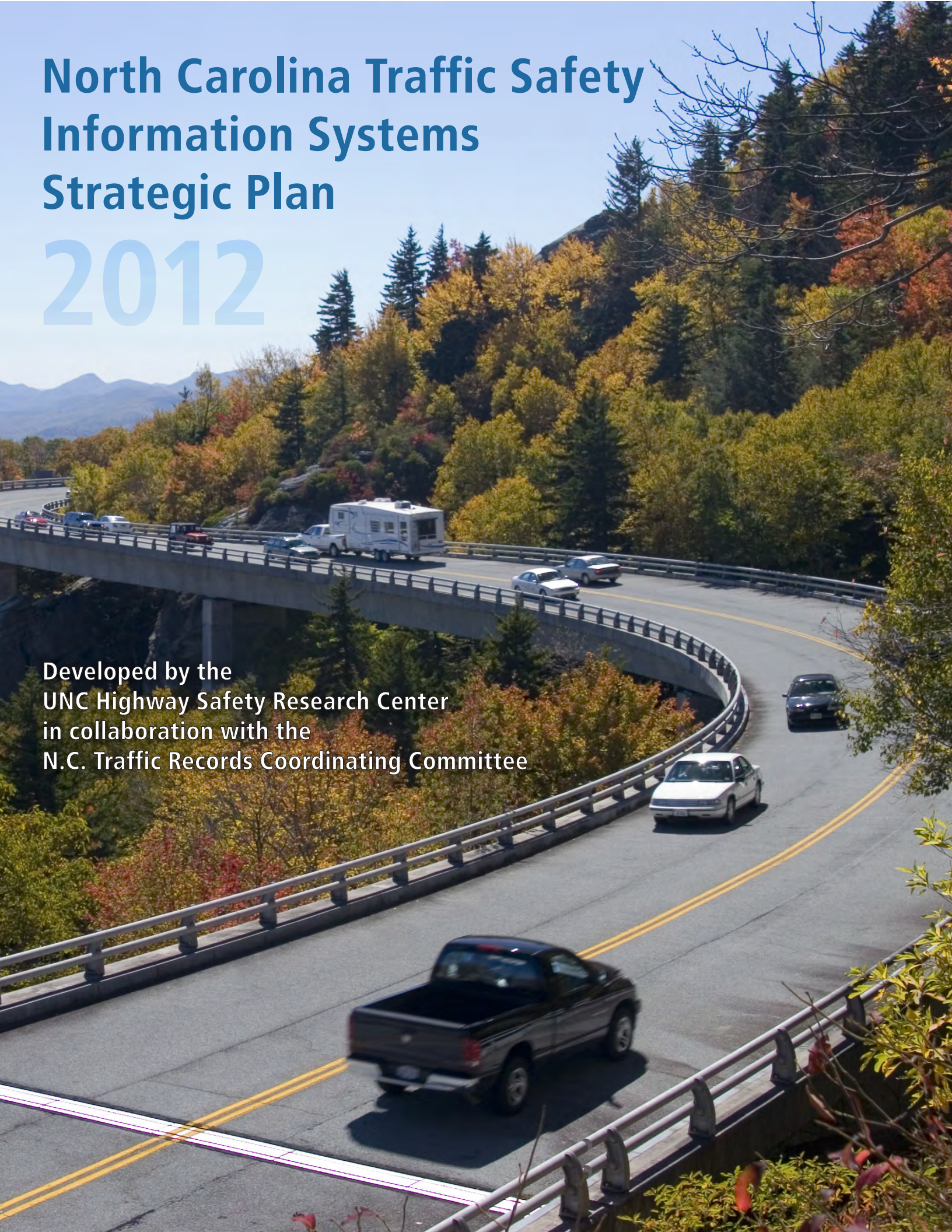
North Carolina Traffic Safety Information Systems Strategic Plan

2012



Developed by the
UNC Highway Safety Research Center
in collaboration with the
N.C. Traffic Records Coordinating Committee

North Carolina Traffic Safety Information Systems

Strategic Plan 2012

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for the Governor's Highway Safety Program

June 2012

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Commonly Used Abbreviations

AASHTO – American Association of State Highway and Transportation Officials

ACIS – Automated Criminal Infraction System

AOC – Administrative Office of the Courts

DMV – Department of Motor Vehicles

DOT – Department of Transportation

ECHS – Executive Committee for Highway Safety

EMS – Emergency Medical Services

FARS – Fatality Analysis Reporting System

FHWA – Federal Highway Administration

GHSP – Governor's Highway Safety Program

HSRC – Highway Safety Research Center

ITRE – Institute for Transportation Research and Education

NCAOC – North Carolina Administrative Office of the Courts

NCAWARE – North Carolina Warrant Repository

NHTSA – National Highway Traffic System Administration

PreMIS – Prehospital Medical Information System

SADLS – State Automated Driver License System

TARS – State Tilting and Registration System

TEASS – Traffic Engineering Accident Analysis System

TRaCS – Traffic and Criminal Software

TRCC – Traffic Records Coordinating Committee

UNC – University of North Carolina

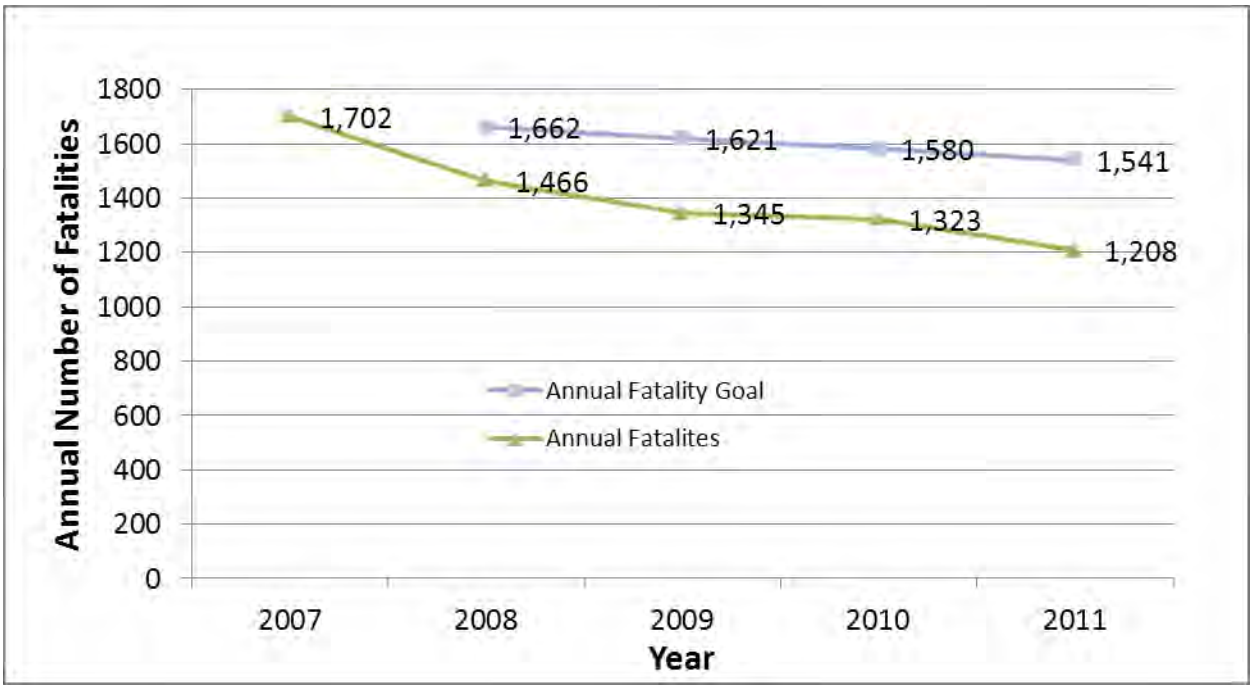
Introduction

Background

While North Carolina, like most other States, has made progress in reducing the toll that results from traffic crashes on our roadways, the number of persons killed and injured remains unacceptably high. In 2010, there were 213,573 reported traffic crashes on state-maintained roads that resulted in 1,359 persons killed and 113,761 injured. The economic impact of these crashes is costly, resulting in an estimated loss of $8.27 billion to the economy of North Carolina annually (estimate as of 2009).

North Carolina established a vision to have a multi-disciplinary, multi-agency approach to research, planning, design, construction, maintenance, operation and evaluation of transportation systems, which results in reduced fatalities, injuries and economic losses related to crashes. In addition, there is a coordinated effort to address emerging safety issues.

In 2007, the number of fatalities on North Carolina's roads totaled 1,702 persons. The Department of Transportation adopted a goal of reducing fatalities by 2.5 percent per year from that point forward. As shown in the chart below, the state is currently ahead of this pace and is working hard to keep this trend moving in the right direction.



Annual number of fatalities on North Carolina's roads versus the annual fatality goal of the North Carolina Department of Transportation.

For North Carolina to continue to make progress toward *these goals* and reach the vision of multi-disciplinary and multi-agency approaches to the challenges we face, improvements in the quality and utility of traffic safety information data and systems must continue to evolve in order to make additional gains and sustain previous achievements. Improvements are needed in each of our primary traffic safety information systems, which include 1) crash records, 2) vehicle and driver records, 3) roadway inventory and geographic information systems, 4) medical outcome systems, and 5) citation and adjudication systems. The even greater achievement will be to increase the effectiveness and efficiency of linking crash data to the other systems for improved reporting and analysis. These important linkages must be achieved while protecting the privacy rights of our citizens' data and abiding by the appropriate laws and regulations.

Coordination, communication and cooperation are the defining attributes for success of the North Carolina Traffic Records Coordinating Committee (TRCC). Each stakeholder will be able to develop the awareness of the needs of the various data collectors, data users, data managers and traffic records systems owners.

North Carolina's TRCC Implementation and Progress Guide will document progress toward the overall goal of providing high-quality data to users in timely and efficient processes. This document will record the progress of the TRCC's efforts and will serve as the guide for planning and implementing change. This resource will be continually updated and available on-line in an electronic format http://www.hsrc.unc.edu/nctrcc/guide.cfm.

Organization of the Report

This report includes an overview of the organizational structure that is in place in the state to address the traffic safety information needs, a strategic plan that was developed with input from the North Carolina TRCC membership and a description of safety information projects that have been conducted since 2009 with specific objectives of improving traffic safety information systems.

Organizational Structure

The multidisciplinary approach to traffic system information systems requires multiple agencies to be included in the planning and implementation of programs and processes designed to improve the components of the various systems, linkages among the systems, and ultimately affect the outcome of reducing the level of harm on the roads of North Carolina There are two committees that have been established in North Carolina to ensure that all information stewards and stakeholders are included in the decision-making process for improving our traffic safety information – the North Carolina Executive Committee for Highway Safety (ECHS) and the TRCC. The purpose and role of each of these groups are described below.

Executive Committee for Highway Safety

The North Carolina ECHS was established in 2003 and was empowered to address the motor vehicle crash epidemic and to coordinate the many safety initiatives both within and outside of the North Carolina Department of Transportation with an emphasis on efficiency of resources and the prioritization of programs. The ECHS is comprised of representatives from top management of selected disciplines involved in highway safety who control the current and potentially available resources for utilization in safety efforts. The Committee has endorsed and adopted the American Association of State Highway and Transportation Official's (AASHTO) Strategic Highway Safety Plan (SHSP) as its working plan with the understanding that this is a dynamic document subject to modifications as necessary to address North Carolina 's needs.

The Committee has also adopted the goal of fatalities on North Carolina's roads by 2.5 percent per year for the next 20 years. The goal for 2011 was 1,541 fatalities; 1,208 persons lost their lives that year in crashes on North Carolina's roads. Implementation of the strategies and directives of the ECHS and the AASHTO Strategic Highway Safety Plan are viewed as the key mechanism to reach this goal and thereby significantly reduce the annual number of fatalities and deaths on our highways.

The ECHS represents North Carolina's comprehensive strategic plan to enhance highway safety that was assembled collaboratively by major stakeholders in the highway safety arena. The energy generated and knowledge of the multi-disciplined team members has provided many opportunities for innovative strategies. Representatives from different agencies are teamed up to find solutions to a common goal. A key "facilitator" works closely with all of the working groups through meetings and discussions with members. This central point of reference provides assistance in eliminating road blocks, suggests champions for strategy involvement and ensures elimination of redundant strategies.

The ECHS endorses and supports North Carolina TRCC. The ECHS will review and endorse any strategic plans and implementation guides from TRCC. TRCC, as necessary and appropriate, will provide strategies for the Executive Committee to support and endorse. These strategies could

include legislative initiatives, interagency projects requiring significant resources and other important strategies.

ECHS Membership

The ECHS is chaired by the North Carolina Secretary of Transportation, Dr. Eugene Conti. The membership is listed below and includes representatives for the North Carolina Department of Transportation (NCDOT), municipal transportation departments, state and local law enforcement, universities, and other state and local agencies.

