

A map of Michigan and surrounding regions, including parts of Wisconsin, Indiana, Ohio, and Ontario, Canada. The map shows major cities, roads, and water bodies. The title text is overlaid on the map.

# **MICHIGAN TRAFFIC RECORDS COORDINATING COMMITTEE (TRCC)**

## **STRATEGIC PLAN**

***FY2020-2024***



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# INTRODUCTION

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In Michigan, the traffic data systems that make up a comprehensive traffic records system are in multiple state departments. It is essential, that the operation and management of these systems are coordinated to ensure that the crash data is accessible, timely, accurate, complete, uniform and integrated for all users within the State.

Prior to 1994, coordination of these systems took place through an interagency work group that met every other month. In 1994, this work group was absorbed into the Michigan Traffic Safety Management System becoming the Data Action Team (DAT), one of 13 action teams created within this system. Membership within the DAT expanded to include traffic safety data users from across the state. This expansion changed the role of the DAT from strategic to operational. Recognizing the need to continue coordination of these data systems at a strategic level, an executive level group continued to meet separate from the DAT. These two groups were combined to create Michigan's Traffic Records Coordinating Committee (TRCC). In 2002, the Michigan State Safety Commission and the Michigan Traffic Safety Management System were combined to create the Governors Traffic Safety Advisory Commission (GTSAC). The Traffic Records Coordinating Committee continues to serve as an action team within the GTSAC structure and has responsibility for addressing traffic crash record issues within the state.

In 2019, the Data Users Group was formed and merged with the Executive Level of the TRCC to streamline discussions and planning of future projects.

In Michigan, TRCC membership is made up of any group, agency or individual who has an interest in, and can provide to other members, a perspective needed to improve the timeliness, accuracy, completeness, uniformity, integration, and accessibility of traffic records. While Memorandum of Understandings (MOUs) exist between member agencies, TRCC membership is voluntary and can be subject to change at any point. The TRCC has no authority to set policy, establish rules, or otherwise impose its authority on any group, agency or individual. Work groups and technical committees are established based on current projects, activities and/or issues at hand. The full TRCC (executive and technical committees) currently meets on a quarterly basis.

Within the TRCC is an Executive Committee that provides leadership to the larger, full TRCC. The Chair of the TRCC is also a member of the Executive Committee and is rotated among the Executive Committee membership on an bi-annual basis. The TRCC keeps the GTSAC apprised of TRCC activity, projects and/or accomplishments through reports at the bi-monthly GTSAC meetings and through an annual accomplishment report. The Executive Committee is comprised of a representative from the Michigan Department of State Police – Criminal Justice Information Center (MSP-CJIC), Michigan Department of State (MDOS), Michigan Department of Transportation (MDOT), Michigan Department of Health and Human Services – EMS Office (MDHHS), Michigan State Courts Administrative Office (SCAO), the Michigan Office of Highway Safety Planning (OHSP), and the Michigan Department of Technology, Management, & Budget (DTMB).

The TRCC Charter can be found in the Appendix Section - Appendix A.

## Traffic Records Assessment

In 2004, 2009, 2014 and again in 2020 the Office of Highway Safety Planning (OHSP) requested the National Highway Traffic Safety Administration (NHTSA) to facilitate a statewide, comprehensive traffic records assessment. NHTSA proceeded to assemble a team of traffic records professionals representing the various disciplines involved in a state traffic records system. Concurrently the OHSP carried out the necessary logistical and administrative steps in preparation for the online assessment via the State Traffic Records Assessment Program (STRAP). A team of professionals with backgrounds and expertise in several component areas of traffic records data systems (crash, driver/vehicle, roadway, enforcement and adjudication, and EMS and trauma data systems) conducted the assessment.

The scope of the traffic records assessment included all the data systems comprising a traffic records system. The purpose of this assessment was to determine whether Michigan's traffic records system can support the means to identify the state's safety problems, to manage the countermeasures applied to reduce or eliminate those problems and to evaluate those programs for their effectiveness.

The 2020 Traffic Records Assessment Executive Summary can be found on page 6.

## Strategic Planning

A comprehensive Traffic Records Strategic Plan should define a system, organization, and process for managing the data and attributes of the roadway, drivers, passengers, and vehicles to achieve the highest level of highway safety by integrating the work of disciplines and agencies involved. **Simply put, a strategic plan identifies where the organization wants to be at some point in the future and how it is going to get there.** The "strategic" part of any planning is the continual attention to current changes in the organization and its external environment, and how this may affect the future of the organization and its established goals.

To manage this complex system and to achieve the level of integration necessary to meet the highest levels of safety, four key assumptions must be understood:

1. An organizational structure exists that will allow for the collaboration of the agencies involved in highway safety.
2. A formal management process is in place that will coordinate the activities of these agencies in a manner that will efficiently achieve the stated goals, mission, and vision.
3. The planning process is at least as important as the planning document(s) itself
4. The planning process is never "done" – it is a continuous cycle

This strategic plan is a multi-year plan which will be updated annually and/or as needed. The strategic plan was developed to address the timeliness, accuracy, completeness, uniformity, integration and accessibility of all traffic related data and systems and to provide the mechanism to ensure the expenditure of safety funds are done so with these elements in mind.

## Vision

All roadway users arrive safely at their destinations.

## Mission

Improve the timeliness, accuracy, completeness, uniformity, integration, and accessibility of crash data and systems to enable stakeholders and partners to identify proactive countermeasures to address traffic safety issues.

## Goals

- ❖ Maintain a TRCC composed of members from the traffic safety community whose purpose is to jointly set the direction and future on matters related to Michigan traffic record data systems.
- ❖ Benchmark and measure the timeliness, accuracy, completeness, uniformity, integration and accessibility of traffic data that is needed to identify priorities for national, state and local traffic safety programs.
- ❖ Facilitate and coordinate the integration of systems within the state, such as systems that contain crash related medical and economic data, with traffic crash data.

## Measures of Impact and Evaluation

In developing and implementing emphasis area strategies, the TRCC will determine the level of impact and success of efforts and resources expended to:

- ❖ Secure baseline data from relevant sources to determine the current 'Crash Picture' for the state.
- ❖ Develop and determine priorities and programming based on critical data analysis and potential emerging safety issues.

Develop relevant measures of activity and impact and gather and use such data as the basis for new program development and requests for traffic records funding. An annual report will be prepared to provide information on the status of all funds awarded under Section 405-c including the list of projects implemented in the past fiscal year, brief descriptions of activities completed, and any problems encountered.

## Emphasis Areas

To support the mission, vision and goals of the strategic plan, information was utilized from the 2020 Traffic Records Assessments and through TRCC general and executive level meetings and from other national, state, and local safety partners at various meetings, forums, and conferences. In addition, the generally accepted "E's" of traffic safety (Engineering, Enforcement, Education and Emergency Medical Services) were considered in establishing emphasis areas. This plan outlines the high-level activities and projects that provide a long term (5 year) direction of traffic records data and systems in Michigan in the following areas:

- ❖ Crash
- ❖ Citation/Adjudication
- ❖ Vehicle/Driver
- ❖ Injury Surveillance System Components

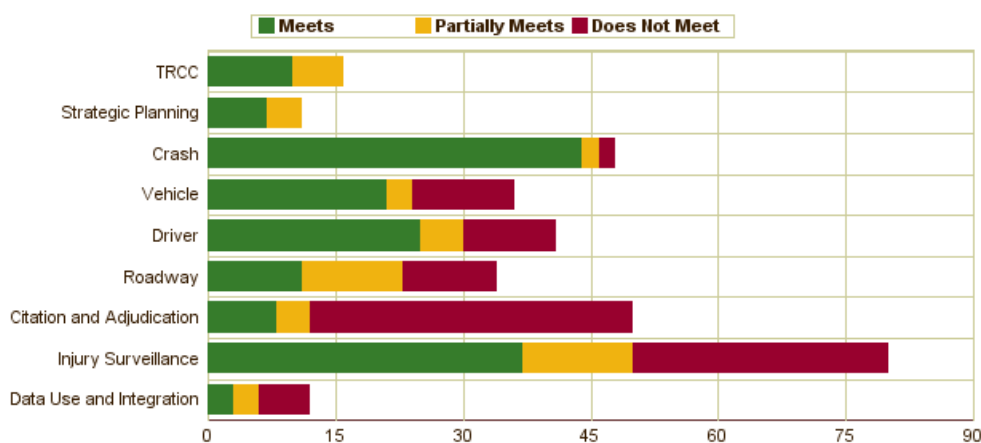
- ❖ Roadway
- ❖ Data Use & Integration
- ❖ TRCC
- ❖ Strategic Planning

## 2020 State of Michigan Traffic Records Assessment- Executive Summary

Out of 328 assessment questions, Michigan met the Advisory ideal for 166 questions (51%), partially met the Advisory ideal for 52 questions (16%) and did not meet the Advisory ideal for 110 questions (34%).

As Figure 1: Rating Distribution by Module illustrates, within each assessment module, Michigan met the criteria outlined in the Traffic Records Program Assessment Advisory 63% of the time for Traffic Records Coordinating Committee Management, 64% of the time for Strategic Planning, 92% of the time for Crash, 58% of the time for Vehicle, 61% of the time for Driver, 32% of the time for Roadway, 16% of the time for Citation and Adjudication, 46% of the time for EMS / Injury Surveillance, and 25% of the time for Data Use and Integration.

**Figure 1: Rating Distribution by Module**



### Recommendations & Considerations

According to 23 CFR Part §1300.22, applicants for State traffic safety information system improvements grants are required to maintain a State traffic records strategic plan that—

*“(3) Includes a list of all recommendations from its most recent highway safety data and traffic records system assessment; (4) Identifies which such recommendations the State intends to implement and the performance measures to be used to demonstrate quantifiable and measurable progress; and (5) For recommendations that the State does not intend to implement, provides an explanation.”*

The following section provides Michigan with the traffic records assessment recommendations and

associated considerations detailed by the assessors. The broad recommendations provide Michigan flexibility in addressing them in an appropriate manner for your State goals and constraints. Considerations are more detailed, actionable suggestions from the assessment team that the State may wish to employ in addressing their recommendations. GO Teams (GO Teams are small groups of one to three subject matter experts designed to help States address traffic records issues ranging from pinpoint assistance with a single database to broader assistance with Traffic Records Coordinating Committee (TRCC) management, strategic planning, and data integration), Crash Data Improvement Program (CDIP), and Model Minimum Uniform Crash Criteria Mappings (MMUCC) are available for targeted technical assistance and training.

### Crash Recommendations

**Assessment Recommendation:** Improve the interfaces with the Crash data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

**Michigan TRCC Response:** The crash data system currently interfaces with the driver, vehicle, and roadway system. In 2020 the crash system started sharing their data file with the Michigan Trauma and Injury system. Objectives will continue to be researched to explore potential methods to build interfaces with citation, adjudication and trauma systems and improve existing interfaces.

The interface with the Michigan Trauma and Injury System is a newer project and no reports have been established yet. MSP/CJIC will be working towards establishing reports to share the benefits of this interface with the TRCC.

**Assessment Recommendation:** Improve the procedures/ process flows for the Crash data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

**Michigan TRCC Response:** Michigan Crash Analysis Application – Phase III is a multi-year project that implemented a Crash Analysis Application that provides the ability to quickly analyze crash statistics and generate shareable reports, charts and graphs. Please see page 50 for detailed information on this project for FY22.

### Vehicle Recommendations

**Assessment Recommendation:** Improve the data quality control program for the Vehicle data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

**Michigan TRCC Response:** MDOS has implemented the Customer and Automotive Records System (CARS) since the previous assessment has added more functionality desired in the Advisory. Performance measures for improving vehicle data quality are future goals for TRCC and will be explored as the system develops.

**Assessment Recommendation:** Improve the interfaces with the Vehicle data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

**Michigan TRCC Response:** There is no interface with other traffic record systems such as the driver or crash databases and the data conventions for capturing personal identity information for these systems appears to be different. However, it was reported that a unified record system is in the process of development to combine vehicle and driver records. TRCC will explore methods to improve the interfaces for the vehicle system.

### Driver Recommendations

**Assessment Recommendation:** Improve the data quality control program for the Driver data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

**Michigan TRCC Response:** The Michigan Department of State is generating more timely and complete error reports to the courts for resolution. Also enhanced training is being done with courts to promote more accurate and timely submission of data. MDOS is currently in Phase 2 of the project, State to State Staffing. This project promotes traffic safety by ensuring unsafe drivers are taken off of road faster and ensuring consistent enforcement for driving offenses. FY22 is the final phase of this project. Discussions will continue with MDOT for future projects. Please see page 46 for more detailed information on this project for FY22.

**Assessment Recommendation:** Improve the interfaces with the Driver data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

**Michigan TRCC Response:** MDOS can grant law enforcement access to the driver records through the Law Enforcement Information Network. The other piece related to inter-operability of the citation interface is addressed in recommendation #1 in "Citation".

### Roadway Recommendations

**Assessment Recommendation:** Improve the applicable guidelines for the Roadway data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

**Michigan TRCC Response:** The MDOT ESRI Roads & Highways software package went live Oct 10, 2018. Work continues in configuring the software and integrating the MDOT road data with the Center for Shared Solutions (CSS) Michigan Geographic Framework (MGF). CSS delivers the electronic road system used by MDOT and MSP for crash location and analysis.

Through a series of meetings with vendors ESRI, CSS, and Roadsoft, The ESRI design recommendation was reduced to three high level recommendations. ESRI worked with MDOT, CSS, and Roadsoft to script models to produce a centerline and migration outputs from R&H. The models export was used to load most of the existing MIRE FDE items into Roadsoft version 20.

We have made progress with MIRE FDE data collection, with 15% of our non-state owned local paved roads collected. MDOT began a new grant, Deriving Missing Model Inventory of Roadway Elements (MIRE) Surface Type from Imagery Phase I in April 2022. This project strives to complete the surface type require for the MIRE Federal Data Elements (FDE) in the MDOT roadway database. Phase II of the project will continue into FY23. Detailed information about FY22 can be found on page 54 and FY23 on page 63.

**Assessment Recommendation:** Improve the data quality control program for the Roadway data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

**Michigan TRCC Response:** The MDOT ESRI Roads & Highways software package went live Oct 10, 2018. Work continues in configuring the software. Road alignments and many attribute edits are now being done by MDOT for the final CSS delivery. Bringing this work item back to MDOT allows for the



completion of Act 51 changes to be incorporated into the annual centerline version releases.

MDOT recently completed the 2020 Traffic Records Assessment (TRA) report. This report documented the updated quality control measures the department is implementing, such as regularly running data validation reports and maintaining good channels of communication between various data management areas within the department and state government.

Discussions with the MDOT Data Inventory and Integration Division management, (business owners of MDOT R&H) expressed a willingness to consider roadway metrics in future discussions with TRCC.

### Citation / Adjudication Recommendations

**Assessment Recommendation:** Improve the data dictionary for the Citation and Adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

**Michigan TRCC Response:** For citations, there is no statewide tracking system or data dictionary. Therefore, not all fields are clearly defined and represented in field data collection manual, training materials, coding manuals and corresponding reports. There is no indication about what data fields are populated through integration with other traffic records system components.

For Case Management Systems, only one data dictionary of the 7 case management systems partially defines the fields in the system and does not identify the data elements populated by data integration.

TRCC will begin reviewing the citation system's adherence to national guidelines. Recommendations will be made for improvements to applicable sections.

**Assessment Recommendation:** Improve the data quality control program for the Citation and Adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

**Michigan TRCC Response:** There is no set of established performance measures for the timeliness, accuracy, completeness, uniformity, integration and accessibility for both citation and adjudication systems. The TRCC will create an action plan that will detail the steps necessary to establish and implement performance measures as outlined and required in the Traffic Records Program Assessment Advisory. Performance measures for improving citation data quality are future goals for TRCC and will be explored as the system develops.

**Assessment Recommendation:** Improve the interfaces with the Citation and Adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

**Michigan TRCC Response:** During the 2020 traffic records assessment, the citation and adjudication section had many of its questions assigned to incorrect respondents. Citation and adjudication data are part of a process that starts with the development of paper citations or an electronic citation program and citation numbers. Law enforcement officers are assigned the paper citation or electronic numbers and issue citations to the public, then forward the citation to their own managers, and to the adjudicators within their jurisdictions. The prosecutors review the citations and determine whether to file the case, or to dismiss or defer. Judges determine a disposition, which is then sent to the driver history file. This involves several State agencies, and these should work in concert on the collection and use of this data.

The TRCC will explore methods to improve the interfaces for the citation system. A demonstration was given to the TRCC by Indiana's eCitation system, this has laid a groundwork for discussion, and given an opportunity for mentoring via another State in our Region. The TRCC continues to work to gain participation from SCAO.

### **EMS / Injury Surveillance Recommendations**

Assessment Recommendation: Improve the data quality control program for the Injury Surveillance systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

Michigan TRCC Response: The EMS data system, Michigan EMS Information System (MI-EMSIS), has established 12 performance measures and metrics within the following attributes: accuracy, completeness, timeliness, and uniformity, that are tracked in a monthly progress report.

Each Medical Control Authority (MCA) within the EMS system conducts quality control reviews of the above performance measures.

The TRCC approved a four-year project with MDHHS, Improving Quality of Crash Severity and Injury Assessment within Michigan EMS Information System (MI-EMSIS). We are currently in Phase II of the project, that is planned to continue into FY23 and FY24. A full-time data analyst has been hired to utilize the MI-EMSIS as well as Biospatial to identify gaps in documentation related specifically to motor vehicle crashes. For more detailed information please see page 47 for FY22 and page 59 for FY23.

### **Data Use and Integration Recommendations**

Assessment Recommendation: None.

Michigan TRCC Response: The TRCC will continue discussions to move forward with data integration.

# CRASH

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## Description

The Traffic Crash Reporting Unit (TCRU) is responsible for the complete, accurate, and timely collection of statewide traffic crash data. The TCRU maintains the Traffic Crash Reporting System (TCRS) database that serves as the central repository for all traffic crash data for the State of Michigan. By law, and in accordance with Michigan Motor Vehicle Code Section 257.622, all law enforcement agencies are required to submit qualifying crash reports to the MSP.

The Unit receives and processes approximately 315,000 crashes annually. The data collected from the crash reports is used extensively by federal, state, and local traffic safety partners to identify traffic safety problems and to support the state's efforts to reduce crashes, fatalities, and injuries. Michigan has established integration between its crash system and other State traffic records systems to improve the quality and accuracy of traffic safety information.

