

2018 Update to the Texas Traffic Safety Information System Strategic Plan with MIRE Fundamental Data Element 9/30/2026 Implementation Plan

Prepared for

National Highway Traffic Safety Administration

Prepared By

Texas Department of Transportation *with the* Texas Traffic Records Coordinating
Committee

May 2018

1.0 Texas Traffic Records Coordinating Committee Documentation

- **Introduction**

This Update to the 2018 Texas Traffic Safety Information System (TSIS) Strategic Plan was developed by the Texas Traffic Records Coordinating Committee (TRCC) with support from the Texas Department of Transportation (TxDOT) to advance the performance and quality of the State's traffic records data.

- **The Role of the TRCC**

The TRCC is a statewide stakeholder forum created to facilitate the planning, coordination and implementation of projects to improve the State's traffic records system. The Texas TRCC is a partnership of representatives from the transportation, law enforcement, criminal justice, and health professions. As such, the TRCC is the body responsible for improving the performance and quality of the data used to support highway safety analyses and countermeasure selection in Texas.

The core membership of the Texas TRCC is described below. The State's Executive Charter (provided below) and Designation of TRCC and Traffic Records Coordinator Designation have changed from last year's plan.

Representation

Representing roadway and Governor's Highway Safety Representative is Michael Chacon, Division Director of the Traffic Operations Division of TxDOT. The TRCC designated and appointed Mr. Chacon as the Traffic Records Coordinator.

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Representing Crash Records Information System (CRIS), crash data, and the Fatality Analysis Reporting System (FARS) is Mr. James Hollis. Mr. Hollis is the Director of the Crash Data and Analysis Section within the Traffic Operations Division of TxDOT. He oversees the development, implementation, and maintenance of CRIS and the training and support of law enforcement using CRIS. He is responsible for the integrity, accuracy, analysis, and dissemination of crash data.

- James Hollis, Director, Crash Data and Analysis Section, Traffic Operations Division
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Representing Geographical Roadway Inventory Data (GRID) and associated roadway systems that capture the roadway assets for Texas, is David Freidenfeld. Mr. Freidenfeld is the Roadway Records Branch Supervisor within the Transportation Planning and Programming Division of TxDOT. He oversees the development, implementation and maintenance of the GRID and other associated roadway asset systems and is part of the TxDOT Safety Data Collections and Analysis group within TxDOT.

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Representing driver licensing and driver history is Angie Suarez. She works in the Enforcement and Compliance Service and is responsible for overseeing the Conviction Reporting office where all convictions and enforcement actions are applied to the driver record. These include accident data and crash suspension related enforcement actions.

- Angie Suarez, Assistant Manager, Enforcement & Compliance Services,
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Representing the Department of State Health Services' Injury Epidemiology & Surveillance Branch, which houses the EMS & Trauma Registries (MAVEN), is Dan Dao, MPH. Dan is the Branch Manager and works collaboratively with the registry's project manager on forwarding the important efforts in the linking process of EMS and Hospital data with crash records. Dan is a subject matter expert on the EMS & Trauma Registries and has expertise with the epidemiology of injuries associated with and factors related to motor vehicle crashes.

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Representing the Office of Court Administration is Thomas Sullivan. Mr. Sullivan is the Project Manager responsible for managing the statewide eCitation Project.

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Representing State Law Enforcement is Capt. Jeremy Sherrod. He is a captain with the Texas Highway Patrol Division of the Texas DPS. Captain Sherrod provides insight on enforcement citation issues, as well as the needs of the law enforcement officers who collect citation and crash data.

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Representing the Department of Motor Vehicles, which oversees vehicle titling and registration, and motor carriers, is Deputy Director of the Vehicle Titles and Registration Division, Tim Thompson.

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This group of individuals serves as the executive-level committee, as many are the managers of the individual core systems with the authority to make decisions regarding the functionality and accessibility of the systems.

TRCC Operation

As stated in the February 2, 2006 Federal Register (Vol. 71, No. 22), the Texas TRCC:

- a) Includes representatives from highway safety, highway infrastructure, law enforcement and adjudication, public health, injury control and motor carrier agencies and organizations;
- b) Has authority to review any of the State's highway safety data and traffic records systems and to review changes to such systems before the changes are implemented;
- c) Provides a forum for the discussion of highway safety data and traffic records issues and report on any such issues to the agencies and the organizations in the State that create, maintain and use highway safety data and traffic records;
- d) Considers and coordinates the views of organizations in the State that are involved in the administration, collection and use of the highway safety data and traffic records system;
- e) Represents the interests of the agencies and organizations within the traffic records system to outside organizations; and
- f) Reviews and evaluates new technologies to keep the highway safety data and traffic records systems up-to-date.

Executive Charter

Whereas the State of Texas and local governmental agencies have concluded and recognized the need to create a committee to assist with the integration of Traffic Records information to enhance decision making in order to save lives and injuries on Texas highways;

And, whereas the State of Texas and local governmental agencies have agreed to collaborate in the development and implementation of a Traffic Safety Information Systems Improvement Program to provide more timely, accurate, complete, uniform, integrated and accessible data to the traffic safety community;

And, whereas the State of Texas and local governmental agencies have agreed to collaborate in the development and implementation of a Traffic Safety Information Systems Strategic Plan to assure that all components of the State Traffic Safety Information System Improvement Program are coordinated;

Therefore, the following Charter is hereby established to help in direction of a Traffic Records Coordinating Committee (TRCC) as agreed upon by the participating agencies.

- **A. Objective**

To provide an interagency Traffic Records Coordinating Committee (TRCC) composed of voting members from the Texas Department of Public Safety (TxDPS), Texas Department of Transportation (TxDOT), Texas Department of State Health Services (DSHS), Texas Department of Motor Vehicles (TxDMV) and The Office of Court Administration (TxOCA) whose purpose is to provide executive direction on all matters related to the Texas Traffic Safety Information Systems (TSIS) and the Traffic Safety Information Systems Improvement Program within the State.

- **B. TRCC Goals**

To improve the timeliness, accuracy, completeness, uniformity, and accessibility of the data of the state that is needed to identify priorities for national, state and local highways and traffic safety programs.

To provide for the comprehensive collection, maintenance and dissemination of Texas traffic safety related data in order to set the direction for traffic safety improvement measures.

To ensure that all Traffic Safety Information Systems improvement projects move forward on schedule and within budget.

- **C. TRCC Authority**

The TRCC operates under the authority of TxDOT and shall consist of voting members from TxDPS, TxDOT, DSHS, TxDMV and the TxOCA.

Each member shall serve at the discretion of their Department Director and shall have the authority to recommend projects for funding to support the Texas Traffic Safety Information System Improvement Program. Final funding authority resides with the Traffic Records Coordinator at the Texas Department of Transportation

- **D. TRCC Purpose**

To evaluate the effectiveness of the committee's efforts to make improvements as needed.

To provide oversight to link state data systems within the state, such as systems that contain medical, economic data and crash information.

To provide oversight and investigate linking crash data to other crash data systems within the state with information relevant to crashes.

To ensure that all Traffic Safety Information System improvement projects meet and/or exceed the expectations of the above stated purposes.

To provide oversight to the development of the State's Traffic Safety Information System Strategic Plan.

- **E. TRCC Duties and Responsibilities**

The duties of the TRCC include but are not limited to:

The TRCC will provide executive direction and oversight for the current Traffic Safety Information Systems.

The TRCC will provide executive direction and oversight for the Traffic Safety Information System Improvement Program.

The TRCC will provide executive direction, oversight and formal approval of the Traffic Safety Information System Strategic Plan.

The TRCC will have the authority to review any of the State's highway safety data and traffic records systems and to review changes to the systems before the changes are implemented.

The TRCC will provide a forum for discussion and reporting of highway safety data and traffic records issues back to the agencies and organizations that created maintain and use highway safety data and traffic records.

The TRCC will consider and coordinate the views of organizations in the State that are involved in the administration, collection and use of the highway safety data and traffic records systems.

The TRCC will represent the interests of the agencies and organizations within the traffic records system to outside organizations.

The TRCC will review and evaluate new technologies to keep the highway safety data and traffic records systems up to date.

I, Michael Chacon, as TRCC Coordinator, hereby certify that this charter legally mandates the TRCC with specified functions as contained within

Signed

Michael Chacon, P.E.
Michael Chacon, P.E.,
Texas Department of Transportation
Traffic Operations Division Director
TRCC Coordinator and Chair

6/17/18
Date

2.0 Assessment and Benchmarking

• 2.1 Status of the 2013 Traffic Record Assessment Recommendations

Texas was undergoing a STRAP review as of Spring 2018. Updates from that review were not available in time to be included in this report and will be reflected in the 2019 TSIS Strategic Plan. Prior to the 2018 STRAP review, Texas' most recent assessment or update of its highway safety data and traffic records system was completed on March 25, 2013. All updates contained within this TSIS Strategic Plan been approved by the Traffic Records Coordinating Committee as of May 15, 2018.