- Gene Conti, Secretary, NCDOT
- Bob Andrews, Director, NCDOT, Safety and Risk Management
- Debbie Barbour, Director, NCDOT Preconstruction
- Susan Coward, Deputy Secretary, NCDOT, Intergovernmental Affairs
- Herb Garrison, Director, East Carolina Injury Prevention Program
- Terry Gibson, State Highway Administrator, NCDOT, Division of Highways
- Michael Gilchrist, Colonel, North Carolina State Highway Patrol
- David Harkey, Director, UNC Highway Safety Research Center
- Terry Hopkins, State Traffic Safety Engineer, NCDOT, Traffic Safety Unit
- Kevin Lacy, State Traffic Engineer, NCDOT, Transportation Mobility and Safety
- Jon Nance, Chief Engineer, NCDOT, Operations
- Kim Overton, Chief Resource Prosecutor, Conference of District Attorneys
- Stan Polanis, Director of Transportation, City of Winston-Salem
- Michael Robertson, Commissioner, NCDOT, Division of Motor Vehicles
- John Sullivan, Division Administrator, Federal Highway Administration
- Ted Vaden, Deputy Secretary, NCDOT, Internal and External Affairs
- Becky Wallace, Director, NCDOT, Governor's Highway Safety Program
- Mike Yaniero, Chief, Jacksonville Police Department
- Basil McVey, Deputy Director, North Carolina Administrative Office of the Courts (NCAOC)

Traffic Records Coordinating Committee

The North Carolina TRCC was established in 2006. The vision of the North Carolina TRCC reads as follows:

> *To improve safety by significantly reducing the number of fatalities and injuries to the citizens and visitors of our state.*

In support of this vision, the mission of the North Carolina TRCC is to:

> *Provide the leadership to establish and maintain a level of coordination, communication and cooperation between agencies and stakeholders to maximize utilization and improve functionality, data accuracy, timeliness and linkages, and to advance electronic data collection, protect privacy, minimize redundancies in traffic records systems and better accomplish individual agencies' goals.*

The specific roles and functions of this group were collectively established by the participating members and consist of the following:

- Provide for coordination, cooperation and collaboration of agency activities that could affect or improve the state traffic safety data or systems while ensuring the protection of confidential information.
- Prepare, update and maintain the North Carolina TRCC Implementation and Progress Guide and to provide a plan for the implementation of traffic safety systems and data improvements.
- Recommend and provide strategies to North Carolina ECHS for endorsement and action.
- Develop interagency project teams to develop implementation plans for carrying out the objectives of the guide as necessary.
- Provide a forum for review and endorsement of programs, regulations, projects and methodologies to implement the improvements identified in the implementation guide.
- Review programs, regulations, projects, and methodologies for alignment with the TRCC's mission, goals and objectives.
- Provide coordination for programs, projects and regulations as they become operational.
- Receive periodic updates from the project teams.
- Endorse and/or implement projects to achieve quality traffic safety data from state traffic records systems.
- Encourage and provide for the sharing of data amongst all members, owners, users and collectors and collaborate on interagency projects.

- Provide for adequate communication and review between members of all changes or modifications to systems, regulations, collection procedures, or usage and analysis needs.
- Support electronic data collection for all types of data including crash, roadway (including volume and asset management), vehicle, driver, medical, and citation or adjudication data.
- Simplify all data collection whenever possible for any record.
- Increase automation and only collect data necessary from field efforts.
- Encourage and provide for the marketing of traffic safety information to increase public and political awareness of its necessity for decision making, resource allocation, and importance in improving quality of life.

TRCC Membership

The North Carolina TRCC consists of a diverse membership that includes representation from the data stewards for each primary data or information system – crash records; vehicle and driver records; roadway inventory and GIS; court, citation and adjudication systems; and medical outcome systems. Several key stakeholder agencies also serve in membership roles on the committee, including state and municipal law enforcement, NCDOT Traffic Safety Unit, Governor's Highway Safety Program, and a university research center. The current list of members is provided below.

- Brian Mayhew, Co-Chair – NCDOT Traffic Safety Unit Data
- Eric Rodgman, Co-Chair – The University of North Carolina (UNC) Highway Safety Research Center (HSRC)
- Julian Council – NCDOT Division of Motor Vehicles (DMV)
- Janet Greene – NCAOC
- Tony Fernandez – North Carolina Ambulance Call Report and North Carolina Trauma Registry Databases
- Alan Dellapenna and Scott Proescholdbell – North Carolina Department of Public Health and UNC Department of Surgery Death Certificate, the ED and the Hospital Discharge Databases
- John Farley and Jon Arnold – NCDOT GIS Roadway Inventory and Location Databases
- Sgt. Eric Schaberg and FSgt. Taylor Cameron – North Carolina State Highway Patrol (NCSHP)

- Frank Hackney – North Carolina Governor's Highway Safety Program (GHSP) State Data Coordinator

In addition to the official membership, there are a number of additional stakeholders, including representatives from the Federal Highway Administration and National Highway Traffic Safety Administration, who routinely participate in TRCC meetings. A complete list of active participants is included in Appendix A**.**

NC State Traffic Safety Data Coordinator

One of the members of the North Carolina TRCC is the State Traffic Safety Data Coordinator. This individual serves as the primary point of contact for information on the Traffic Safety Systems for the National Highway Traffic Safety Administration, the state of North Carolina and the North Carolina TRCC. This person is aware of all the primary traffic records systems in North Carolina and maintains communications with the TRCC. This person can report on, or obtain status information on all projects within the state. Mr. Frank Hackney of the GHSP serves in this role. His contact information is provided below.

Frank Hackney, Traffic Records Coordinator
Governor's Highway Safety Program
215 East Lane Street
Raleigh, N.C. 27601
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Fax: (919) 733-0604
Email: fhackney@ncdot.gov

Traffic Safety Information System Summaries

Provided in this section of the report are descriptive summaries of the traffic safety information systems that are available in North Carolina. Summaries are included for systems within the following agencies:

- NC Department of Transportation
- NC Administrative Office of the Courts
- NC Office of Emergency Management Systems
- NC Department of Health and Human Services

NC Department of Transportation (NCDOT)

Traffic Engineering Accident Analysis System (TEAAS)
The Traffic Engineering Accident Analysis System (TEAAS) is the main tool used by the Traffic Engineering and Safety Systems Branch (TESSB) of the NCDOT to analyze and report on crashes that occur in the state. TEAAS is often used to help support policies and decisions at the state and federal levels. The TEAAS database is a nightly replication of the crash database maintained by the North Carolina DMV. TEAAS was established in 1999 as a product of Y2K preparations, and went online on January 1, 2000. The earliest data on record is from 1990.

Since the TEAAS database is a replication of the DMV crash database, TEAAS data are only as timely as the data within the crash database. Crash data that are submitted to the DMV on the DMV-349 form are typically available within three months of the date of the crash. Electronic crash data submissions made through TRCS must be made within 48 hours of the crash, so these data are typically available within ten days of the date of the crash. TEAAS data are updated nightly with any new or changed data. The data are not purged.

In addition, TEAAS is a roadway crash analysis software system downloadable from the internet and available free of charge to state government personnel, municipalities, law enforcement agencies, planning organizations, and research entities. TEAAS contains information on all reportable traffic crashes occurring in North Carolina since 1990. It also contains all ordinance information for all state-maintained roads and highways. The crashes are located on the North Carolina DMV 349 Crash Report using the street names noted to milepost each crash on the North Carolina Roadway System.

Mileposting is the process of determining the location of features on a road, in miles, from the beginning of the road, and is a fundamental requirement of the TEAAS necessary for crash studies and analyses, crash rates, and ordinance overlap checks. Mileposts are based on information in NCDOT's Linear Referencing System (LRS) maintained by the Geographic

Information Systems (GIS) Unit, and are used to determine where crashes occurred, or where ordinances are located, in relation to roadway features. Features requiring mileposts are intersections and interchanges, at-grade railroad crossings, mile markers, structures (that carry the road), and political boundaries (municipal, county, and state lines).

This allows the North Carolina traffic engineers to analyze crashes at each roadway section or intersection in more detail. The results of these analyses help North Carolina make corrections and improvements to the sites involved.

NC Geographic Information System

The main objectives of the Information and Mapping (IMG) Unit are to provide quality mapping of the existing state maintained system of highways as well as to produce computer generated images of proposed NCDOT projects. This information is used in the planning, funding, construction, and maintenance of transportation facilities throughout the state, helping to provide an efficient and cost effective state transportation system.

The Information and Mapping Unit is divided into three major sections:

- Road Inventory Information Section – generates and maintains database of highway data using various sources of information such as highway construction plans and reports from NCDOT division and district staff.
- Product Development Section – produces cartographic products such as the State Transportation Map, the Coastal Boating Guide, County Maintenance Maps, and over 20 other custom map products that are built to customer requirements.
- Product Distribution Section – provides customer support and ensures distribution and delivery of products created by the Information and Mapping Unit.

Note that the IMG Unit is a relatively new one at the NCDOT. Its products are spatially-oriented. Many of those products rely on the geographical framework and analyses provided by the NCDOT GIS Unit. One of the core functions of the GIS Unit is to maintain the linear referencing system for the North Carolina transportation network. A description of the NCDOT GIS Unit, as related to the purposes of this Guide, is included as an Appendix to this chapter.

The data and products maintained and distributed by the Information and Mapping Unit are updated regularly to provide current and useful information to customers. Some products are updated daily, like the online county maps (in TIF format), while others, such as the State Transportation Map, are updated annually. In addition, a large portion of data is updated at varying intervals as needed to provide reliable information. Most of the products distributed by the Information and Mapping Unit indicate the date(s) for which the data are current.

NCDOT Division of Motor Vehicles

NC Crash Data

The North Carolina Division of Motor Vehicles (NC DMV) maintains a database that contains information on all reported crashes in the state. The database was assembled to serve as a single electronic repository for all crash data. One of the main objectives of the crash database is to make records and related data available to the law enforcement community. The current Crash Reporting System (CRS) was established in 1999, and the earliest record dates back to 1990.

Crash data may either be submitted electronically using the DMV TRCS application or manually through a written crash report form (DMV-349). The TRCS application enables law enforcement to electronically complete and submit crash reports directly to the Crash Reporting System (CRS) from the field. An Appendix following this chapter provides more details on TRCS. Written crash reports are received by DMV and scanned. Data entry staff key information from the scanned images stored in the database.

Crash report data that are electronically submitted through TRCS are typically available within two days after DMV receives the report. Crash data that must be manually entered from the DMV-349 form are usually available within 30 days after the DMV receives the report. Updates to the CRS database are made on a daily basis. The data are never purged.

A CRS data dictionary is available upon request. It is updated periodically, as needed or requested by the DMV Traffic Records Branch. Business rules are in place to ensure the completeness of the data. Only reportable crash data are typically entered into the CRS database; however, data are entered for all crashes that are reported, even those that may not fit the criteria of a reportable crash. A reportable crash must meet at least one of the following criteria:

- The crash resulted in a human fatality, or
- The crash resulted in a non-fatal personal injury, or
- The crash resulted in greater than $1,000 of total property damage, or
- The crash resulted in property damage of any amount to a seized vehicle.

All law enforcement agencies are required to report crashes that they respond to that meet one or more of the criteria.

Traffic and Criminal Software (TRaCS)

NC TraCS is the North Carolina DMV's implementation of the national model of the Traffic and Criminal Software (TraCS) package. TraCS enables law enforcement officers to record and retrieve incident information from the field wherever and whenever an incident occurs. The North Carolina DMV Traffic Records Communications System is an enhancement of the current CRS that enables DMV to receive and process crash reports electronically.

NC TraCS and DMV TRCS are collectively referred to as TRaCS and work together to allow officers to electronically collect and transmit crash information from the field to a central repository (i.e., CRS). TRaCS allows an officer to collect and validate information in his or her vehicle using a notebook computer or at a local office using a workstation. TRaCS can obtain driver and vehicle information corresponding to a driver license or a vehicle (plate or VIN) from the State Titling and Registration System (STARS) and State Automated Driver License System (SADLS) through the crash database.

The primary objective of TRaCS is to maintain a paperless system where creation, validation, and transmission of crash data are performed electronically. In the process of accomplishing this objective, TRaCS also helps to reduce the time needed to create a crash report in the field. This translates to faster submittal of crash reports to DMV, and in turn, expedited public availability of crash data.

Fatality Analysis Reporting System (FARS)

The Fatality Analysis Reporting System (FARS) contains data for fatal traffic crashes that occur within the 50 states, the District of Columbia, and Puerto Rico. To be included in FARS, a crash must involve a motor vehicle traveling on a public roadway and result in the death of a person (occupant of a vehicle or a non-motorist) within 30 days of the crash.

FARS was developed by the National Center for Statistics and Analysis (NCSA) of the National Highway Traffic Safety Administration (NHTSA) in 1975. The main objectives of FARS include:

- Provide an overall measure of highway safety;
- Identify traffic safety problems and solutions; and
- Provide an objective basis to evaluate the effectiveness of motor vehicle safety standards and highway safety initiatives.

NHTSA has a cooperative agreement with an agency in each State's government to provide information on all qualifying crashes in the State. In North Carolina, the DMV is the lead agency for FARS reporting. FARS data are obtained solely from the State's existing documents, which include the following:

- Police crash reports;
- State vehicle registration files;
- State driver licensing files;
- State Highway Division data;
- Vital statistics;
- Death certificates;
- Coroner/Medical Examiner reports;
- Hospital medical reports;
- Emergency medical service reports; and
- Other State records.

More than 100 FARS data elements are coded from the documents above. The specific data elements may be modified slightly each year to conform to changing use needs, vehicle characteristics, and highway safety emphasis areas. The data included in FARS do not include any personal identifying information, such as names, addresses, or social security numbers. Thus, data kept in FARS files and made available to the public fully conform to the federal Driver Privacy Protection Act.

Fatal crash data for each State are entered into a local microcomputer data file, and daily updates are sent to NHTSA's central computer database. Data are automatically checked when entered for acceptable range values and for consistency. This makes it possible for corrections to be made immediately.

Each year, FARS data are utilized by the NCSA to publish a Traffic Safety Facts report. The report compiles fatal crash data from FARS and non-fatal crash data from the General Estimates System (GES). The purpose of the Traffic Safety Facts report is to present statistics about traffic crashes of all severities.

SAFETYNET – Commercial Motor Vehicle Crash Reporting

SAFETYNET is a computer system utilized by state law enforcement agencies and the Federal Motor Carrier Safety Administration (FMCSA) for the collection and management of commercial vehicle safety data. Data are collected from all safety inspections and compliance reviews performed in North Carolina and all qualifying crashes that occur on North Carolina highways.