Michigan has met the advisory standards for NHTSA'S crash system performance measures which can serve as a model for other States. When compared to the federal reporting guidelines in NHTSA's Traffic Records Advisory, Michigan has one of the best performing crash systems in the nation. Several states have requested meetings with Michigan to inquire about how we established the crash system processing. In addition, Michigan has implemented one of the nation's most comprehensive quality control programs, addressing the most critical traffic safety issues.

In 2016, Michigan underwent a revision of the State of Michigan Traffic Crash Report. Michigan's team utilized the Model Minimum Uniform Crash Criteria (MMUCC) and American National Standard Institute (ANSI) D-16 as part of their compliance process to ensure adherence to federal crash reporting standards.

Michigan is now receiving nearly 100% of the crash data electronically and established a statewide electronic reporting requirement as of January 1, 2020. Michigan continues to work with the six remaining paper agencies to comply with electronic reporting.

Quick Michigan Crash Stats				
	2017	2018	2019	2020
Fatalities*	1,028	974	985	1,083
Speed-Involved Fatalities**	236	240	237	274
Pedestrian Fatalities*	158	145	149	175
Bicyclist Fatalities*	21	21	21	38
Motorcyclist Operator Fatalities*	124	121	114	145
Unrestrained Passenger Vehicle Fatalities***	206	192	217	228
Young Driver-Involved (Age 15-20) Fatalities***	135	108	129	133
Senior Driver-Involved (Age 65+) Fatalities***	224	235	227	219
Distracted Driving Fatalities*	72	77	70	52

\* Source: Traffic Crash Reporting System (TCRS)

\*\* Source: Fatality Analysis Reporting System (FARS)

\*\*\* Source: Michigan Traffic Crash Facts Website – Fact Sheets



## Performance Measures

Note: \*\*\* Measures are gauged by calendar year, not fiscal year

Performance Attribute	Performance Measure	Baseline Measure	FY 2018 (10-1-2017 to 09-30-2018)	FY 2019 (10-1-2018 to 09-30-2019)	FY 2020 (10-1-2019 to 09-30-2020)	FY 2021 (10-1-2020 to 09-30-2021)	Goal
Timeliness	# days from the crash date to entry into TCRS database (electronic and paper)	103 days (2003)	12.97	12.41	12.93 (Manual Paper Entry)	11.51	Michigan will improve to 11 days for 2022.
	% records entered into the system within 30 days of the crash	79% (2009)	95%	95%	94%	95%	Michigan will improve to 96% for 2022.
	% records entered into the system within 15 days of the crash	63% (2017)	65%	66%	67%	67%	Michigan will improve to 68% for 2022.
	% records entered into the system within 7 days of the crash	52% (2017)	53%	54%	54%	54%	Michigan will improve to 55% for 2022.
Accuracy	# of data performance edit errors per crash record	0.14 (2016)	0.05	0.03	0.01	0.01	Michigan will remain at .01 data edit errors per crash for 2022.
	% of crash records with no errors in critical data elements.	93% (2017)	95%	96%	95%	96%	Michigan will improve to 97% for 2022.
	% of crash records with 2 or more uncorrected "serious, non-fatal" (Severe) errors	7% (2016)	0%	0%	0%	0%	Michigan will remain at 0% for 2022.
	% of crash records with 5 or more uncorrected "minor" errors	45% (2016)	25%	3%	1%	5%	Michigan will remain at 5% or less for 2022.
Completeness	% of crash records with no missing critical data elements	56% (2016)	95%	96%	96%	92%	Michigan will improve to 94% for 2022.
	% of unknowns or blanks in critical data elements	Crash - 13% (2017) Unit - 6% Party - 23% Party (Driver Cond) - 8% CMV - 6%	Crash - 11% Unit - 6% Party - 22% Party (Driver Cond) - 9% CMV - 5%	Crash - 11% Unit - 6% Party - 22% Party (Driver Cond) - 9% CMV - 6%	Crash - 12% Unit - 7% Party - 24% Party (Driver Cond) - 9% CMV - 6%	Crash - 13% Unit - 7% Party - 25% Party (Driver Cond) - 9% CMV - 6%	Michigan will improve to the following percentages for 2022: Crash - 10% Unit - 6% Party - 21% Party (Driver Cond) - 8% CMV - 5%
Uniformity	% compliance with MMUCC guidelines	85% (2008)					The uniformity measure will be addressed with the next MMUCC edition.
Integration	% of in-state DLN's linked to MDOS driver file	97% (2015)	97%	97%	96%	96%	Michigan will improve to 97% for 2022.
	% of in-state VIN's linked to MDOS vehicle file	97% (2017)	98%	99%	98%	98%	Michigan will improve to 99% for 2022.
Accessibility	Principal Data Users (MDOT, UMTRI, SEMCOG, TIA, Wayne State University, WMU, MSU)	96% (2020)	Survey Questions: *How easily are you able to obtain crash data or other services requested from the TCRU? *Your satisfaction with the timeliness of the TCRU's response to your request?	Survey sent to OHSP, MSP, MDOT, UMTRI, SEMCOG, TIA, and MDOS users in early 2020. <b>Most recent results compiled on 1-23-2020:</b> -16 users were surveyed, with 12 responding for a total of 24 questions. -96% of the users were satisfied with both areas. One response suggested an area for improvement with the release of year-end data.			Michigan will improve to 97% for 2022.  The TCRU receives immediate response from users after Mi-CAT trainings that are put on by Numetric.  Accessibility to be surveyed again after more users are on Mi-CAT after the TCRS website is shut down.

## TRCC Funded Projects

### State of Michigan Traffic Crash Report Form Training Support

The State of Michigan Traffic Crash Report Trainer is also the instructor and subject matter expert for the Crash Location Improvement Project (CLIP). The trainer provides free training on the CLIP tool to local agencies that utilize the vendor that created CLIP. Today, statewide agency CLIP participation is at fifty (50%).

### Michigan Crash Analysis Tool

The CJIC, TCRU has a nationally recognized crash database and processes, however, the TCRU has no way to easily process crash data requests. Currently requesting crash data is difficult and time-consuming.

The Michigan Crash Analysis Tool will dramatically reduce the wait time caused by the bottleneck that holds up data requests and will allow for more dynamic querying of data.

An additional piece was added to Mi-CAT in March 2022, called Network Screening. This new feature will allow for the ranking of road segments and intersections. Crash locations can be filtered using geo-boundaries, age ranges, countermeasures and many other crash attributes already available in Mi-CAT.

In total, the Michigan TRCC approved \$345,000 for the original Mi-CAT project, plus an additional \$132,300 for the Network Screening application.

## General Funding Information

The MSP/CJIC funds a State of Michigan Traffic Crash Report Trainer position. The State of Michigan Traffic Crash Report Trainer provides training on the crash report form, in various mediums, to law enforcement agencies, regional police academies, and traffic safety professionals. In addition, this trainer works with the electronic crash analyst, quality control analyst, and the crash specialist to identify reporting problems and possible misinterpretations of data fields and attributes on the State of Michigan Traffic Crash Report form. Specialized and specific trainings are offered to police agencies where there may be a concern with data quality.

The MSP/CJIC shares data on a regular basis with the Michigan Department of Health and Human Services (MDHHS) and Bureau of Emergency Medical Services, Trauma, and Preparedness section to integrate with their datasets. The MSP/CJIC also processes many crash data requests for MSP, local law enforcement agencies, media, universities, and the public to name a few. The MSP/CJIC has proactively implemented a robust quality control program to ensure the crash data is as accurate as possible.

State of Michigan federal trunkline funds are used to support the entire TCRU, which consists of 10 positions, as well as all costs associated with managing the traffic crash database.

## FY 2021 Accomplishments

Statewide crash report timeliness decreased to 11.51 days in FY2021 from 12.93 in FY2020.

The State of Michigan Traffic Crash Report Trainer conducted 75 trainings for 1,467 attendees from 159 agencies. The trainings were conducted for the recruit school academies, law enforcement agencies, regional police academies, traffic safety and vehicle engineers. Even with the COVID-19 pandemic and shutdown the State of Michigan Traffic Crash Report Trainer conducted 25 more classes than the goal, thereby training an additional 267 officers and recruits while still providing an additional 570 officers with training supplies and materials. Presentations were also made to the following groups:

- Pedestrian and bicycle safety education trainings.
- Capital Area Traffic Safety Network Distracted Driving Action Team.

Other significant activities completed by the State of Michigan Traffic Crash Report Trainer were:

- Updated UD-10 Traffic Crash Report User Guide.
- Published the Traffic Crash Advisory to the [www.michigan.gov/crash](http://www.michigan.gov/crash) website.
- Created IyeTek Instruction, FARS, and Autonomous Vehicle Guides

The Michigan Crash Analysis Tool is a traffic safety analysis and visualization solution provided by the Michigan State Police, Criminal Justice Information Center for state and local agencies to perform crash analysis in their respective areas. The tool has made a significant impact thus far, providing crash statistics in a timelier manner, increasing the unit's efficiency to respond to data requests. An example of improved response time is creating the statistics for Traffic Safety Network group meetings. This effort previously took approximately three hours to compile the data but using the Michigan Crash Analysis Tool reduced the time to approximately a half hour.

## Crash Unit Contact

Amanda Heinze, Michigan State Police, Criminal Justice Information Center

# VEHICLE

## Description

The State of Michigan vehicle titling, and registration program is administered by the Michigan Department of State (MDOS). All vehicle registration and title records are contained in a single database under the custodial authority of the Michigan Department of Management and Budget (MDTMB). The legacy Michigan vehicle title and registration system were replaced with the Customer and Automotive Records System (CARS) since the last Traffic Records Assessment. CARS is a real time data entry and processing system that incorporates data entry validation through field and logical edits. Additionally, CARS queries outside databases to confirm Vehicle Identification Number (VIN) information and obtain vehicle title information through National Motor Vehicle Title Information System (NMVTIS). CARS is supported by documented data elements and data structures in a comprehensive data dictionary while processing sequences are documented in training manuals for all vehicle title and registration transactions.

CARS is further supported by technical system workflow documentation, but no routine and alternative operational processing workflow documentation exists. Additional programs supporting CARS include: a program for making data corrections by internal quality assurance staff; a program for receiving user feedback to identify problems and receive ideas for system improvement; a program for detecting high frequency errors to identify issues; a program of audits; and an evaluation program for long term trend analyses.

Michigan vehicle registration and title documents contain barcoded information allowing for rapid data collection by law enforcement equipped with bar code reading technology. Additionally, vehicle records for vehicles reported stolen to law enforcement are flagged within the CARS.

Quick Stats for the Vehicle System <small>(source summary of fees collected 25683 7 208911 7.pdf)</small>				
	2017	2018	2019	2020
Vehicle Registrations Issued	8,667,654	8,623,658	9,178,783	9,137,484
Title's Issued in Michigan's 83 Counties	1,722,039	1,606,719	1,611,591	1,343,569

## Performance Measures

The Traffic Records Coordinating Committee (TRCC) will continue working with the Michigan Department of State (MDOS) to set performance measures that can be shared with the team.

## TRCC Funded Projects

The Michigan TRCC is not currently funding any projects for the Vehicle System.



## General Funding Information

The Customer and Automotive Records System (CARS) is maintained and staffed by the Michigan Department of State (MDOS).

## FY 2020 Accomplishments

- Michigan is now a 'real-time' NMVTIS participating state with Customer and Automotive Records System (CARS) implementation. Previously Michigan was a batch participating state.
- Worked with American Association of Motor Vehicle Administrators (AAMVA) on Michigan's continuous use of NMVTIS State Web Interface after real-time implementation, which helped to verify and resolve out-of-state title transactions and improved timeliness of verification turn-around.
- Prior to the implementation of CARS, local Secretary of State branches had to manually verify all foreign titles utilizing the NMVTIS website. If a discrepancy were found between the NMVTIS database and the foreign title presented; a request would be submitted to the NMVTIS helpdesk for further research and validation of the foreign title. Michigan would send a nightly batch file to AAMVA to ensure that the NMVTIS database would have the most up to date title record. With the implementation of CARS, Michigan now has a real-time interface with AAMVA web servers to verifies title activities. The real-time implementation resulted in the help desk receiving more review cases, telephone calls and emails because all vehicle title activities are verified. The verification of titles with other states ensures only one title is issued per vehicle, reducing the chance and opportunity for fraud or error.

## Vehicle Unit Contact

Keitha Cameron, Michigan Department of State

# DRIVER

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## Description

The Michigan Department of State (MDOS) has custodial responsibility for the Michigan driver data system, which resides in a single location and includes records pertaining to all drivers in the State, including commercially licensed drivers.

The State has well-established 3-level Graduated Driver License (GDL) program for novice drivers and motorcycle safety program for motorcycle riders. Michigan tracks and maintains relevant information related to these two programs. Also, the State maintains the Basic Driver Improvement Course (BDIC) dataset that contains detailed information regarding BDIC course completions and associated traffic violations. At the present time, the State only captures and saves the last three issuance dates for all permits, licenses, and endorsements. However, Michigan is in the process of updating its driver data system, which will allow to retain all information pertaining to driver license issuance, including the dates of original issuance.

The driver data system interacts with the National Driver Register's Problem Driver Pointer System (PDPS) and the Commercial Driver's License Information System (CDLIS). The contents of the driver system are documented in the MDOS Driver Database Field Description Guide with definitions for each data field and detailed information on valid data field values. The MDOS Driver Database Field Description Guide is updated as needed and in accordance with federal and State legal requirements.

The State maintains appropriate documentation related to procedures for driver license, permits, and endorsements issuance. These procedures are specified in the Driver License Manual. In addition, the State has the Standard Actions Manual and the Court Procedures Manual, that document procedures regarding driver license actions, reporting and recording of conviction information, and other information relevant to the driver system. There are several data process flow diagrams comprising of information related to key data process flows and inputs from other data systems, as well as interactions with other data systems. Michigan has established process documentation with rules to purge data from the driver data system.

Michigan has established comprehensive procedures to detect false identity licensure fraud for both commercial and non-commercial drivers. The State provides the driver history record information to another State upon request. For commercial drivers, this is accomplished through CDLIS, and for noncommercial drivers, the driver history information is provided electronically or manually. The same methods are used to obtain the previous driver history information from other States. Michigan does not use facial recognition software prior to issuing driver license. However, the State may exchange driver photos with other State upon request and if such request meets Michigan's legal requirements. Michigan has established the Security Awareness Training Standard to ensure appropriate system and information security. This standard applies to all information systems in the State.

The State does not impose administrative license suspension based on a DUI arrest. Also, a separate DUI tracking system is not established. However, the State has established protocols for reporting different DUI-related data to MDOS, such as DUI conviction data from the courts or data on drivers in crashes involving alcohol. There is an interface link between the State's driver data system and the

PDPS, the CDLIS, the Social Security Online Verification (SSOLV), and the Systematic Alien Verification for Entitlements (SAVE). Access to the Michigan driver data system cannot be granted to authorized law enforcement agencies, except for limited and approval-based access through the Michigan Law Enforcement Network (LEIN) system. Michigan court personnel can be granted access to the driver data system through different methods, including via the MDOS Direct Access.

Michigan has well established data monitoring procedures to detect and correct errors. For example, the State performs random audits, uses the error reports for the conviction data submitted by the courts, detects keying errors, etc. The State performs annual reviews of their conviction data, evaluates error rates, identifies trends, and detects potential anomalies in these data. Data quality feedback from key users is communicated to data managers. The State also has well established timeliness performance measure. Specifically, Michigan maintains a report that shows the number and the percentage of the conviction abstracts that are received by the MDOS within 10 days from the conviction date. This report is produced on monthly basis and shows this information for each court in the State.

Quick Stats for the Driver System				
	2017	2018	2019	2020
Total licensed Michigan drivers (source DM/9005 report)	9,543,106	9,604,064	9,834,658	9,567,768
Court convictions (source DR5315 report)	736,146	709,111	680,131	561,199

## Performance Measures

### CDLIS Timeliness of Convictions Sent Electronically (49 CFR 384.209)

SOC	Overall, 2018 (Baseline)		
	# Sent Successfully	# Sent within 10 days	% Sent within 10 days
MI	2,130	2,059	96.67%

October 2019 - September 2020			
	# Sent Successfully	# Sent within 10 days	% Sent within 10 days
MI	1,258	1,144	90.94%

September 2020					
# Sent Successfully	# Sent within 10 days	% Sent within 10 days		Average # of Days to Send	Median # of Days to Send
154	136	88.31%		7	5

## TRCC Funded Projects

### State to State (S2S) Staffing Phase I

Michigan currently has multiple individuals on the driver database under similar names, and receives driving histories for others with similar names, yet the records are not linked. Licenses are issued by other states and conversely by Michigan, without knowing an individual has adverse items on their driving record and should not be driving. This impacts traffic safety for others on the roads. These multiple records have been found through a regular review of Michigan records and through other state's contact with Michigan. The depth of the issue has been determined through observation of other states who have already implemented S2S.

The 2015 assessment of Michigan's Traffic records systems included the recommendations that Michigan "improve the description and contents of the Driver data system that reflect best practices identified in the Traffic Records Program Assessment Advisory."

Specifically, Assessors rated Michigan as not having met the Advisory ideal for Questions 120, 121, 122, and 123, which describe the ideal capabilities of the capturing the driver history in the driver database. This project seeks to address this recommendation by enhancing Michigan's ability to "maintain driver identities, histories, and licensing information for all records in the system" and align with the following excerpt from the Traffic Records Advisory: "Ideally, the driver system maintains information on all out-of-State or unlicensed drivers convicted of traffic violations within the State's boundaries. At a minimum, the driver system maintains driver identities, histories, and licensing information for all records in the system".

Implementation of the S2S system will allow for the capture and consolidation or removal of these multiple records and will help other state's cleanse their driving records to allow for better traffic safety efforts by all jurisdictions.

This project will also help Michigan address the 2015 TR Assessment recommendation for Michigan to "Improve the traffic records systems capacity to integrate data that reflects best practices identified in the Traffic Records Program Assessment Advisory". Specifically, the Advisory notes that "Data quality plays an important role in any data integration effort. If the data is to be linked is not accurate and complete the resulting integrated dataset is always limited by the quality of the data in each of the source data sets".

Year one is the initial clean-up of the Michigan database. Year two is the efforts to cleanse records from other states that are already on the S2S system. Year 3 efforts will cleanse data as new states come on board. It is recognized that this requires considerable manual effort to keep the system in sync with the records that are being received and sent.



In total, the Michigan TRCC approved \$664,441 405(c) funding for this project.

### General Funding Information

MDOS successfully wrote and received grants to help with different upcoming projects.

