Roads program.

Developing problematic intersections into roundabouts is becoming more popular over time due to their safety and efficiency benefits. Therefore, it is important for local road agencies to strongly consider and encourage roundabouts when looking to enhance intersections with safety and traffic issues. The skim analysis that GCMPC staff performed was just a starting point for proposed future roundabout projects in Genesee County. Although this information certainly assists in determining ideal intersections for potential roundabout projects in the County, local road agencies should conduct more detailed studies when planning specific projects. Agencies can refer directly to the Roundabout Implementation Study at the following link: https://www.rowepsc.com/rabs/images/pdfs/genesee_county_RAB_full_report.pdf.

Future Opportunities

To help local road agencies plan for potential roundabout projects, staff performed a skim analysis of the existing federal-aid intersections in Genesee County. This analysis identifies intersections that may be most compatible for roundabout projects in terms of safety and was the basis for the Genesee County Roundabout Implementation Study performed by Rowe Professional Services. Since there are many safety factors that can make an intersection a candidate for a roundabout, this analysis is broken into four tiers.

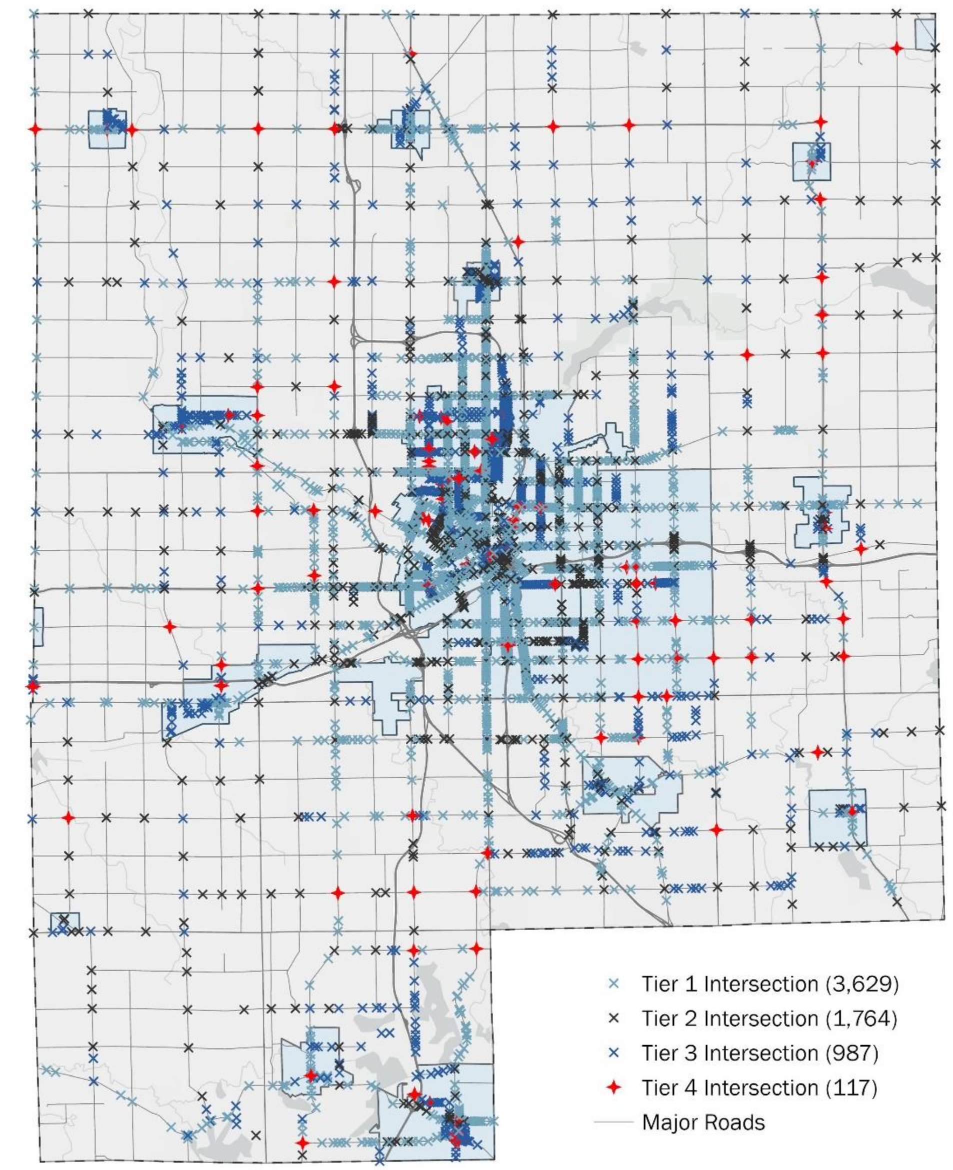
Factors	Tier 1	Tier 2	Tier 3	Tier 4
Federal-aid Intersection	✓	✓	✓	✓
No local road and major road intersecting		✓	✓	✓
Not located within 500 feet of a railroad			✓	✓
No gravel road at intersection			✓	✓
Not located on a signal timed corridor			✓	✓
Under 25,000 Annual Daily Traffic			✓	✓
Less than 4 Lane Roads at Intersection			✓	✓
Over 5 angle crashes within 5 years, at least 1 fatality, or at least 1 severe injury crash				✓