Table 2.1 Status of Traffic Records Assessment Recommendations

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
1-A	Crash Information			
1-A.2	Complete the data entry of backlogged reports by February 2008 as planned.	TxDOT	Near-term	Complete
1-A.7	Develop a process to add the CRB-3C (commercial motor vehicle (CMV) Report) information to the CRIS database.	TxDOT	Near-term	Complete
1-A.8	Maintain the liaison role that DPS has with the over 2,000 local law enforcement agencies as the CRIS responsibility is transitioned to TxDOT.	DPS/TxDOT	Near-term	Complete
1-A.9	Consider integrating CMV processing into the routine crash processing effort.	TxDOT	Near-term	Complete

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
1-A.1	Develop a formal plan to support electronic reporting of crash data and assure that the plan will allow an interface with local RMSs.	TxDOT	Mid-term	Complete
1-A.3	Establish a new standard data entry process upon completion of the backlog elimination efforts. The new process should include electronically transmitted data, as well as paper reporting.	TxDOT/DPS	Mid-term	Complete

1-A.6	Pursue MMUCC compliance of the crash report form and the CRIS database.	TxDOT	Mid-term	On-going. NHTSA Go-Team MMUCC Assessment complete as of April 2016, Suspected Serious Injury (A) will be updated in accordance with FHWA directive by April 2019.
1-A.4	Include in the data entry process the ability to integrate with other databases, e.g., the driver and vehicle systems to auto-populate CRIS with driver vehicle information.	DPS/TxDOT	Research completed/Long-term	Complete
1-A.5	Develop a plan for improved accessibility to crash information where appropriate, i.e., web access for reporting and query capabilities.	TxDOT	Mid-term	Query was launched 12/2016 allowing the public to search for publicly available crash data. We provide public extract file for anyone wanting publicly available data and standard extract file for governmental agencies wanting crash data.
1-A.11	Develop a marketing plan to inform Texas safety partners about the availability of timely and quality crash data.	TxDOT	Long-term	Ongoing

**Table 2.1 Status of Traffic Records Assessment Recommendations
(continued)**

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
1-B	Roadway Information			
1-B.1	Include local engineering and safety professionals in strategic planning for traffic records systems.	TRCC	Near-term	No progress to report
1-B.2	Include representation on the Traffic Records Coordinating Committee of local engineering and safety professionals.	TRCC	Near-term	Ongoing
1-C	Vehicle Information			
1-C.1	Participate actively in the new TRCC to assure that all opportunities to identify and incorporate into the Registration and Title System (RTS) Refactored system definition those features that would be useful to and from other components of the traffic records system are examined and adopted. This is particularly true for using a common identifier for persons who are drivers and vehicle owners and to facilitate the desirable links with the CRIS.	TxDOT/ TxDMV	Long-term	Complete CRIS is integrated with RTS.
1-D	Driver Information			
1-D.1	Participate actively in the new TRCC to assure that all opportunities to identify and incorporate into the revised driver records system definition those features that would be useful to and useful from other components of the traffic records system are examined and adopted. This is particularly true for using a common identifier for persons who are drivers and vehicle owners and to facilitate the desirable links with the CRIS.	DPS	Long-term	Complete: CRIS is integrated with TLETS.
1-E	Citation/Adjudication Information			
1-E.1	Oversee and facilitate communication related to electronic citation systems, between the judiciary and law enforcement agencies throughout the State, through the TRCC.	TRCC	Long-term	A project to accomplish this objective was canceled during the FY 2018 grant year. The TRCC voted unanimously to cancel the project because there was no host agency or funding identified to address ongoing system maintenance upon completion.

Table 2.1 Status of Traffic Records Assessment Recommendations (continued)

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
1-E.2	Design and develop a distribution system for a statewide uniform citation which can be sequentially numbered and tracked as the basis for a citation tracking system for the State, or minimally develop a "proof of concept" with DPS.	OCA	Long-term	No activity
1-E.3	Investigate the potential for a DWI tracking system using information from TCIC (Texas Crime Information Center) and the Administrative License Revocation paperwork that is sent to Driver License Division (DLD), with matches to the convictions sent from the Courts.	TRCC	Near-term	TRCC is considering adding the LEADRS database to the TRCC inventory to meet this need.
1-F	Injury Surveillance System Information			
1-F.1	Continue to utilize the GETAC recommendation of acquiring one year of a full-time IT specialist to bring EMS/Trauma registry software and computers up-to-date. This will prevent intermittent crashes and downtime that may cause providers and hospitals to lose confidence in the system.	DSHS	Near-term	Ongoing – DSHS continues to utilize a full-time IT specialist to assist with troubleshooting data processing errors in the new system (MAVEN) and issues with customer access to the system.
1-F.6	Continue the many uses of the EMS/Trauma Registry, including injury prevention programs and trauma designation processes, and publicize these through involvement with the TRCC and through injury prevention and EMS conferences.	DSHS	Near-term	Ongoing DSHS registry staff holds stakeholder webinars presenting EMS and Hospital Summary Reports and made presentations at Texas Trauma Coordinator's Forum; and GETAC's Injury Prevention Committee, EMS Committee, and Trauma Systems Committee.

1-F.3	Promote the value of the data in the ISS components to traffic safety partners and stakeholders.	DSHS	Mid-term	<p>DSHS has presented linked data at the Council of State and Territorial Epidemiologist Conference in 2017.</p> <p>DSHS updates stakeholders through quarterly webinars in which progress on linking EMS and hospital data to CRIS is discussed.</p> <p>DSHS also provides EMS and Hospital statistics on motor vehicle related causes of injury to stakeholders and legislators as requested.</p>
1-F.4	Assure that all managers of the Texas ISS components participate fully in the TRCC.	DSHS	Long-term	<p>Ongoing</p> <p>DSHS Program and Project managers and Section Director are briefed about the TRCC activities and DSHS' involvement.</p>

Table 2.1 Status of Traffic Records Assessment Recommendations (continued)

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
2-A	Crash Information Quality			
2-A.3	Establish an ongoing law enforcement training program specifically dedicated to improving crash data timeliness, completeness, accuracy, and consistency.	TxDOT	Near-term	On-going: CRASH users are trained when first connecting with the system and can receive free refresher training on demand. TxDOT and TMPA are also planning a Data Quality For Law Enforcement course to be offered for TCOLE through the LEL program in FY 2019.
2-A.1	Establish a formalized Quality Control program for the measurement of timeliness, completeness, consistency, and accuracy of crash data.	TxDOT	Mid-term	Ongoing: TxDOT has a Quality Assurance team who review crash accuracy, an Operations team that reviews timeliness and addresses any production related programs and a Data Team who monitors and reports crash data. Correction efforts have been historically performed as needed.

Table 2.1 Status of Traffic Records Assessment Recommendations (continued)

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
2-A.2	Use the results of the Quality Control program to develop baseline quality and performance measures for strategic planning purposes.	TxDOT	Mid-term	Ongoing Crash Data metrics are used at the Federal, State and internally to measure performance.
2-A.4	Promote broad acceptance of electronic data capture and reporting (to CRIS) by all law enforcement agencies in the State.	TxDOT	Long-term	Complete
2-A.5	Develop appropriate Internet accessibility to crash and traffic records systems.	TxDOT	Long-Term	Complete
2-B	Roadway Information Quality			
2-B.1	Involve local road and safety engineers in planning for data needs.	TxDOT/ TRCC	Long-term	Ongoing Through working group meetings.
2-B.2	Give serious consideration to provide local agencies access to road features and crash data on their roads for highway safety programming functions.	TxDOT	Long-term	Complete.

Table 2.1 Status of Traffic Records Assessment Recommendations (continued)

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
2-C	Vehicle Information Quality			
	None.			
2-D	Driver Information Quality			
	None.			
2-E	Enforcement/Adjudication Information Quality			
2-E.1	Develop an avenue for regular feedback from the courts to police agencies related to timely filing of citations and any common errors that might occur.	OCA	Long-term	OCA was working on the development of a statewide citation system that would have provided the basis for this, but that project was cancelled on 3/27/18.
2-E.2	Provide training for officers or a regularly scheduled newsletter that addresses issues with charging documents and charging language. This effort will promote both correct and uniform charging language, which will save time for officers, citizens, and court personnel.	TRCC	Long-term	Integrating LEADRS into the TRCC could provide a solution to this.
2-E.3	Provide, pursuant to allowances by state statutes, court personnel with electronic access to driver history information.	TRCC	Long-term	Integrating LEADRS into the TRCC could provide a solution to this.
2-F	Injury Surveillance Systems Information Quality			
2-F.1	Seek legislative funding to support the ongoing operation and needs of the EMS/Trauma Registry data collection system.	DSHS	Long-term	Ongoing

Table 2.1 Status of Traffic Records Assessment Recommendations (continued)

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
2-F.2	Continue to work with the GETAC Injury Prevention Committee to raise awareness of the needs of the EMS/Registry and identify a legislator to champion the cause of injury prevention.	DSHS	Long-term	Ongoing Identification of a legislator to champion the cause of injury prevention is ongoing.
2-F.3	Work with EMS providers and hospitals submitting data to the EMS/Trauma Registry to determine the data elements to submit to the new Trauma Registry.	DSHS	Long-Term	Ongoing. The Injury Epidemiology & Surveillance Branch's EMS & Trauma Registries will be moving to the National EMS Information System (NEMSIS V3.3.4) and National Trauma Data Bank (NTDB 2017) data standards. These are the national standards. DSHS continues to work with stakeholders on the inclusion of Texas specific data elements that are not already collected following national standards

2-F.4	Use the hospital discharge dataset to calculate the number of major trauma cases in Texas in order to estimate the extent of underreporting to the EMS/Registry.	DSHS	Near-Term	Ongoing Programmatic procedures for data sharing within the agency have been identified. An Internal Review Board (IRB) application for hospital discharge data has been submitted.
2-F.8	Continue to promote the usefulness of the EMS/Registry data by working with injury prevention planners, producing data reports, and presenting at injury prevention conferences.	DSHS	Long-term	Ongoing Injury Epidemiology & Surveillance Branch staff promotes the usefulness of the registry data by presenting data and statistics to various GETAC committees in addition to other external forums such as the Department of Transportation Regional Partners Meetings and Texas Public Health Association. Future venues for data presentations include Texas EMS Conference and The National Association of State EMS Officials' (NASEMSO), Council of State and Territorial Epidemiologist.