The DMV maintains commercial motor vehicle (CMV) crash data in the crash database. The Division is responsible for forwarding CMV crash data to the North Carolina State Highway Patrol, who enter the data into SAFETYNET. See the Chapter elsewhere in this document with a more complete description of SAFETYNET as maintained by the State Highway Patrol. SAFETYNET data are routinely transferred to the Motor Carrier Management Information System (MCMIS) for analysis by FMCSA and are used to help determine a motor carriers' safety fitness rating. The system also allows for the electronic collection of inspection data from roadside inspection software.

FMCSA's SAFETYNET Crash Module records qualifying vehicles involved in crashes that are motor vehicle traffic crashes as defined in the ANSI D-16 Manual on the Classification of Motor Vehicle Traffic Accidents. To satisfy the definition of a motor vehicle traffic crash, the crash must not be the result of a deliberate act (e.g., suicide, police intervention) or a cataclysm (e.g., hurricane, flood). A crash must also meet the following criteria to be sent to SAFETYNET:

1. The crash must result in at least one of the following:
   - Fatality;
   - Injury; or
   - Towed vehicle.

2. Commercial vehicles must:

- have a gross vehicle weight rating (GVWR) > 10,000 pounds; or
- carry hazardous materials.

3. Non-commercial vehicles must have one of the following vehicle styles:
   - Commercial bus;
   - School bus;
   - Activity bus;
   - Other bus;
   - Light truck (carrying nine or more occupants);
   - Sport utility vehicle (carrying nine or more occupants); or
   - Van (carrying nine or more occupants).

NC Driver License Record System Data

The North Carolina Division of Motor Vehicles (NC DMV) maintains the State Automated Driver License System (SADLS), which contains North Carolina driving records data. SADLS went into live production on November 24, 1994. The earliest driver license record stored in the system is from October, 14 1966.

Online data are processed in real time as received from various states/agencies via the American Association of Motor Vehicle Administrators Network (AAMVANet) interface. Some data files provided by outside agencies, such as the Administrative Office of the Courts (AOC), are not received through AAMVANet and are processed by batch each workday.

Updates made to a driver record as the result of the driver turning in his or her North Carolina license and applying for a license in another state are made in real time. In addition, another example of real time updates includes any updates resulting from receipt of customer information from the Social Security Administration.

Overnight data updating is primarily adjudicatory in nature, and involves updating the driving record based on convictions received from the AOC. The updated record is then applied against the standards to determine whether a suspension should result. It could also involve updating the driving record when a suspension ends or updating status information for the recently deceased.

NC Vehicle Registration Record Data

The State Titling and Registration System (STARS) is a database maintained by the North Carolina Division of Motor Vehicles (NC DMV) that was created to provide automated vehicle titling and registration services. STARS was established in 1996, and contains title records dating back to the year 1900 and registration records dating back to 1975. Data are entered into STARS by authorized employees at DMV branches. The data are entered using online STARS screens, which automatically transmit data to the database. In addition to online reporting, data are also reported through batch processes in which data are uploaded into STARS nightly.

Most STARS data are captured in real time; however, some data are updated through nightly batch processes. Data that are submitted online at DMV branches are real time, while registration renewals done via mail and the internet, for example, are input through nightly batch processes.
Title data are never purged from STARS. However, registration data older than four years are archived on a monthly basis.

NC Administrative Office of the Courts

NCAWARE (North Carolina Warrant Repository)
NCAWARE is a custom-developed, web-based system that was designed, developed, and implemented by the North Carolina Administrative Office of the Courts (NCAOC). The system maintains detailed information about criminal processes, such as warrants, magistrate orders, citations that lead to an arrest, criminal summons, orders for arrest, release orders, and appearance bonds. It also tracks information and details for all people and businesses involved in such processes. With the implementation of NCAWARE and accompanying legislation which provided for a statewide electronic repository, law enforcement can view and serve any electronic unserved process in the state without having paper in hand. Officers are also able to pre-fill arrest and warrant information prior to appearing before the magistrate and thus decreasing processing time.

All NCAWARE judicial and law enforcement users also have access to the unserved warrants in both the NCAWARE system and the Automated Criminal Infraction System (ACIS) through the Statewide Warrant Search which combines information from both systems. Prior to implementation in each county, the NCAOC worked with local criminal justice and public safety entities to certify the validity of all outstanding processes for the year 2000 and forward prior to converting these processes to NCAWARE. Additionally, the NCAOC staff continues to work with counties to convert paper-based orders for arrest to NCAWARE so that older processes are also available electronically.

NCAWARE is the first point of entry for all arrests including DWI cases, into the courts databases. Court case information in NCAWARE automatically populates ACIS through real-time XML and MQ interfaces. Demographic driver and vehicle data is automatically pre-populated in NCAWARE through a host-to-host DB2 connection with NCDOT-DMV. The NCAOC is currently working on a real-time interface between eCitation and NCAWARE to provide for the automatic creation of a process where a traffic citation leads to an arrest – such as DWI, driving while license revoked, and driving with no operator's license.

The statewide system launched in June 2008 in Johnston County and was implemented in 98 counties in October 2010, resulting in the official retirement of the 1990's Magistrate System. The NCAOC is working jointly with the two remaining counties (Buncombe and Mecklenburg) to integrate NCAWARE with their local criminal justice systems.

As of April 30, 2012, there were 2,924,875 issued processes in NCAWARE. As of that same date, 34,347 judicial and law enforcement users are accessing the system.

eCITATION®

eCITATION® automates the issuing of cite-and-release citations in North Carolina. Six hundred law enforcement agencies (LEAs) issue more than one million traffic and infraction citations annually. Prior to the implementation of the eCITATION® system, North Carolina law enforcement officers (LEO) wrote all citations by hand. Copies of the handwritten citation were given to the recipient, delivered to the local clerk of superior court (CSC) office, and kept on file by both the LEA and CSC involved. This process could be rather cumbersome and lengthy, as it involved entering the same information multiple times in different systems. Additionally, there was a high probability of mistakes being introduced due to illegible handwriting.

eCITATION®, the first such system in the nation, was conceived and developed as a solution to this manual process. eCitation® fully automates the citation process, producing the North Carolina Uniform Citation in an electronic format and reducing data entry to a single iteration. Using existing wireless connections, eCitation® allows officers to create citations and schedule court dates electronically from the patrol car. A portable printer produces the copy of the citation for the cited person. After issuance of the ecitation, the officer transmits the data directly to NCAOC where it can be immediately accessed statewide in the Automated Criminal Infraction System (ACIS).

eCITATION® was developed as a joint venture between the North Carolina Administrative Office of the Courts (AOC) and the North Carolina State Highway Patrol. Significant funding was also provided by the Governor's Highway Safety Fund and the Governor's Crime Commission. During October 1999 through September 2001, a pilot project was conducted in Cumberland County, and after a successful pilot, eCITATION® was implemented in all 100 counties at no cost to law enforcement agencies.

eCitation® includes the following components:

- Officers Component: This component is loaded on the computer in the patrol car for entering and printing ecitations. It is capable of operating with or without communication coverage.
- RMS Component: This component provides law enforcement agencies with the capability to electronically download ecitation data for use in local law enforcement records management systems (RMS), thus eliminating dual data entry. It also provides a citation printing function.
- Clerks Component: This is a browser-based component used by county clerk staff to monitor and print judgment copies of the transmitted citations.
- Interface to NCAOC ACIS: This interface receives and stores ecitation data in ACIS, making the information available statewide.
- Interface to NCDOT Division of Motor Vehicles: This interface automatically prefills demographic and vehicle data using the driver’s license or vehicle plate number.

As of April 30, 2012:

- 367 LEAs with 14,687 officers statewide have been provided with eCITATION® access.
- 6,527,537 electronic citations have been processed since inception.
- 413,261 electronic citations have been issued so far in 2012.
- Over 82.6% of traffic and infractions citations are now issued through eCITATION®, and this number continues to grow.

The NCAOC is currently rewriting the eCitation® Officers Component onto a new technical platform (from VB to Java) and developing an interface from eCitation to NCAWARE for arrests which begin on a citation. Officers anticipate that the arrestables interface will save them up to three hours per DWI stop.

Automated Criminal Infraction System (ACIS)

All criminal and infraction court cases in North Carolina are tracked from initiation through disposition in the statewide Automated Criminal Infraction System (ACIS). Case initiation processes (warrants, criminal summons, orders for arrest, magistrate orders) are transferred electronically from NCAWARE to ACIS. Infraction (non-arrestable) cases are electronically transferred to ACIS from eCitation®. Clerk of Superior Court staff continue to track all cases through to disposition using ACIS.

ACIS is the primary point of interface to other agencies. All reportable traffic offenses are transmitted nightly to NCDOT-DMV. Charges and convictions for all serious misdemeanor and felony offenses (including death by motor vehicle) are reported nightly to the State Bureau of Investigation (SBI) which in turn updates ACIS and NCAWARE cases with the state fingerprint identification number (SID). ACIS data is a major data feed to the Criminal Justice Law Enforcement Automated Data Service (CJLEADS). All citation data for the North Carolina State Highway Patrol (NCSHP) is transferred to them nightly.

In March 2012, the NCAOC added the Eastern Band of Cherokee Indians (ECBI) to ACIS, allowing them to process their court cases in the system and providing them with an automated means to report their traffic cases to NCDOT/DMV.

ACIS was implemented statewide in 1987 and contains some cases as far back as 1978. Criminal cases are maintained and accessible online since inception. Infraction cases are purged five years after disposition in accordance with NCDOT-DMV rules of recordkeeping.

Criminal Court Information System – Clerks Component (CCIS-CC)

The Criminal Court Information System - Clerks Component (CCIS-CC) is a web-based criminal case management system which extends and will ultimately replace ACIS. The system currently provides multiple entry functions for court continuances and results, speeding dispositions, and monies paid. Functions are also available for online payment status and disposition of cases not requiring sentencing. CCIS-CC includes an interface to NCDOT-DMV for electronic reporting of corrections to cases previously reported. Court staff are also able to process both criminal and infraction cases on the same screen which allows much faster and efficient entry of case data.

CCIS-CC is being developed and released in approximate six-month increments as functions are replaced in ACIS. The first functional release for multiple entry of microfilm numbers was implemented in June 2006. In 2011, a total of 11,132 corrections were automatically submitted to NCDOT-DMV.

The CCIS-CC team is currently working on automating the Bill of Costs for courtroom judgments and is re-designing the ACIS case disposition functionality.

payNCticket
payNCticket is a web-based system which allows persons who have received citations for offenses not requiring a court appearance (primarily traffic tickets) to query and pay their tickets online. Prior to payNCticket, citizens had to pay fines and related court costs by going to the courthouse to pay in cash or by mailing a money order or cashier's check. In addition to providing a more convenient payment method for the public, the system also allows for quicker disposition of cases because as payment is received, the citation is also disposed in ACIS. In conjunction with eCitation® which allows citations to be transmitted to ACIS immediately, payNCticket can potentially allow for a ticket to be paid and disposed within minutes after it was issued.

Payments made through payNCticket are processed by NIC, an independent payment processing vendor.

payNCticket was piloted in March 2010 and released statewide in June 2010. As of April 30, 2012, 207,711 citations have been disposed and $41,660,887 has been collected.

Criminal Court Information System – District Attorneys Component (CCIS-DA)
CCIS-DA is a web-based criminal case management system developed specifically for District Attorneys to manage the caseload within their offices. CCIS-DA captures individualized case notes, and tracks and schedules action-oriented events and decision points relevant to the prosecution of each case, including DWI case management.

CCIS-DA interfaces with ACIS to download case data real-time. The system also interfaces with the Discovery Automation System (DAS) which allows uploads of law enforcement discovery documents.

In October 2011, CCIS-DA was implemented in all 100 counties.

NC Office of Emergency Management Systems

EMSPIC Performance Improvement Center
The EMS Performance Improvement Center (EMSPIC) is located within Department of Emergency Medicine at the University of North Carolina at Chapel Hill. Systems that are currently maintained and supported by the EMSPIC are:

- Credentialing Information System (CIS)
- EMS Toolkit Project
- Prehospital Medical Information System (PreMIS)
- State Medical Asset Resource Tracking Tool (SMARTT)

The North Carolina Office of EMS (NCOEMS) established a central location where, by regulation, incident data could be collected and maintained from all 101 North Carolina EMS systems/counties. This is accomplished by a contractual agreement in place since 1999. On January 1, 2008, South Carolina Department of Health and Environmental Control (DHEC), Division of EMS and Trauma also entered into a contractual agreement with the EMSPIC to begin utilizing the systems listed above. The EMSPIC is strategically placed to provide a high level of Information Technology (IT) support and quality management expertise. The EMSPIC supports state, regional and local EMS service delivery from a patient care, resource allocation, and regulatory perspective.

Prehospital Medical Information System (PreMIS)
The Prehospital Medical Information System (PreMIS) provides a data entry and reporting capability for the evaluation of EMS patient care and system performance. PreMIS follows the NEMSIS standards.

The benefits of PreMIS include a standard method of documenting patient care to facilitate tracking of hospital diagnoses and patient outcome information, system comparison across agencies, involvement in public health and injury prevention initiatives, and EMS research, EMS strategic planning on a statewide basis, fiscal accountability, leadership in developing EMS outcome measurements, links to other state and national data sets for researchers, quality management of patient care, services, and resource tracking, required billing information, offsite data warehousing, feedback on technician procedures for evaluation and certification, and storage of medical device data.

NC Trauma Registry System
Since 1987, North Carolina has 14 hospitals submitting data on trauma patients to the North Carolina Trauma Registry (NCTR). Twelve of these facilities are designated trauma centers by the state of North Carolina as level I, II, or III and two are non-designated.

The North Carolina Office of Emergency Services (NCOEMS) maintains the NCTR and requires all state designated trauma centers to submit data, achieving the overall mission of collecting information on the injured patients in North Carolina for the purposes of performance

improvement, outcomes measurement, resource utilization, injury prevention, and clinical research.