- FMCSA provided a grant to allow DRPS and Driver Programs and Testing Section to hire two limited-term analysts to provide expertise in upcoming CDL -related projects.
- FMCSA also awarded (in August 2020) a CDL grant to allow the Office of Hearings and Administrative Oversight to hire a limited term attorney to assist in communications and training for courts and prosecutors related to CDL issues.

### FY 2021 Accomplishments

The project of adding temporary staff to help verify and clean up impacted driving records has had a positive impact on the MI jurisdiction. Potential duplicate records that were held in Michigan and other states have been reduced and eliminated. Reducing and eliminating duplicate records made it easier to identify records that were in multiple names and combine them into one record, allowing proper sanctions to be made against the individual. This impacts the state by helping to reduce the number of unsafe drivers on the roads and provide for a safer travelling environment. It is still too early in the process to identify precise volumes of drivers impacted, but we know that there are multiple thousands of potential matches in Michigan that are being worked through and processed. This all serves to improve traffic safety.

### Driver Unit Contact

John Harris, Michigan Department of State

# ROADWAY

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## Description

The State of Michigan has over 120,000 miles of paved roads. The State uses ESRI Roads and Highways (R&H) as its linear referencing system for locating safety data. This includes the crash, roadway, and traffic data. The program is a web-based program which allows multiple agencies easy access to the LRS so data can be uniformly located. Through the software program Roadsoft, Michigan has an enterprise level crash reporting tool. Crash data is available for the public to use on a public website.

Michigan has most of the MIRE FDE's in their data dictionary, currently 22 with an additional 12 planned to be included by May 2020. All roadways have a unique ID, classification, beginning and ending points. Intersection and ramps have unique ID's as well as length information for the ramps. Other data elements can also be found in this dictionary or in various other data dictionaries. Local entities use the software Roadsoft to collect their roadway data. Currently the State is working on changes to the software to incorporate more elements of the MIRE FDE's. Updates are done through excel files provided by the Roads and Highways vendor. These documents are modified when data elements are added or deleted from the database.

Michigan Department of Transportation (MDOT) and the State of Michigan's Center for Shared Solutions (CSS) have a partnership where CSS maintains the Michigan Geographic Framework (MGF). RoadSoft users, Act 51, and community partnerships as well as crash location identification help identify roads that need to be added or removed from the MGF. CSS makes the changes within the Michigan Geographic Framework Editing Environment (MGFEE). These updates are audited to ensure accuracy. ESRI Workflow Manager is used to ensure the process is repeatable and to show the flow of information. Manuals such as the Pavement Surface Evaluation and Rating (PASER) manual are provided to guide local entities on the collection and management of the data. The State also uses the Highway Performance Monitoring System (HPMS) Field Manual as a guideline for data collection.

Roads and Highways uses a physical reference value that connects the State's discrete roadway information systems. Location coding methodologies for all the State roadway information systems are compatible and can use Lat-Long to convert to the LRS. The MGF is available to anyone for download and allows for linkage of information to it, however locals do not interact with the State's enterprise roadway information systems.

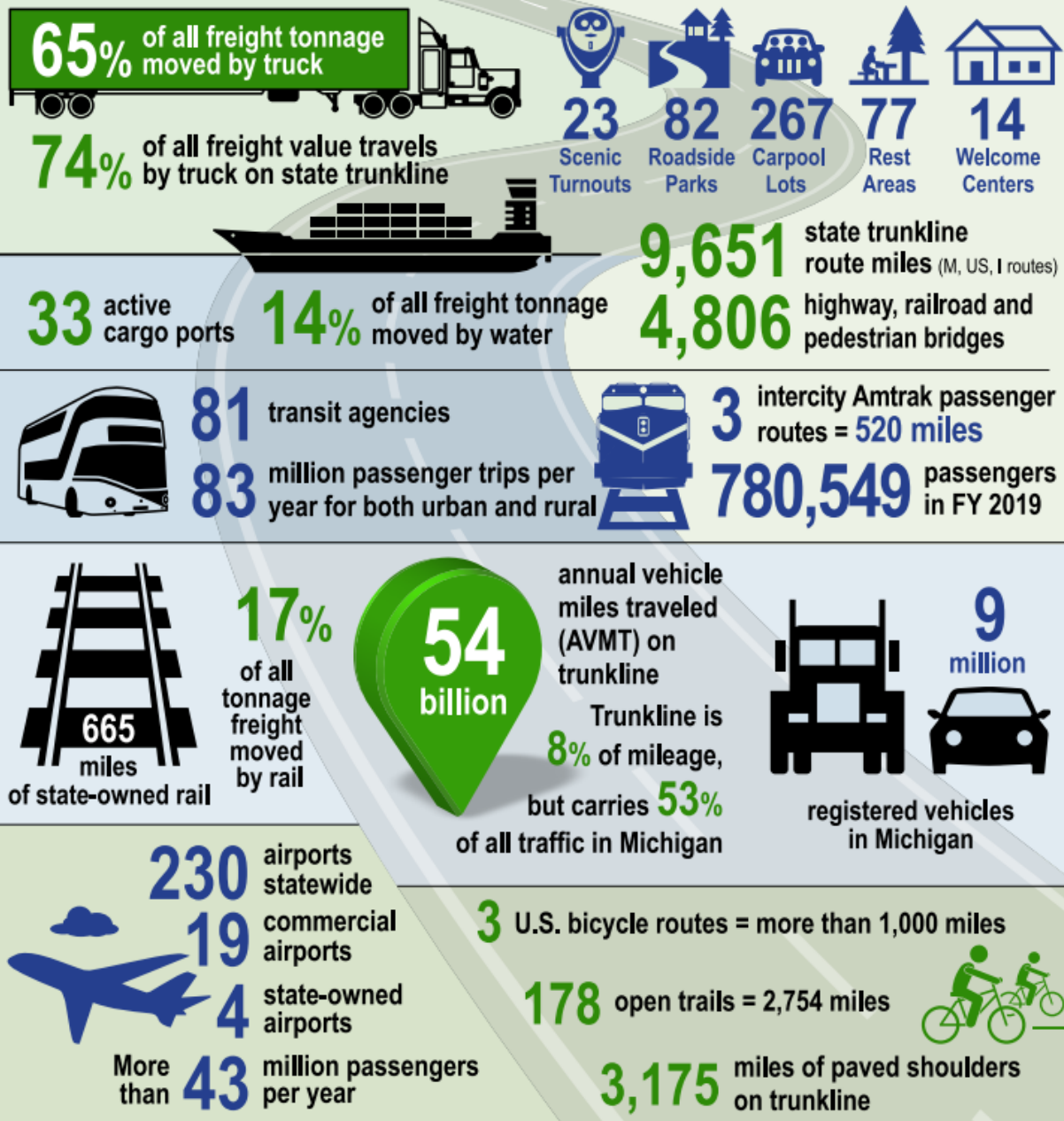
No real data performance measures have been established for the State. There are requirements that they strive to meet such as deadlines, but these are not performance measures. They do have spreadsheets that could help with the development of performance measures such as those included in the integration question.

Quality checks are done through existing rules for managing the MFG revisions, but no reports are created. Error and edit checking are done through Roads and Highways Data Reviewer. Data collectors receive TAMC training for RoadSoft and are provided quality control information during this training.

MICHIGAN DEPARTMENT OF TRANSPORTATION

# Fast Facts 2021

MDOT is responsible for all trunkline (M, US, I routes) throughout the state. This includes highways, railroads, pedestrian bridges, and all adjacent infrastructure (i.e., carpool lots, rest areas, noise barriers).



MDOT also provides financial and/or technical assistance for portions of the transportation system owned and operated by others, including local transit systems, airports, intercity bus, trails, etc.

## Performance Measures

MIRE FDEs	Non Local Paved Roads - Segment		Non Local Paved Roads - Intersection		Non Local Paved - Interchange/Ramp		Local Paved Roads		Unpaved Roads	
	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned
ROADWAY SEGMENT										
Segment Identifier (12)	100	100					100	100	100	100
Route Number (8)	100	0								
Route/Street Name (9)	100	100								
Federal Aid/Route Type (21)	100 derived	100 derived								
Rural/Urban Designation (20)	100	100							100	100
Surface Type (23)	100	100							100	15
Begin Point Segment Descriptor (10)	100	100					100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST
End Point Segment Descriptor (11)	100	100					100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST
Segment Length (13)	100	100								
Direction of Inventory (18)	100 derived	0								
Functional Class (19)	100	100					100	100	100	100
Median Type (54)	80 (undivided)	95 (undivided)								
Access Control (22)	20 derived	0								
One/Two Way Operations (91)	95	10								
Number of Through Lanes (31)	100 derived	80					100	0		
Average Annual Daily Traffic (79)	100	95					100 est	0 actual		
AADT Year (80)	100	95								
Type of Governmental Ownership (4)	100	100					100	100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST
INTERSECTION										
Unique Junction Identifier (120)			100	100						
Location Identifier for Road 1 Crossing Point (122)			100	100						
Location Identifier for Road 2 Crossing Point (123)			100	100						
Intersection/Junction Geometry (126)			100 derived	100 derived						
Intersection/Junction Traffic Control (131)			95 derived	0						
AADT for Each Intersecting Road (79)			100 state & local est	100 state & local est						
Unique Approach Identifier (139)			100 derived	100 derived						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					100	NA				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					100	NA				
Location Identifier for Roadway at Ending Ramp Terminal (201)					100	NA				
Ramp Length (187)					100	NA				
Roadway Type at Beginning of Ramp Terminal (195)					100	NA				
Roadway Type at End Ramp Terminal (199)					100 Derived	NA				
Interchange Type (182)					100	NA				
Ramp AADT (191)					98	NA				
Year of Ramp AADT (192)					98	NA				
Functional Class (19)					100	NA				
Type of Governmental Ownership (4)					100	NA				
Totals (Average Percent Complete)	99.62	73.75	100.00	75.00	99.60	N/A	N/A	N/A	N/A	N/A
Modification to Roadsoft to accommodate MIRE FDE										
"Derived" data base requires processes to extract in MIRE FDE format										
"100 of roads/ 0 ST" we have this data for all roads, so when we understand which roads are paved and which roads are not, we are set.										

## TRCC Funded Projects

### Roadsoft and Environmental Systems Research Institute Updates

The Model Inventory of Roadway Elements (MIRE) Federal Data Element (FDE) are federally required by the MAP-21/FAST-Act transportation legislation which will aid in crash analysis. Previously, Michigan developed a tool for collecting MIRE FDEs from the 616 local transportation agencies through enhancements to the Roadsoft software tool. MDOT is acquiring new software, ESRI Roads & Highways, to manage the data (attributes) for the statewide network of roads, streets, and highways for all transportation agencies in the state. It will become the data repository for the statewide transportation system information.

The Transportation Asset Management Council (TAMC) has cross governmental responsibility and authority for some road data collection items. TAMC supplies local transportation agencies with the tools and guidelines for collecting roadway assets to report on a statewide basis. TAMC currently uses one software tool called Roadsoft for state-required data collection on roadway assets. This tool is used by hundreds of local agencies and is supported by funding from MDOT, FHWA, and Michigan Tech University.

It will be necessary to integrate/link Roadsoft and ESRI Roads & Highways to establish and populate the new MIRE data repository in ESRI Roads & Highways. Additionally, the new ESRI Roads & Highways software system has reporting and updating capabilities that need to be customized to meet the federal requirements for sharing the 38 MIRE FDEs information.

It will be necessary to disseminate roadway data to and from the local transportation agencies through developed web services as the proposed linkage. This includes those agencies that do not use Roadsoft. Roadsoft is available free to all Michigan road agencies, however, there is no requirement to use Roadsoft. It has been TAMC's experience that a web-based tool is necessary to get input from some agencies that do not use Roadsoft. Creating web services for Roadsoft and a web-based tool will allow all local agencies two possible methods to exchange, validate, and populate the MIRE FDE database with missing information.

In total, the Michigan TRCC approved \$710,000 405(c) funding for this project.

### FY 2021 Accomplishments

Modifications were successfully implemented within the Roadsoft software that will enable it to consume 36 of the 37 Model Inventory Roadway Elements Fundamental Data Elements that are sent by MDOT to Roadsoft in the annual roadway centerline file (once populated at MDOT). Roadsoft tools were successfully implemented that will allow Roadsoft users to compare, edit, and submit 5 MIRE FDE items from the local agency users to MDOT RH. Roadsoft was able to create an easy button creation of MIRE FDE export to MDOT in a format (ESRI file Geodatabase) required by RH to consume the data.

### Roadway Unit Contact

Mike Toth, Michigan Department of Transportation



# CITATION/ADJUDICATION

## Description

Michigan has a judicial data warehouse of adjudication data that can be used by prosecutors and judges to ensure that the parties whom they are adjudicating are not re-offenders who have multiple previous offenses that have been erased from the record due to deferrals and subsequent dismissals. This is an efficient process, though the warehouse data is not deemed to be an official record. It could, however, be used as the infrastructure for a citation tracking system to give a complete picture of the statewide traffic enforcement efforts, and when compared with the crash incidence, provide evidence of the impact of directed enforcement on numbers and severity of crashes. It might also be used as a DUI tracking system, which the State does not currently have.

The State has a real-time driver and criminal and driver history database, the Law Enforcement Information Network, which provides data to appropriate individuals. The State law provides for numerous types of administrative driver license penalties, which are effectively tracked. These are but a few of the positive aspects of Michigan's citation and adjudication data files.

The State experiences difficulties in other aspects of data collection in terms of uniformity and consistency, not unlike other States, due to its non-unified court system, and multiple types of court case management systems. However, it seems to have overcome some of the difficulty of aggregating data from these various systems as evidenced by the judicial data warehouse.

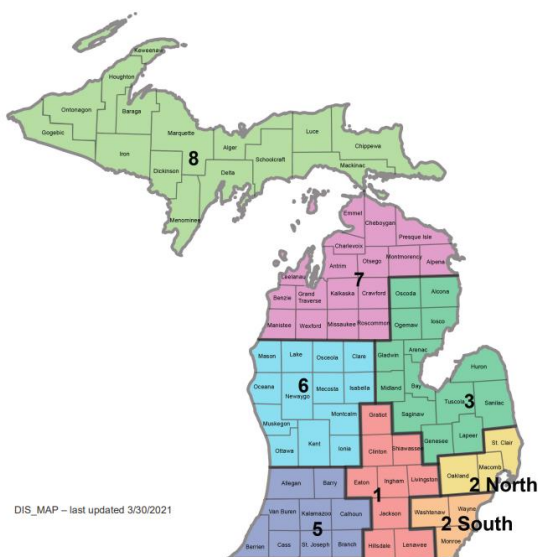
Currently Michigan does not have a great deal of integration, interface, or linkage between the various component data systems of Michigan's traffic records system. These are areas where improvement could be made, and benefits would be far-reaching. Good documentation for data systems is beneficial not just to the IT staff, but to data collectors and users alike, ensuring that data collected is consistent, well-formatted, and documents what the users expect, so analyses have integrity. Additionally, good documentation of systems helps to facilitate integration, making data collection and dataset linkages faster, more efficient and saving time for data collectors, who often have more pressing duties than collecting data.

State Court Administrative Office Stats			
	2014	2015	2021
Agencies Accessing Judicial Data Warehouse	16	20	22
Courts Contributing to Warehouse	242 out of 254	242 out of 254	249 out of 254
Counties Where Courts Contribute to Warehouse	81 of 83	82 of 83	82 of 83
Inquiries to Warehouse	467,000	426,791	548,957
Court Records in Warehouse	46 million	45 million	60 million

## Performance Measures

\*\*Michigan does not have one repository for citations, this is a snapshot from our Michigan State Police eDaily module\*\*

2021: Michigan State Police Speeding Citations by Month												
(**This data represents the citation upon issuance, and not the adjudicated court data**)												
Michigan State Police District	January	February	March	April	May	June	July	August	September	October	November	December
1	674	721	722	670	809	997	947	839	795	625	537	1074
2	1179	1003	1310	1118	1459	1416	1402	1504	1205	977	1121	1896
3	460	415	622	586	856	986	937	547	741	620	573	639
5	383	353	740	365	1187	681	886	527	642	290	530	788
6	512	411	767	645	626	611	719	886	713	503	490	629
7	483	325	691	755	1207	1198	1197	1441	1024	840	800	587
8	316	290	408	331	532	518	522	429	376	304	224	194
Total	4007	3518	5260	4470	6676	6407	6610	6173	5496	4159	4275	5807



Speeding Citation Codes Used	
8051	EXCEEDED POSTED OR UNPOSTED MAXIMUM SPEED
8052	EXCEEDED PRIMA FACIE SPEED LIMIT
8054	VIOLATION OF BASIC SPEED LAW, TOO FAST
8055	VIOLATION OF BASIC SPEED LAW, TOO SLOW
8057	EXCEEDED POSTED SPEED-TRUCKS OVER 10,000 LBS
8058	EXCEEDED 55 MPH DAYTIME SPEED LIMIT-56 THRU 59 MPH
8059	EXCEEDED 55 MPH DAYTIME SPEED LIMIT-60 MPH AND OVER
8060	SPEEDING IN CONSTRUCTION ZONE
8061	EXCEEDED FREEWAY SPEED LIMIT-65 ZONE
8062	EXCEEDED FREEWAY SPEED LIMIT-70 ZONE
8063	EXCEEDED FREEWAY SPEED LIMIT-65 ZONE
8064	EXCEEDED SPEED LIMIT
8065	BELOW MINIMUM FREEWAY SPEED

## TRCC Funded Projects

The Michigan TRCC is not currently funding any projects for the Citation or Adjudication systems. Michigan has been in contact with Indiana, and had a demonstration of their eCitation system, this is something Michigan will continue to pursue. The TRCC also had a demonstration of the DUI tracking database and data dashboard from Minnesota. Michigan will continue exploring options to implement a system in their State.

## General Funding Information

The Judicial Information Services (JIS) division of the State Court Administrative Office (SCAO) provides technical and automated information system support for the Michigan Supreme Court, the State Court Administrative Office (SCAO), and the trial courts throughout the state.

The primary functions of JIS are to:

- develop, implement, and maintain automated information systems and office automation support systems internally for all Supreme Court agencies
- maintain the telecommunication network for state judicial agencies
- provide automated reporting services for courts using JIS software and other systems software for delivery of case disposition information to the Secretary of State and Michigan State Police
- continue to develop systems to expand automated reporting to all courts and to additional state agencies
- maintain the caseload reporting system for automated collection and dissemination of caseload information
- provide technical assistance to all trial courts regarding the application of technology for judicial operations and provide direct software and hardware support to over 200 trial court locations around the state
- serve on committees and workgroups designed to develop and implement statewide court information systems

Primary services of JIS include:

- court information system design and development
- court information system support and maintenance
- data processing management assistance
- liaison to state information offices
- network management
- Supreme Court and SCAO office automation.