2-F.11	Assure that all managers of the key components of a statewide Injury Surveillance System are aware of and participate fully in the TRCC.	DSHS	Long-term	Ongoing DSHS Injury and Project managers and Section Director are briefed about the TRCC activities and DSHS involvement.
2-F.5	Undertake a linkage project to match EMS runs to major trauma cases in the Registry for the dual benefit of improving EMS information on trauma cases and providing EMS agencies with outcome information.	DSHS	Long-Term	Ongoing. The Injury Epidemiology & Surveillance Branch has successfully linked EMS and hospital records with Crash data for 2010-2015.

Table 2.1 Status of Traffic Records Assessment Recommendations (continued)

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
2-F.9	Link the crash and EMS/Trauma Registry data, once crash data become available, so that the burden of motor vehicle crashes in Texas can be better understood.	DSHS and TxDOT	Near-Term	In progress. TxDOT provides a data extract file to DSHS to use in their EMS & Trauma Registries system to link crash data with EMS and Hospital records. The Injury Epidemiology & Surveillance Branch has successfully linked EMS and hospital records with Crash data for 2010-2014.
2-F.10	Collaborate with all data-sharing partners in the developing protocols, memoranda of understanding, and data sharing agreements and methodologies that will enable the injury prevention and traffic safety community to conduct analytical and research activities as authorized users. This should be done under the guidance of the TRCC.	DSHS	Mid-term	Complete.

2-F.6	Determine the feasibility of removing restrictions regarding linkage of the hospital discharge database to other systems in the Injury Surveillance System.	DSHS	In progress	<p>DSHS is currently working on the programmatic procedures for data sharing within the agency. SB156 amends the Texas Health and Safety Code, sec. 108.013 to authorize the Department of State Health Services (DSHS) to share data records with patient identifiers collected from hospital discharge reports (not included in the public Use data) with other programs in the agency, allowing for linkage between public health databases. An Internal Review Board (IRB) application for hospital discharge data has been submitted.</p> <p>Effective date: 4/30/2018</p>

Table 2.1 Status of Traffic Records Assessment Recommendations (continued)

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
3-A	Program Management and Evaluation			
	None			
3-B	Research and Program Development			
3-B.1	Encourage and provide resources for the development of a citation tracking system, based on a review by the TRCC of the most viable place to develop and house such a system.	OCA	Long-term	OCA had selected a vendor to develop a statewide citation system, however the project was canceled during the FY 2018 grant year. The TRCC voted unanimously to cancel the project because there was no host agency or funding identified to address ongoing system maintenance upon completion.
3-C	Policy Development			
3-C.1	Address in the Strategic Plan where the responsibility for highway safety policy development should reside.	TxDOT	Short-term	Complete.
3-D	Private Sector and Public Requests			
3-D.1	Continue to produce and update the Motor Vehicle Crash report when more current data become available.	TxDOT	Near-term	Complete
3-D.3	Seek opportunities to provide crash data to the injury prevention and surveillance community once the new crash data become available.	TxDOT	Long-term	Ongoing
3-D.2	Begin strategizing for methods of dealing with public and private sector data requests in an easy and timely fashion; this could include web access to a compiled database where users can define and manipulate their own queries.	TxDOT	Mid-term	Complete.

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
4-A	Coordination			
4-A.1	Add local law enforcement and local traffic engineers to the TRCC membership, and other appropriate stakeholders and transportation safety advocates.	TxDOT/ TRCC	Near-term	No progress
4-A.2	Provide an opportunity for members of the TRCC to present information regarding their individual data collection, use, or ownership.	TRCC	Near-term	In progress
4-A.3	Form a TRCC subcommittee to develop an inventory of data elements and a data dictionary for all components of the diverse traffic records system.	TxDOT	Long-term	Not started, anticipated completion during FY 2019 grant year
4-A.4	Continue, through the TRCC, to plan for electronic data collection and transmission by law enforcement and courts, using electronic crash and citation systems.	TxDOT/DPS /OCA	Long-term	In progress. Each agency working toward data consolidation, but no data housing repository has been identified. OCA was developing a statewide citation system, but that project was cancelled on 3/27/18, due to lack of available funding to provide ongoing support of the system.
4-A.5	Provide adequate administrative support to the TRCC chair.	TxDOT	Near-term	Ongoing
4-B	Strategic Planning			
4-B.1	Task the TRCC with the responsibility to follow up on the NHTSA review of the 2007 Section 408 grant submission and consider the suggestions cited above.	TxDOT	Short-term	The State did not receive any questions from NHTSA; State is considering and acting on recommendations from the TRA.
4-B.2	Use the recommendations in this Assessment and begin the process for a Traffic Records Strategic Plan and any future Section 408 grant submissions.	TxDOT	Near-term	Completed

4-B.6	Develop benchmark and performance measures in future Plan updates collaboratively with the project manager, other traffic records partners that may be affected by the project results, and the Traffic Records Coordinator to assure consensus is reached on the appropriate measures to be monitored for progress.	TRCC with consultant support	Complete	Complete. Consultant is on board for FY 2019.
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Table 2.1 Status of Traffic Records Assessment Recommendations (continued)

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
4-B.3	Assign the TRCC (restructured as recommended in Section 4-A of this assessment) with the responsibility for the development and implementation of the Traffic Records Strategic Plan.	TRCC	Near-term	Complete.
4-B.4	Establish project management procedures for each project proposed in the Plan.	TxDOT with TRCC (and project leaders)	Near-term	Complete. TxDOT manages projects funded with Section 405c funds through the eGrants system.
4-B.5	Establish a progress reporting and monitoring system to track all projects listed in the Plan regardless of funding sources.	TxDOT/ Project Managers	Near-term	Complete. All 405c Projects are managed in eGrants.
4-C	Training and Staff Capabilities			
4-C.1	Determine the training needs for users to better understand the value and application of safety data.	Each core system owner	Long-term	Ongoing
4-C.2	Develop a clearinghouse to provide information about data service and resources that can assist in analyzing safety data.	N/A	Not at this time	No change in progress.

Table 2.1 Status of Traffic Records Assessment Recommendations (continued)

TRA Reference Number	Management and System Issues/Recommendations	Responsible Agency	Timeframe for Implementation	Status of Activity
4-C.3	Develop an ongoing training program targeting law enforcement to assist with proper completion of crash reports, importance of the data they provide, and the ability to advance electronic crash data collection.	TxDOT	Long-term	Completed in 2014.
4-C.4	Consider including safety stakeholders in training courses offered through the judicial associations to better understand the processing of traffic-related offenses and their impact on traffic safety programs.	N/A	Long-term	Ongoing. LEADRS team could be instrumental in accomplishing this objective.

2.2 Core System Status

This section provides an update on the status of core systems. More extensive documentation regarding the progress made on individual systems can be found in the minutes of the Texas TRCC meetings.

Crash Record Information System (CRIS)

The Crash Record Information System is a web based, online system that is designed to capture, process and analyze crash data for the State of Texas. Crash Reporting and Analysis for Safer Highways (CRASH) is one of the many components of the Crash Records Information System (CRIS) and was deployed October 2011, and enables Law Enforcement Officers to submit a crash report directly into the state system. TxDOT also offers Law Enforcement Agencies the option to submit electronic records using its internal Records Management Systems vendors. As of April 2018, 95% of crash reports are submitted electronically, with only 5% still being submitted via paper records. The Crash Report Online Purchase System (CROPS) is another component of CRIS that enables the purchase of Texas crash reports using a credit card and is open and available to the public 24 hours, 7 days a week. CRIS Query, is an externally facing application, open to the public, that allows users to pull publically available crash data and summarize, export and map Texas crashes statewide and for specific areas. The CRIS program also provides a Help Desk to assist with all CRIS related questions. The Help Desk is available to law enforcement officers and the public 12-hour, 7-day a week, 365-days a year.

Injury Surveillance Systems

The Department of State Health Services (DSHS) houses the official state EMS & Trauma Registries (MAVEN) which was implemented in September 2012. Implementation of the new system included conducting system demonstrations in Austin, Dallas, and Houston as well as providing over 80 training webinars to EMS and hospital staff responsible for reporting to the EMS & Trauma Registries. DSHS Registry Program has hired four contractors - an IT Specialist, Test Lead, Data Analyst and a Project Manager. The responsibility of the IT Specialist includes maintaining the current registry, fixing minor defects, and making minor improvements. During the two years since there has been an IT Specialist on board, the Registry has been steadily working. The Test Lead and Data Analyst ensure new functionality is tested and meets project deliverable specifications. The EMS & Trauma Registries is a commercial off-the-shelf product built by Consilience that allows reporting entities to submit data to the state via file upload or web data entry. The EMS & Trauma Registries is transitioning to the National EMS Information System (NEMIS) V3.3.4 and National Trauma Data Bank 2017 data standards.

Roadway System

The Transportation Planning and Programming (TPP) Division of TxDOT is the owner of the roadway inventory file. In the fall of 2015, a completely new Roadway Inventory database and maintenance application went into production. This new system, the Geospatial Roadway Inventory Database (GRID), transitioned the maintenance of the roadway inventory data from a variety of disparate systems to a single GIS-based system. Around that same time, a new Straight Line Diagram tool was developed to enhance access to the roadway inventory data.