A designated trauma center is a local hospital voluntarily meeting the state's guidelines for care of the injured patient. Currently North Carolina has 13 designated trauma centers across the state. Each of the state's centers has the responsibility of providing care and of developing and supporting a regional trauma system.

NC Department of Health and Human Services

NC Hospital Patient Discharge System
Prior to 1995, the Medical Database Commission (MDC) collected hospital discharge data. On September 31, 1995, the North Carolina General Assembly eliminated the MDC and set up an alternative system for the reporting of discharge data. Since 1996, hospitals have reported data to Thomson Reuters (formerly Solucient and Thomson Healthcare) as set forth by the Medical Care Data Act of 1995 (Article 11a of Chapter 131E of the North Carolina General Statutes).

Since 1996, the Cecil G. Sheps Center for Health Services Research has worked under contract with the North Carolina Division of Health Service Regulation (DHSR) to store, maintain and analyze the North Carolina Discharge Databases. The data contained in the discharge databases are retrieved claim forms used by facilities to bill payers.

NC Medical Examiner System
The North Carolina Medical Examiner System is a network of over 600 medical doctors throughout North Carolina who voluntarily devote their time, energy, and medical expertise to see that deaths of a suspicious, unusual or unnatural nature are adequately investigated. This resource is maintained by the Office of the Chief Medical Examiner of the state of North Carolina. The OCME is a division of the North Carolina Department of Health and Human Resources. OCME also functions as the Division of Forensic Pathology of the UNC School of Medicine Department of Pathology.

The Medical Examiner's office has detailed data on each death in North Carolina. For the cases that are associated with motor vehicle crashes, these death reports are used to determine the presence of alcohol for the North Carolina crash data driver fatalities and the FARS North Carolina driver fatalities.

NC State Center for Health Statistics
The State Center for Health Statistics (SCHS) is the North Carolina agency responsible for the data collection, health-related research, production of reports, and maintenance of a comprehensive collection of health statistics. SCHS http://www.schs.state.nc.us/schs/pubs/mailinglist.htmlprovides high quality health information for better informed decisions and effective health policies. The goal is to improve the health of all North Carolinians and their communities.

These data include statewide records on all births, deaths, marriages, and divorces. These records have data on the age, race, sex, county, name, and key dates as required by the state.

2012 TRCC Strategic Plan

Overview

In 2011, the TRCC began the process of updating the 2009 Strategic Plan. The University of North Carolina Highway Safety Research Center worked with the Governor's Highway Safety Program and the North Carolina Department of Transportation to review relevant materials, gather input from key agencies, and develop a plan to guide improvements to be made in traffic safety information systems over the next five years. Other agencies who participated in the development of this plan included:

- NC Division of Motor Vehicles
- NC Department of Transportation
- NC Governor's Highway Safety Program
- NC Administrative Office of the Courts
- NC Department of Health and Human Services
- NC State Highway Patrol
- UNC Highway Safety Research Center

Gathering input for the updated plan began with the initial task of reviewing the following documents:

- *North Carolina's Traffic Records Coordinating Committee's Strategic Plan, 2009*. This plan became the benchmark for progress with respect to improvements made over the past three years.
- *State of North Carolina Traffic Records Assessment, 2012*. The assessment was completed by a NHTSA Technical Assessment Team in January 2012 and included several recommendations related to traffic safety information systems.
- *North Carolina Governor's Highway Safety Program FY 2012 Highway Safety Plan*. This plan was reviewed for specific recommendations related to traffic safety information systems and for data-related recommendations related to targeted safety strategies.
- *DMV-349 Revision Project, Phase I to Phase II Transition Notes*. This document was reviewed to determine specific needs related to the 58 recommended changes to the crash report content.

The primary source of input to the plan was a strategic planning session with representatives from the agencies listed above. This session was used to review and update the mission statement and establish goals and objectives for the TRCC.

The plan that is presented below is intended to address improvements in traffic safety information systems over the next five years. However, the plan will be reviewed on an annual cycle and modified as necessary to ensure that progress is being made in each of the areas and

that new objectives are added to address changes in the State and take advantage of improvements that may lead to better systems. In other words, this is a dynamic plan.

Vision and Mission

The current mission statement that had been previously developed for the TRCC was divided into two statements – a vision statement and a mission statement. Each one is provided below.

Vision

To improve safety by significantly reducing the number of fatalities and injuries to the citizens and visitors of our state.

Mission

Provide the leadership to establish and maintain a level of coordination, communication and cooperation between agencies and stakeholders to maximize utilization and improve functionality, data accuracy, timeliness and linkages, and to advance electronic data collection, protect privacy, minimize redundancies in traffic records systems and better accomplish individual agencies' goals.

Goals and Objectives

Goals were established for the TRCC as an entity and for each of the six primary data systems that are required for addressing traffic safety in the State. For each of these seven goals, specific objectives were developed that represent the priorities for each group/system.

Traffic Records Coordinating Committee

Goal – Provide direction and facilitate coordination among the safety data stewards and stakeholders to improve the transportation safety information systems in North Carolina.

- Consider expanding the membership of the North Carolina TRCC to include additional stakeholders. Examples include local law enforcement, public health professionals, and transportation planners.

- In collaboration with the North Carolina GHSP, review and improve upon the protocol used in the identification, prioritization and selection of projects that are funded under the Section 408 State Traffic Safety Information System Improvement Grant program that was authorized under SAFETEA-LU and is administered by NHTSA.

- Annually review and update the Traffic Safety Information Systems Strategic Plan to measure progress on existing goals and objectives and to establish new goals and objectives. All TRCC members and additional stakeholders as necessary should provide input to the review/update process via facilitated workshops.

Crash Information Systems

Goal – Maintain the crash data system and expand the capabilities of the system to allow the state to use this data to track crash injury/fatality experience for use in court cases, safety improvement studies and evaluating State driving statues.

- Continue to explore technologies for enhancing electronic crash reporting by all enforcement agencies in the State.

- Develop communication protocols with third-party software vendors of electronic crash submission products to keep them apprised of changes in the North Carolina crash data system that need to be accommodated in their software applications.

- Continue to develop and enhance data quality metrics through the review of business rules applied with the crash data system. The metrics should address the six NHTSA performance attributes – timeliness, accuracy, completeness, uniformity, integration and accessibility.

- Conduct an assessment of crash data accessibility by stakeholder groups, including internal users within the NCDOT and external users such as other state agencies and universities.

- Develop a communications protocol to provide feedback to reporting agencies on the quantity and quality of the data received and recommendations for improving the crash data collected and delivered.

- Explore options for enhanced law enforcement training that will result in more complete and accurate crash reporting.

- Conduct an assessment of the issues associated with the possible implementation of an abbreviated crash report form by a limited number of law enforcement agencies in the State. The issues addressed should include data acquisition, compliance with NHTSA data guidance (e.g., MMUCC), legal considerations, and possible degradation in the information being captured in the crash report.

- Explore the feasibility of creating a statewide streamlined or “limited” data entry protocol for non-injury crashes within the electronic crash reporting systems.

Citation/Adjudication Systems

Goal – Maintain and update North Carolina AOC databases and oversee the proper movement of court information and data, while centralizing information and creating citation/sharing procedures for the citation and adjudication records.

- Explore the value and the feasibility of developing a centralized database for warning tickets that would be available to law enforcement officers and other stakeholders, such as researchers, in the road safety community.

- Continue to examine electronic citation audit procedures and implement the most promising improvements to ensure citations are tracked from time of issuance to disposition of citations.

- Conduct a feasibility assessment of the most effective means of sharing data across multiple systems within the data collection process, such as crash and citation, for consistency and accuracy of data.

- Increase data capture surrounding the case management of DWI charges and convictions to aide in the analysis and tracking of these cases.

- Provide for an interface between eCitation and NCAWARE for the most charged arrestable offenses to greatly diminish the duplicate data entry involved with these charges.

- Continue to develop functionality in the CCIS-Clerk's Component to work towards eliminating the paper citation in the courtroom disposition process.

Injury Surveillance Systems

Goal – Evaluate the need for – and feasibility of – a comprehensive Statewide Surveillance Injury System.

- Conduct a needs assessment and feasibility study for the development of a comprehensive injury surveillance system. The needs assessment should determine the range of health data and information available and the value of these data to safety stakeholders. The feasibility study should address the linkage issues to other data (e.g., crash records), privacy regulations, and cost for development, implementation, and maintenance of the system.

Roadway Information Systems

Goal – Continue to maintain and expand an up-to-date statewide inventory of all North Carolina roadways that allows the State to track roadway changes and improvements and permits enhanced safety analysis.

- Conduct a data quality assessment of key roadway elements and attributes, and prepare a feasibility report for the enhancement of data where the quality is deemed substandard or there are gaps in the data.

- Expand the linear referencing system (foundation for linkage to roadway characteristics) to cover all public roads, state- and locally-owned).

- Improve the interoperability and linkage between the linear referencing system, road characteristics data, and the crash data system (TEAAS).

- Conduct a feasibility assessment of the development of supplemental roadway files that may be used in safety analysis. Examples include horizontal curves, grades, and intersections.

Driver Information Systems

Goal – Continue to maintain and update the North Carolina driver license record data to track all North Carolina drivers and their driving records to insure every driver is properly licensed according to North Carolina law.

- Publish online a basic summary of the number of North Carolina drivers legally licensed to drive in North Carolina, which includes their age, race, sex and county of residence based on a set date (e,g, July 1, 20xx).

Vehicle Information Systems

Goal – Continue to maintain and update all North Carolina vehicle registration record data for the state to insure all vehicles are properly licensed according to the laws of NC.

- Publish online a summary of the total number of vehicles – by type of vehicle and county – legally registered to be driven on the North Carolina roadways based on a set date (e.g., July 1, 20xx).

Traffic Safety Information System Projects

Provided in this section of the report is a discussion of the process that is currently used by the North Carolina TRCC to provide input to the North Carolina GHSP on the selection of projects to be funded using Section 408 funds from NHTSA. At the end of this section is a table showing current traffic safety information system projects that are ongoing in the state, regardless of funding source.

Project Identification

The following section of this report will be dynamic and will reflect the ongoing efforts of the TRCC to effectively identify and prioritize initiatives to reflect its goals. The priorities and projects will change as available resources are identified. This section will also evolve as Traffic Records Assessments are completed and as information, data and opportunities become more clear. In addition, the status of Information Technology directives or legislative actions can have significant effects on the items in this section.

Projects will primarily be identified by each agency effort to address a deficiency in a traffic records system, the data collection process (accuracy, completeness), achieving necessary compliance, customer service improvements (availability of data) or improving the timeliness of the data. Projects involving the linking of data for improved utilization and establishing partnerships will also be identified and receive full consideration by the TRCC. All projects must fully address all federal and state laws or policies concerning the privacy or protection of information. Formal and informal traffic records assessments will be a significant resource for projects and strategies.

Project Prioritization

All strategies or projects included in this report are considered important to both the short term and long term success of the TRCC, each agency and the State of North Carolina. Each initiative will have measurable benefits. In addition to addressing data systems, data collection, the technical ability to link data or systems or other technical components, some projects may focus on increasing the general knowledge, understanding or marketability of the data. Projects demonstrating the results of a successful TRCC partnership should also be considered.

The TRCC also recognizes that many projects or strategies will be easier to implement and may yield high payoff and have few obstacles to archive relatively quick success. If resources become available to the TRCC, typically in the form of grants or possibly through the Executive Committee for Highway Safety, a process should be in place to select these projects.

After all projects were submitted a prioritization matrix sheet was distributed to each member agency. Each member agency ranked the projects from one to ten in ten criteria areas with one

indicating the project did not meet criteria and ten indicating it strongly met the criteria. All member agency totals were then tallied to get an overall priority ranking.

Traffic Safety Information System Projects Listing

The table on the following page includes a list of current traffic safety information system projects, with the projects funded entirely or partially by Section 408 funds listed first. Descriptions of these projects, as well as a list and description of past projects is available in Appendix B.

Project	Project Number	Coordinating Agency	Budget	Budget Source
408-funded projects				
Migration of NCSHP GIS Decision Support from Motor Carrier Enforcement to Traditional Enforcement– The First Step	K9-12-11-02	ITRE / NCSHP	$28,049.00	GHSP
E-citation/Electronic Crash Reporting	K9-12-11-15	NCSHP	$46,000.00	GHSP/NC SHP
NCSHPGIS Decision Support from Motor Carrier Enforcement. To Traditional Enforcement	K9-12-11-02	NCSU ITRE	$28,049.00	GHSP/ITRE
Geocode Pedestrian Crashes Statewide and Traffic Records Strategic Plan	K9-12-11-04	HSRC	$51,421.00	GHSP/HSRC
eCitation/NCAWARE Interface for Arrestable Offenses	K9-12-11-05	NCAOC	$200,100.00	AOC/GHSP
Linking EMS, Trauma, Healthcare and Crash Data Systems	K9-10-11-03	EMSPIC		GHSP
Non 408-funded Projects				
NC Crash Data Web-site	TR-12-10-02	HSRC	$51,782.00	GHSP/HSRC
Quick Response System	TR-12-10-01	HSRC	$45,537.00	GHSP/HSRC
E-citation/Electronic Crash Reporting	TR-12-10-06	Roxboro PD	$40,000.00	Roxboro PD/GHSP
E-citation/Electronic Crash Reporting	TR-12-10-04	Enfield PD	$16,000.00	Enfield PD/ GHSP
Air Card Technology and Connectivity for Sgts. and Troopers in the Field		NCSHP	$608,160.00	GHSP
SADIP 2009	SD-09-37-G-00000	NCDMV-TR, NCSHP	$562,651.00	NCDMV- TR, NCSHP
SADIP 2010	SD-10-37-01-000000	NCDMV-TR	$90,218.00	NCDMV-TR
SADIP 2011	FM-SAD-003-11-01-00	NCDMV-TR	$872,400.00	NCCMV- TR, NCSHP
SADIP 2012 (PENDING)		NCDMV-TR	$946,400.00	NCDMV-TR

**please see appendices for a list of past projects.*

Appendix A – TRCC Participants

Provided below is a list of the active participants in the North Carolina TRCC meetings.