### FY 2021 Accomplishments

There were no accomplishments for FY2021 reported.

### Citation/Adjudication Contacts

Al Renz, Michigan State Police, Criminal Justice Information Center

Vacant, Michigan State Court Administrative Office

## EMS/INJURY SURVEILLANCE

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### Description

An ideal statewide Injury Surveillance System (ISS) is minimally comprised of data from five core components: pre-hospital emergency medical services (EMS), trauma registry, emergency department, hospital discharge, and vital records. This data provides more detailed information on the nature and extent of injuries sustained in a motor vehicle crash than can be found in other components of the traffic records system. Consequently, this information is invaluable when determining the injury severity, costs, and clinical outcomes of the individuals involved.

Michigan has all five major components of a traffic records injury surveillance system and the available data is accessible to both traffic safety stakeholders, as well as the public through either aggregate summary tables or department approved data use agreements. The traffic safety community in Michigan has used EMS and crash data to identify problems and evaluate programs in the past. The Office of Highway Safety Planning (OHSP) is encouraged to work with the Michigan Department of Health and Human Services (MDHHS) to expand those analyses to include the (recently available) emergency department, hospital discharge, and vital records data.

The pre-hospital data collection system, known as the Michigan EMS Information System (MI-EMSIS), is managed by the MDHHS and is built on the Image Trend Elite platform. Paper reports are not accepted, per State Statute, and the system is NEMSIS-compliant. All data collection systems use ImageTrend Elite, which incorporates appropriate edit checks and validations to ensure that the data falls within acceptable parameters. The State has established performance measures and metrics are tracked in a monthly progress report. Incorporating the metrics from the progress report will bring the measures up to standard. The monthly progress report is shared with the Traffic Records Coordinating Committee (TRCC). There is a sound feedback loop between users and data collectors as well as performance reporting to submitting Medical Control Authorities from the State and all these processes are clearly documented.

The statewide emergency department and hospital discharge data systems are managed by The Michigan Health and Hospital Association Service Corporation (MHASC). The emergency department data system, known as the Michigan Outpatient Database (MODB) was initiated in 2016 and receives data from all but three hospitals as of 2018. The hospital discharge database contains data from 1995 through 2019. The MHASC maintains open communication with regards to data quality and error correction with the submitting hospitals to ensure that data is as accurate as possible. Trend analyses are conducted, but no performance measures have been developed. However, aggregate data is available through the MHA upon approval of a data use agreement and the MDHHS purchases record level data annually. Data quality reports are not currently provided to the TRCC, but the value of these data sets is significant. The State is encouraged to work with TRCC members to better understand the importance and advantage of incorporating medical records in traffic safety efforts.

There is a statewide trauma registry that is also managed by the MDHHS and uses the ImageTrend Patient Registry software. The trauma registry data has been used to evaluate the trauma system, build a strategic plan, and research other forms of injury; the State is encouraged to use that information in traffic safety analyses. Routine quality control reviews are no longer conducted due to staff turnover but

are an important component to a healthy data collection system. The State has not developed performance measures, but there is ongoing discussion surrounding measures and numeric goals. As the EMS and trauma systems utilize a common software vendor, ImageTrend, there is a strong interface and interconnectivity between those systems.

The MDHHS is responsible for managing all vital statistics data including death certificates. As with most other States, Michigan collects death certificates from hospitals, funeral homes, and coroners and submits all data to the National Center for Health Statistics (NCHS) for quality review and assignment of cause-of death ICD-10 codes. Due to strict requirements from the NCHS, the State relies on that quality review to ensure that all State data conforms to standards. That is the extent, however, of the quality control for death records in the State and there are no data performance measures or standard quality reports that are shared among stakeholders or with the TRCC.

The traffic records injury surveillance system in Michigan is complete with all five major components. however, the emergency department data (MODB) is new, and most safety partners may be unaware of its qualities. The State is encouraged to incorporate emergency department and hospital discharge information into the traffic records model.

### Performance Measures

Quality Control Measurements for the Statewide Injury Surveillance System						
Performance Attribute	Responsible Agency	Performance Measure	2019	2020	2021	Goal
Timeliness	MDHHS-EMS	<u>Median</u> number of hours it takes for EMS run reports to be sent to MI-EMSIS	N/A	N/A	5.82 hours	Michigan will reduce the median time for run reports submitted to MDHHS-EMS by .20 in 2022.
	MDHHS-EMS	% of EMS run reports sent to governing agency in the prescribed time	81%	100%	**67%	Michigan will improve the % of EMS run submission to 80% in 2022.
Accuracy	MDHHS-EMS	% of EMS run locations that match statewide location coding	No data	0.04%	No data	Michigan will work to implement a plan to capture the data needed for this performance measure in 2022.
	MDHHS-EMS	% correct ICD-9 and E-codes in EMS Data System	No data	No data	No data	ICD-9 codes are no longer captured.
	MDHHS-EMS	% "errors" found during data audits of critical data elements in EMS Data System	No data	0.23%	No data	Michigan will work to implement a plan to capture the data needed for this performance measure in 2022.
	MDHHS-EMS	% errors and warnings in the NEMSIS 3 data submitted to the state EMS Data System from other systems	9%	8.10%	.02% errors / 10.1% warnings	Michigan will work to maintain <0.05% errors.
	MDHHS-EMS	% of traffic crash-related EMS runs in the EMS database	3.99%	*2.77%	3.03%	the number of traffic crash-related EMS runs are outside of our control.
*The reduction in the % of traffic crash-related EMS runs in the EMS database may be attributed to COVID-19 related Stay at Home restrictions						
** The percentage of NEMSIS version 3 patient care reports received by the state data system within 24 hours from the time the EMS unit was back in service after the call. The prescribed time requirements are variable based on agency type and type of incident.						

## TRCC Funded Projects

### **Improving Quality of Crash Severity and Injury Assessment within Michigan EMS Information System**

Emergency Medical Services (EMS) are a vital part of the national strategy of highway safety Toward Zero Deaths. Unfortunately, traffic crashes are on the rise nationally. Building a culture of traffic safety requires accurate data collection and analysis of all aspects of road user behaviors. A critical component of the necessary injury surveillance data involves that which is collected by EMS. While engineering and prevention also play a large role in this initiative, the appropriate arrival of, assessment, treatment, and transport by EMS can improve patient outcomes.

This data initiative will focus on aligning the elements inside the National EMS Information System (NEMSIS) with the 18 Information Technology (IT) vendors that provide the IT platforms for the 808 Michigan EMS agencies that are documenting important traffic crash information necessary to support a data driven traffic safety culture.

There are currently no standard procedures in place for this process. To accomplish the three Traffic Records Strategic Plan recommendations for injury surveillance, several things must occur:

1. Funding for a dedicated data analyst that can focus on the data quality of the MI-EMSIS data base, and the various vendors utilized to collect and transmit the data.
2. Once data gaps are identified; work must occur with the vendors to ensure appropriate mapping.
3. A plan to mitigate or correct the deficiencies must be developed and implemented on several levels from the system level for data integration down to the individual level where data is entered.
4. Routine monitoring of accuracy of data submission utilizing the Plan-Do-Study-Act (PDSA) process on a regular basis.

Biospatial's linkage to the Michigan State Police historic traffic crash data will allow for events without (probabilistically) matched records to be investigated for missing elements or documentation errors that caused the records to not be identified as crash records. The ability to thoroughly and accurately understand where, when, and how crashes happen as well as crash severity and effectiveness of treatments and interventions is integral to decreasing the incidence of crashes as well as the associated morbidity and mortality.

The issues inside the current data system can be associated with multiple factors. There are many different software platforms that are utilized by EMS agencies to document traffic crashes that are subsequently transmitted into MI-EMSIS. This transmission has been associated with translation errors that need to be individually identified and followed up on with the vendor associated with the documentation platform. EMS agencies have different cultures and practices for documentation. Some agencies document all crash related information in the narrative section of their reports instead of the crash scene related elements that are available in the software platforms. This makes accessing and aggregating this information nearly impossible. Lastly, individual personnel have practices that may be based on documentation before electronic surveillance was possible, and they are not aware of appropriate or correct ways of documenting crashes to allow for accurate extraction of the data.

In total, the Michigan TRCC approved \$127,000 of 405(c) funding for this project for FY2022.



### General Funding Information

Funding for this project began in February 2022. The FY2022 goals are: hire a full time Traffic Crash Data Quality Specialist and to identify the specific elements that should be utilized exclusively for traffic crash severity assessment (case definition).

### FY 2021 Accomplishments

There were no accomplishments for FY2021 reported.

### EMS/Trauma Contact

Sabrina Kerr, Michigan Department of Health & Human Services, Bureau of EMS, Trauma & Preparedness

# DATA INTEGRATION

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## Description

Michigan recognizes the value of integrating traffic records datasets to support comprehensive in-depth behavioral safety analyses that often requires established connections between two or more of the six major traffic records system components – crash, vehicle, driver, roadway, citation and adjudication, and injury surveillance.

Based on the wide range of responses, covering the various traffic records core component areas, it should be noted that Michigan's behavioral program managers have access to traffic records data and analytic resources across the different systems and platforms for problem identification, priority setting, and program evaluation.

It is also a credit to Michigan that the State's TRCC monitors access to the various traffic safety data systems through discussions among membership at quarterly TRCC meetings. This ensures that the needs of end users are being met and that useful and meaningful data is accessible to decision-makers across the various government agencies in the State. To that end, the TRCC approved a data integration project which looks to develop data governance, access, and security policies for integrated traffic records data between the various TRCC State agencies.

However, As Michigan has experienced, data integration can be challenging. High costs, multi-agency agreements, legislative restrictions, custodial resistance can all provide obstacles difficult to overcome. Currently the data integration project approved by the TRCC is on hold. As a result, vehicle, driver and citation and adjudication data are not integrated with crash data.

Injury surveillance data is also not currently integrated with crash data. However, some manual comparison of FARS and vital records has been done to provide greater clarity on the Health records side regarding the person type in the motor vehicle crash. This is a good example of how future data integration between these two systems (and others) can yield beneficial analysis and information to decision-makers and researchers.

As Michigan restarts its data integration project, the contribution of statewide Data Governance should not be overlooked. Governance includes documentation of processes, policies and procedures that apply to the various traffic records systems. Many States are moving towards adoption of a Chief Data Governance Officer that is sometimes employed in the centralized Information Technology agency for the State. This person could serve as an adviser to those responsible for traffic records systems in each respective agency regarding data governance principles.

As the State noted, decision-makers do have access to skilled personnel across several agencies who have expertise and are well-versed in traffic safety data. The public also has access to some skilled personnel and analytical tools when seeking access to statistical crash data. However, in both cases, for decisionmakers and the public, integrated core component traffic records systems would greatly enhance comprehensive behavioral safety analyses and should be a part of the State's overall data integration project plan.

With that said, Michigan appears to have a good roadmap in place with the TRCC data Integration project, where some business requirements have already been documented. It is hopeful in the coming years that the project will move forward, so improvements can be made in this area.

### Performance Measures

There are no data integration performance measures currently.

### TRCC Funded Projects

The Michigan TRCC is not currently funding any projects for the Data Use and Integration.

### General Funding Information

When applicable, the Michigan TRCC will continue its support of data use and integration projects as they relate to traffic safety research, enforcement and infrastructure improvements and will continue to foster and promote data integration efforts.

- Potential data systems to pursue are as follows:
- CDC population data
- Ped/Bike exposure data: MioVision, Strava, AbleLink (<https://www.ablelinktech.com/>), Wayfinder, etc.
- Public transit use data
- Micro mobility use data
- SEMCOG economic trends: <https://semcog.org/economic-trends>
- Tow Truck data
- Emergency response data (if fatalities happen in transit versus at hospital)
- DNR

### FY 2021 Accomplishments

The interface with the Michigan Trauma and Injury System is a newer project and no reports have been established yet. MSP/CJIC will be working towards establishing reports to share the benefits of this interface with the TRCC.

### Data Integration Contact

Chelsea Thelen, Michigan State Police, Office of Highway Safety Planning

## OTHER PROJECTS AND NOTABLE PARTNERS

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### Michigan Traffic Crash Facts (MTCF)

#### Description

Michigan's traffic crash data is used to identify and analyze problems, implement countermeasures, and evaluate impact. The Michigan Traffic Crash Facts (MTCF) website is updated annually by the University of Michigan Transportation Research Institute (UMTRI) to provide comprehensive traffic crash data and reports and has been in partnership with the Office of Highway Safety Planning (OHSP) for 27 years.

The Michigan Traffic Crash Facts website: [www.MichiganTrafficCrashFacts.org](http://www.MichiganTrafficCrashFacts.org), updated annually, provides comprehensive traffic crash data. A data query tool was developed in 2006 to generate individualized reports and mapping capabilities. Interactive tutorials were developed and enhanced in 2009. A focus group was held and a new design with a simplified version of the query tool was deployed in 2012. Specific enhancements to the data query tool included multi-year analysis, a date range function, and list view. A GTSAC area on the website was developed and continues to be maintained to support the State Strategic Highway Safety Plan. Customized County profiles were developed and released in 2011. Michigan's District, Post, and Prosperity Region profiles, as well as cell phone use and seat belt use fact sheets were developed in 2013. Technical assistance was broadened from its original role to include many other specialized reports.

In FY15 graphics were updated in the MTCF publications, a crash calendar was added as an output option with the query tool, and direct links to relevant publications were also added to the query tool. Technical assistance was broadened to support action team meetings and planning meetings. In FY16 a redesigned, mobile-friendly MTCF website was launched. Also, in FY16, a new report generation process was launched for the County, District, Post, and Prosperity Region profiles. Michigan's Traffic Safety Network profiles, a Commercial Motor Vehicle profile, and a Cannabinoid Drug profile were developed and released as well. In FY17 a road segment filter and map area selection filter were launched with the query tool. Crash maps depicting different topics of interest, such as Senior Drivers, Motorcyclists, and Winter Weather, were developed and released. Fact sheets on 'Speed' and 'Red Light Running' were also generated. In FY18 historical Michigan crash data publications "Michigan Traffic Accident Facts" (1952-1991) and "MSP Alcohol-Related Fatal Accident" studies (1974-1991) were added to the MTCF website. In FY18 a feature was implemented for performing query tool sorting based on crash counts or crash rates.

## Performance Measures

Year	Users	Queries	Tech Assist Requests	Page View	Publication Downloads
2016	6,766	149,541	92	127,467	N/A
2017	10,983	94,829	61	108,526	10,645
2018	10,028	112,017	100	99,575	7,115
2019	11,125	109,248	87	123,827	3,979
2020	12,132	107,663	68	113,211	N/A *

\* Due to changes in Amazon Log, tracking the unique publications requested per month is no longer available. Because Amazon Log offers no alternative tracking method for the Publication Downloads, we recommend that column be removed from the table. This column will be removed after FY2023.

## TRCC Funded Projects

### Michigan Traffic Crash Facts Technical Support

This project will continue to provide public accessibility for the crash data derived from Michigan's Traffic Crash Reporting System. The 2020 MTCF will be produced and posted at: [www.michigantrafficcrashfacts.org](http://www.michigantrafficcrashfacts.org). Feedback, comments, and suggestions are solicited from webinar participants which helps gauge the effectiveness of the websites. The OHSP will work with UMTRI staff to provide technical assistance on requests for crash data analysis and presentations.

Funding will support personnel, travel supplies/operating, and indirect costs.

In total, the Michigan TRCC approved \$563,000 in 402 funding for this project.

## General Funding Information

The University of Michigan Transportation Research Institute (UMTRI) Center for the Management of Information for Safe and Sustainable Transportation (UMTRI - CMISST) has conducted a series of research projects sponsored by NHTSA and General Motors Corporation to use telematically collected data on advanced driver assistance system (ADAS) technology used by many drivers in the field. These novel and cost-effective field studies explored Lane-Departure Warning, Forward Collision Warning, Automatic Emergency Braking, and Crash Imminent Braking systems. A current study on which Dr. Flannagan is co-investigator is evaluating the use of a Level 2 automation system for highway driving.

CMISST researchers have conducted a series of crash-data-based studies of the field effectiveness of a wide variety of safety systems. These projects have been funded by NHTSA and General Motors Corporation. The analyses link state crash data to safety content on vehicles (e.g., presence of optional ADAS equipment) via Vehicle Identification Number (VIN). The linked datasets allow for the estimate of the field benefits of ADAS including those that address forward collisions (e.g., automatic emergency braking; AEB), lateral collisions (e.g., side blind-zone alert, lane keep assist), vulnerable road user collisions (e.g., pedestrian AEB, headlamps), and backing collisions (e.g., rear cross-traffic alert). Field-observed benefits combine the effectiveness of the technology with any behavioral components such as whether drivers turn the system on or off and whether they respond appropriately to warnings. Thus,

these estimates are the realized potential of the technologies, rather than the theoretical maximum that would arise from simulation studies.

CMISST researchers have developed a unified model and associated visualization tool to help understand the combined effects of implementing a variety of crash countermeasures. The countermeasures span a wide range of options in the Haddon matrix, including policy, vehicle technology, and behavioral countermeasures. The website (<http://utmost.umtri.umich.edu>) and the underlying statistical model were developed in 2007 and have been upgraded and added to by several projects since then. Current capability includes special views by age group, fatality outcome, and sociodemographic to assess transportation equity.

CMISST researchers recently conducted for USDOT a Safety Data Initiative (SDI) project on conducting innovative, applied research to gain new roadway safety insights and tools. Our project focus was to investigate potential data sources that are new to USDOT to help address the questions:

- 1) Where is pedestrian/bicyclist fatalities and serious injuries happening and what are the behavioral factors, surrounding features, and characteristics of where these fatalities and serious injuries occur?
- 2) What combination of existing or emerging data sources can be used to create scalable, corridor-level models for pedestrian and bicyclist exposure? What can be done to better determine pedestrian/bicyclist safety risk rate?

Prior to this project, team members had developed pedestrian and bicyclist exposure and risk estimation processes for the Michigan Department of Transportation (MDOT). These were implemented in a web tool that was developed based on extensive practitioner input and feedback from MDOT. Another focus of the SDI project was to identify an analytic approach to enable extending and improving the MDOT model to other states.

## FY 2021 Accomplishments

The UMTRI provided the 2020 MTCF fact books, fact sheets, profiles, web content, web analysis tools, and Strategic Highway Safety Plan action team information. The UMTRI continued to provide one part-time statistician to provide in-depth crash data analysis for nearly 90 requests as well as crash data presentations at traffic safety partner meetings, including regional Traffic Safety Network meetings and the Strategic Highway Safety Plan action team meetings. The MTCF website had 101,497 page views, 77,629 queries on the data query tool, and 12,815 new users.