Since their original implementation both systems have required additional enhancements to completely satisfy their design requirements. As of the writing of this document, GRID is expected to be able to satisfy our roadway inventory reporting requirements for calendar year 2017 data.

During 2017 a major focus was placed upon recovering from the large backlog of edits that have accumulated over the past few years. Specifically, a statewide update for all county roads was made, in which approximately 500 miles of County Roads were added to the inventory. In addition, a large number of on-system extensions and realignments were also added to the system. TPP has also continued its efforts, in cooperation with each of the 25 districts, to update specific attributes for all on-system roadways, including maintenance section, control section, surface type, median location, number of lanes, and one-way/two-way street operation for frontage roads.

As required by 23 CFR Part 924.11, this update to the Traffic Safety Information System Strategic Plan includes a plan to ensure that Model Inventory of Roadway Elements (MIRE) fundamental data elements are included in the Roadway Inventory component of a state's Highway Safety Information system. This plan is included in Section 6.

Driver Licensing System

The Driver License System (DLS) managed by the - Texas DPS contains over 18 million active records as of April 2017. The Texas DPS Driver License Division issues driver licenses and administers programs for enforcement and compliance of driver safety.

Vehicle Registration and Title System (RTS)

The TxDMV administers the refactored RTS database. The refactored RTS is an improved version of the legacy RTS. The objective was to improve the underlying technical implementation with modern, more agile and sustainable technology, while preserving the existing application functionality. The system allows for easier upgrades and enhancements to the application and a more efficient way to maintain and operate the code, while ensuring data integrity and security.

Citation/Adjudication System

The eCitation system project was cancelled by the TRCC on 3/27/18. OCA had been managing the Statewide eCitation System project, which would have allowed local courts and law enforcement agencies to submit citation data through a standard API (Application Programming Interface) to a statewide database. The database was to be made available to participating local agencies to perform data queries, and DSHS, TxDPS, TxDOT and OCA would have been able to extract data from the database.

OCA published a Request for Offer in Summer 2017 for the development and implementation of the Statewide eCitation System. After extended negotiations with the vendor, a contract was signed in February 2018. At the same time, OCA was pursuing a source for ongoing funding for the project to address support and maintenance costs for the implemented system. In March 2018, it was determined that there was no available funding source for the support services. As a result, the TRCC made the unanimous decision to cancel the grant rather than spend funds to develop a system that couldn't be supported once it was implemented.

Meanwhile, Texas DPS operates the state's Citation Database through its Highway Safety Operations Center (HSOC). The HSOC has expanded its capabilities to include creating heat-based crash maps and analysis to support the state's Selective Traffic Enforcement Program (STEP). This development has allowed STEP enforcement in Texas to become data-driven beginning in FY 2019.

Finally, Texas is considering the addition of the LEADRS (DWI) database as a TRCC-sponsored database in FY 2019 which would give Texas insight into DWI enforcement and adjudication.

Traffic Records Strategic Action Plan

• 3.1 Status of the Texas TSIS Strategic Action Plan

Table 3.1 provides an update on the specific actions or projects that were recommended to advance the accessibility, accuracy, completeness, integration, timeliness, and uniformity of traffic records in Texas and to strengthen the TRCC program. Table 3.2 provides the status of recent traffic records projects.

Table 3.1 Action Plan

Objective	Activity/Description	Status Update
1. Improve the Leadership and Coordination of the TRCC	<p>1.1 Formalize and Focus TRCC Meetings <i>Purpose:</i> To develop standing agenda items to be discussed every meeting. <i>Description:</i> System development updates by agencies. Status of other projects defined in this Action Plan, including contractor progress if they are used. Status of grant applications and requests. Presentation of recent data analyses and data use by members. <i>Measurement of Progress:</i> Regular meetings of the TRCC.</p>	<p><i>Measurement of Progress:</i> TRCC meetings were held. The dates for the TRCC meetings were: October 24, 2017 January 23, 2018 March 27, 2018 May 15, 2018</p>
	<p>1.2 TRCC Working Groups <i>Purpose:</i> To develop smaller working groups for vetting specific issues. <i>Description:</i> Form at least three separate committees which will be subgroups below the TRCC, but not part of the TRCC: Citation and Adjudication Information Outreach; Web-Based Data Entry; and Data User Needs (outreach to MPOs, etc.). <i>Measurement of Progress:</i> Number of meetings and annual reports to the TRCC by subgroups.</p>	<p><i>Measurement of Progress:</i> No recent meetings of subgroups. The decision to form those groups has been put on hold until after the current STRAP review is complete in May 2018.</p>

Table 3.1 Action Plan (continued)

Objective	Activity/Description	Status Update
<p>1. Improve the Leadership and Coordination of the TRCC (continued)</p>	<p>1.3 TRCC Stakeholder Outreach <i>Purpose:</i> To collect and share information regarding core system development by participating in other committee and meetings. <i>Description:</i> A representative of the TRCC or TxDOT will attend and report back to the TRCC on other information system projects and initiatives, such as: GETAC meetings; and OCA and JCIT meetings <i>Measurement of Progress:</i> Number of meetings attended by TRCC representative.</p>	<p><i>Measurement of Progress:</i> Four GETAC meetings (including several different committee meetings), 4 Trauma Coordinator meetings, and one EMS Conference, were attended by TRCC representatives.</p>
	<p>1.4 Apply for first and successive year grants under Section 405c of MAP-21 (State Traffic Safety Information System Improvements).</p>	<p>The Texas TRCC has been funded again for FY 2019.</p>
	<p>1.5 Retain consultant support to TRCC <i>Purpose:</i> To provide consultant support to TxDOT and TRCC to further the leadership and coordination of the newly reconvened Texas TRCC; gain lessons learned from other states. <i>Description:</i> Retain a consultant to support TxDOT and the TRCC to: Support the momentum achieved by the TRCC in the past fiscal year; Conduct outreach to potential working group members and stakeholders; Conduct annual update to the strategic plan; Assist with pursuing commission approval of additional TRCC membership; and Assist with preparation of future 408 grant applications. <i>Measurement of Progress:</i> Number of meetings prepared, facilitated, and documented; completed grant applications; additional as tasks are defined by TxDOT.</p>	<p>Consultant will be on board in FY 2019 to provide technical advice and perspective from TRCC activities in other states.</p> <p>TxDOT staff supports the TRCC by :</p> <ul style="list-style-type: none"> Facilitating meetings Conducting annual update to the strategic plan; Preparing 405c grant applications and interim progress reports. <p><i>Measurement of Progress:</i> three TRCC meetings were facilitated in FY 2018; an update to the Strategic Plan was prepared; and preparation of the Section 405c grant application.</p>

<p>Improve the Individual Core Data Systems</p>	<p>2.1 Crash Record Information System (CRIS) Enhancements</p> <p><i>Purpose:</i> To expand the functionality of CRIS and improve accessibility, accuracy, completeness, timeliness, and consistency of the system.</p> <p><i>Description (Tasks):</i></p> <ul style="list-style-type: none"> A. Web Data Entry Public Internet; B. Web Services for CRIS Data Requests; C. Regular XML; D. Texas On-line Component; E. Data Entry of the Commercial Vehicle Crash Report into CRIS; F. Extended Data Entry Modification; and G. Data Entry of Public Crash Report into CRIS. H. CRIS Help Desk I. CRIS Agency Support <p><i>Measurement of Progress:</i> Individual to each</p>	<ul style="list-style-type: none"> A. Completed: Web Data Entry Public Internet: The Crash Reporting and Analysis for Safer Highways (CRASH) application offers law enforcement officers the option of submitting crash data via their desktops computers, laptops or in-car computers via the internet. This application was developed with assistance from law enforcement officers. <i>Measurement of Progress:</i> Deployment of CRASH. 2. Completed: The component was deployed in October 2011. B. Completed: Web Services for CRIS Data Requests: Aggregate crash data is available to stakeholders and the general public via the TxDOT website. The CRIS Query system was deployed in August of 2016. C. Completed: Regular XML <i>Measurement of Progress:</i> Crash reports are sent and received in XLM format. D. Completed: Texas On Line Component <i>Measurement of Progress:</i> Crash reports are available online for purchase through CROPS. E. Completed: Data Entry of Commercial Vehicle Crash Report into CRIS. <i>Measurement of Progress:</i> Complete. CMV Data is currently being entered into CRIS. F. Completed: Extended Data Entry Modification <i>Measurement of Progress:</i> Complete. Currently all data from the Texas crash report (CR-3) is being captured in CRIS. G. In Progress: Data Entry of Public Crash Report into CRIS. <i>Measurement of Progress:</i> Complete. Driver Crash Report entered into an automated system such as CRIS. H. CRIS Help Desk <i>Measurement of Progress:</i> Completed: A call center/help desk is available to support law enforcement officers using CRASH. I. CRIS Agency Support <i>Measurement of Progress:</i> Ongoing, with technical support to assist law enforcement agencies get set up for CRASH.
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Objective	Activity/Description	Status Update
<p>2. Improve the Individual Core Data Systems (continued)</p>	<p>2.2 Texas EMS & Trauma Registries EMS and Trauma Registries Project</p> <p><i>Purpose:</i> The EMS and Trauma Registries project will perform an assessment and gap analysis to identify and implement system modifications and enhancements necessary to: attain maximum system efficiency and data quality, meet ongoing and changing stakeholder needs, and to provide reports that inform injury prevention intervention practices to address public health needs.</p> <p>This project will build upon the EMS and Trauma Registries system to improve injury prevention interventions by focusing on continuous quality improvement. This will ensure that the EMS and Trauma Registries data are accurate and complete, can be validated, remain consistent, and comply with national data standards.</p> <p><i>Description (Tasks):</i></p> <ul style="list-style-type: none"> • Implement a long-term sustainability plan based on a review of the EMS and Trauma Registries operational and system support needs. • Validate the linkages between registries' datasets to better describe the EMS to hospital continuum of care. • Assess the use of hospital discharge data to improve data quality and completeness. • Implement the National Trauma Data Bank (NTDB) FY18 and FY19 data standards. • Implement the National Emergency Medical Services Information System (NEMSIS) FY18 and FY19 data standards. • Build key reports to inform evidence-based injury prevention initiatives and improve patient outcomes. • Build injury reporting tools so stakeholders can manage data and do self-assessments on data quality. • Provide key injury data points so stakeholders can evaluate and improve the EMS and Trauma care system in Texas. • Build the capability to compare Texas NEMSIS injury data against other reporting states. • Provide a communication plan to disseminate information for public health benefit. 	<p>Progress made on this task includes the following:</p> <p>Project is currently under development.</p> <p>These tasks include:</p> <ul style="list-style-type: none"> • Started to implement the National Trauma Data Bank (NTDB) FY18 and FY19 data standards. • Started developing specifications for injury reporting tools. • Started to validate the linkages between registries' datasets to better describe the EMS to hospital continuum of care. • Implementing the capability to compare Texas NEMSIS injury data against other reporting states. • Started reviewing the EMS and Trauma Registries operational and system support needs for long-term sustainability. <p><i>Measurement of Progress:</i> Project objectives and activities are currently under development with the first phase deliverables due by September 30th, 2018.</p>