Name	Agency	Email Address
Brian Mayhew (Co-chair)	NC DOT	bmayhew@ncdot.gov
Eric Rodgman (Co-chair)	UNC HSRC	rodgman@hsrc.unc.edu
Frank Hackney	NC GHSP	fhackney@ncdot.gov
Cliff Braam	NC DOT	abraam@ncdot.gov
Terry Hopkins	NC DOT	thopkins@ncdot.gov
Brian Murphy	NC DOT	bgmurphy@ncdot.gov
Jon Arnold	NC DOT	jonarnold@ncdot.gov
John Farley	NC DOT GIS	jcfarley@ncdot.gov
Julian Council	NC DOT DMV	jhcouncil@ncdot.gov
Mike Bryant	NC DOT DMV	mbryant@ncdot.gov
Portia Manley	NC DOT DMV	pmanley@ncdot.gov
Pam Guptill	NC DOT DMV	pguptill@ncdot.gov
Mike Blalock	NC DOT DMV	jmblalock@ncdot.gov
Don Nail	NC GHSP	dnail@ncdot.gov
Sandra Greene	UNC Sheps Ctr	sandrab_greene@unc.edu
Charlotte Williams	UNC Sheps Ctr	chwilliams@schsr.unc.edu
Sharon Schiro	NC DHHS	sharon.schiro@dhhs.nc.gov
Regina Godette Crawford	NC DHHS	regina.godette@dhhs.nc.gov
Alan Dellapenna	NC DHHS	alan.dellapenna@dhhs.nc.gov
Scott Proescholdbell	NC DHHS	scott.proescholdbell@dhhs.nc.gov
Tony Fernandez	UNC EMS	afernandez@emspic.org
Chad Lohmeier	UNC EMS	clohmeier@emspic.org
Brad Hibbard	FHWA	Bradley.Hibbs@dot.gov
Rod Chu	NHTSA	Rod.Chu@dot.gov
Valerie Gompf	US DOT	valerie.gompf@dot.gov
Kevin Breedlove	US DOT	kevin.breedlove@dot.gov
Janet Greene	NCAOC	janet.greene@nccourts.org
Kimberly Gibney	NCAOC	kim.a.gibney@aoc.nccourts.org
Cameron Taylor	NC SHP	cameron.taylor@ncshp.org
Bryan Chadwick	NC SHP	brchadwick@ncshp.org
Eric Schaberg	NC SHP	eric.schaberg@ncshp.org

Greg Ferrara	NCSU ITRE	gpferrar@ncsu.edu
Ron Hughes	NCSU ITRE	rghughes@ncsu.edu
David Harkey	UNC HSRC	harkey@hsrc.unc.edu
Bill Hunter	UNC HSRC	hunter@hsrc.unc.edu
Carol Martell	UNC HSRC	martell@claire.hsrc.unc.edu

Included in the table below are the historical (completed) traffic safety information system projects.

Project	Project Number	Coordinating Agency	Budget	Budget Source
408-funded Projects				
Purchase/Distribution of Printers to Expand the ecitation Program	K9-11-11-02	AOC	$325,000.00	GHSP
	K9-11-11-03	ITRE	$15,898.00	GHSP
Purchase of MDTs for Electronic Crash Reporting - MDPS	K9-11-11-06	Morganton Department of Public Safety	$8,000.00	GHSP
Purchase of MDTs for Electronic Crash Reporting - SPD	K9-11-11-07	Sylva Police Department	$4,132.00	GHSP
Purchase of MDTs for Electronic Crash Reporting - RMPD	K9-11-11-11	Rocky Mount Police Department	$4,000.00	GHSP
Purchase of MDTs for Electronic Crash Reporting - WPD	K9-11-11-12	Warrenton Police Department	$5,425.00	GHSP
ECRS Program Manager Position Continuation	K9-11-11-13	NCDMV-TR	$27,400.00	NCDMV-TR
Salary and Benefits for a State Traffic Records Coordinator	K9-10-11-01	GHSP-Traffic Records	$67,000.00	GHSP
GHSP Traffic Records Coordinator	K9-09-11-01		$60,010.00	
Purchase of Printers	K9-10-11-02	AOC	$325,000.00	GHSP
State Highway Patrol (SHP) Mobile Data Computers	K9-09-11-03		$445,639.00	
MDTs to Enable More Officers to Perform Ecitation and Electronic Crash - LPD	K9-10-11-04	Lenoir Police Department	$44,000.00	GHSP
MDTs to Enable More Officers to Perform Ecitation and Electronic Crash - MCSO	K9-10-11-05	Macon County Sheriffs Office	$16,000.00	GHSP
MDTs to Enable More Officers to Perform Ecitation and Electronic Crash - TPD	K9-10-11-06	Taylorsville Police Department	$11,372.00	GHSP

Project	Project Number	Coordinating Agency	Budget	Budget Source
MDTs to Enable More Officers to Perform Ecitation and Electronic Crash - N.C. Highway Patrol	K9-10-11-07	N. C. State Highway Patrol	$331,240.00	GHSP
MDTs to Enable More Officers to Perform Ecitation and Electronic Crash - GPD (Gastonia)	K9-10-11-08	Gastonia Police Department	$3,340.00	GHSP
AOC-Batmobile for purchase of MDTs to Place Aboard Each BAT Units	K9-10-11-09	AOC	$10,992.00	GHSP
Systems Gap Analysis	K9-10-11-10	N. C. DOT - Division of Motor Vehicles	$117,420.00	GHSP
MDTs to Enable More Officers to Perform Ecitation and Electronic Crash - GPD (Garner)	K9-10-11-11	Garner Police Department	$10,000.00	GHSP
MDTs to Enable More Officers to Perform Ecitation and Electronic Crash - NPD	K9-10-11-12	Norwood Police Department	$4,850.00	GHSP
Administrative Office of the Courts (AOC) e-Citation Printers	K9-09-11-04		$328,157.00	
Division of Motor Vehicles (DMV) Gap Analysis	K9-09-11-05		$56,109.00	
NC DOT Traffic Engineering TR Guidebook	K9-09-11-06		$6,342.00	
NC DOT Traffic Engineering TRCC Support	K9-09-11-07		$33,000.00	
NC DOT Traffic Engineering TR Guidebook	K9-09-11-06		$6,342.00	
Electronic Submission of Crash Reports (DMV-349) from NCSHP	K9-08-11-04	NCSHP	$331,240.00	GHSP
Non 408-funded Projects				
UNC HSRC Crash Web Site Update			$48,483.00	402 funding
Local Law Enforcement MDT Projects			$19,682.00	402 funding

Project	Project Number	Coordinating Agency	Budget	Budget Source
eCitation®		NCAOC	$1,521,616.00	GHSP/Gov.'s Crime Comm.
ACIS/Eastern Band of Cherokee Indians (ECBI)		NCAOC	$67,990.00	EBCI/NCAOC
Automated Criminal Infraction System (ACIS)		NCAOC		NCAOC
Criminal Court Information System – District Attorney Component (CCIS-DA)		NCAOC	$3,333,348.24	NCAOC
Criminal Court Information System – Clerk Component (CCIS-CC)		NCAOC	$5,808,653.00	NCAOC
North Carolina Warrant Repository/NCAWARE		NCAOC	$13,000,000.00	
payNCticket		NCAOC	$185,459.00	NCAOC
NC Local and State Law Enforcement Electronic Crash Reporting				

2012 Traffic Records Project Status Reports

See below for project descriptions for both the current and past traffic safety information system projects.

Electronic Submission of Crash Reports (DMV-349) from NCSHP

Number(s): K9-08-11-04
Agency(ies): North Carolina State Highway Patrol
Project Leader(s): First Sergeant Cameron Taylor
Performance Period: 10/1/2009 – 9/30/2010
Description: This project is providing hardware (64 Mobile Data Terminals) and software resources for the NCSHP to electronically submit crash data to the North Carolina DMV. The NCSHP is the largest law enforcement agency in the state and typically responds and reports 66 percent of all crashes within NC. This project has continued an effort by the patrol with the assistance of GHSP to help troopers submit this crash data electronically. It continues to have a major impact on the timeliness, quality (accuracy) and accessibility of crash data.
Status: MDCs have been purchased and are deployed to troopers in the field. They are currently providing electronic submission of crash data to the North Carolina DMV.
Sponsoring Agency 1: GHSP (Budget $331,240)
Total Budget: $331,240
For More Information Contact: FSgt Cameron Taylor or Mr. Bryan Chadwick, 919-662-4440 or 919-436-3011 respectively, cstaylor@ncshp.org or brchadwick@ncshp.org

Air Card Technology and Connectivity for Sgts. and Troopers in the Field

Agency(ies): North Carolina State Highway Patrol
Project Leader(s): Major Bill Grey
Performance Period: 10/1/2012 – 9/30/2013
Description: This technology will allow troopers to enter citations, crash reports and other programs/software needed for safety and efficiency. Troopers will be able to complete any necessary reports in a timely manner and uploaded to DMV immediately.
Status: Grant application has been completed and submitted. We are currently awaiting any award information from GHSP.
Sponsoring Agency 1: GHSP (Budget $608,160)
Total Budget: $608,160
For More Information Contact: FSgt Cameron Taylor or Mr. Bryan Chadwick, 919-662-4440 or 919-436-3011 respectively, cstaylor@ncshp.org or brchadwick@ncshp.org

Migration of NCSHP GIS Decision Support from Motor Carrier Enforcement to Traditional Enforcement – The First Step

Number(s): K9-12-11-02
Agency(ies): ITRE / NCSHP
Project Leader(s): Greg Ferrara
Performance Period: 2/92012 – 9/20/2012
Performance Areas: data accessibility
Status: The project has just kicked off.

Sponsoring Agency 1: GHSP (Budget $28,049)
For More Information Contact: Greg Ferrara, 919-515-8656, gpferrar@ncsu.edu

SADIP 2009
Number(s): SD-09-37-G-00000
Agency(ies): NCDMV- TRAFFIC RECORDS, NCSHP
Project Leader(s): Michael Bryant, Julian H. Council, Michael Thomas, Joe Kirshner
Performance Period: 9/2009 – 9/2012
Description: SaDIP 2009 – DMV-349 re-write and ECRS Pilot
Performance Areas: The expansion of electronic crash reporting which would accept crash reports electronically from non-TraCS users. The Proof of Concept was successful by certification of two Law Enforcement agencies Raleigh and Garner PDs. DMV-349 form revision, Projected to start work 4th Qtr 2013. Incorporated a more comprehensive crash reporting curriculum at law enforcement academies and implement the state's train-the-trainer module. Updated instruction manuals, education of all organizations involved in the crash collection and reporting process on their role in the process and the standards to be clearly defined by DMV.
Status: Completed (We successfully started receiving crash reports electronically from third party vendors for the Garner and Raleigh PDs. Grant was extended on behalf of the NCSHP until Sept. 2012. Grant will be closed out for the NCDMV portion of the grant Mar 2012.)
Sponsoring Agency 1: NCDMV- TRAFFIC RECORDS (Budget $366,803)
Sponsoring Agency 2: NCSHP (Budget: $195,848)
Total Budget: $562,651
For More Information Contact: Julian H. Council, 919-861-3061, jhcouncil@ncdot.gov

SADIP 2010
Number(s): SD-10-37-01-000000
Agency(ies): NCDMV-TRAFFIC RECORDS
Project Leader(s): Michael Bryant, Julian H. Council, Michael Thomas, Cornelia Kensak
Description: SaDIP 2010 – TraCS 10 Upgrade Project. This grant is funded until 9/2012.
Performance Areas: Upgrade the North Carolina TraCS software to TraCS 10. Implement a new Incident Location Tool into North Carolina TraCS. Train current IT staff on the TraCS Software Development Kit (SDK). Update TraCS related instructional materials and on-line help
Status: In progress

- Upgrade the North Carolina TraCS software to TraCS 10 (in progress),
- Implement a new Incident Location Tool into North Carolina TraCS (the tool has been purchased),
- Train current IT staff on the TraCS Software Development Kit (SDK) (completed)
- Update TraCS related instructional materials and on-line help (in the process of hiring a Tech Writer).

Sponsoring Agency 1: NCDMV-TRAFFIC RECORDS (Budget $90,218)
Total Budget: $90,218
For More Information Contact: Julian H. Council, 919-861-3061, jhcouncil@ncdot.gov

ECRS Program Manager Position Continuation

Number(s): K9-11-11-13
Agency(ies): NCDMV-TRAFFIC RECORDS
Project Leader(s): Michael Bryant, Julian H. Council, Michael Thomas, Joe Kirshner
Performance Period: 8/2011 – 9/2011
Description: One (1) Project Manager (This position is being funded by the 2009 SaDIP Grant which was extended until July 31, 2011. We have submitted a Grant request for 2011 SaDIP funding to continue this position which we hope is approved Sep 30, 2011. There will be a 2 month gap with no funding for the position. Funding for the gap was requested from the TRCC.
Performance Areas: This project would endeavor to provide a "proof of concept" with the goal of accepting crash reports electronically from non-TraCS users.
Status: Completed. We successfully started receiving crash reports electronically from third party vendors for the Garner and Raleigh PDs.
Sponsoring Agency 1 NCDMV- TRAFFIC RECORDS (Budget $27,000)
Total Budget: $27,400
For More Information Contact: Julian H. Council, 919-861-3061, jhcouncil@ncdot.gov

SADIP 2011
Number(s): FM-SAD-003-11-01-00
Agency(ies): NCDMV-TRAFFIC RECORDS
Project Leader(s): Michael Bryant, Julian H. Council, Michael Thomas, Joe Kirshner
Performance Period: 9/2011 – 9/2013
Description: SaDIP 2011 – ECRS Rollout. This grant is for a 2 year time frame.
Performance Areas: Goal is to improve North Carolina's crash data by continuing the SADIP 2009 and 2010 Grant project goals to increase the electronic submission of crash data by continuing to roll out the Electronic Crash Reporting Submission services (ECRS) created during the SaDIP 2009 grant.
Status: In Progress

- The funds were used to hire a Project Manager
- The funds were used to hire a Tech Writer (1 year) and will be closed out 9/2013.
- Successfully began receiving electronic crash reports from Charlotte/Mecklenburg, Davidson and Charlotte Airport PDs
- We have 5 successful deployments in all.