## University of Michigan Transportation Research Institute (UMTRI) Contact

Carol Flanagan, Research Professor, University of Michigan Transportation Research Institute (UMTRI), Director, Center for the Management of Information for Safe and Sustainable Transportation (CMISST)



Southeast Michigan Council of Governments (SEMCOG)

Description

The Southeast Michigan Council of Governments (SEMCOG) supports local planning through its technical, data, and intergovernmental resources. The work SEMCOG does improves the quality of the region's water, makes the transportation system safer and more efficient, revitalizes communities, and spurs economic development.

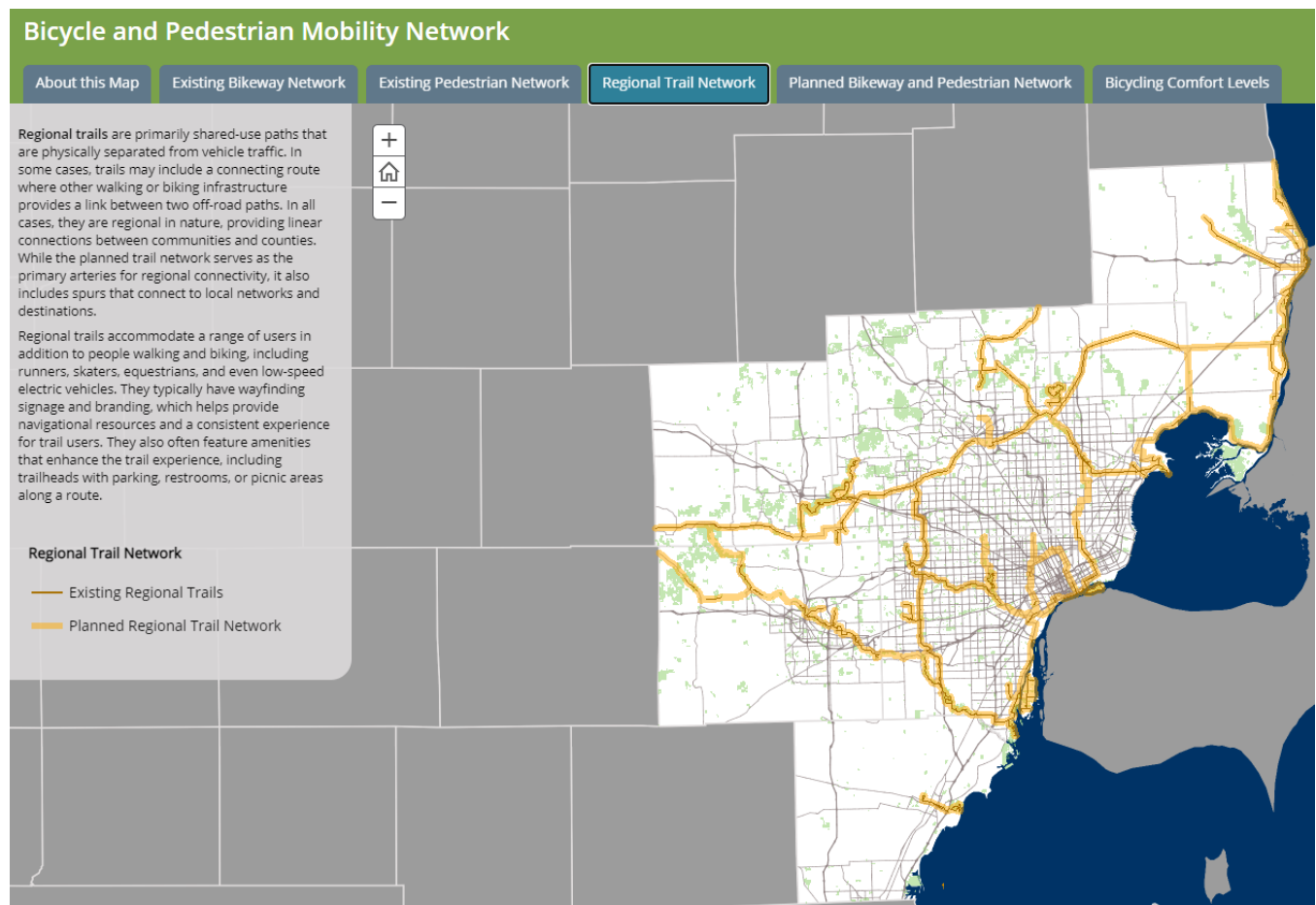
Functions of SEMCOG include:

- Promote informed decision-making by improving Southeast Michigan and its local governments through insightful data analysis and direct assistance to members.
- Promote the efficient use of tax dollars for infrastructure investment and governmental effectiveness.
- Develop regional solutions that go beyond the boundaries of individual local governments; and
- Advocate on behalf of Southeast Michigan in Lansing and Washington.

Since its inception in 1968, SEMCOG has acted as a regional planning partner with local member governments. SEMCOG serves the Southeast Michigan region, made up of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne Counties. Membership is open to all counties, cities, villages, townships, intermediate school districts, and community colleges.

Stats & Facts of Interest





## Southeast Michigan Council of Governments (SEMCOG) Contact

Jenya Abramovich, [semcog.org](http://semcog.org)

## Transportation Improvement Association (TIA)

### Description

Since 1967, the Transportation Improvement Association (TIA) has been one of the leading safety agencies in the world. Created by more than two-hundred government and corporate leaders, TIA is committed to identifying transportation safety trends that negatively impact society and developing solutions that can be implemented to save lives, prevent injuries, and improve mobility.

Focusing on the Four E's of safety (Engineering, Education, Enforcement, and EMS), TIA provides traffic engineering services to its government members. Furthermore, TIA conducts public education and professional training.

TIA has been recognized at the national and international levels for its leadership in transportation safety. In 2008, the Ash Center for Democratic Governance and Innovation at Harvard University's John F. Kennedy School of Government awarded TIA for "Top 50 Programs of the 2008 Innovations in American Government." In a 2006 Federal Highway Administration publication titled, "Innovative Intersection Safety Improvement Strategies and Management Practices: A Domestic Scan," TIA and the Road Commission for Oakland County were recognized as a best practice. Most recently, TIA's "Remembering Ally: Distracted Driving Awareness Campaign" was one of five traffic safety programs in the nation to receive a Peter K. O'Rourke Award during 2013. It also received a 2012 Outstanding Traffic Safety Achievement Award from the Michigan Governor's Traffic Safety Advisory Commission. A component of the campaign, a realistic distracted driving crash education video, received an Eclipse Award for production excellence and has been viewed in more than 90 countries.

### Stats & Facts of Interest

The Transportation Improvement Association (TIA) announced a new distracted driving enforcement initiative on April 25, 2017. Operation Ghost Rider uses unmarked spotter vehicles, which contain a law enforcement passenger. When the spotters observe a distracted driver, they radio a fully marked law enforcement unit to initiate a traffic stop.

During a total of 18 hours of enforcement in 2017, law enforcement officers conducted more than 907 traffic stops resulting in 726 citations and 34 arrests.

In 2018, 49 officers stopped 530 vehicles, issued 440 citations, and made 9 arrests in a 6-hour period.

During 2019, 22 officers stopped 300 vehicles, issued 295 citations, and made 5 arrests in 12 hours. 2019 also included night enforcement for the first time.

Due to COVID-19, Operation Ghost Rider did not take place during 2020.

In 2021, 39 officers stopped 673 vehicles, issued 589 citations and made 17 arrests in 10 hours. The program was expanded into Wayne County.

Operation Ghost Rider, which involves the Michigan State Police, and county and local law enforcement agencies, was featured in The Wall Street Journal and at the 2019 Governor's Highway

Safety Association's Annual Meeting in Anaheim, California. TIA is currently working on expanding the program.

## Transportation Improvement Association (TIA) Contact

Chuck Keller, <http://www.tiasafety.us/>

## Federal Highway Administration (FHWA)

### Description

The Federal Highway Administration (FHWA) is an agency within the U.S. Department of Transportation that supports State and local governments in the design, construction, and maintenance of the Nation's highway system (Federal Aid Highway Program) and various federally and tribal owned lands (Federal Lands Highway Program). Through financial and technical assistance to State and local governments, the Federal Highway Administration is responsible for ensuring that America's roads and highways continue to be among the safest and most technologically sound in the world.

### Stats & Facts of Interest

**THE SAFE SYSTEM**

**APPROACH**

Zero is our goal. A Safe System is how we will get there.

Imagine a world where nobody has to die from vehicle crashes. The Safe System approach aims to eliminate fatal & serious injuries for all road users. It does so through a holistic view of the road system that first anticipates human mistakes and second keeps impact energy on the human body at tolerable levels. Safety is an ethical imperative of the designers and owners of the transportation system. Here's what you need to know to bring the Safe System approach to your community.

**THE SAFE SYSTEM APPROACH**

DEATH/SERIOUS INJURY IS UNACCEPTABLE

HUMANS MAKE MISTAKES

HUMANS ARE VULNERABLE

RESPONSIBILITY IS SHARED

SAFETY IS PROACTIVE

REDUNDANCY IS CRUCIAL

Safe Road Users

Safe Vehicles

Safe Speeds

Safe Roads

Post-Crash Care

**SAFE SYSTEM PRINCIPLES**

<p><b>Death/Serious Injury is Unacceptable</b></p> <p>While no crashes are desirable, the Safe System approach prioritizes crashes that result in death and serious injuries, since no one should experience either when using the transportation system.</p>	<p><b>Humans Make Mistakes</b></p> <p>People will inevitably make mistakes that can lead to crashes, but the transportation system can be designed and operated to accommodate human mistakes and injury tolerances and avoid death and serious injuries.</p>	<p><b>Humans Are Vulnerable</b></p> <p>People have limits for tolerating crash forces before death and serious injury occurs; therefore, it is critical to design and operate a transportation system that is human-centric and accommodates human vulnerabilities.</p>
<p><b>Responsibility is Shared</b></p> <p>All stakeholders (transportation system users and managers, vehicle manufacturers, etc.) must ensure that crashes don't lead to fatal or serious injuries.</p>	<p><b>Safety is Proactive</b></p> <p>Proactive tools should be used to identify and mitigate latent risks in the transportation system, rather than waiting for crashes to occur and reacting afterwards.</p>	<p><b>Redundancy is Crucial</b></p> <p>Reducing risks requires that all parts of the transportation system are strengthened, so that if one part fails, the other parts still protect people.</p>

U.S. Department of Transportation  
Federal Highway Administration

Safe Roads for a Safer Future  
Investment in roadway safety saves lives

FHWA-SA-20-018

### SAFE SYSTEM ELEMENTS

**Making a commitment to zero deaths means addressing every aspect of crash risks through the five elements of a Safe System, shown below.** These layers of protection and shared responsibility promote a holistic approach to safety across the entire transportation system. The key focus of the Safe System approach is to reduce death and serious injuries through design that accommodates human mistakes and injury tolerances.



#### Safe Road Users

The Safe System approach addresses the safety of all road users, including those who walk, bike, drive, ride transit, and travel by other modes.



#### Safe Vehicles

Vehicles are designed and regulated to minimize the occurrence and severity of collisions using safety measures that incorporate the latest technology.



#### Safe Speeds

Humans are unlikely to survive high-speed crashes. Reducing speeds can accommodate human injury tolerances in three ways: reducing impact forces, providing additional time for drivers to stop, and improving visibility.



#### Safe Roads

Designing to accommodate human mistakes and injury tolerances can greatly reduce the severity of crashes that do occur. Examples include physically separating people traveling at different speeds, providing dedicated times for different users to move through a space, and alerting users to hazards and other road users.



#### Post-Crash Care

When a person is injured in a collision, they rely on emergency first responders to quickly locate them, stabilize their injury, and transport them to medical facilities. Post-crash care also includes forensic analysis at the crash site, traffic incident management, and other activities.

### THE SAFE SYSTEM APPROACH VS. TRADITIONAL ROAD SAFETY PRACTICES

Traditional	Safe System
Prevent crashes	Prevent deaths and serious injuries
Improve human behavior	Design for human mistakes/limitations
Control speeding	Reduce system kinetic energy
Individuals are responsible	Share responsibility
React based on crash history	Proactively identify and address risks

Whereas traditional road safety strives to modify human behavior and prevent all crashes, the Safe System approach also refocuses transportation system design and operation on anticipating human mistakes and lessening impact forces to reduce crash severity and save lives.

### WHERE ARE YOU ON THE SAFE SYSTEM JOURNEY?

Implementing the Safe System approach is our shared responsibility, and we all have a role. It requires shifting how we think about transportation safety and how we prioritize our transportation investments. Consider applying a Safe System lens to upcoming projects and plans in your community: put safety at the forefront and design to accommodate human mistakes and injury tolerances. Visit [safety.fhwa.dot.gov/zerodeaths](https://safety.fhwa.dot.gov/zerodeaths) to learn more.

Federal Highway Administration (FHWA) Contact

Brandy Solak, <https://highways.dot.gov/>

## FY2022 PROJECTS

### Project Title

Michigan Traffic Crash Facts (MTCF) Technical Support

### Performance Measures

Michigan Traffic Crash Facts Statistics					
FY	Users	Queries	Tech Assist Requests	Page View	Publication Downloads
2015	4,830	321,431	80	158,929	N/A
2016	6,766	149,541	92	127,467	N/A
2017	10,983	94,829	61	108,526	10,645
2018	10,028	112,017	100	99,575	7,115
2019	11,125	109,248	87	123,827	3,979

### Project Description

This project will continue to provide public accessibility for the crash data derived from Michigan's Traffic Crash Reporting System. The 2021 MTCF will be produced and posted at: [www.michigantrafficcrashfacts.org](http://www.michigantrafficcrashfacts.org). An annual survey will gauge the effectiveness of the website. The OHSP will work with the UMTRI staff to provide technical assistance on requests for crash data analysis and presentations.

Funding will support personnel, supplies/operating and indirect costs.

### Project Goal(s) and Activities

**Goal 1:** Complete the 2021 Michigan Traffic Crash Facts publications/web content and 'MichiganTrafficCrashFacts.org' website maintenance by September 30, 2022.

#### Activities

1. Project startup: October 1, 2021
2. Meet with the OHSP to define any changes, if necessary, to the 2020 Michigan Traffic Crash Facts publications: November 2021
3. Meet with the OHSP for an evaluation of the website content and analysis tools: November 2021
4. Michigan 2021 traffic crash data received from the Michigan State Police-Criminal Justice Information Center (MSP-CJIC): April 2022
5. Webinar to present 'MichiganTrafficCrashFacts.org' website updates and obtain user feedback: April 2022
6. Updates to action team trend tables: May 2022



7. Rolling release upload of the MTCF publications to the MTCF website: June 1 through September 2022

8. Data acquisition from outside sources: August 2022

9. Completion of general system programming improvements to website tools: August 2022

10. Complete the 2020 Michigan Traffic Crash Facts publications/web content and the 'MichiganTrafficCrashFacts.org' website maintenance: September 30, 2022

**Goal 2:** Provide technical assistance to the OHSP as directed through September 30, 2022.

### **Activities:**

1. An UMTRI team of researchers, including an on-site statistician, is available to respond to the OHSP requests as rapidly as possible via e-mail or by directly contacting team members.

2. Based on requests from the OHSP, crash data analysis will be provided through Traffic Crash Facts and other data sources. These analyses will include:

- a) Ad-hoc requests for crash data analysis from the OHSP partners and stakeholders.
- b) Crash data analysis to assist with the Highway Safety Plan (HSP) processes, program evaluation, and/or the Annual Evaluation Report.
- c) In-depth UD-10 analysis to identify specific factors related to a single type or category of crashes, injuries, or fatalities.
- d) Analyses on the impact of proposed legislation or public policy on traffic crashes.

3. Deliverables for this project will be defined by the OHSP on a task-by-task basis and will include:

- a) Summary tables of crash data
- b) Brief technical reports on requested crash data analyses
- c) Oral presentations of data analysis results as requested by the OHSP
- d) Specialized Profiles as requested by the OHSP

4. All findings will be provided to the OHSP for review and comment prior to public release.

### **Funding Information**

In total, the Michigan TRCC approved \$578,000 402 funding for this project.

### **Project Contact**

Carol Flanagan, Research Professor, University of Michigan Transportation Research Institute (UMTRI), Director, Center for the Management of Information for Safe and Sustainable Transportation (CMISST)

## Project Title

### Traffic Crash Reporting Form UD-10 Training Support

## Performance Measures

Performance Attribute	Performance Measure	Baseline Measure	FY 2018 (10-1-2017 to 09-30-2018)	FY 2019 (10-1-2018 to 09-30-2019)	FY 2020 (10-1-2019 to 09-30-2020)	FY 2021 (10-1-2020 to 09-30-2021)	Goal
Timeliness	# days from the crash date to entry into TCRS database (electronic and paper)	103 days (2003)	12.97	12.41	12.93 (Manual Paper Entry)	11.51	Michigan will improve to 11 days for 2022.
	% records entered into the system within 30 days of the crash	79% (2009)	95%	95%	94%	95%	Michigan will improve to 96% for 2022.
	% records entered into the system within 15 days of the crash	63% (2017)	65%	66%	67%	67%	Michigan will improve to 68% for 2022.
	% records entered into the system within 7 days of the crash	52% (2017)	53%	54%	54%	54%	Michigan will improve to 55% for 2022.
Accuracy	# of data performance edit errors per crash record	0.14 (2016)	0.05	0.03	0.01	0.01	Michigan will remain at .01 data edit errors per crash for 2022.
	% of crash records with no errors in critical data elements.	93% (2017)	95%	96%	95%	96%	Michigan will improve to 97% for 2022.
	% of crash records with 2 or more uncorrected "serious, non-fatal" (Severe) errors	7% (2016)	0%	0%	0%	0%	Michigan will remain at 0% for 2022.
	% of crash records with 5 or more uncorrected "minor" errors	45% (2016)	25%	3%	1%	5%	Michigan will remain at 5% or less for 2022.
Completeness	% of crash records with no missing critical data elements	56% (2016)	95%	96%	96%	92%	Michigan will improve to 94% for 2022.
	% of unknowns or blanks in critical data elements	Crash - 13% (2017) Unit - 6% Party - 23% Party (Driver Cond) - 8% CMV - 6%	Crash - 11% Unit - 6% Party - 22% Party (Driver Cond) - 9% CMV - 5%	Crash - 11% Unit - 6% Party - 22% Party (Driver Cond) - 9% CMV - 6%	Crash - 12% Unit - 7% Party - 24% Party (Driver Cond) - 9% CMV - 6%	Crash - 13% Unit - 7% Party - 25% Party (Driver Cond) - 9% CMV - 6%	Michigan will improve to the following percentages for 2022: Crash - 10% Unit - 6% Party - 21% Party (Driver Cond) - 8% CMV - 5%

## Project Description

This project will provide materials to support law enforcement officer training on accurately completing the UD-10 Traffic Crash Report to improve the quality of the traffic crash data. Addressing any concerns will continue to be a highlight of the training efforts, in addition to training officers and police recruits on identifying and reporting automated vehicle information.