<p>3. Broaden availability and distribution of traffic safety data to all safety practitioners.</p>	<p>3.1 Continue to produce and update the Motor Vehicle Crash report when more current data become available. <i>Purpose:</i> To provide most recent years of data in standard, easy-to-understand format for planning by TxDOT and other safety stakeholders.</p> <p><i>Description (Tasks):</i></p> <ul style="list-style-type: none"> A. Complete cleansing of CRIS data; B. Conduct detailed analysis of 2008 - 2013 crash data; C. Produce updated version of Motor Vehicle Crash Report; and D. Distribute report to TRCC, public health community, advocacy groups, universities, etc. <p><i>Measurement of Progress:</i> Production of Report.</p>	<p>Progress made on this task includes the following: <i>Measurement of Progress:</i> Production of Report. Completed:</p> <ul style="list-style-type: none"> A. Complete: Data entry and reconciliation (cleansing of CRIS data) has been completed. B. Complete: TxDOT has produced annual summary reports for years 2003-2015 and posted the reports to their website. Years within retention period are updated annually and the previous year's reports are added. Crash data requests can now be made through the TxDOT.gov website. C. Complete: Extract crash data files are available to DSHS, universities, MPO's/COG's, advocacy groups, law enforcement, general public, etc. upon request. D. Complete: Annual reports are published annually and published on TxDOT's website for public to view. E. <p><i>Measurement of Progress:</i> Deployment of CRASH. Completed: The CRASH application was deployed in October 2011.</p>

Table 3.1 Action Plan (continued)

Objective	Activity/Description	Status Update
3. Broaden availability and distribution of traffic safety data to all safety practitioners.	<p>3.2 <i>Develop an ongoing training program targeting law enforcement to assist with proper completion of crash reports, importance of the data they provide, and the ability to advance electronic crash data collection.</i></p> <p><i>Purpose:</i> train law enforcement on new CRIS and additional functionalities as they come on-line (i.e., Web Data Entry).</p> <p><i>Description (Tasks):</i></p> <p>Develop training program for law enforcement to improve data quality on crash report; execute training with state and local police departments.</p> <p><i>Measurement of Progress:</i> Number of training sessions conducted by TxDOT.</p>	<p>3.2 On Going: TxDOT has a CRASH training program. An additional TCOLE-certified course will be added in FY 2019 through the LEL program.</p> <p><i>Measurement of Progress:</i> On Going</p>

4.0 Performance Measures

- **Performance Measure #1:**
- **Timeliness of Crash Reporting**
 - A. **Performance Measure Used to Track Improvements**
Crash/Timeliness 2 - Availability of reports to the public.
 - B. **Narrative Description of Calculation / Estimation Method**
C-T-2: The percentage of crash reports entered into the database within 30 days after the crash
 - A. Date: April 1, 2016 – March 31, 2017 Baseline Value for Measure: 91.34%
 - B. Date: April 1, 2017 - March 31, 2018 Current Value for Measure: 94.78%
 - C. **Title, number and strategic Plan page reference for each Traffic Records System improvement project to which this performance measure relates**
Traffic Records Assessment Reference Number 1-A.1 and 1-A.3 (Management and System Issues/Recommendations) document TxDOT's efforts to implement an electronic reporting system. Additionally, Traffic Records Assessment Reference Number 4-A.4 documents TxDOT's' efforts to capture crash data electronically.

Required Data	April 1, 2014 – March 31, 2015	April 1, 2015 – March 31, 2015	April 1, 2016 – March 31, 2017	April 1, 2017 – March 31, 2018
Number of crash reports submitted	528,181	567,601	610,586	628,634
Average number of days between date of crash and availability in warehouse	19.80	15.59	20.73	11.08
Number of crash records available for reporting within 30 days of the date of crash	463,105	525,199	557,696	595,826
Percentage of all crash reports entered into the database (available for reporting) within 30 days after the crash	87.68%	92.53%	91.34%	94.78%

- Performance Measure #2
- **COMPLETENESS of the EMS/Trauma Registry**

A. Performance Measure Used to Track Improvements

Completeness of the registry data – Percentage of patient care records with no missing critical data elements.

B. Narrative Description of Performance Measure Calculation

Previous Period (date):

The number of Hospital (Trauma Registry) records submitted was 141,546. The percentage of patient care reports with no missing *critical* data elements was 46.1%.

Current Period (date):

The number of Hospital (Trauma Registry) records submitted was 156,796. The percentage of patient care reports with no missing *critical* data elements was 60.2%.

Previous Period	Current Period
April 1, 2015 – March 31, 2016	April 1, 2016 – March 31, 2017
The percentage of Hospital (Trauma Registry) patient care reports with no missing critical data elements.	The percentage of Hospital (Trauma Registry) patient care reports with no missing critical data elements.
Discharge Date and Time: 46.1%	Discharge Date and Time: 60.2%
	Improvement Percent Change
<u>Critical Date Element</u>	
Discharge Date and Time:	30.5%

C. Title, number and strategic Plan page reference for each Traffic Records System

improvement project to which this performance measure relates

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5.0 FY2019 Proposed Projects

Grant ID	Description	Funding Request
2019-TTI-G-1YG-0094	Providing Technical Assistance to the Texas Traffic Records Coordinating Committee (TRCC)	\$94,250.60
2019-TMPA-G-1YG-0133	Law Enforcement Advanced DWI/DUI Reporting System (LEADRS) with DWI analytical data module	\$767,633.69
2019-TMPA-G-1YG-0142	LEADRS Integration with Texas Highway Patrol (DPS) and Houston PD	\$245,177.56
2019-IADLEST-G-1YG-0159	Reduce Crashes and Crime by Expanding the DDACTS Model and Technical/Analytical Support	\$419,835.27
2019-TDSHS-IS-G-1YG-0181	Assessment and gap analysis of data issues to determine EMS/Trauma Registries system enhancements.	\$1,166,391.79
2019-TDPS-G-1YG-0136	State Traffic Records System Citation Database	\$1,038,152.38
CRIS Projects	All CRIS projects	\$1,450,000.00
		Totals \$5,181,441.29

6.0 MIRE Fundamental Data Element 9/30/2026 Implementation Plan

6.1 Executive Summary

One of the major challenges facing transportation agencies, is collecting, storing and maintaining road data in a manner that is consistent, accurate and timely. This plan has been developed, so that the Texas Department of Transportation (TxDOT) can incorporate the fundamental roadway elements outlined in the Model Inventory Roadway Elements (MIRE) guideline, into the Texas state data systems. The overall goal is to capture timely accurate and complete data that can be lined with crash data and other relevant data sources, for safety analysis. Improvements in the Texas state data systems will further our goals in reducing the number of fatalities and increase the safety for the traveling public within Texas. TxDOT currently coordinates with local entities and will continue to do, in order to successfully implement this plan. TxDOT anticipates that the roadway elements currently not collected by TxDOT will take between one to nine years to enable technology and perform the collection efforts. TxDOT anticipates that this will cost the department no more than \$4,000,000.

6.2 Background

The Federal Highway Administration (FHWA) recently issued guidance related to State safety data systems under the Highway Safety Improvement Program (HSIP). The purpose of the HSIP program is to achieve a significant reduction in fatalities and serious injuries on all public roads by focusing on a data-driven, strategic approach to improving highway safety [23 U.S.C. 148 (b) (2)]. To support the intended safety analyses within a state's HSIP program, each DOT's safety data system should include a subset of "Model Inventory of Roadway Elements (MIRE)". While the full set of MIRE elements is discussed within FHWA's MIRE document,¹ only a specific subset of "Fundamental Data Elements (FDEs)" are required to be incorporated within a state DOT's safety data system and primarily reflect roadway inventory and traffic volume related data. Moreover, these data elements have been identified and are intended to represent a minimum data set that is needed to run a Highway Safety Manual safety prediction functions. Federal guidance state that states "shall have access to the FDEs on all public roads by September 30, 2026.