Source: GCMPC Roundabout Skim Analysis

As recommended by MDOT, intersections that are most compatible for a roundabout in terms of safety include those that have over five angle crashes within the last five years, at least one fatality, or at least one severe injury crash. This is the factor that was used in GCMPC's analysis for an intersection to be considered Tier 4, or in other words, the most compatible for a roundabout project. Other factors included in this analysis are taken from the Federal Highway Administration's (FHWA) report, Roundabout: An Informational Guide, which describes various elements to consider for a roundabout project. Sites where roundabouts are advantageous include intersections with historical safety problems, balanced traffic volumes, where traffic calming is desired, and high left-turn volumes. Sites where roundabouts may be problematic include intersections within a signalized corridor, traffic flow on a major street opposed by relatively light traffic on a minor street, with a gravel road, as well as intersections located near a railroad.

The map to the left displays the results of GCMPC's roundabout skim analysis with each tier of intersections represented in a different color. Of the 3,629 federal-aid intersections in Genesee County, 117 are considered Tier 4, or the most compatible candidates for a roundabout based on this safety analysis. See the map legend below for the number of intersections included in each tier.

Roundabout Skim Analysis in Genesee County



Although safety is a primary aspect in determining compatible intersections for roundabouts, operations is also an important factor. The standard four-way intersection poses various issues in terms of efficiency. Since there are 32 vehicle to vehicle conflict points and 24 vehicle to pedestrian conflict points, vehicles are stopping far more and much longer compared to an intersection with a roundabout. The amount and length of stopping is not only problematic for efficiency, but also air quality since vehicles are idling longer, producing more carbon emissions. As a result, local road agencies have developed their own lists of intersections that could be converted to a roundabout to mitigate operational issues.

Safety Performance Measures

Transportation Performance Management (TPM) establishes Safety Performance Measurement (Safety PM) to clarify existing program requirements and to improve data, foster transparency and accountability, and to allow safety progress to be tracked at the national level. The TPM supports safety performance measures that are used to make investment and policy decisions to achieve performance goals. The Safety PM Final Rule establishes five performance measures as the five-year rolling averages to include:

- Number of Fatalities
- Rate of Fatalities per 100 million VMT
- Number of Serious Injuries
- Rate of Serious Injuries per 100 million VMT
- Number of Non-motorized Fatalities and Non-motorized Serious Injuries

The following chart shows the State of Michigan Safety PM Targets. Metropolitan Planning Organizations (MPO's) are required to establish targets by either supporting the statewide targets or creating a unique local target. The Genesee County Metropolitan Alliance (GCMA) has elected to support the statewide Safety PM targets.