Funding will support the supplies/operating costs

## Project Goal(s) and Activities

**Goal 1:** Increase statewide crash report timeliness from 11.51 days to 11 days; increase the percentage of crash records with no errors (accuracy) in critical data elements from 95% to 96%; and increase the percentage of crash records with no missing critical data elements (completeness) from 96% to 97% by September 30, 2022.

### Activity:

Quarterly reports will be run by the TCRU crash analyst to track crash report timeliness, accuracy, and completeness.

**Goal 2:** Provide 25 training classes for 1,200 officers, police recruits and traffic safety professionals to assist with the proper completion of the UD-10 Traffic Crash Report by September 30, 2022.

**Activity:**

Provide hands-on training materials and supplies for the various trainees which could include flash drives, flyers, advisories, brochures, training announcements and handouts

**Funding Information**

In total, the Michigan TRCC approved \$10,000 405(c) funding for this project.

**Project Contact**

Sgt. Scott Carlson, Michigan State Police, Criminal Justice Information Center

**Project Title**

State to State (S2S) Staffing Phase 2

**Performance Measures**

Michigan Department of State – Driver’s Licenses by Calendar Year	
Year	Total DL
2020	8,444,281
2019	8,300,924
2018	8,097,773
2017	8,061,553
2016	8,006,038
2015	7,965,492
2014	7,932,199

**Project Description**

The Michigan Department of State (MDOS) will clean up the driver records database by removing 75% of data errors in this multi-year project. This is a national project to ensure there is only one driving record and driver history for every driver in the country. This project will enable more accurate and complete driver records to enhance the ability of law enforcement and courts in identifying and completing their records more accurately. It promotes traffic safety by ensuring unsafe drivers are taken off the road faster and ensuring consistent enforcement for driving offenses. This also helps to deter identity fraud by preventing an individual from keeping multiple licenses and creating multiple records in other states and avoiding driving penalties.

Funding will support personnel and indirect costs.

**Project Goal(s) and Activities**

**Goal 1:** Correct at least 75 percent of the driver database errors by September 30, 2022.

**Activity:**

Cleanse the Michigan driver database first error report.

- resolve discrepancies between the federal database compared to the MDOS database
- determine state ownership for records of drivers licensed in multiple states

**Funding Information**

In total, the Michigan TRCC approved \$667,000 405(c) funding for this project.

**Project Contact**

John Harris, Michigan Department of State

**Project Title**

Improving Quality of Crash Severity and Injury Assessment within Michigan EMS Information System (MI-EMSIS) – Phase II

**Performance Measures**

Quality Control Measurements for the Statewide Injury Surveillance System					
Performance Attribute	Responsible Agency	Performance Measure	2019	2020	Goal
Timeliness	MDHHS-EMS	Average time for EMS run reports to be sent to governing agency	5.86 hours	2.8 hours	Michigan will reduce the average time for run reports submitted to MDHHS-EMS by .20 in 2020.
Accuracy	MDHHS-EMS	% of EMS run reports sent to governing agency in the prescribed time	81%	100%	Michigan will improve the % of EMS run submission to 95% in 2020.
	MDHHS-EMS	% of EMS run locations that match statewide location coding	No Data	0.04%	Michigan will work to implement a plan to capture the data needed for this performance measure in 2020.
	MDHHS-EMS	% correct ICD-9 and E-codes in EMS Data System	No Data	No Data	Michigan will work to implement a plan to capture the data needed for this performance measure in 2020.
	MDHHS-EMS	% "errors" found during data audits of critical data elements in EMS Data System	No Data	0.23%	Michigan will work to implement a plan to capture the data needed for this performance measure in 2020.
	MDHHS-EMS	Rate of errors and warnings in the NEMSIS 3 data submitted to the state EMS data system from other systems	9	8.10%	Michigan will reduce the rate of errors and warnings in the NEMSIS 3 data to 8 in 2020.
Completeness	MDHHS-EMS	% of traffic crash-related EMS runs in the EMS database	3.99	*2.77	No goal set for this measure as the number of traffic crash-related EMS runs are outside of our control.
<b>*The reduction in the % of traffic crash-related EMS runs in the EMS database may be attributed to COVID-19 related Stay at Home restrictions.</b>					

Statewide Injury Surveillance System Data					
Year	Fatalities	MI-EMSIS Fatalities	Suspected Serious Injuries	MI-EMSIS Severe and Likely Fatal	Total (K+A)
2014	Unknown	106**	Unknown	23,529***	N/A
2015	963	123**	4,865	23,980***	5,828
2016	1,064	151**	5,634	25,538***	6,698
2017	1,028	124**	6,084	19,617***	7,112
2018 (version 2.2 NEMSIS Data)	N/A	17**	N/A	3,014***	N/A
2018* (version 3.4 NEMSIS Data)	974	372	5,586	359	6,560
2019	Unknown	564	Unknown	547	N/A
<b>Total</b>	5,014	1,501	27,798	1,507	32,812
*Partial year of reporting					
**Injury crashes with cardiac arrest noted as “yes”					
***Total Traffic Crashes, unable to quantify severity					

## Project Description

There are challenges in how data from the Emergency Medical Services (EMS) is entered, accessed, and processed within the MI-EMSIS, creating questions in the accuracy and validity of conclusions that are drawn from that data. In 2018, the MDHHS began using the Biospatial data platform, which links the EMS electronic patient care record (ePCR) data with other health and injury-related data sources. A full-time data analyst will utilize the MI-EMSIS as well as Biospatial to identify gaps in documentation related specifically to motor vehicle crashes. The data analyst will categorize the gaps into actionable items to resolve or mitigate the gaps. FY22 is the second year of this 4-year project.

Funding will support the personnel and indirect costs.

## Project Goal(s) and Activities

**Goal 1:** The Michigan Department of Health and Human Services (MDHHS) will identify the percentage of the crash elements that are missing or not consistently being reported, sorted by EMS agency, documentation software vendor, medical control authority, and medical control authority region by September 30, 2022.

**Activity 1:** Identify data elements within MIEMSIS that contribute to a crash record (both ideal and potential).

**Activity 2:** Create report in MIEMSIS to assess individual elements and the presence or absence of data present in the elements.

**Activity 3:** Create graphical representation of element present reporting (both as an entirety and as individual elements).

**Goal 2:** The MDHHS will distribute crash documentation improvement plans for EMS agencies, documentation software vendors, medical control authorities, and medical control authority regions by September 30, 2022.

**Activity 1:** Utilizing the crash record MIEMSIS report, create individual reports based on: Agency, Medical Control Authorities, Software Vendors, and Regional Medical Control Authorities

**Activity 2:** Develop template for documentation improvement plans to insert data from MIEMSIS reports.

### Funding Information

In total, the Michigan TRCC approved \$141,000 405(c) funding for this project.

### Project Contact

Sabrina Kerr, Michigan Department of Health & Human Services, Bureau of EMS, Trauma & Preparedness



## Project Title

### Michigan Crash Analysis Application - Phase III

## Performance Measures

Performance Attribute	Performance Measure	Baseline Measure	FY 2018 (10-1-2017 to 09-30-2018)	FY 2019 (10-1-2018 to 09-30-2019)	FY 2020 (10-1-2019 to 09-30-2020)	FY 2021 (10-1-2020 to 09-30-2021)	Goal
Timeliness	# days from the crash date to entry into TCRS database (electronic and paper)	103 days (2003)	12.97	12.41	12.93 (Manual Paper Entry)	11.51	Michigan will improve to 11 days for 2022.
	% records entered into the system within 30 days of the crash	79% (2009)	95%	95%	94%	95%	Michigan will improve to 96% for 2022.
	% records entered into the system within 15 days of the crash	63% (2017)	65%	66%	67%	67%	Michigan will improve to 68% for 2022.
	% records entered into the system within 7 days of the crash	52% (2017)	53%	54%	54%	54%	Michigan will improve to 55% for 2022.
Accuracy	# of data performance edit errors per crash record	0.14 (2016)	0.05	0.03	0.01	0.01	Michigan will remain at .01 data edit errors per crash for 2022.
	% of crash records with no errors in critical data elements.	93% (2017)	95%	96%	95%	96%	Michigan will improve to 97% for 2022.
	% of crash records with 2 or more uncorrected "serious, non-fatal" (Severe) errors	7% (2016)	0%	0%	0%	0%	Michigan will remain at 0% for 2022.
	% of crash records with 5 or more uncorrected "minor" errors	45% (2016)	25%	3%	1%	5%	Michigan will remain at 5% or less for 2022.
Completeness	% of crash records with no missing critical data elements	56% (2016)	95%	96%	96%	92%	Michigan will improve to 94% for 2022.
	% of unknowns or blanks in critical data elements	Crash - 13% (2017) Unit - 6% Party - 23% Party (Driver Cond) - 8% CMV - 6%	Crash - 11% Unit - 6% Party - 22% Party (Driver Cond) - 9% CMV - 5%	Crash - 11% Unit - 6% Party - 22% Party (Driver Cond) - 9% CMV - 6%	Crash - 12% Unit - 7% Party - 24% Party (Driver Cond) - 9% CMV - 6%	Crash - 13% Unit - 7% Party - 25% Party (Driver Cond) - 9% CMV - 6%	Michigan will improve to the following percentages for 2022: Crash - 10% Unit - 6% Party - 21% Party (Driver Cond) - 8% CMV - 5%
Uniformity	% compliance with MMUCC guidelines	85% (2008)					The uniformity measure will be addressed with the next MMUCC edition.
Integration	% of in-state DLN's linked to MDOS driver file	97% (2015)	97%	97%	96%	96%	Michigan will improve to 97% for 2022.
	% of in-state VIN's linked to MDOS vehicle file	97% (2017)	98%	99%	98%	98%	Michigan will improve to 99% for 2022.
Accessibility	Principal Data Users (MDOT, UMTRI, SEMCOG, TIA, Wayne State University, WMU, MSU)	96% (2020)	Survey Questions: *How easily are you able to obtain crash data or other services requested from the TCRU? *Your satisfaction with the timeliness of the TCRU's response to your request?	Survey sent to OHSP, MSP, MDOT, UMTRI, SEMCOG, TIA, and MDOS users in early 2020. <b>Most recent results compiled on 1-23-2020:</b> -16 users were surveyed, with 12 responding for a total of 24 questions. -96% of the users were satisfied with both areas. One response suggested an area for improvement with the release of year-end data.			Michigan will improve to 97% for 2022.  The TCRU receives immediate response from users after Mi-CAT trainings that are put on by Numetric.  Accessibility to be surveyed again after more users are on Mi-CAT after the TCRS website is shut down.

## Project Description

The Crash Analysis Application is a multi-year project provides the ability to quickly analyze crash statistics and generate shareable reports, charts, and graphs. It has been implemented and was

deployed to the Michigan State Police (MSP) in January 2021. The addition of the Network Screening application will allow law enforcement the ability to deploy enforcement based on the highest ranked road segments. The user can filter the rankings by hundreds of options – like alcohol, distracted driving, restraint, county, district, etc. This will be especially beneficial for law enforcement when grant funding has been received to support targeted enforcement efforts.

Funding will support contractual costs.

### Project Goal(s) and Activities

**Goal 1:** To provide a crash data tool which identifies high-crash road segments to assist local law enforcement agencies with enforcement efforts by September 30, 2022.

#### Activity 1:

- The crash unit intends to obtain a list of law enforcement agencies from OHSP who will be receiving funding for specific enforcement efforts in the 1st Quarter.
- Contact the agencies to see if they would be willing to partner with the OHSP to look at the success of their efforts utilizing the high crash segment area data in the 1st Quarter.
- Obtain statistics from the OHSP enforcement effort by that agency in the 1st Quarter.
- The crash unit will work to identify those high crash road segments in the agency's area for the specific enforcement effort by the end of the 2nd Quarter.
- The TCRU will develop reports, charts, and graphs to share with the agency. The TCRU will work closely with the agency to ensure the data is understood and that the data will and can be used for the enforcement effort by the end of the 2nd Quarter.
- The TCRU will create statistics based on the results of the enforcement effort and compare to a same previous enforcement effort by the agency as well as track the next year of the agency's progress to establish a baseline, and success of the partnership by the end of the 4th Quarter.

### Funding Information

In total, the Michigan TRCC approved \$133,000 405(c) funding for this project.

### Project Contact

Amanda Heinze, Michigan State Police, Criminal Justice Information Center

## Project Title

Data Driven Crash Assessment for Rural Michigan

## Performance Measures

Michigan Traffic Crash Facts Statistics					
FY	Users	Queries	Tech Assist Requests	Page View	Publication Downloads
2015	4,830	321,431	80	158,929	N/A
2016	6,766	149,541	92	127,467	N/A
2017	10,983	94,829	61	108,526	10,645
2018	10,028	112,017	100	99,575	7,115
2019	11,125	109,248	87	123,827	3,979

## Project Description

Crash characteristics such as speeding, alcohol impairment, and seat belt use tend to differ for rural and urban areas. By defining crashes as rural or urban and providing a clear crash picture of the data, this project aims to determine the percentage of crashes that can be labeled as either rural or urban and to produce outputs indicating defining characteristics on rural Michigan roadways. This will also assist in rural traffic safety planning developing countermeasures that were previously unavailable with the current crash dataset.

Funding will support personnel, supplies/operating, and indirect costs.

## Project Goal(s) and Activities

**Goal:** To conduct a rural traffic crash assessment by September 30, 2022.

### Activities:

1. Label reported crashes in terms of rural/urban categories in the form of filters on the MTCF website
2. Develop an analysis report for rural crashes that considers contextual factors inherent to these crashes by consulting with OHSP staff
3. Design new rural crash data publications for the statewide, UP, and County/Community publications
4. Create additional rural and urban crash density maps that show the proportion of rural and urban crashes, fatalities, and suspected serious injuries by county

## Funding Information

In total, the Michigan TRCC approved \$22,000 402 funding for this project.

## Project Contact

Carol Flanagan, Research Associate Professor, University of Michigan Transportation Research Institute (UMTRI), Director, Center for the Management of Information for Safe and Sustainable Transportation (CMISST)

### Project Title

Michigan Traffic Crash Facts (MTCF) Query Tool Enhancements

### Performance Measures

Michigan Traffic Crash Facts Statistics					
FY	Users	Queries	Tech Assist Requests	Page View	Publication Downloads
2015	4,830	321,431	80	158,929	N/A
2016	6,766	149,541	92	127,467	N/A
2017	10,983	94,829	61	108,526	10,645
2018	10,028	112,017	100	99,575	7,115
2019	11,125	109,248	87	123,827	3,979

### Project Description

This project will develop additional enhancements to the Michigan Traffic Crash Facts Data Query Tool, such as: Multiple Simultaneous Queries; Map Time Series; and 5 Year/10 Year Trend Tables.

Funding will support personnel, supplies/operating and indirect costs.

### Project Goal(s) and Activities

**Goal 1:** Develop support for Multiple Simultaneous Queries to provide ‘And/Or’ querying capability by September 30, 2022

#### Activity 1:

**Provide the ability to chain multiple independent queries to form an ‘OR’ type operation.**

**Goal 2:** Develop Map Time Series by September 30, 2022

#### Activity 2:

Add option for visualizing data over the time of the query

**Goal 3:** Develop 5 Year/10 Year Trend Tables by September 30, 2022

#### Activity 3:

Add support for a query output that shows 5- and 10-Year Trends

### Funding Information

In total, the Michigan TRCC approved \$51,000 402 funding for this project.

## Project Contact

Carol Flanagan, Research Associate Professor, University of Michigan Transportation Research Institute (UMTRI), Director, Center for the Management of Information for Safe and Sustainable Transportation (CMISST)

## Project Title

Deriving Missing Model Inventory of Roadway Elements (MIRE) Surface Type from Imagery Phase I

## Performance Measures

MIRE FDEs	Non Local Paved Roads - Segment		Non Local Paved Roads - Intersection		Non Local Paved - Interchange/Ramp		Local Paved Roads		Unpaved Roads	
	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned
ROADWAY SEGMENT										
Segment Identifier (12)	100	100					100	100	100	100
Route Number (8)	100	0								
Route/Street Name (9)	100	100								
Federal Aid/Route Type (21)	100 derived	100 derived								
Rural/Urban Designation (20)	100	100					100	100		
Surface Type (23)	100	100					100	15		
Begin Point Segment Descriptor (10)	100	100					100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST
End Point Segment Descriptor (11)	100	100					100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST
Segment Length (13)	100	100								
Direction of Inventory (18)	100 derived	0								
Functional Class (19)	100	100					100	100	100	100
Median Type (54)	80 (undivided)	95 (undivided)								
Access Control (22)	20 derived	0								
One/Two Way Operations (91)	95	10								
Number of Through Lanes (31)	100 derived	80					100	0		
Average Annual Daily Traffic (79)	100	95					100 est	0 actual		
AADT Year (80)	100	95								
Type of Governmental Ownership (4)	100	100					100	100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST

## Project Description

This project would strive to complete the surface type requirement for the MIRE Federal Data Elements (FDE) in the Michigan Department of Transportation's roadway database. The project has two phases; the first phase to analyze and refine existing surface type detection methods and the second phase of production to refine processes and complete surface type assignments for all missing MIRE FDE surface type data (approximately 50%) on public roadways in the State of Michigan. This project will improve two traffic records data attributes. Accuracy is being addressed by the analysis phase. Timeliness is being addressed by executing this project and its method.

Funding will support contractual costs.

## Project Goal(s) and Activities

**Goal 1:** Project setup, data access and analysis, and project meetings will be completed by September 30, 2022.

**Activity 1:** The MTU staff will analyze and refine AI algorithms and report conclusions.

**Activity 2:** The MTU will report to the MDOT their findings regarding the strengths and weaknesses of each data collection method.

**Activity 3:** The MDOT and the MTU will hold monthly meetings regarding this activity.

**Activity 4:** The MTU will provide a written guide detailing when each method should be used to obtain the best results.

**Goal 2:** AI Model Tuning will be completed by September 30, 2022.

**Activity 1:** Fine tune the unpaved identification algorithms produced in the previous FY2021 work to determine when it is best to use each.