6.3 MIRE FDEs

Per the Model Inventory of Roadway Elements, version 1.0,² MIRE FDEs are "critical to making sound decisions about the design and operation of roadways." Accurate and detailed roadway data will enable tools to enable analysis of safety data which will enable

states to make sound decisions for design and operation on Texas roadways. MIRE FEDs specific to the following three hierarchical roadway categories, with each category requiring fewer FDE than the previous one listed:

- Paved roads, functionally classified above local,
- Paved roads, functionally classified as local, and
- Unpaved roads (regardless of functional classification)

In addition, MIRE FDEs have also been defined for ramps, interchanges, and intersections. For the purposes of this plan, ramps are considered to be a type of roadway.

6.4 Status of Required MIRE FDEs within TxDOT

The Data Management Section within the Transportation Planning and Programming division is the Office of Primary Responsibility (OPR) for the Texas Roadway Inventory data. In August of 2015, TxDOT's Roadway Inventory data was migrated into a single, spatially-based system called the Geospatial Roadway Inventory Database (GRID). This GRID system currently contains 314,000 centerline miles of certified public roadway and approximately 3,100 miles of ramps for both state and local roadways. However, due to the fact that most limited access freeways are paralleled frontage roads, TxDOT has two special categories of ramps, "simple" ramps and "grade separated connectors". There are approximately 2,170 miles of ramps and approximately 930 miles of grade-separated connectors (GSCs).

Currently, members of TPP's Data Management staff, in cooperation with TxDOT's 25 districts, are the primary maintainers of this roadway inventory data. In the fall of 2016, the Traffic Operation division has been also added to the group of data maintainers, primarily to maintain speed limit data, not currently a required MIRE FDE. TxDOT project planners can also access the roadway data in 'read-only' mode to identify and obtain locational referencing information for programming projects. Historically, the Data Management has made this data available to both internal and external entities through a number of means, including an ArcGIS online portal and year-end downloadable data.

The roadway data is also shared with other systems used in safety analysis, such as the Crash Records Information System (CRIS). CRIS updates the roadway data on an annual basis, so that crashes can be located using TxDOT's roadway data and analyzed. Crash location data is analyzed and reviewed by TxDOT staff as well as shared with locals, such as metropolitan planning organizations and city engineering groups. TxDOT provides several methods for local governments and the public to access crash data.

There are two extract files currently offered, one is specifically for the public, and excludes all personally identifiable information. The second is a standard extract, intended for governmental entities and includes all crash data. Many local agencies use this extract file to

populate ARCGIS, to enable a visualization of problematic areas involving crashes with fatalities and serious injuries. TxDOT also allows local governmental entities direct access to CRIS Microstrategy, which is TxDOT's Business Intelligence Tool used to report crash data, so that they can customize the data retrieved from the system to perform specific analysis. Within TxDOT CRIS Microstrategy is used to identify and prioritize Highway Safety Improvement Plan (HSIP) projects. The specific HSIP codes are updated within CRIS for each program call and used as part of the project score, to assess which projects provide the highest cost benefit.

TxDOT's Roadway Inventory data is continuously updated based upon a variety of different sources of information. For on-system (i.e., those roads under the control and jurisdiction of TxDOT), Data Management staff review all roadway projects that are let to construction to determine if the activities within the project would cause an update to any of the attributes in the Roadway Inventory file. Examples of types of projects that would change the inventory include new construction, widening, and bridge replacements. For off-system roadways (example city streets and county roads), TxDOT has regularly canvassed all cities and counties throughout the state on a two-year cycle.

To ensure quality control, the new GRID system contains two important features. First, all updates are performed within the context of a "job", and each job can be assigned to one user and reviewed by another. Secondly, GRID contains over 100 data validation business rules to ensure that consistent and congruous data is entered for all roadway attributes.

The table 1 below summarizes the status of all MIRE FDEs within TxDOT's Roadway Inventory system. The checkmark ✓ representing a data element currently tracked by TxDOT and the X, represents that this element is currently missing from TxDOT's data element inventory.

In a large part, TxDOT has many of the FHWA required MIRE FDEs in its Highway Performance Monitoring System (HPMS). However, any element not already required and included in HPMS does not exist within TxDOT's Roadway Inventory system. Data Management staff is responsible for maintaining 'non-field' data, such as functional classification, which is not 'collected' per se, while 'field' data, such as Surface Type, is typically 'collected' by TxDOT's district staff. In addition to actual collection by the TxDOT districts or derived data, TxDOT is also obtaining an increased amount of this field data using aerial imagery.

TABLE 1: TxDOT STATUS OF EACH MIRE FDE

MIRE FDE	Roadway Segments			Ramps	
	Paved		Unpaved	Grade Connected Separators (GSC)	Ramps
	Functionally Classified Above Local	Functionally Classified as Local			
Roadway Elements					
Segment Identifier (12)	X	X	X		
Begin Point Segment Descriptor (10)	X	X	X		
End Point Segment Descriptor (11)	X	X	X		
Functional Classification (19)	✓	✓	✓	✓	X
Type of Governmental Ownership (4)	✓	✓	✓	✓	X
Average Annual Daily Traffic (79)	✓	✓		✓	X
Number of Through Lanes (31)	✓	✓			
Rural/Urban Designation (20)	✓	✓			
Surface Type (23)	✓	X			
AADT Year (80)	✓			✓	X
Access Control (22)	✓				
Direction of Inventory (18)	✓				
Federal Aid/ Route Type (21)	✓				
Median Type (54)	✓				
One/Two-Way Operations (91)	✓				
Route Number (8)	✓				
Route/Street Name (9)	✓				
Segment Length (13)	✓				
Location Identifier for Roadway at Beginning Ramp Terminal (197)				X	X
Location Identifier for Roadway at Ending Ramp Terminal (201)				X	X
Roadway Type at Beginning Ramp Terminal (195)				X	X
Roadway Type at Ending Ramp Terminal (199)				X	X
Interchanges					
Unique Interchange Identifier (120)	X	X	X		
Interchange Type (182)	X	X	X		
Intersections					
Unique Junction Identifier (120)	X	X	X		
Intersection/Junction Geometry (126)	X	X	X		
Intersection/Junction Traffic Control (131)	X	X	X		
Unique Approach Identifier (139)	X	X	X		
Location Identifier for Road 1 Crossing Point (122)	X	X	X		
Location Identifier for Road 2 Crossing Point (123)	X	X	X		
AADT (79) [for Each Intersecting Road]	X	X	X		
AADT Year (80) [for Each Intersecting Road]	X	X	X		

* Based on actual counts

All traffic data is collected, through a variety of technologies, by TxDOT’s Transportation Planning and Programming Division, Traffic Analysis section. Depending upon the category of roadway to which a roadway segment belongs, traffic counts are taken either annually or every five years.

6.5 TxDOT’s Plan to Collect Missing MIRE FDEs

For all MIRE FDEs that are currently part of TxDOT’s Roadway Inventory system, TxDOT’s Data Management section, in partnership with the Traffic Analysis section, within its Transportation Planning and Programming (TPP) division will continue its current data ‘collection’ practices. For TxDOT owned roadways, TxDOT has maintained an inventory of its state network for nearly a century.

On a continual basis, TPP reviews all let projects and updates the Roadway Inventory based upon how each roadway construction project affects the items in the Roadway Inventory. In the early 2000s, TxDOT conducted a GPS-based roadway inventory data collection, and since that time TxDOT has canvassed each county every other year to identify new or improved county roads. With the advent of FHWA's All-road (ARNOLD) initiative, TxDOT developed its first ever spatially based inventory of all city streets, regardless of functional classification. TxDOT gathered data from cities, Councils of Governments, E-911 districts, and Metropolitan Planning Organization. However, due to the novelty of this inventory, local city street data has yet to be subject to a formal, regular update process. TxDOT envisions having its city street update program mirror its county road inventory program (with half the state being updated each year). In fact, TPP has developed an online 'crowd sourcing' application to assist with this effort. TxDOT will also explore other options such as Open Street Map to assist in its roadway inventory program.

As you will see in table 2 below, interchange and intersection related MIRE FDEs need to be defined and collected. We anticipate that we can utilize existing roadway elements to programmatically identify an intersection. Once identified, we can programmatically connect the spatial layers, which can be validated by District personnel. The model used for this approach is a recent study performed to identify signalized intersections in one district. Crash data was used to first identify intersection related crashes. From there, the geospatial data was programmatically used to connect nodes in order to identify intersections. Once located, the team validated the type of traffic control at the intersection with the assistance of District personnel. A similar approach could be utilized in collecting intersection and interchange related data; specifically first using the attributes and/or crash data that is currently available, perform analysis to identify intersections, programmatically derive intersection layers and lastly, visually verifying the data's accuracy with visual inspection.

TxDOT anticipates the development of internal data for ramps will be prioritized first (1-3 years), while the generation of the various descriptor and other 'derivable' MIRE FDEs will be prioritized second (4-6 or 7-9 years). Both of these data types will require Data Management to work closely with TxDOT's Information Management Division (IMD) to make the necessary revisions to the GRID system in a timely manner. In the case of the AADT for ramps, TxDOT Administration approval is needed for Texas to complete this effort. In summary, all of the MIRE FDEs currently not captured by TxDOT can be collected and/or programmatically derived.