Safety Performance Measure	Baseline Through 2022	2023 State Safety Target	2024 State Safety Target
Fatalities	1085.2	1,109.2	1,098.0
Fatality Rate (per 100 million VMT)	1.137	1.152	1.152
Serious Injuries	5,727.8	5,785.0	5,785.0
Serious Injury Rate (per 100 million VMT)	5.988	5.999	5.850
Non-Motorized Fatalities & Serious Injuries	743.0	710.8	728.3

To contribute towards reaching statewide targets GCMA will continue ongoing coordination with the State and other safety stakeholders to address areas of concern and will plan and program projects that contribute toward meeting the State safety targets. GCMPC will continue to prioritize safety projects submitted by road agencies for the local safety program. GCMA provides support for projects through a list of projects sorted by time-of-return provided to MDOT during the annual call for local safety projects. Current projects programmed that should contribute to safety performance include intersection safety improvements, signalized corridor improvements, roundabouts, non-motorized improvements, and road diets. A listing of projects is maintained on the Transportation Improvement Program (TIP) section of the GCMPC website, which includes safety projects and is updated continuously as projects are added.

GCMA and local road agencies will continue to work towards the local safety policies and strategies identified in the Genesee County Transportation Safety Action Plan. Continued focus will be on the priority emphasis areas identified in the Safety Action Plan. GCMA will continue to work with local, county, and state transportation agencies to develop projects that address priority emphasis area. We will also continue to provide technical assistance to members, perform annual crash data analysis, and track our region's data for the safety performance measures.

Recommendations

Below are things agencies can consider for road safety investments:

- Educate citizens and local officials regarding safety issues and mitigation strategies
- Continue to maintain a database of road and crash data so the most accurate data is being used in investment decisions
- Communities should work to create a comprehensive Asset Management Plan for their roads to prepare for future investments
- Continue to use safety as a factor in selecting projects for federal transportation funding
- Explore innovative ways to fund improvements such as combining multiple funding sources or making road repairs at the same time as other infrastructure repairs

Appendix A to this report is an MDOT document with more details on Safety Performance Measures.
https://www.iihs.org/topics/distracted-driving

APPENDIX A

Safety Performance Management

TRANSPORTATION PERFORMANCE MANAGEMENT

HIGHWAY SAFETY IMPROVEMENT PROGRAM SAFETY PERFORMANCE MEASURES

In 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) established a performance- and out-come based program to achieve seven new national performance goals, including a safety goal to "achieve a significant reduction in traffic fatalities and serious injuries on all public roads." Congress directed the U.S. Department of Transportation to establish performance measures in support of the national goals and in consultation with States, metropolitan planning organizations (MPOS), and other stakeholders. Reauthorizations since MAP-21 have reaffirmed the national goals and supporting performance measurement and target requirements.

As directed by Congress, through rulemaking [81 FR 13913 and 81 FR 13882] the Federal Highway Administration (FHWA) codified the annual Highway Safety Improvement Program (HSIP) performance measurement and target requirements in 23 CFR Part 490, National Performance Management Measures, Subpart B. The purpose of safety performance measurement is to improve transparency through use of a public reporting system using common data standards and elements, and aggregating progress toward the national goal of reducing traffic fatalities and serious injuries. The safety performance measures identified in the regulation are applicable to all public roads regardless of jurisdiction.

The HSIP, legislated under 23 U.S.C. 148 and regulated under 23 CFR Part 924, is a core federal-aid program to achieve a significant reduction of fatalities and serious injuries on all public roads through targeted investment in infrastructure programs and projects to improve safety. The annual HSIP report communicates the annual performance targets to FHWA.

In coordination with FHWA, the National Highway Traffic Safety Administration (NHTSA) also codified MAP-21 safety performance measurement and target requirements as part of the annual Highway Safety Plan (HSP). The HSP is regulated by 23 CFR §1300, Uniform Procedures for State Highway Safety Grant Programs. The HSP focuses on behavioral traffic safety programs and serves as a companion to the HSIP infrastructure investments.