Sponsoring Agency 1: NCDMV- TRAFFIC RECORDS (Budget: $500,000)
Sponsoring Agency 2: NCSHP (Budget $372,400)
Total Budget: $872,400
For More Information Contact: Julian H. Council, 919-861-3061, jhcouncil@ncdot.gov

SADIP 2012 (PENDING)
Number(s): n/a
Agency(ies): NCDMV-TRAFFIC RECORDS
Project Leader(s): Michael Bryant, Julian H. Council, Michael Thomas
Performance Period: n/a
Description: SaDIP 2012 – (Pending) the funding will be used to hire supplemental IT staffing and to purchase the supported version of "Easy Street Draw" crash diagraming tool which is

currently being used by law enforcement. Supplemental staff will work on outstanding Change Requests to clean up the system environment in preparation to process electronic and paper submissions efficiently.
Status: Pending
Sponsoring Agency 1: NCDMV- TRAFFIC RECORDS (Budget $946,400)
Total Budget: $946,400
For More Information Contact: Julian H. Council, 919-861-3061, jhcouncil@ncdot.gov

E-Citation/Electronic Crash Reporting
Number(s): K9-12-11-15
Agency(ies): North Carolina State Highway Patrol
Project Leader(s): Lt. John Ivarsson
Performance Period: 10/01/2011 – 09/31/2012
Description: To purchase printers to enable the department to perform e-citation reporting.
Performance Areas: Timeliness, uniformity and accessibility
Status: Units are being purchased and officers being trained to use.
Sponsoring Agency 1: GHSP (Budget $46,000)
Sponsoring Agency 2: North Carolina SHP
Total Budget: $46,000
For More Information Contact: Frank Hackney, 919-733-3083, fhackney@ncdot.gov

Geocode Pedestrian Crashes Statewide and Traffic Records Strategic Plan
Number(s): K9-12-11-04
Agency(ies): UNC Highway Safety Research Center
Project Leader(s): Libby Thomas
Performance Period: 10/01/2011 – 09/31/2012
Description: To produce spatially-linked pedestrian crash data and summary information for the state that will provide the basis for allocation of resources and a zonal, targeted approach to pedestrian safety. To analyze the data to highlight the spatial distribution of pedestrian safety problems to help the state better target responses and appropriate countermeasures and also provide a model for further analysis by local agencies for problem identification and targeting of behavioral countermeasures. To provide a highlights report summary of findings, describe further uses of the data and recommend additional measures to enhance pedestrian safety in NC. This project was added to in February, 2012 by the addition of the task for HSRC to act as the facilitator in writing a new Strategic Plan for Traffic Records in North Carolina after the conclusion of an assessment of the Traffic Records by NHTSA in January, 2012.
Performance Areas: Accuracy, completeness and accessibility.
Status: The geo-coding project is currently geo-coding three years of pedestrian crash data and will be performing spatial analysis once completed. The Strategic Plan portion is up and running with a delivery date set for the end of May 2012.
Sponsoring Agency 1: GHSP (Budget $51,421)
Sponsoring Agency 2 HSRC
Total Budget: $51,421
For More Information Contact: Frank Hackney, 919-733-3083, fhackney@ncdot.gov

NCSHPGIS Decision Support from Motor Carrier Enf. To Traditional Enf.
Number(s): K9-12-11-02
Agency(ies): NCSU ITRE
Project Leader(s): Greg Ferrara
Performance Period: 10/01/2011 – 09/31/2012
Description: To provide additional support for the larger project of producing a web map of crash locations for the motor carrier officers and expanding that knowledge statewide for all crashes, etc. This web map and an analysis will be expanded for use by the SHP to identify performance measures of effectiveness, identify technology gaps and record and report results.
Performance Areas: Completeness, integration and uniformity.
Status: This project will provide partial funding (10 percent) for the project manager, a research assistant and a graduate student.
Sponsoring Agency 1: GHSP (Budget $28,049)
Sponsoring Agency 2: ITRE
For More Information Contact: Frank Hackney, 919-733-3083, fhackney@ncdot.gov

NC Crash Data Web-site
Number(s): TR-12-10-02
Agency(ies): UNC Highway Safety Research Center
Project Leader(s): William Hunter
Performance Period: 10/01/2011 – 09/31/2012
Description: To upgrade the website by adding data from 2011. To maintain the website and correct identified problems. To conduct beta test by users and revise system.
Performance Areas: Completeness and accessibility
Status: This is an ongoing project to enable all users quick access to crash data in a timely fashion through use of the internet. This data is updated on a yearly basis.
Sponsoring Agency 1: GHSP (Budget $51,782)
Sponsoring Agency 2: HSRC
Total Budget: $51,782
For More Information Contact: Frank Hackney, 919-733-3083, fhackney@ncdot.gov

Quick Response System
Number(s): TR-12-10-01
Agency(ies): UNC Highway Safety Research Center
Project Leader(s): Eric Rodgman
Performance Period: 10/01/2011 – 09/31/2012
Description: To provide quick access to the North Carolina crash data, vehicle information and driver license information on a requested basis. To provide extract files as required by GHSP and the state. To meet with key agents in the state to help facilitate the dissemination of summarized data and information.
Performance Areas: Timeliness, accuracy, completeness, integration, uniformity and accessibility

Status: This is a project that has been ongoing for more than ten years. This service is made available to anyone requesting the data at any time. This project has been invaluable in assisting the public as well as the private sector with data related to traffic at every level of the state.
Sponsoring Agency 1: GHSP (Budget $45,537)
Sponsoring Agency 2: HSRC
Total Budget: $45,537
For More Information Contact: Frank Hackney, 919-733-3083, fhackney@ncdot.gov

eCitation/NCAWARE Interface for Arrestable Offenses
Number(s): K9-12-11-05
Agency(ies): Administrative Office of the Courts
Project Leader(s): Janet Greene
Performance Period: 10/01/2011 – 09/31/2012
Description: To provide four Senior Analyst/Programmers to AOC to enhance eCitation to include processing of arrestable offenses and to develop an interface from eCitations to NCAWARE to transmit arrestable data and create a temporary magistrates order process for magistrates review and approval.
Performance Areas: Accuracy, completeness, integration, uniformity and accessibility.
Status: This project will provide funding for the four positions this year as part of a multi-year project at AOC.
Sponsoring Agency 1: GHSP (Budget $200,100)
Sponsoring Agency 2 AOC
Total Budget: $200,100
For More Information Contact: Frank Hackney, 919-733-3083, fhackney@ncdot.gov

E-Citation/Electronic Crash Reporting
Number(s): TR-12-10-06
Agency(ies): Roxboro Police Department
Project Leader(s): Lt. Mike Price
Performance Period: 10/01/2011 – 09/31/2012
Description: To purchase MDTs to enable the department to perform e-citation reporting and electronic crash reporting.
Performance Areas: Timeliness, uniformity and accessibility
Status: Units are being purchased and officers being trained to use.
Sponsoring Agency 1: GHSP (Budget $20,000)
Sponsoring Agency 2: Roxboro Police Department (Budget $20,000)
Total Budget: $40,000
For More Information Contact: Frank Hackney, 919-733-3083, fhackney@ncdot.gov

E-Citation/Electronic Crash Reporting
Number(s): TR-12-10-04
Agency(ies): Enfield Police Department
Project Leader(s): Chief Eddie Buffaloe
Performance Period: 10/01/2011 – 09/31/2012
Description: To purchase MDTs to enable the department to perform e-citation reporting and electronic crash reporting.
Performance Areas: Timeliness, uniformity and accessibility
Status: Units are being purchased and officers being trained to use.
Sponsoring Agency 1: GHSP (Budget $8,000)
Sponsoring Agency 2: Enfield Police Department (Budget $8,000)
Total Budget: $16,000
For More Information Contact: Frank Hackney, 919-733-3083, fhackney@ncdot.gov

ACIS/Eastern Band of Cherokee Indians (ECBI)
Agency(ies): North Carolina Administrative Office of the Courts
Project Leader(s): Charles Lane
Performance Period: 1/2010 – 2/2012
Description: This project provides the Eastern Band of Cherokee Indians (EBCI) with access to the Automated Criminal Infraction System (ACIS) for the primary purpose of utilizing the ACIS to DMV interface to transmit Cherokee Tribal Court citation information.
Performance Areas:

- Accuracy: Cherokee traffic records data will adhere to the same strict validations already in place in ACIS.
- Completeness: By incorporating ECBI traffic data into ACIS, DMV will be able to have a much more complete picture of statewide traffic data. The ECBI are physically located in five North Carolina Counties.
- Integration: ECBI data will be transmitted electronically to DMV once agreements are in place and code changes are made at DMV to accept the transactions.
- Timeliness: Once DMV is able to accept the ECBI transactions, traffic charge and adjudication data will be available in DMV's systems overnight.
- Uniformity: ECBI agreed to use the North Carolina Uniform Citation.
- Accessibility: ECBI traffic data will be available to DMV overnight once transactions are accepted. ECBI unserved processes will not be available for other counties to view or serve because only ECBI law enforcement has legal authority to serve their processes.

Status: On 03/12 ECBI to begin using ACIS as their system of record for criminal and infraction cases.
Sponsoring Agency 1: EBCI (Budget $54,800)
Sponsoring Agency 2: NCAOC (Budget $13,190)
Total Budget: $67,990
For More Information Contact: Janet Greene, 919-890-2041, Janet.greene@nccourts.org

Automated Criminal Infraction System (ACIS)

Agency(ies): North Carolina Administrative Office of the Courts

Project Leader(s): Wanda Thomas/Paul Cash

Performance Period: 1/2010 – 2/2012

Description: ACIS is an automated, statewide system which provides direct operational support to the Clerk of Superior Court Offices in the areas of district and superior court criminal case processing. The system is comprised of two major components:

- Criminal Module – Criminal case data is entered from case initiating documents such as Warrants for Arrest, Orders for Arrest, or Bills of Indictment or data is received electronically from NCAWARE. Cases are tracked from initiation through disposition, with some post-disposition entries such as probation violation. If appealed, notations are made including results of appeal.
- Infraction Module – The majority of infraction data is electronically transmitted from the eCitation system with less than 20% of data entered from paper processes. Infraction cases are also tracked from initiation through disposition in the system.

Performance Areas:

- Accuracy: All data, except some free text offenses (offenses used less often where no standardized code and language has been established) and clerk notes/special conditions is rigorously validated and data integrity is ensured. ACIS data is shared with all other state criminal justice agencies, the DOT/DMV, many federal agencies, special interest groups and the public in general. Data about an individual's court record must be accurate.
- Completeness: All criminal and infraction cases are tracked within ACIS. It contains a comprehensive repository of all cases. Infraction cases are purged from the system 5 years after their disposition date.
    - Integration: Division of Motor Vehicles (DMV) – transmittal of charge and disposition data for motor vehicle offenses
    - State Bureau of Investigation (SBI) – transmittal of charged and disposition data; match occurs with SBI records to retrieve the state identification number (SID) or fingerprint number.
    - State Highway Patrol (SHP) – transmittal of all SHP trooper issued citation data
    - Department of Correction (DOC) – transmittal of charge and disposition data for defendants sentenced to active prison time or supervised probation.
- Timeliness: With the implementation of eCitation in 1999 and NCAWARE in 2008, most of the case initiation data in ACIS is received electronically, real-time. Results of case trials/hearings are often entered by clerk staff the day of court but not during court. Court proceedings still rely on paper files or shucks during the trial.
- Uniformity: All 100 counties track all court cases in ACIS. North Carolina has a uniform court system with standardized, uniform forms. The same data is captured the same way in ACIS in all 100 counties.
- Accessibility: ACIS is available 24 hours a day except for scheduled semi-monthly maintenance (generally one hour on a Sunday) to court personnel, law enforcement, all criminal justice agencies, the DOT/DMV, federal criminal justice agencies such as ICE,

the Department of Health and Human Services, and to the public through contracted public access vendors.

Status:

- 02/10 Implemented code changes to accept disposition of cases via payNCticket
- 04/10 Implemented data interface to CJLEADS
- 03/10 Provided new interface files to Mecklenburg, including Infraction data
- 04/10 Modified programs to accept numeric citation number for DMV Licensing and Theft
- 07/10 Allowed for the transfer of H and I felonies back to district court.
- 10/10 Created shadow SHP citation validation file to diminish unavailability during SHP maintenance windows.
- 12/10 Implemented new courts costs and offense codes.
- 08/11 Added Court Cost Waiver Flag for new legislation.
- 10/11 Added additional edits for implied consent offenses.
- 12/11 Implemented new legislatively mandated offense codes. Added functionality for Provisional Civil Revocation of driver licenses.

For More Information Contact: Janet Greene, 919-890-2041, Janet.greene@nccourts.org

Criminal Court Information System – Clerk Component (CCIS-CC)

Agency(ies): North Carolina Administrative Office of the Courts

Project Leader(s): Mark Prakke

Performance Period: 1/ 2010 – 2/2012

Description: CCIS-CC is a web-based criminal case management system which will ultimately replace the Automated Criminal Infraction System (ACIS). Functionality is being delivered incrementally and as functions are delivered in CCIS-CC, the corresponding functions are "turned off" in ACIS.