The table 2 on the next page provides an overview of how TxDOT plans to handle any MIRE FDEs not in today's current inventory. Please note that the MIRE FDEs that currently do not exist, the vast majority of which are not in need of data collection but data generation. TxDOT's current plan for generating these data items are as follows:

TABLE 2: MIRE FDES COLLECTION METHODOLOGY					
MIRE FDE	Roadway Segments			Ramps	
	Paved		Unpaved	Grade Connected Separators (GSC)	Ramps
	Functionally Classified Above Local	Functionally Classified as Local			
Roadway Elements					
Segment Identifier (12)	Once concept of "segment" is fully defined, these identifiers and descriptors will either be programmatically derived or manually input.				
Begin Point Segment Descriptor (10)					
End Point Segment Descriptor (11)					
Functional Classification (19)	✓	✓	✓	✓	TxDOT will develop this data internally; the current GRID system is already designed to accept this data.
Type of Governmental Ownership (4)	✓	✓	✓	✓	TxDOT will develop this data internally; the current GRID system is already designed to accept this data.
Average Annual Daily Traffic (79)	✓	✓		✓	Due to safety reasons, TxDOT currently has a policy to not allow pneumatic tube counts on ramps. TxDOT will explore alternative technologies to count ramps. In addition, TxDOT may need to identify additional funding to conduct these counts.
Number of Through Lanes (31)	✓	✓			
Rural/Urban Designation (20)	✓	✓			
Surface Type (23)	✓	TxDOT will work with municipalities through our MPCs and district partners to categorize all local roads within an incorporated city to determine whether roads classified as local are paved or no			
AADT Year (80)	✓			✓	TxDOT anticipates that, just like all of TxDOT's other counts, ramps counts will contain a date/time stamp to determine the year of AADT.
Access Control (22)	✓				
Direction of Inventory (18)	✓				
Federal Aid/ Route Type (21)	✓				
Median Type (54)	✓				
One/Two-Way Operations (91)	✓				
Route Number (8)	✓				
Route/Street Name (9)	✓				
Segment Length (13)	✓				Once the concept of a "segment" is fully defined, this identifier will either be programmatically derived or manually input.
Location Identifier for Roadway at Beginning Ramp Terminal (197)					This location identifier will be programmatically derived.
Location Identifier for Roadway at Ending Ramp Terminal (201)					
Roadway Type at Beginning Ramp Terminal (195)					This Roadway Type will be programmatically derived.
Roadway Type at Ending Ramp Terminal (199)					
Interchanges					
Unique Interchange Identifier (120)	Once the concept of "interchange" is fully defined this identifier will either be programmatically derived or manually input.				
Interchange Type (182)					
Intersections					
Unique Junction Identifier (120)	Once the concept of "intersection" is fully defined this identifier will either be programmatically derived or manually input.				
Intersection/Junction Geometry (126)					
Intersection/Junction Traffic Control (131)	This data will either be programmatically collected or manually input.				
Unique Approach Identifier (139)					
Location Identifier for Road 1 Crossing Point (122)	This identifier will be programmatically derived.				
Location Identifier for Road 2 Crossing Point (123)					
AAADT (79) [for Each Intersecting Road]	This information will be programmatically derived using existing AADT data.				
AAADT Year (80) [for Each Intersecting Road]					

6.6 Coordination with other Agencies

Currently TxDOT coordinates with a variety of local entities including counties, cities, and Metropolitan Planning Organizations (MPOs) for its Roadway Inventory program. As mentioned earlier, counties and cities have been regularly contacted for information about new roadways. In addition, TxDOT has begun to explore the possibility of gathering traffic count data from other data sources. TxDOT has also coordinated with various federal agencies to generate its own detailed 'official' mileage of federal roads in Texas. We will continue to build upon this coordination with local and other governmental agencies.

6.7 Prioritization Criteria for MIRE FDE Data Collection

For roadways and ramps, the priority will be to round out the data for ramps, to develop the procedures by which segment/ramp descriptors and location identifiers are derived, and to continue our efforts in ensuring that the road network contained within our Roadway Inventory system is as complete and up-to-date as possible.

An important task in these efforts will be to successfully integrate an intersection/interchange inventory within our new GRID system. Currently, TxDOT's roadway network is not topologically connected.

6.8 Schedule for Data Collection

The general schedule for the completion of the important "gaps" in our system includes the following:

- Short-Term (1-3 years): Develop ramp data and edit GIS line work to ensure the roadway network is topologically correct.
- Medium-Term (4-6 years): Conduct GRID software enhancement project to incorporate intersection/interchange inventory.
- Long-Term (7-9 years): Develop algorithms to generate intersections and derive descriptors and location identifiers such that all MIRE FDEs are fully incorporated into our Roadway Inventory system.

For all of these activities, the priority will be to develop data for on-system routes first, working down the functional classification hierarchy from Interstates to locals. The rationale for this approach is that while on-system roadways constitute only a quarter of the state's roadway miles, they carry nearly three quarters of the state's vehicle miles of travel. Similarly, all intersection and interchange data development will be firsts focused on the connections between on-system roadways, followed by connections between on-system and off-system roadways, and then by off-system to off-system connections.

6.9 Estimated Cost for Data Collection

TxDOT estimates that enabling the core data systems (GRID and CRIS) with the missing MIRE FDEs to cost between \$3,000,000 and \$4,000,000 to implement. TxDOT's GRID system, the primary data element collection system, will require planning which includes establishing field definitions and functional requirement documentation. Once the fields are planned, the database will be structured to house the new data elements.

Once the database is structured and tested, collection efforts can begin. If fields need to be programmatically derived and technical specifications have been confirmed, development can begin.

Once the database is enabled, field data is collected, the system will need to be maintained and updated, as part of on-going maintenance. We anticipate this to be the largest effort and to cost between \$2,000,000 and \$2,500,000.

CRIS will also have to plan for incorporating the additional MIRE FDEs, so that safety analysis can be performed on crash data. For this effort, much like with GRID, the database must be configured to accommodate the new data fields, along with the various applications that utilize TxDOT's roadway data must be enhanced to display this information for safety analysis. Currently, CRIS updates its roadway data on an annual basis. CRIS has several applications which utilize the roadway data, such as CRIS MAP, Query and Microstrategy. Each application must be enhanced to display and/or utilize the new roadway data elements and requires unit, user acceptance and regression testing. CRIS is dependent upon GRID for its roadway data. As such, GRID and CRIS would coordinate updates to ensure that the fields added to GRID would be able to be added to CRIS. Once implemented, CRIS will also need ongoing maintenance and support for these additional fields. We anticipate the cost to update CRIS to be between \$1,000,000 to \$1,500,000.

6.10 Assumptions

Several assumptions have been made as part of this planning process and are as follows:

- Most if not all of the field data can be collected and/or programmatically derived in a parallel effort.
- State resources (subject matter experts, technical resources and executive support) and funding will be prioritized and made available for this effort.
- TxDOT District personnel will be able to assist in the manual collection efforts.
- Local governmental entities will be able and willing to assist in this process.
- GRID technical resources will be able to perform needed system enhancements.
- CRIS technical resources will be able to perform needed system enhancements.

6.11 References:

1 http://safety.fhwa.dot.gov/tools/data_tools/mirereport/mirereport.pdf

² Model Inventory of Roadway Elements, Version 1.0, Published October 2010, FHWA-SA-10-018

Addendum to 2018 TSIS Strategic Plan Texas TRCC Review of Assessment Findings and Recommendations

Texas underwent a traffic records assessment from January to May 2018. The assessment is required by the National Highway Traffic Safety Administration (NHTSA) and must be completed every five years in order for states to qualify for Section 405c funding. A technical expert team appointed by NHTSA examines the State's traffic records data systems. As part of the assessment process, the following data systems are examined:

- Crash Records
- Vehicle Records
- Driver Records
- Roadway Records
- Citation and Adjudication Records
- Injury Surveillance Records

The assessment team also examined the issues of data use and integration, strategic planning, and management of the State's Texas records Coordinating Committee (TRCC).

During the assessment, representatives from the State of Texas provided responses to 391 questions regarding the state's traffic records system. The 391 questions are derived from the "ideal" traffic records system described in NHTSA's *Traffic Records Program Assessment Advisory*. The ideal traffic records system described in the advisory is an ambitious vision created by subject matter experts from around the country that describe the contents, capabilities, and data quality of an effective traffic records system.

The responses to the 391 questions allow the technical assessment team to compare the State's traffic records system to the ideal system described by NHTSA. After reviewing Texas' responses, the assessors assigned a rating of "Meets", "Partially Meets", or "Doesn't Meet" to each response. In addition to the ratings, the assessment team also develops a list of recommendations and considerations for improving the state's traffic records system and management of the TRCC, strategic planning, and data use and integration issues. The results from the assessment allow states to identify areas for improvement and provide a measuring stick for improvement when the assessment is performed again in five years.

The results from the Texas Traffic Records Assessment were presented to the Texas TRCC on May 15th, 2018 in Austin. The presentation covered the assessment process and discussed the recommendations developed by the assessors. Following the presentation, the TRCC Coordinator and researchers from the Texas A&M Transportation Institute (TTI) worked with the TRCC members to develop responses to each recommendation. The responses are high-level and broad due to the short turnaround time between Texas receiving the assessment recommendations and the need to submit responses for the FY19 Highway Safety Plan. However, TTI has been tasked with incorporating the results from the traffic records assessment into the TRCC's Traffic Safety Information System (TSIS) Strategic Plan in FY19, which will include more detailed action plans responding to the traffic records assessment recommendations.

Below is a summary of the findings, the assessment recommendations, and the Texas TRCC's response to each recommendation.