In 2016, the FHWA identified five safety measures, as follows, and the FHWA and NHTSA selected three measures in common (number 1-3) requiring identical targets be reported in the HSIP and the HSP.

1. Number of Fatalities
2. Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT)
3. Number of Serious Injuries
4. Rate of Serious Injuries per 100 million VMT
5. Number of Non-motorized Fatalities and Serious Injuries

In 2021, the Infrastructure Investment and Jobs Act (IIJA) provided substantive changes to 23 U.S.C. §402 Highway Safety Programs not limited to modifying the HSP from an annual to a triennial plan, and modified performance target requirements. The change in U.S. Code created conflict between HSIP and HSP regulations. Through rulemaking [88 FR 7804], NHTSA modified 23 CFR §1300, Uniform Procedures for State Highway Safety Grant Programs effective March 2023, as directed by 23 U.S.C. §402. In January 2024, FHWA published an NPRM [89 FR 4857] to propose changes to 23 CFR §490, including potential paths to realign the HSIP and HSP for performance measurement, but has not published a final rule as of September 2024.

As a result of the remaining conflict in regulation, the FHWA and NHTSA waived the identical HSIP and HSP target setting requirements for 2024 and 2025.

STRATEGIC HIGHWAY SAFETY PLAN

Figure 1 - Relationship between the SHSP, HSIP and HSP

The Michigan Strategic Highway Safety Plan (SHSP) is legislated and regulated under the HSIP and spearheaded by the Michigan Governor's Traffic Safety Advisory Commission (GTSAC) in coordination with public and private stakeholders. The SHSP is updated on a four-year basis and each edition builds upon the previous versions to reflect current conditions and safety needs.

The SHSP provides the framework for all Michigan highway safety programs to work in concert to align and leverage resources and guide investment decisions to collectively address the state's safety challenges.

The SHSP incorporates the Safe System Approach (SSA) to mitigate risks by building and reinforcing layers of protection to prevent crashes and minimize the harm caused when they do occur. The SHSP mission applies the SSA through statewide strategies to move Michigan Toward Zero Deaths, as even one death is not acceptable.

The Michigan SHSP safety goal is to eliminate fatalities and serious injuries by 2050

TARGET SETTING COORDINATION

The 23 CFR Part 490, Subpart B communicates the process for which State DOTs and Metropolitan Planning Organizations (MPOs) are to establish and report on the five HSIP safety targets, and the criteria FHWA will use to assess whether State DOTs have met or made significant progress toward meeting their safety targets.

The current annual timeline for establishing and reporting safety targets is as follows, and subject to change once FHWA issues an anticipated update to 23 CFR Part 490:

August 31: MDOT reports statewide safety targets (i.e., all Michigan public roads) for the next calendar year to FHWA through the HSIP.

February 27 (following year): MPOs report targets for the current calendar year to MDOT. Refer to the MPO section for details regarding MPO target elections and reporting. MDOT must provide FHWA MPO targets, upon request. [Regulation Timeline: August 31 + 180 Days]

Annual safety targets should reflect the Long-Range Transportation Plan and Strategic Highway Safety Plan (SHSP) goals.

MPO TARGET SETTING

Under current regulation, MPOs must report their safety targets to MDOT by February 27 of the year following MDOT reporting the State safety targets to FHWA (August 31 + 180 days). The target establishment and reporting process for MPOs was jointly developed, documented, and mutually agreed upon by the MPO and MDOT.

The MPO must establish annual targets for each of the five measures by either (1) agreeing to plan and program projects so that they contribute toward the accomplishment of the State safety target for that performance measure, or (2) committing to a quantifiable target for that performance measure for their metropolitan planning area. For each of the five measures, the MPO can make different elections to agree to support the State's targets or establish a quantifiable target.

MPOs must also report safety targets in their System Performance Report.