Performance Areas:

- Accuracy: All data, except some free text offenses (offenses used less often where no standardized code and language has been established) is rigorously validated and data integrity is ensured.
- Completeness: All criminal and infraction cases are tracked within ACIS or CCIS-CC. Data for both systems is stored on the same physical database and accessed by both systems. Along with ACIS, CCIS-CC contains a comprehensive repository of all cases. Infraction cases are purged from the system 5 years after their disposition date.
- Integration: Existing ACIS interfaces.
- Timeliness: With the implementation of eCitation in 1999 and NCAWARE in 2008, most of the case initiation data in CCIS-CC and ACIS is received electronically, real-time. Results of case trials/hearings are often entered by clerk staff the day of court but not during court. Court proceedings still rely on paper files or shucks during the trial.
- Uniformity: All 100 counties track all court cases in ACIS and CCIS-CC. North Carolina has a uniform court system with standardized, uniform forms. The same data is captured the same way in ACIS and CCIS-CC in all 100 counties.

- Accessibility: CCIS-CC is available 24 hours a day except for scheduled semi-monthly maintenance (generally one hour on a Sunday) to court personnel.

Status:

- 5/10 Implemented Release 5.1 statewide which included the automation of event corrections to DMV.
- 06/11 Release 5.2 which allows for pre-trial and post-disposition events tracking.
- 07/11 Implemented newly mandated court costs and added court costs waiver flag.
- 09/11 Implemented civil revocation for provisional licensees.
- Currently developing new functionality to capture the complete Bill of Costs and re-designing ACIS disposition functionality (to be replaced with CCIS-CC design).

Sponsoring Agency 1: NCAOC (Budget $5,808653)
Total Budget: $5,808653
For More Information Contact: Janet Greene, 919-890-2041, Janet.greene@nccourts.org

Criminal Court Information System – District Attorney Component (CCIS-DA)
Agency(ies): North Carolina Administrative Office of the Courts
Project Leader(s): Ginger Helms/Sanjay Bhojani
Performance Period: 1/2010 – 2/2012
Description: CCIS-DA is a web-based criminal case management system developed specifically for District Attorneys to manage the caseload within their offices. CCIS-DA captures individualized case notes, and tracks and schedules action-oriented events and decision points relevant to the prosecution of each case, including DWI case management.
Performance Areas:

- Accuracy: All data, except some free text offenses (offenses used less often where no standardized code and language has been established) is rigorously validated and data integrity is ensured.
- Completeness: All district and superior cases assigned to the District Attorney offices may be downloaded from ACIS and managed by each local office.
- Integration: Interfaces with ACIS to download case data real-time. Also interfaces with the Discovery Automation System (DAS) which allows uploads of law enforcement discovery.
- Please also see attached list of Internal and External Interfaces.
- Timeliness: Cases may be selected and downloaded real-time from ACIS.
- Uniformity: CCIS-DA is implemented in all 100 counties. North Carolina has a uniform court system with standardized, uniform forms and offense charging language.
- Accessibility: CCIS-DA is available 24 hours a day except for scheduled semi-monthly maintenance (generally one hour on a Sunday) to District Attorney staff.

Status:

- 01/10 Implemented Release 3.0 which included calendar enhancements and Integration with the Discovery Automation System (DAS)
- 10/10 Implemented Release 4.0 which included additional DAS integration.
- 07/11 Implemented newly mandated court costs and added court costs waiver flag.
- 01/11 Added statewide search by defendant name.

- 04/11 Implemented real-time interface with ACIS for case download.
- 10/11 Implemented CCIS-DA in all 100 counties.

Sponsoring Agency 1: NCAOC (Budget $3,333,348.24)
Total Budget: $3,333,348.24
For More Information Contact: Janet Greene, 919-890-2041, Janet.greene@nccourts.org

payNCticket
Agency(ies): North Carolina Administrative Office of the Courts
Project Leader(s): Wanda Thomas
Performance Period: 1/2010 – 2/2012
Description: payNCticket allows the public to go online and pay their waivable traffic citations using either a credit or debit card. The system automatically disposes of the case in the Automated Criminal Infraction System (ACIS) once the payment is made. The system provides custom front end pages which allow the cited person to search and select his/her citation for payment. The vendor, NIC, provides card verification and processing services.
Performance Areas:

- Accuracy: All data is rigorously validated and data integrity is ensured.
- Completeness: Any traffic citation with waivable only offenses may be paid and disposed using payNCticket
- Integration: payNCticket directly interfaces with ACIS and the Financial Management System (FMS) to immediately mark the case paid and disposed. In turn ACIS will transmit the data to both DMV and the North Carolina State Highway Patrol (SHP) systems.
- Timeliness: Case disposition in ACIS is real-time. Interfaces with DMV and SHP are overnight.
- Uniformity: payNCticket is operational in all 100 counties.
- Accessibility: payNCticket is available 24 hours a day except for scheduled semi-monthly maintenance (generally one hour on a Sunday) to the public.

Status:

- 3/10 Piloted payNCticket in Cumberland County.
- 06/10 Completed statewide roll-out of payNCticket.
- 05/11 Added citation number to customer receipt for DMV acceptance of receipt. Added duplicated receipt function.
- 06/11 Implemented new legislatively mandated court costs.
- 07/11 Added misdemeanor confinement fee and equipment violation fee.
- 12/11 Enhanced the look and feel of the user interface.
- 02/12 Added ability to automatically re-instate a case dismissed with leave so that it can be paid online.
- Currently working to expand the system to allow non-traffic waivable offenses to also be paid online.

Sponsoring Agency 1: NCAOC (Budget $185,459)
Total Budget: $185,459
For More Information Contact: Janet Greene, 919-890-2041, Janet.greene@nccourts.org

Automated Criminal Infraction System (ACIS)

Agency(ies): North Carolina Administrative Office of the Courts

Project Leader(s): Wanda Thomas/Paul Cash

Performance Period: 1/2010 – 2/2012

Description: ACIS is an automated, statewide system which provides direct operational support to the Clerk of Superior Court Offices in the areas of district and superior court criminal case processing. The system is comprised of two major components:

- Criminal Module – Criminal case data is entered from case initiating documents such as Warrants for Arrest, Orders for Arrest, or Bills of Indictment or data is received electronically from NCAWARE. Cases are tracked from initiation through disposition, with some post-disposition entries such as probation violation. If appealed, notations are made including results of appeal.
- Infraction Module – The majority of infraction data is electronically transmitted from the eCitation system with less than 20% of data entered from paper processes. Infraction cases are also tracked from initiation through disposition in the system.

Performance Areas:

- Accuracy: All data, except some free text offenses (offenses used less often where no standardized code and language has been established) and clerk notes/special conditions is rigorously validated and data integrity is ensured. ACIS data is shared with all other state criminal justice agencies, the DOT/DMV, many federal agencies, special interest groups and the public in general. Data about an individual's court record must be accurate.
- Completeness: All criminal and infraction cases are tracked within ACIS. It contains a comprehensive repository of all cases. Infraction cases are purged from the system 5 years after their disposition date.
- Integration:
    - Division of Motor Vehicles (DMV) – transmittal of charge and disposition data for motor vehicle offenses
    - State Bureau of Investigation (SBI) – transmittal of charged and disposition data; match occurs with SBI records to retrieve the state identification number (SID) or fingerprint number.
    - State Highway Patrol (SHP) – transmittal of all SHP trooper issued citation data
    - Department of Correction (DOC) – transmittal of charge and disposition data for defendants sentenced to active prison time or supervised probation.
- Timeliness: With the implementation of eCitation in 1999 and NCAWARE in 2008, most of the case initiation data in ACIS is received electronically, real-time. Results of case trials/hearings are often entered by clerk staff the day of court but not during court. Court proceedings still rely on paper files or shucks during the trial.
- Uniformity: All 100 counties track all court cases in ACIS. North Carolina has a uniform court system with standardized, uniform forms. The same data is captured the same way in ACIS in all 100 counties.
- Accessibility: ACIS is available 24 hours a day except for scheduled semi-monthly maintenance (generally one hour on a Sunday) to court personnel, law enforcement, all

criminal justice agencies, the DOT/DMV, federal criminal justice agencies such as ICE, the Department of Health and Human Services, and to the public through contracted public access vendors.

Status:

- 02/10 Implemented code changes to accept disposition of cases via payNCticket
- 04/10 Implemented data interface to CJLEADS
- 03/10 Provided new interface files to Mecklenburg, including Infraction data
- 04/10 Modified programs to accept numeric citation number for DMV Licensing and Theft
- 07/10 Allowed for the transfer of H and I felonies back to district court.
- 10/10 Created shadow SHP citation validation file to diminish unavailability during SHP maintenance windows.
- 12/10 Implemented new courts costs and offense codes.
- 08/11 Added Court Cost Waiver Flag for new legislation.
- 10/11 Added additional edits for implied consent offenses.
- 12/11 Implemented new legislatively mandated offense codes. Added functionality for Provisional Civil Revocation of driver licenses.

For More Information Contact: Janet Greene, 919-890-2041, Janet.greene@nccourts.org

eCitation®

Agency(ies): North Carolina Administrative Office of the Courts
Project Leader(s): Charles Lane/Kimberly Gibney
Performance Period: 1/ 2010 – 2/2012
Description: eCitation®, using existing wireless connections, allows the law enforcement officer to create and issue citations from the patrol car. All generated citations are transmitted to the Automated Criminal Infraction System (ACIS) where the citation and case information can be accessed immediately. The system is available statewide and is in use by over 14,000 law enforcement officers and all 100 counties Clerk of Superior Court Offices.
Performance Areas:

- Accuracy: All data is rigorously validated and data integrity is ensured.
- Completeness: Any traffic citation with non-arrestable offenses may be generated through eCitation®. Over 82% of all citations are generated through eCitation®.
- Integration: eCitation® directly interfaces with ACIS via the transmittal of the citation from the officer's client component. ACIS in turn transmits the citation information to both DMV and the North Carolina State Highway Patrol. The eCitation® officer component also directly interfaces with DMV's license and registration systems to pre-fill demographic and vehicle data on the citation.
- Timeliness: The citation may be automatically transmitted to ACIS at time of issuance or the officer may choose to override this function and transmit later for reasons such as being out of wireless coverage range. Interfaces to DMV and SHP are overnight.
- Uniformity: eCitation® is operational in all 100 counties. North Carolina has a unified court system and all forms including the citation form are uniform throughout the state

- Accessibility: The system is available, free of charge, to any law enforcement officer with a computer and a printer in the patrol car.

Status:

- 07/10 Completed distribution of 983 printers to 126 agencies (funded by GHSP)
- 10/10 Release 3.1.5 which included new court costs, payNCticket verbiage on citations.
- 12/10 Year-to-date implemented 48 new law enforcement agencies and generated 1.3 million citations.
- 03/11 Received new GHSP grant to purchase 1083 printers for law enforcement.
- 09/11 Release 4.0 which implemented courtroom load limiting.
- 12/11 Year-to-date implemented 8 new agencies and distributed 821 printers.
- Currently undertaking major endeavor to rewrite eCitation onto a new technical platform (from VB to Java) and interfacing eCitation to NCAWARE for arrests which begin on a citation. The arrestables interface to NCAWARE will concentrate on DWI, No Operator's License, and Driving While License Revoked offense for the first release. Officers anticipate that the arrestables interface will save them up to three hours per DWI stop.

Sponsoring Agency 1: GHSP – initial funding for project (Budget $500,000)
Sponsoring Agency 2: Governor's Crime Commission – printers (Budget $220,875)
Additional Sponsors: GHSP grants to purchase printers for law enforcement (Budget $800,741)
Total Budget: $1,521,616
For More Information Contact: Janet Greene, 919-890-2041, Janet.greene@nccourts.org

Criminal Court Information System – Clerk Component (CCIS-CC)
Agency(ies): North Carolina Administrative Office of the Courts
Project Leader(s): Mark Prakke
Performance Period: 1/2010 – 2/2012
Description: CCIS-CC is a web-based criminal case management system which will ultimately replace the Automated Criminal Infraction System (ACIS). Functionality is being delivered incrementally and as functions are delivered in CCIS-CC, the corresponding functions are "turned off" in ACIS.
Performance Areas

- Accuracy: All data, except some free text offenses (offenses used less often where no standardized code and language has been established) is rigorously validated and data integrity is ensured.
- Completeness: All criminal and infraction cases are tracked within ACIS or CCIS-CC. Data for both systems is stored on the same physical database and accessed by both systems. Along with ACIS, CCIS-CC contains a comprehensive repository of all cases. Infraction cases are purged from the system 5 years after their disposition date.
- Integration: Existing ACIS interfaces.
- Timeliness: With the implementation of eCitation in 1999 and NCAWARE in 2008, most of the case initiation data in CCIS-CC and ACIS is received electronically, real-time. Results of case trials/hearings are often entered by clerk staff the day of court but not during court. Court proceedings still rely on paper files or shucks during the trial.

- Uniformity: All 100 counties track all court cases in ACIS and CCIS-CC. North Carolina has a uniform court system with standardized, uniform forms. The same data is captured the same way in ACIS and CCIS-CC in all 100 counties.
- Accessibility: CCIS-CC is available 24 hours a day except for scheduled semi-monthly maintenance (generally one hour on a Sunday) to court personnel.

Status:

- 5/10 Implemented Release 5.1 statewide which included the automation of event corrections to DMV.
- 06/11 Release 5.2 which allows for pre-trial and post-disposition events tracking.
- 07/11 Implemented newly mandated court costs and added court costs waiver flag.
- 09/11 Implemented civil revocation for provisional licensees.
- Currently developing new functionality to capture the complete Bill of Costs and re-designing ACIS disposition functionality (to be replaced with CCIS-CC design).