Assessment Ratings

Overall, 62.7% of the questions asked to Texas stakeholders were rated as "Meets," which is near the national average of 64.6%. Vehicle, Driver, and Injury Surveillance scored above the national average for their respective databases. TRCC management and Strategic Planning scored well below their national average which presents an opportunity for significant improvement. Table 1 below illustrates the number of questions each section was responsible for responding to, the assessor's average rating, and the national average rating for comparison. The TRCC has funded TTI for FY19 to provide technical assistance to address many of the questions rated "Does Not Meet" in those areas.

Table 1. Traffic Records Program Assessment Ratings

NHTSA Assessment Ratings of TX's Traffic Records Systems			
	Number of Questions	TX Rating	56-State* Average Rating
Overall	391	62.7%	64.6%
Crash	44	64.6%	72.2%
Vehicle	39	72.4%	64.5%
Driver	45	67.5%	65.7%
Roadway	38	61.7%	61.9%
Citation/Adjudication	54	50.3%	61.2%
Injury Surveillance	123	64.5%	59.9%
TRCC Management	19	64.77%	82.2%
Strategic Planning	16	55.6%	78.0%
Data Use and Integration	13	48.5%	60.0%

*All 50 US states, District of Columbia, and US Territories

Strategic Planning Recommendation

Unlike many state TRCCs, Texas does not have a full time TRCC coordinator nor does Texas have separate TRCC Executive and Technical committees. Additionally, the Texas TRCC TSIS does not follow NHTSA's *Traffic Records Program Assessment Advisory* format or questions.

Recommendation: Strengthen the TRCC's abilities for strategic planning to reflect best practices identified in the Traffic Records Program Assessment Advisory.

TRCC Response: The TRCC has funded TTI to provide technical assistance to the TRCC in FY19. One of the first tasks TTI will perform is an overhaul of the TSIS to bring it in line with the NHTSA assessment. The updated TSIS will provide clear guidance to the goals and objectives of the TRCC.

Crash Data Recommendation

Crash data are overseen by the Texas Department of Transportation (TxDOT) and is collected and stored in the Crash Records Information System (CRIS). 93% of crash reports are submitted electronically to TxDOT – 64% through the Crash Reporting and Analysis for Safer Highways (CRASH) web interface and 29% through submission services.

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

TRCC Response: While there is a long term desire to improve the interfaces between traffic records databases, no linkage efforts are currently planned due to prioritization of other needs. The TRCC funded a Traffic Records Linkage Feasibility Study in FY17 that identified many potential interface linkages. For example, linking crash data with citation and roadway data were identified as two potential linkages that could reduce time entering information, such as the citation information on the CR-3 crash report, and improve data quality such as linking crash data with the corresponding road segment in the roadway data.

Recommendation: Improve the data quality control program for the Crash data system to reflect best practices identified in the Traffic Records program advisory.

TRCC Response: The TRCC has funded TTI to provide technical assistance to the TRCC in FY19. One of TTI's tasks will be to assist each TRCC member agency to establish timeliness, accuracy, completeness, uniformity, integration, numeric, and accessibility performance measures for their respective databases.

Vehicle Data Recommendation

The Texas Department of Motor Vehicles (TxDMV) has custodial responsibility for the State's vehicle data system that maintains all vehicle title and registration records in the Registration and Title System (RTS). Critical information related to ownership and identification of the State's vehicles (e.g., vehicle make, model, year of manufacture, body type, and title brands) is stored in RTS.

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

TRCC Response: While there is a long term desire to improve the interfaces between traffic records databases, no linkage efforts are currently planned due to prioritization of other needs. The TRCC funded a Traffic Records Linkage Feasibility Study in FY17 that identified many potential interface linkages. For example, linking vehicle data with driver was identified as a potentially beneficial linkages. Many states link registered owner information to the driver database. This allows the registered owner information to be quickly auto-populated and improves accuracy.

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

TRCC Response: The TRCC has funded TTI to provide technical assistance to the TRCC in FY19. One of TTI's tasks will be to assist each TRCC member agency to establish timeliness, accuracy, completeness, uniformity, integration, numeric, and accessibility performance measures for their respective databases.

Driver Data Recommendation

The Texas Department of Public Safety (TxDPS) - Driver License Division has custodial responsibility of the Texas driver data system. The driver system maintains all critical information including driver's personal information, license type, endorsements, status, conviction history, crash involvement and driver training.

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

TRCC Response: While there is a long term desire to improve the interfaces between traffic records databases, no linkage efforts are currently planned due to prioritization of other needs. The TRCC funded a Traffic Records Linkage Feasibility Study in FY17 that identified many potential interface linkages. For example, linking vehicle data with driver was identified as a potentially beneficial linkage. Many states link driver license information to the vehicle database which allows law enforcement to more quickly identify drivers with warrants or suspended licenses when running a vehicle's license plate number.

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

TRCC Response: The TRCC has funded TTI to provide technical assistance to the TRCC in FY19. One of TTI's tasks will be to assist each TRCC member agency to establish timeliness, accuracy, completeness, uniformity, integration, numeric, and accessibility performance measures for their respective databases.

Roadway Data Recommendation

The Texas Department of Transportation (TxDOT) is the agency responsible for collecting and maintaining the roadway information system for the State. According to Highway Statistics 2016 (Federal Highway Administration), TxDOT maintains 80,484 miles of state-owned highways and ramps. This mileage represents roughly 26% of the 313,656 miles of road in Texas. Roadway and traffic data elements are maintained within a statewide linear referencing system (LRS). Through this LRS, TxDOT maintains data on all 313,656 miles of public road and enables linkages between road, traffic data, bridge, and pavement condition databases to develop their GRID roadway inventory system.

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

TRCC Response: During the remainder of 2018, TxDOT plans on creating a comprehensive data dictionary with an indication of which elements in TxDOT's inventory are Model Inventory of Roadway Elements (MIRE) elements.

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

TRCC Response: The TRCC has funded TTI to provide technical assistance to the TRCC in FY19. One of TTI's tasks will be to assist each TRCC member agency to establish timeliness, accuracy, completeness, uniformity, integration, numeric, and accessibility performance measures for their respective databases.

Citation and Adjudication Data Recommendation

The State of Texas faces some challenges in management of citation and adjudication processes due to the size and number of agencies involved, as well as the lack of a unified State court system. Numerous local courts that process traffic violations are autonomous and a number of different case management systems are in use. Additionally, hundreds of law enforcement agencies contribute the data that is collected on citations. Addressing data integrity in a State with so many autonomous inputs is difficult at best. The Office of Court Administration, with the assistance of TRCC funding, was pursuing a statewide citation repository. However, these plans were halted due to concerns about long-term funding.

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

TRCC Response: Many of the applicable guidelines discussed in the Traffic Records Program Assessment Advisory related to a statewide citation system which Texas does not have.

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

TRCC Response: Texas does not have a unified court system. Consequently citation data is collected by each individual law enforcement agency and court system using multiple different vendors and systems. As a result, there is no statewide data dictionary or data dictionary standards.

Recommendation: Improve the interfaces with the Citation and Adjudication data system to reflect best practices identified in the Traffic Records Assessment.

TRCC Response: While there is a long term desire to improve the interfaces between traffic records databases, no linkage efforts are currently planned due to prioritization of other needs. The TRCC funded a Traffic Records Linkage Feasibility Study in FY17 that identified many potential interface linkages. For example, improving the linking of citation and driver data could improve the accuracy of the driver history record.

Recommendation: Improve the data quality control program for the Citation and Adjudication data system to reflect best practices identified in the Traffic Records program advisory.

TRCC Response: The TRCC has funded TTI to provide technical assistance to the TRCC in FY19. One of TTI's tasks will be to assist each TRCC member agency to establish timeliness, accuracy, completeness, uniformity, integration, numeric, and accessibility performance measures for their respective databases.

Injury Surveillance Data Recommendation

The Texas Department of State Health Services (DSHS) oversees the Texas injury surveillance data system. There are privacy barriers related to examining and linking health records with crash and other traffic safety data. However, when possible, Texas has been working to make injury surveillance data available for analysis and has a current project to link crash and injury surveillance data.

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

TRCC Response: While there is a long term desire to improve the interfaces between traffic records databases, no linkage efforts are currently planned due to prioritization of other needs. The TRCC funded a Traffic Records Linkage Feasibility Study in FY17 that identified many potential interface linkages. For example, linking vehicle data with driver was identified as a potentially beneficial linkages. Texas currently links crash and injury surveillance data for research purposes. An interface between the two would improve the accuracy of the links, but will be difficult due to privacy concerns.

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

TRCC Response: The TRCC has funded TTI to provide technical assistance to the TRCC in FY19. One of TTI's tasks will be to assist each TRCC member agency to establish timeliness, accuracy, completeness, uniformity, integration, numeric, and accessibility performance measures for their respective databases.

Data Use and Integration Recommendation

The ability to establish direct record linkage from one dataset to the associated record in another independent dataset is a challenge that all states find when attempting to establish traffic records data systems integration initiatives. Texas has demonstrated a culture of cooperation in their ability to grant access to specific agency data to other agencies and users. Sharing data among agencies is an essential prerequisite in eventual integration across multiple data custodians.

Recommendation: Improve the traffic records systems capacity to integrate data to reflect best practices identified in the Traffic Records Program Assessment Advisory.

TRCC Response: The TRCC has funded TTI to provide technical assistance to the TRCC in FY19. One of the first tasks TTI will perform is an overhaul of the TSIS to bring it in line with the NHTSA assessment. Part of the TSIS will be dedicated to long term goals, such as increasing data use and integration among the TRCC member agencies.