TARGET ACHIEVEMENT, CONSEQUENCE/PENALTY

FHWA will provide MDOT an official significant progress determination within 18 months following the Statewide target calendar year (i.e., in 2027 FHWA will provide MDOT a significant progress determination letter for 2025 safety targets). A State is considered to have met or made progress when at least four out of five safety targets are met, or the actual safety performance is better than the baseline performance for the period for four out of five measures.

If the State did not meet or make significant progress toward targets, the State (MDOT) must (1) submit an HSIP Implementation Plan (consequence) and (2) use obligation authority equal to or greater than the HSIP apportionment for the prior year only for highway safety improvement projects (penalty).

There is no federal- or state evaluation of significant progress toward MPO safety targets, nor is there a consequence or penalty for an MPO that does not demonstrate they have met or made significant progress toward target achievement.

2025 MICHIGAN SAFETY TARGETS

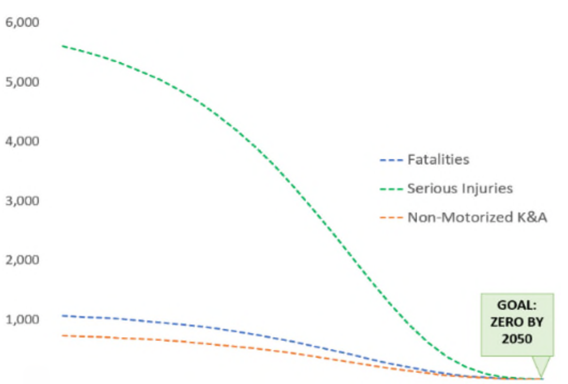
Data

The Fatalities Analysis Report System (FARS) is to be used for fatality related measures, and the State of Michigan Crash database is used for serious injury related measures. The VMT is calculated annually from the Highway Performance Monitoring System (HPMS).

2025 Target Development

The 2025 State safety targets are guided by the SHSP Mission, Vision and Goal to eliminate fatalities and serious injuries on Michigan roadways by 2050.

Aligned with the goal of Zero by 2050, the 2025 targets are developed on a curved slope wherein targets established from the current 5-year rolling average initially decline more slowly than the straight-line approach, and gain momentum over the timeline as reduction strategies are implemented.



Calculation Steps

MDOT calculated the baseline and established the 2025 targets using the below steps. Fatalities are used for demonstration noting the same steps are utilized for all five measures. Reference FHWA Procedure for Safety Performance Measure Computation and State Target Achievement Assessment guidance document.

Year	Annual Fatalities	BASELINE 5-Year Rolling Average
2015	967	967.0
2016	1,065	1,016.0
2017	1,031	1,021.0
2018	977	1,010.0
2019	986	1,005.2
2020	1,086	1,029.0
2021	1,136	1,043.2
2022	1,123	1,061.6
2023 (1)	*1,095*	*1,085.2*
2024 (2)	*1,074*	*1,102.9*
2025 (3)	*1,062*	*1,098.0*

1. Calculate the baseline. In 2025, the baseline is the outcome for a measure (e.g., annual fatalities) for the year prior to the establishment of the State's target. In this case, it is the 5-year average of annual fatalities (2019-2023)

$$\frac{986_{(2019)} + 1{,}086_{(2020)} + 1{,}136_{(2021)} + 1{,}123_{(2022)} + 1{,}095_{(2023)}}{5} = 1{,}085.2$$

2. Calculate the declining projection for 2024 annual fatalities and 5-year rolling average.
    a. Multiply baseline (2023 actual performance) by 0.990 = 1,074
    b. Calculate 5-year rolling average for 2020 through 2024 using 1,074 declining projection for 2024 = 1,102.9
3. Calculate the declining projection for 2025 fatalities and 5-year rolling average.
    a. Multiply 2024 projection by 0.989 = 1,062
    b. Calculate 5-year rolling average for 2021 through 2025 using 1,062 declining projection for 2025 = 1,098.0

Repeat steps for remaining four measures.