**Activity 2:** Compare AI algorithm results to real world data.

**Activity 3:** Refine the AI algorithms to ensure the most accurate data is collected.

## Funding Information

In total, the Michigan TRCC approved \$100,000 405(c) funding for this project.

## Project Contact

Mike Toth, Supervisor System Monitor and Reporting Unit, Michigan Department of Transportation (MDOT)



## PROPOSED FY2023 PROJECTS

### Project Title

Michigan Traffic Crash Facts (MTCF) Technical Support

### Performance Measures

Michigan Traffic Crash Facts Statistics					
FY	Users	Queries	Tech Assist Requests	Page View	Publication Downloads
2016	6,766	149,541	92	127,467	N/A
2017	10,983	94,829	61	108,526	10,645
2018	10,028	112,017	100	99,575	7,115
2019	11,125	109,248	87	123,827	3,979
2020	12,132	107,663	68	113,211	N/A

\*Due to changes in Amazon Log, tracking the unique publications requested per month is no longer available. Because Amazon Log offers no alternative tracking method for the Publication Downloads, this column will be removed from the table after FY2023.

### Project Description

This project will continue to provide public accessibility for the crash data derived from Michigan's Traffic Crash Reporting System. The 2022 MTCF will be produced and posted at: [www.michigantrafficcrashfacts.org](http://www.michigantrafficcrashfacts.org). An annual survey will gauge the effectiveness of the website. The OHSP will work with the UMTRI staff to provide technical assistance on requests for crash data analysis and presentations.

Funding will support personnel, supplies/operating and indirect costs.

### Project Goal(s) and Activities

**Goal 1:** Complete the 2022 Michigan Traffic Crash Facts publications/web content and MichiganTrafficCrashFacts.org website maintenance by September 30, 2022.

- Activities:**
- Meet with the OHSP to define any changes, if necessary, to the 2021 Michigan Traffic Crash Facts publications: November 2022.
- Meet with the OHSP for an evaluation of the website content and analysis tools: November 2022.
- Michigan 2022 traffic crash data received from the Michigan State Police-Criminal Justice Information Center (MSP-CJIC): April 2023.
- Webinar to present 'MichiganTrafficCrashFacts.org' website updates and obtain user feedback: April 2023.
- Updates to action team trend tables: May 2023.

7. Rolling release upload to the MTCF publications to the MTCF website: June through September 2023.
8. Exposure data acquisition from federal and state agencies: August 2023.
9. Completion of general system programming improvement to website tools: August 2023.
10. Complete the 2022 Michigan Traffic Crash Facts publications/web content and the 'MichiganTrafficCrashFacts.org' website maintenance: September 30, 2023.

**Goal 2:** Provide technical assistance to the OHSP as directed through September 30, 2023.

**Activities:**

1. An UMTRI team of researchers, including an on-site statistician, is available to respond to the OHSP requests as rapidly as possible via e-mail or by directly contacting team members.
2. Based on requests from the OHSP, crash data analysis will be provided through Traffic Crash Facts and other data sources. These analyses will include:
  - a. Ad-hoc requests for crash data analysis from the OHSP partners and stakeholders.
  - b. Crash data analysis to assist with the Highway Safety Plan (HSP) processes, program evaluation, and/or the Annual Report.
  - c. In-depth UD-10 analysis to identify specific factors related to a single type or category of crashes, injuries, or fatalities.
  - d. Analyses on the impact of proposed legislation or public policy on traffic crashes.
3. Deliverables for this project will be defined by the OHSP on a task-by-task basis and will include:
  - a. Summary tables of crash data.
  - b. Brief technical reports on requested crash data analyses.
  - c. Oral presentations of data analysis results as requested by the OHSP.
  - d. Specialized profiles as requested by the OHSP.
4. All findings will be provided to the OHSP for review and comment prior to public release.

## Funding Information

In total, the Michigan TRCC approved \$600,000 402 funding for this project.

## Project Contact

Carol Flanagan, Research Professor, University of Michigan Transportation Research Institute (UMTRI), Director, Center for the Management of Information for Safe and Sustainable Transportation (CMISST)

## Project Title

Traffic Crash Reporting Form UD-10 Training Support

## Performance Measures

OHSP - FISCAL YEARS									
Performance Attribute	Performance Measure	Baseline Measure	FY 2017 (10-1-2016 to 09-30-2017)	FY 2018 (10-1-2017 to 09-30-2018)	FY 2019 (10-1-2018 to 09-30-2019)	FY 2020 (10-1-2019 to 09-30-2020)	FY 2021 (10-1-2020 to 09-30-2021)	FY 2022 (10-1-2021 to 09-30-2022)	Goal
Timeliness	# days from the crash date to entry into TCRS database (electronic and paper)	103 days (2003)		12.97	12.41	12.93 (Manual Paper Entry)	11.51		Michigan will improve to 11 days for 2022.
	% records entered into the system within 30 days of the crash	79% (2009)	94%	95%	95%	94%	95%		Michigan will improve to 96% for 2022.
	% records entered into the system within 15 days of the crash	63% (2017)	63%	65%	66%	67%	67%		Michigan will improve to 68% for 2022.
	% records entered into the system within 7 days of the crash	52% (2017)	52%	53%	54%	54%	54%		Michigan will improve to 55% for 2022.
Accuracy	# of data performance edit errors per crash record	0.14 (2016)		0.05	0.03	0.01	0.01		Michigan will remain at .01 data edit errors per crash for 2022.
	% of crash records with no errors in critical data elements	93% (2017)	94%	95%	96%	95%	96%		Michigan will improve to 97% for 2022.
	% of crash records with 2 or more uncorrected "serious, non-fatal" (Severe) errors	7% (2016)	7%	0%	0%	0%	0%		Michigan will remain at 0% for 2022.
	% of crash records with 5 or more uncorrected "minor" errors	45% (2016)	37%	25%	3%	1%	5%		Michigan will remain at 5% or less for 2022.
Completeness	% of crash records with no missing critical data elements	56% (2016)	92%	95%	96%	96%	92%		Michigan will improve to 94% for 2022.
	% of unknowns or blanks in critical data elements	Crash - 13% (2017) Unit - 6% Party - 23% Party (Driver Cond) - 8% CMV - 6%	Crash - 14% Unit - 6% Party - 23% Party (Driver Cond) - 8% CMV - 6%	Crash - 11% Unit - 6% Party - 22% Party (Driver Cond) - 9% CMV - 5%	Crash - 11% Unit - 6% Party - 22% Party (Driver Cond) - 9% CMV - 6%	Crash - 12% Unit - 7% Party - 24% Party (Driver Cond) - 9% CMV - 6%	Crash - 13% Unit - 7% Party - 25% Party (Driver Cond) - 9% CMV - 6%	Crash - Unit - Party - Party (Driver Cond) - CMV -	Michigan will improve to the following percentages for 2022: Crash - 10% Unit - 6% Party - 21% Party (Driver Cond) - 8% CMV - 5%

## Project Description

This project will provide materials to support law enforcement officer training on accurately completing the UD-10 Traffic Crash Report to improve the quality of the traffic crash data. Addressing any concerns will continue to be a highlight of the training efforts, in addition to training officers and police recruits on identifying and reporting automated vehicle information.

Funding will support the supplies/operating costs.

## Project Goal(s) and Activities

**Goal 1:** Increase statewide crash report timeliness from 11.51 days to 11 days; increase the percentage of crash records with no errors (accuracy) in critical data elements from 95% to 97%; and increase the percentage of crash records with no missing critical data elements (completeness) from 96% to 97% by September 30, 2023.

### Activity:

Quarterly reports will be run by the TCRU crash analyst to track crash report timeliness, accuracy, and completeness.

**Goal 2:** Provide 50 training classes for 1,200 officers, police recruits and traffic safety professionals to assist with the proper completion of the UD-10 Traffic Crash Report by September 30, 2023.

### Activity:

Provide hands-on training materials and supplies for the various trainees which could include flash drives, flyers, advisories, brochures, training announcements and handouts

## Funding Information

In total, the Michigan TRCC approved \$15,000 405(c) funding for this project.

## Project Contact

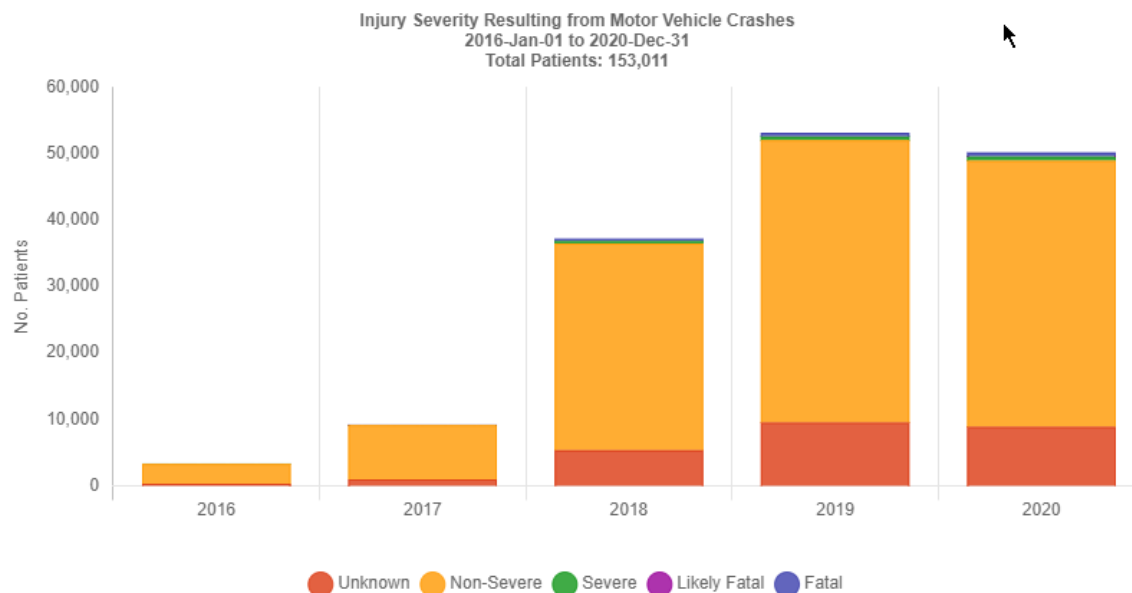
Sgt. Scott Carlson, Michigan State Police, Criminal Justice Information Center

## Project Title

Improving Quality of Crash Severity and Injury Assessment within Michigan EMS Information System (MI-EMSIS) – Phase III

## Performance Measures

Statewide Injury Surveillance System Data					
Year	Fatalities	MI-EMSIS Fatalities	Suspected Serious Injuries	MI-EMSIS Severe and Likely Fatal	Total (K+A)
2016	1,064	151**	5,634	25,538***	6,698
2017	1,028	124**	6,084	19,617***	7,112
2018 (version 2.2 NEMSIS Data)	N/A	17**	N/A	3,014***	N/A
2018* (version 3.4 NEMSIS Data)	974	372	5,586	359	6,560
2019	Unknown	564	Unknown	547	N/A
2020		599		644	
2021		745		776	
<b>Total</b>	5,014	1,501	27,798	1,507	32,812
*Partial year of reporting					
**Injury crashes with cardiac arrest noted as “yes”					
***Total Traffic Crashes, unable to quantify severity					



## Project Description

There are challenges in how data from the EMS is entered, accessed, and processed within the MI-EMSIS, creating questions in the accuracy and validity of conclusions that are drawn from that data. In 2018, the MDHHS began using the Biospatial data platform, which links the EMS electronic patient care record (ePCR) data with other health and injury-related data sources. A full-time data analyst will utilize the MI-EMSIS as well as Biospatial to identify gaps in documentation related specifically to motor vehicle crashes. The data analyst will categorize the gaps into actionable items to resolve or mitigate the gaps. FY2022 is the second year of this 4-year project.

Funding will support contractual costs.

## Project Goal(s) and Activities

**Goal 1:** The Michigan Department of Health and Human Services (MDHHS) will distribute crash documentation improvement plans for EMS agencies, documentation of software vendors, medical control authorities and medical control authority regions by September 30, 2023.

**Activity 1:** Utilizing the crash record MIEMSIS and Biospatial report, create individual reports based on: Agency, Medical Control Authorities, Software Vendors and Regional Medical Control Authorities by the end of the fourth quarter.

**Activity 2:** Develop template for documentation improvement plans to insert data from MIEMSIS and Biospatial reports by the end of the fourth quarter.

## Funding Information

In total, the Michigan TRCC approved \$141,000 405(c) funding for this project.

## Project Contact

Sabrina Kerr, Michigan Department of Health & Human Services, Bureau of EMS, Trauma & Preparedness

## Project Title

Data Quality Assessment of Pedestrian, Bicyclist, and Motorcycle Crashes in Michigan

## Performance Measures

### Motorcyclist Operator Fatalities and Suspected Serious Injuries 2016-2020

Year	Fatalities	Suspected Serious Injuries	Total (K+A)
2016	130	590	720
2017	124	610	734
2018	121	594	715
2019	114	609	723
2020	145	721	866
<b>TOTAL OPERATOR COUNT</b>	<b>634</b>	<b>3,124</b>	<b>3,758</b>

### Pedestrian Fatalities and Suspected Serious Injuries 2016-2020

Year	Fatalities	Suspected Serious Injuries	Total (K+A)
2016	165	363	528
2017	158	444	602
2018	145	418	563
2019	149	455	604
2020	179	367	542
<b>TOTAL PERSON COUNT</b>	<b>792</b>	<b>2,047</b>	<b>2,839</b>

### Bicyclist Fatalities and Suspected Serious Injuries 2016-2020

Year	Fatalities	Suspected Serious Injuries	Total (K+A)
2016	38	158	196
2017	21	157	178
2018	21	136	157
2019	21	153	174
2020	38	147	185
<b>TOTAL PERSON COUNT</b>	<b>139</b>	<b>751</b>	<b>890</b>



## Project Description

A 2019 study of crash data quality in four countries, including the U.S., showed that some crash attributes, including injury severity, are more often inaccurate, but that this issue is not equal for all types of crashes. In particular, the authors note research that has shown that motorcycle, pedestrian, and bicyclist crashes are often underreported.

In this project, the researchers will assess the reporting accuracy of pedestrian, bicyclist, and motorcyclist crash data, especially with respect to injury severity, using linkage to Emergency Medical Services (EMS) data and trauma data. The result of this study will be an evaluation of data completeness as a function of characteristics of the crash including its location, time of day, and injury severity. The resulting report will describe the analysis and results and provide some suggestions for data quality improvement.

Funding will support personnel and indirect costs.

## Project Goal(s) and Activities

**Goal 1:** Conduct a data quality assessment of pedestrian, bicyclist, and motorcycle crash data and provide recommendations by September 30, 2023.

**Activity 1:** Obtain external data sources by November 30, 2022.

**Activity 2:** Complete data linkage to external sources by February 28, 2023.

**Activity 3:** Complete evaluation of missing data by May 31, 2023.

**Activity 4:** Draft final report by June 30, 2023.

**Activity 5:** Final revised report by July 31, 2023.

## Funding Information

In total, the Michigan TRCC approved \$16,000 402 funding for this project.

## Project Contact

Carol Flanagan, Research Professor, University of Michigan Transportation Research Institute (UMTRI), Director, Center for the Management of Information for Safe and Sustainable Transportation (CMISST)

## Project Title

Deriving Missing Model Inventory of Roadway Elements (MIRE) Surface Type from Imagery Phase I

## Performance Measures

MIRE FDEs	Non Local Paved Roads - Segment		Non Local Paved Roads - Intersection		Non Local Paved - Interchange/Ramp		Local Paved Roads		Unpaved Roads	
	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned	Completion % - State Owned	Completion % - Non State Owned
ROADWAY SEGMENT										
Segment Identifier (12)	100	100					100	100	100	100
Route Number (8)	100	0								
Route/Street Name (9)	100	100								
Federal Aid/Route Type (21)	100 derived	100 derived								
Rural/Urban Designation (20)	100	100								
Surface Type (23)	100	100					100	15	100 of roads/ 0 ST	100 of roads/ 0 ST
Begin Point Segment Descriptor (10)	100	100					100 of roads/ 0 ST	100 of roads/ 0 ST		
End Point Segment Descriptor (11)	100	100					100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST
Segment Length (13)	100	100								
Direction of Inventory (18)	100 derived	0								
Functional Class (19)	100	100					100	100	100	100
Median Type (54)	80 (undivided)	95 (undivided)								
Access Control (22)	20 derived	0								
One/Two Way Operations (91)	95	10								
Number of Through Lanes (31)	100 derived	80					100	0	100 of roads/ 0 ST	100 of roads/ 0 ST
Average Annual Daily Traffic (79)	100	95					100 est	0 actual		
AADT Year (80)	100	95								
Type of Governmental Ownership (4)	100	100					100	100 of roads/ 0 ST	100 of roads/ 0 ST	100 of roads/ 0 ST

## Project Description

This is Phase 2 of a project which strives to complete the surface type requirement for the MIRE Federal Data Elements (FDE) in the Michigan Department of Transportation's roadway database. The project has two phases; the first phase of analyzing and refining existing surface type detection methods and the second phase of producing the refined processes and completing surface type assignments for all missing MIRE FDE surface type data (approximately 50%) on public roadways in the State of Michigan. This project will improve two traffic records data attributes – accuracy and timeliness. Accuracy is being addressed by the analysis phase. Timeliness is being addressed by executing this project and its method.

Funding will support contractual costs.

## Project Goal(s) and Activities

**Goal 1:** Unpaved road identification artificial intelligence (AI) model tuning by September 30, 2023.

**Activity 1:** Update paved vs. unpaved identification for the six previous test counties, with addition of concrete vs. asphalt for paved roads by March 31, 2023.

**Activity 2:** Outline the process of steps necessary to use the updated models in the Production Phase, including recommendations on when different models perform best by March 31, 2023.

**Goal 2:** Develop AI models to detect asphalt and concrete pavements by September 30, 2023.

**Activity 1:** Outline the process of steps necessary to use the model in a production environment by March 31, 2023.

**Activity 2:** Create a pavement identification model and metrics for confidence and alignment for the extent of the road network that was analyzed by March 31, 2023.

**Goal 3:** Road detection production and data handling testing by September 30, 2023.

**Activity 1:** Provide example results for 20 counties, with recommended metrics for road/image fit by September 30, 2023.

**Activity 2:** Process at least 20 counties through the detection process by September 30, 2023.

**Activity 3:** Draft examples of output files using data from the research and development phase by September 30, 2023.

### Funding Information

In total, the Michigan TRCC approved \$325,000 405(c) funding for this project.

### Project Contact

Mike Toth, Supervisor System Monitor and Reporting Unit, Michigan Department of Transportation (MDOT)

## APPENDIX A: TRCC CHARTER

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### Mission

Improve the quality, timeliness and availability of crash related data, information, and systems to enable stakeholders and partners to identify and resolve traffic safety issues

### General Information

1. Include representatives from highway safety, highway infrastructure, law enforcement and adjudication, public health, injury control, and motor vehicle and driver licensing agencies, and motor carrier agencies.
2. The TRCC is an Action Team located under the Governors Traffic Safety Advisory Commission (GTSAC).
3. Provide a forum for the discussion of highway safety data and traffic records issues and report on any such issues to the agencies and organizations in the State that create, maintain, and use highway safety data and traffic records.
4. Consider and coordinate the views of organizations in the State that are involved in the administration, collection, and use of highway safety data and traffic records systems.
5. Represent the interest of the agencies and organizations within the traffic records system to outside organizations.
6. Review and evaluate new technologies to keep the highway safety data and traffic records systems up to date.
7. Facilitate and coordinate the integration of systems within the state, such as systems that contain crash related medical and economic data with traffic crash data.
8. Form sub-committees and action teams as appropriate.
9. The TRCC will not adopt any formal policy or rules intended to impose authority on any group, agency or individual.
10. Within the TRCC there shall exist an 'Executive Committee'.
11. The TRCC will keep the GTSAC apprised of TRCC activity, projects and/or accomplishments through reports at periodic GTSAC meetings.
12. Create and monitor a Traffic Records System Strategic Plan that:

- addresses existing deficiencies in a State's highway safety data and traffic records system
- specifies how deficiencies in the system were identified
- prioritizes the needs and set goals for improving the system
- identifies performance-based measures by which progress toward those goals will be determined
- specifies how the State will use section 405-c and other funds of the State to address the needs and goals identified in its Strategic Plan.

### **Executive Committee**

The 'Executive Committee' will be comprised of:

- Michigan Department of State Police
- Michigan Department of State
- Michigan Department of Transportation
- Michigan Department of Health and Human Services
- Michigan State Courts Administration Office
- Michigan Office of Highway Safety Planning
- Michigan Department of Technology, Management, & Budget

Each member shall have the authority to authorize changes of and/or expend agency funds to support the Michigan Traffic Records System.

The Executive Committee shall appoint a committee chair on a bi-annual basis who will serve as chair for both the Executive Committee and the general TRCC body.

## APPENDIX B: TRCC MEMBERSHIP ROSTER

Traffic Records Coordinating Committee Members FFY2022					
Member	Position	Agency	Core Database	E-Mail	FY2023 Grantee #
<b>EXECUTIVE COUNCIL</b>					
Vacant	n/a	State Court Administrative Office	Citation & Adjudication	n/a	
Dave Work	State Administrative Manager	Department of Technology, Management, and Budget	All	workd@michigan.gov	
John Harris	Driver Records Program Section Manager	Michigan Department of State	Driver & Vehicle	harrisj2@michigan.gov	TR-22-03
Michelle Kleckler (current chair)	Director Criminal Justice Information Center	Michigan State Police	Crash	klecklerm2@michigan.gov	
Alicia Sledge	Director of the Office of Highway Safety Planning	Michigan State Police	All	sledgea@michigan.gov	
Tonya Nobach	Departmental Manager, Criminal Justice Information Center	Michigan State Police	Crash	nobacht@michigan.gov	
Sabrina Kerr	BA, MPA, EMS Section Manager	Michigan Department of Health and Human Services	EMS & Trauma	kerrs3@michigan.gov	TR-22-08
<b>TECHNICAL COUNCIL</b>					
<b>Michigan State Police - Criminal Justice Information Center (MSP-CJIC)</b>					
Amanda Heinze	Crash Unit Manager	Michigan State Police	Crash	heinzea@michigan.gov	TR-22-06
Melissa Marinoff	Traffic Crash Specialist	Michigan State Police	Crash	marinoffm@michigan.gov	
Brian Sine	IT Program Analyst	Department of Technology, Management, and Budget	Crash	sineb@michigan.gov	
Lorie Sierra	FARS Analyst	Michigan State Police	FARS	seirral@michigan.gov	
Scott Carlson	UD-10 Crash Trainer	Michigan State Police	Crash	carlsons1@michigan.gov	TR-22-01
Shawn Sible	Assistant Division Director	Michigan State Police	Crash	sibles@michigan.gov	
<b>Michigan Department of Transportation (MDOT)</b>					
Cory Johnson	Manager - GIS Unit & System Monitoring	Michigan Department of Transportation	Roadway	johnsonc45@michigan.gov	
Mark Bott	Manager - State Traffic and Safety Engineer	Michigan Department of Transportation	Roadway	bottm@michigan.gov	
David Fairchild	Transportation Planner	Michigan Department of Transportation	Roadway	fairchildd1@michigan.gov	
Dean Kanitz	Traffic Signing Engineer	Michigan Department of Transportation	Roadway	kanitzd@michigan.gov	
Mike Toth	Supervisor	Michigan Department of Transportation	Roadway	tothm@michigan.gov	
Linda Powell	Safety Programs Engineer	Michigan Department of Transportation	Roadway	powelll12@michigan.gov	
Carissa McQuiston	Safety Programs Unit Manager	Michigan Department of Transportation	Roadway	mcquistonc@michigan.gov	
<b>Michigan Department of Health and Human Services (MDHHS)</b>					
Emily Bergquist	Director, Division of EMS & Trauma	Bureau of EMS, Trauma & Preparedness	EMS & Trauma	bergquiste@michigan.gov	
Eileen Worden	State Trauma Manager	Bureau of EMS, Trauma & Preparedness	EMS & Trauma	wordene@michigan.gov	
Sabrina Kerr	Michigan EMS Section Manager	Bureau of EMS, Trauma & Preparedness	EMS & Trauma	kerrs3@michigan.gov	TR-22-08
Kristine Kuhl	Medical Control Authority Coordinator	Bureau of EMS, Trauma & Preparedness	EMS & Trauma	kublk2@michigan.gov	
Kevin Putman	Data Manager	Bureau of EMS, Trauma & Preparedness	EMS & Trauma	putmank@michigan.gov	
John Wagner	Michigan EMS Data Coordinator	Bureau of EMS, Trauma & Preparedness	EMS & Trauma	wagnerj4@michigan.gov	
Alissa Morrison	EMS Traffic Crash Data Quality Specialist	Bureau of EMS, Trauma & Preparedness	EMS & Trauma	morrisona11@michigan.gov	



<b>Michigan Department of State (MDOS)</b>					
Abby DeMarco	Analyst	Michigan Department of State	Driver & Vehicle	demarcoa@michigan.gov	
Bonita Sporer	Departmental Specialist	Michigan Department of State	Driver & Vehicle	sporerb@michigan.gov	
Jeremy Russo	Analyst	Michigan Department of State	Driver & Vehicle	russoj5@michigan.gov	
Makayla Carpenter	Departmental Analyst	Michigan Department of State	Driver & Vehicle	carpenterm1@michigan.gov	
Rebecca McGeorge	Budget Analyst	Michigan Department of State	Driver & Vehicle	mcgeorger@michigan.gov	TR-22-03
<b>Michigan Department of Technology Management and Budget (MDTMB)</b>					
Joel Locke	Departmental Analyst	Department of Technology, Management, and Budget	All	lockej@michigan.gov	
Mark Holmes	Departmental Manager	Department of Technology, Management, and Budget	All	holmesm3@michigan.gov	
Timothy Lauxmann	GeoData Manager	Department of Technology, Management, and Budget	All	lauxmannt@michigan.gov	
<b>Michigan State Court Administrative Office (SCAO)</b>					
Laura Hutzell	Judicial Data Warehouse Manager	State Court Administrative Office	Citation & Adjudication	hutzell@courts.mi.gov	
<b>Federal Highway Administration (FHWA)</b>					
Brandy Solak	Safety and Operations Engineer	Federal Highway Administration	Roadway	brandy.solak@dot.gov	
<b>National Highway Traffic Safety Administration (NHTSA)</b>					
Jessi Hopkins	Regional Program Manager	NHTSA	All	jessica.hopkins@dot.gov	
Martin Broyles	Regional Program Manager	NHTSA	All	martin.broyles@dot.gov	
<b>Federal Motor Carrier Safety Administration (FMCSA)</b>					
John Wallace	State Programs Specialist	FMCSA	All	john.wallace@dot.gov	
<b>Michigan Technology Institute (MTU)</b>					
Dale Lighthizer	Professor	Michigan Technology University	Roadway	dlrighth@mtu.edu	
Timm Colling, PhD PE	Director, Center for Technology & Training Civil, Environmental and GEospatial Engineering Department	Michigan Technology University	Roadway	tkcollin@mtu.edu	
<b>University of Michigan Transportation Institute (UMTRI)</b>					
Aditi Misra	Assistant Research Scientist	UMTRI	Crash & Roadway	aditimis@umich.edu	until May 2022
Carol Flannagan	Research Professor	UMTRI	Crash & Roadway	cacf@umich.edu	TR-22-05
Lisa Park	Project Manager	UMTRI	Crash & Roadway	lapark@umich.edu	TR-22-05
Patrick Bowman	Statistician Lead	UMTRI	Crash & Roadway	bowmanp@umich.edu	TR-22-05
<b>Southeast Michigan Council of Governments (SEMCOG)</b>					
Jenya Abramovich	Transportation Planner	SEMCOG	Roadway	abramovich@semcog.org	
Alex Bourgeau	Transportation Modeling and Mobility Manager	SEMCOG	Roadway	bourgeau@semcog.org	
<b>Transportation Improvement Association (TIA)</b>					
Chuck Keller	Director of Engineering	TIA	Crash & Roadway	ckeller@tiasafety.us	
Jim Santilli	Chief Executive Officer	TIA	Crash & Roadway	jsantilli@tiasafety.us	
Monica Yesh	Chief Operating Officer	TIA	Crash & Roadway	mvesh@tiasafety.us	

## APPENDIX C: ACRONYMS

Acronym	Definition
AAMVA	American Association of Motor Vehicle Administrators
CFR	Code of Federal Regulations
CJIC	Criminal Justice Information Center
CMV	Commercial Motor Vehicle
CSS	Center for Shared Solutions
DAT	Data Action Team
DUI	Driving Under the Influence
EMS	Emergency Medical Services
FARS	Fatality Analysis Reporting System
FHWA	Federal Highway Administration
FY	Fiscal Year
GTSAC	Governor's Traffic Safety Advisory Commission
ISS	Injury Surveillance System
JDW	Judicial Data Warehouse
LEIN	Law Enforcement Information Network
LTAP	Local Technical Assistance Program
MCA	Medical Control Authority
MDHHS	Michigan Department of Health and Human Services
MDOS	Michigan Department of State

MDOT	Michigan Department of Transportation
MDTMB	Michigan Department of Technology, Management, & Budget
MHA	Michigan Health & Hospital Association
MIRE-FDE	Model Inventory of Roadway Elements – Fundamental Data Elements
MOU	Memoranda of Understanding
MSP	Michigan Department of State Police
NHTSA	National Highway Transportation Research Administration
NIEM	National Information Exchange Model
NMVTIS	National Motor Vehicle Title Information System
OHSP	Office of Highway Safety Planning
PRISM	Performance Registration System and Management
SCAO	State Court Administrative Office
SEMCOG	Southeast Michigan Council of Governments
STRAP	State Traffic Records Assessment Program
TAMC	Transportation Asset Management Council
TAMP	Transportation Asset Management Plan
TAMS	Transportation Asset Management System
TBD	To Be Determined
TCRS	Traffic Crash Reporting System
TCRU	Traffic Crash Reporting Unit
TDMS	Traffic Data Management System
TRCC	Traffic Records Coordinating Committee

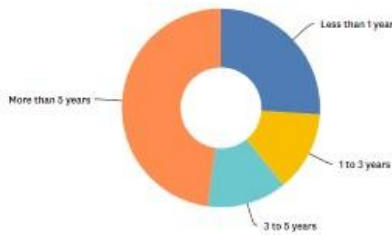
# APPENDIX D: MICHIGAN TRCC SURVEY

TRCC Survey will be conducted every other year. The results of this survey are from FY2021.

How long have you been involved with the Traffic Records Coordinating Committee (TRCC) or Data User Group (DUG)?

How long have you been involved with the Traffic Records Coordinating Committee (TRCC) or Data User Group (DUG)?

Answered: 23 Skipped: 0

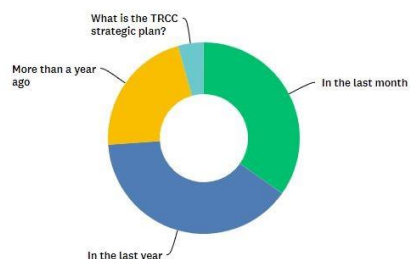


ANSWER CHOICES	RESPONSES
I am not really	0.00%
Less than 1 year	26.09%
1 to 3 years	13.04%
3 to 5 years	13.04%
More than 5 years	47.83%
TOTAL	23

## When is the last time you read the TRCC strategic plan?

When is the last time you read the TRCC strategic plan?

Answered: 23 Skipped: 0

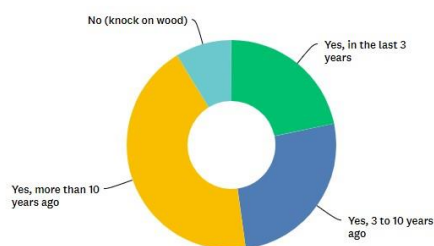


ANSWER CHOICES	RESPONSES	
▼ In the last month	34.78%	8
▼ In the last year	39.13%	9
▼ More than a year ago	21.74%	5
▼ What is the TRCC strategic plan?	4.35%	1
<b>TOTAL</b>		<b>23</b>

## Have you ever been in a crash?

Have you ever been in a crash?

Answered: 23 Skipped: 0

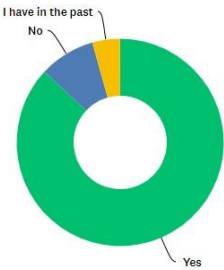


ANSWER CHOICES	RESPONSES	
▼ Yes, in the last 3 years	21.74%	5
▼ Yes, 3 to 10 years ago	26.09%	6
▼ Yes, more than 10 years ago	43.48%	10
▼ No (knock on wood)	8.70%	2
<b>TOTAL</b>		<b>23</b>

# Do you personally use traffic records or crash data?

Do you personally use traffic records or crash data?

Answered: 23 Skipped: 0

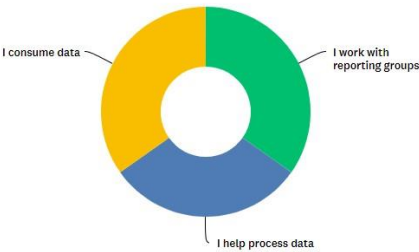


ANSWER CHOICES	RESPONSES	
Yes	86.96%	20
No	8.70%	2
I have in the past	4.35%	1
TOTAL		23

# How do you use traffic records?

How do you use traffic records?

Answered: 23 Skipped: 0



ANSWER CHOICES	RESPONSES	
I work with reporting groups	34.78%	8
I help process data	30.43%	7
I consume data	34.78%	8
I do not use it	0.00%	0
TOTAL		23

What aspect of traffic records do you think is currently the strongest?

What aspect of traffic records do you think is currently the strongest?

Answered: 23 Skipped: 0



ANSWER CHOICES	RESPONSES	
Accuracy	21.74%	5
Completeness	17.39%	4
Integrity	4.35%	1
Timeliness	21.74%	5
Uniformity	17.39%	4
Accessibility	17.39%	4
<b>TOTAL</b>		<b>23</b>

What aspect of traffic records do you think is currently the strongest?

What aspect of traffic records do you think is currently the strongest?

Answered: 23 Skipped: 0



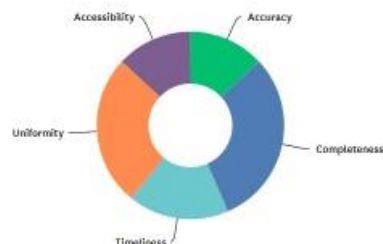
ANSWER CHOICES	RESPONSES	
Accuracy	21.74%	5
Completeness	17.39%	4
Integrity	4.35%	1
Timeliness	21.74%	5
Uniformity	17.39%	4
Accessibility	17.39%	4
<b>TOTAL</b>		<b>23</b>



Which aspect of traffic records do you think is the weakest?

Which aspect of traffic records do you think is the weakest?

Answered: 23 Skipped: 0



ANSWER CHOICES	RESPONSES	
▼ Accuracy	13.04%	3
▼ Completeness	30.43%	7
▼ Integrity	0.00%	0
▼ Timeliness	17.39%	4
▼ Uniformity	26.09%	6
▼ Accessibility	13.04%	3
TOTAL		23

What areas of traffic records do you feel could be improved on?

- Use with other data sets
- Citation data accessibility
- Data linkage, namely citation data
- More GIS mapping with good filtering abilities
- Follow up on severity of injury after the fact
- Improve location data on the UD-10's by requiring mapping of the location
- Judicial data
- Communication between data consumers on results of certain projects
- More diverse membership at meetings
- Data linkage across systems is one of the biggest issues
- Not sure globally, but for EMS it would be accuracy
- Accuracy/uniformity in reporting
- More summary reports
- Continue to work to establish performance measures to improve roadway data
- Ways to compile information
- E-Citation data
- Accuracy in documentation of crashes
- Getting the data out to users
- Access to data that is free of PII
- Integration with more datasets

Are there any  
other ideas or  
suggestions  
you have to  
make your  
TRCC  
experience  
better?

- The group has evolved over the years in a good way.
- Not at this time. The group is a good platform for sharing and understanding the data that is collected.
- Allow consumption of traffic records that is free of PII, so that it can be utilized across more platforms and integrated into more business areas and decision-making processes.
- Love the diverse speakers and participants at the meetings - keep those coming!

## PARTNERSHIPS & COLLABORATION

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## EXECUTIVE COMMITTEE SIGNATURES

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These signatures indicate approval of the strategic plan including the update with FY23 projects.



Mark Bott

Michigan Department of Transportation

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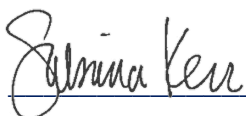
Vacant

State Court Administrative Office



John Harris

Michigan Department of State



Sabrina Kerr

Michigan Department of Health and Human Services



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Michelle Kleckler

Michigan State Police – Criminal Justice Information Center



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Alicia Sledge

Michigan State Police – Office of Highway Safety Planning

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Dave Work

Michigan Department of Technology, Management, and Budget