Sponsoring Agency 1: NCAOC (Budget $5,808653)
Total Budget: $5,808653
For More Information Contact: Janet Greene, 919-890-2041, Janet.greene@nccourts.org

North Carolina Warrant Repository/NCAWARE
Agency(ies): North Carolina Administrative Office of the Courts
Project Leader(s): Stephanie Taborn
Performance Period: 1/2010 – 2/2012
Description: NCAWARE is a custom developed, web-based system that maintains and tracks unserved criminal processes such as warrants for arrest, orders for arrest, and criminal summons. With the implementation of NCAWARE and accompanying legislation which provided for a statewide electronic warrant repository, officers can view and serve any electronic unserved process in the state without having paper in hand. Officers are also able to pre-fill arrest and warrant information prior to appearing before the magistrate and thus decreasing processing time. NCAWARE currently has over 2.5 million processes and over 33,000 court and law enforcement users.
Performance Areas:

- Accuracy: All data, except some free text offenses (offenses used less often where no standardized code and language has been established) and officer notes is rigorously validated and data integrity is ensured. It is critical that data be accurate to prevent re-arrest of individuals and to ensure service of processes.
- Completeness: NCAWARE is operational in 98 counties. The Statewide Warrant Search feature pulls all processes in NCAWARE and any non-converted cases (including those cases from Mecklenburg and Buncombe which have not been implemented yet) from ACIS to give a comprehensive view of all outstanding processes for an individual. All data is housed in a relational DB2 criminal enterprise database.
- Integration:
    - Division of Motor Vehicles (DMV) – pre-fill of both driver and vehicle data.
    - ACIS – immediate transmittal through messaging of all case/process activity.
- Timeliness: All data is captured at the point of entry and is transferred to ACIS real-time.

- Uniformity: Currently 98 of 100 counties track all processes in NCAWARE. North Carolina has a uniform court system with standardized, uniform forms. The same data is captured the same way in NCAWARE in all counties.
- Accessibility: NCAWARE is available 24 hours a day except for scheduled semi-monthly maintenance (generally one hour on a Sunday) to court personnel, law enforcement, all criminal justice agencies, the DOT/DMV, federal criminal justice agencies such as ICE.

Status:

- 03/10 Began work with Mecklenburg County to integrate NCAWARE with their local criminal justice systems.
- 06/10 Implemented new court costs
- 07/10 Release 2.1.6 which included form changes for civil revocation of driver license.
- 10/10 Implemented NCAWARE in 98 counties. Began testing law enforcement nightly Records Management System interface with law enforcement agencies and their RMS vendors.
- 11/10 Release 2.1.7.1 which allowed for easy transfer of SHP officers from one district to another.
- 02/11 Release 2.1.7.3 which added a DNA flag to Release Orders
- 02/11 Release 2.1.8 implemented interface to Department of Adult Correction to allow for the printing of the Probation Violation Report.
- 07/11 Release 2.1.9.0.1 implemented new court costs.
- 10/11 Release 2.1.10 enhanced citation validation.
- 12/11 Release 2.1.11 added new officer court date look-up feature.
- 01/12 Release 2.1.12 included new provisional license revocation
- 02/12 Released the Law Enforcement RMS nightly interface
- Currently involved in joint functional testing of the Mecklenburg interface to their local systems. Implementation expected in Spring 2012. Also working with Buncombe County to integrate NCAWARE with their local criminal justice systems.

Total Budget: $13,000,000

For More Information Contact: Janet Greene, 919-890-2041, Janet.greene@nccourts.org

Traffic Records Coordinating Committee Certification

The following North Carolina TRCC members have electronically certified this document:

Name	Agency	Email Address
Brian Mayhew (Co-chair)	NC DOT	bmayhew@ncdot.gov
Julian Council	NC DOT DMV	jhcouncil@ncdot.gov
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Tony Fernandez	UNC EMS	afernandez@emspic.org
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Eric Schaberg	NC SHP	eric.schaberg@ncshp.org
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STATE
OF
NORTH CAROLINA

TRAFFIC RECORDS ASSESSMENT

January 08 – 13, 2012

National Highway Traffic
Safety Administration
Technical Assessment Team

Sergeant Christopher D. Corea
Michael J. McDonald
Tracy Joyce Smith, MBA
Langston A. Spell
John J. Zogby

EXECUTIVE SUMMARY

The National Highway Traffic Safety Administration (NHTSA), in response to a request by the Governor's Highway Safety Program of North Carolina, assembled a team to conduct a traffic records assessment. The Governor's Highway Safety Program carried out the logistical and administrative steps necessary for an onsite assessment. A team of professionals with backgrounds and expertise in the various traffic records data systems (crash, driver, vehicle, roadway, citation and adjudication, and EMS/injury surveillance) conducted the assessment January 8th through 13th, 2012.

The scope of this assessment included all of the components of a traffic records system. The purpose was to determine whether the traffic records system in North Carolina is capable of supporting management's needs to identify the State's highway safety problems, to manage the counter-measures applied in attempts to reduce or eliminate those problems, and to evaluate those efforts for their effectiveness.

Background

North Carolina underwent a traffic records assessment in 2007, during which deficiencies were identified that were the basis for recommendations enumerated in that report. During this assessment, the State has demonstrated notable progress in its traffic records system that has resulted from implementation of some of the recommendations for improvement and the State's own initiative in identifying and seeking solutions.

At the time of the 2007 assessment, the State reported that most of the nearly 300,000 crash reports it received annually were paper reports, though a small percentage of reports were being received electronically. Five years later, the timeliness of the data has improved substantially as the percentage of electronic crash submissions has grown. Data entry of paper reports is timely. Fifty-five percent of crash reports are now received electronically by the Division of Motor Vehicles. Another 30 percent of the total volume of reports is completed using field data collection software, but they are not yet transmitted to the Crash Records Section at DMV in the electronic format. They are, instead, data entered by DMV personnel. Once the interface is complete for these remaining electronic reports, 85 percent of crashes will be automatically uploaded into the State crash file.

Driver licensing has taken a number of steps toward compliance with the Real ID Act. Using facial recognition and document authentication technology, they are working to ensure that each applicant for a driver license or state ID card is well-vetted and properly enrolled into the driver license database. Their future plans involve re-configuration of the office process flow to include taking the applicant's photograph at the beginning of the process, in order to aid in fraud investigations should an applicant leave after having given counterfeit identity documents or fraudulent information, but before completion of the application and issuance process.

Though electronic citations have been used in North Carolina for over a decade, the Highway Patrol estimates that 80 percent of its citations are now electronically generated. Because of the drop-down menus for roadway names, automated fine calculations, and the ability to cut and paste information on the mobile data computers from the DMV databases into the citation

form, accuracy of the citation data has been improved. The fact that data re-entry of handwritten citations is not required, introduction of errors into the system is lessened as well.

Injury Surveillance data is strengthened by the fact that North Carolina has enacted legislation to mandate emergency medical system data and trauma data transmission to the State.

At this time, however, some issues and deficiencies remain and continue to impact the ability of the present traffic records system to optimally support North Carolina's management of its highway safety programs. These are discussed in the summary below and the full report that follows.

Crash Records

The North Carolina Department of Transportation (NCDOT), Division of Motor Vehicles (DMV) is the official custodian of the State's crash file. The current crash file was implemented in 1999 and there has not been a major re-write of the database since its inception. The crash report is documented in North Carolina in two formats. The paper form DMV-349 is still in use and accounts for approximately 45 percent of the annual volume of crash reports submitted. Electronic crash reports account for the balance and are generated from two sources; an e-crash field reporting module from third-party vendors and North Carolina TraCS which was developed by the NCDOT Information Technology (IT) staff and is provided free of charge to local, tribal, and state law enforcement. Both electronic versions follow the approved NCDOT format and contain over 300 data fields and perform validation edit routines of State mandated business rules for accuracy and completeness.

Because electronic reports generated by third-party vendor systems must first be printed and submitted in hard copy to the DMV, NCDOT IT staff recently completed a pilot with three local agencies who use the same Records Management System (RMS) vendor to enable their system to submit completed and successfully validated e-crash reports electronically using XML exchange. This pilot was successful and the NCDOT is poised to address the other vendors who supply RMS software. NCDOT estimated that 30 percent of the total crash volume annually is submitted by printed reports from RMS vendors' systems that capture crash reports electronically. Addressing these additional vendor systems as quickly as possible will improve the timeliness of the crash database and eliminate the redundant data entry currently imposed on the data capture staff.

North Carolina has an impressive business process that results in a high degree of confidence and accuracy in its crash file. The system is governed by an excellent Quality Control process. Broader data quality metrics should be developed to provide a more comprehensive view of the entire data collection process.

Roadway Component Records

The State has made significant improvements in the highway safety information environment since the last traffic records assessment. Two issues noted in that report were location referencing and status of the Geographic Information System. Because the electronic collection

of traffic crashes has increased appreciably the ability to locate the crash occurrence on the public road system has also increased appreciably. This was due to a software routine built into the automated system that aids in the location process. The North Carolina Department of Transportation has also made great progress in the development and implementation of the Arc Geographic Information System (GIS) used to house and display roadway characteristics data on the State road system. The information systems used in roadway safety programming are fundamentally sound and are meeting the needs of the roadway safety community.

Driver and Vehicle Records

The DMV was not able to implement a total rewrite of the State Automated Driver License System (SADLS) and the State Title and Registration System (STARS) that was anticipated for 2008. Nonetheless, the over-the-counter driver license process was changed to central issuance with improved control over the validation of personal identification of applicants. Use of the Systematic Alien Verification for Entitlements (SAVE) file was initiated in 2007. Also, registration of vehicles and processing of title applications has been extended to qualified auto dealerships.

The DMV is poised to complete the rewrite of their driver and vehicle systems and has the changes defined for tightening the control in order to counter attempts to obtain a driver license under fraudulent conditions. No recommendations were needed to enable North Carolina to satisfy the requirements of the traffic records system *Advisory*.

Statewide Injury Surveillance System (SWISS) Records

North Carolina's injury surveillance data are captured in two disparate systems. One system resides within the Office of Emergency Medical Services. This system is reported to include all data components recommended by the *Advisory*.

A second injury surveillance system resides within the Injury Epidemiology Unit of the Division of Public Health, Injury and Violence Prevention Branch. This injury surveillance system is comprised of emergency department, hospital discharge, and vital statistics (death) data.

EMS agencies transmit data to the State either via commercial software (90 percent) or using an on-line state-supplied application at no cost (10 percent). EMS data are linked to emergency department data on a daily basis. Aggregate information is available about the number of agencies and personnel in the State and agency level reports address response time, call volume and disposition.

Hospital discharge and emergency department data processing is contracted to an outside vendor that compiles reports and responds to requests for data. Ninety-seven percent of emergency departments in the State post to the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) with the remaining three percent due to begin reporting within the year. De-identified discharge sets are shared with the State Center for Health Statistics.

Twelve designated trauma centers and two non-designated hospitals submit data to the National Trauma Data Bank. Trauma records are linked to EMS reports.

Mortality data is reported to the local registrar within five days of death. The registrar prepares death certificates and forwards them to Vital Records and on to the National Center for Health Statistics. This process would benefit from the development of an electronic registration system in terms of timeliness of the records.

The existence and use of two different injury surveillance systems introduces the opportunity for conflicting reports and statistics. Efforts should be made to develop a single comprehensive injury surveillance system for the State.

Citation and Adjudication Records

North Carolina led the nation in its efforts to develop the electronic citation, which it began in 1999 with a pilot program with the Highway Patrol. That program has grown and is embraced by law enforcement agencies throughout the State to the point that 82.3 percent of the traffic citations issued annually are completed and transmitted electronically. The Administrative Office of the Courts has taken an active role in this process, working to purchase printers for law enforcement officers, to enable agencies to implement electronic citations.

Because of the volume of electronic citations and the fact that paper citations are added to the electronic database through data entry by court staff, there is virtually a complete database of enforcement actions within the State. One missing element that should be considered for inclusion into the dataset is warning citations. This information is vital to law enforcement in terms of learning about subsequent behavior of a warned versus a cited violator. Such data should be made a part of the citation database.

Although this rich enforcement data source exists, it is unclear whether it is being used to its fullest capacity. The Traffic Records Coordinating Committee should market the available traffic safety data within the state, such as citation and adjudication data. Once the locations on citations and crash reports are harmonized, it will be possible to review the effect of various enforcement countermeasures on crash incidence and severity in North Carolina.

Traffic Records Coordinating Committee (TRCC)

North Carolina has a long-standing Traffic Records Coordinating Committee which has been meeting regularly for the last decade. The State's size has tended to limit attendance for some local level members due to the time commitment required to travel to meetings.

The Executive Committee for Highway Safety acts as the TRCCs executive level committee members. The heads of the State Departments that are responsible for the record systems that comprise the North Carolina traffic records system comprise the executive level. The Injury Surveillance System has not had consistent recent involvement and the Director of the Administrative Office of the Courts is not a member. Efforts should be made to secure full involvement of the AOC and Public Health executives.

Strategic Planning

The 2007 strategic plan was based on the recommendations of the 2007 Traffic Records Assessment. The TRCC helped in developing the original strategic plan, and is instrumental in its continuation and revisions. They were supported in this effort by the Executive Committee for Highway Safety (ECHS) which is comprised of executive members of the major State safety stakeholder agencies and operates as the de-facto TRCC executive committee. The TRCC members provide project input to the TRCC and these projects are incorporated into the Plan. Stakeholder agencies are actively involved with the implementation of the Plan's strategies and projects.

A workshop should be scheduled for members of the TRCC to develop a new strategic plan under the guidance of a facilitator. The facilitator would lead the strategic planning process, especially encouraging TRCC members to define problems and develop solutions. The TRCC should secure the commitment of personnel and resources to address multiyear data systems planning across different state agencies. The TRCC-driven planning process should result in a statewide data improvement program that assures coordination of efforts and sharing of data between the various safety data systems. The stated intent of the TRCC to contract the services of the Highway Safety Research Center should satisfy this purpose.

The following are the major recommendations for improvements to the State's traffic records system. The references indicate the sections of the report from which the recommendations are drawn.

MAJOR RECOMMENDATIONS

Crash Records System

- ❑ Expand the capability as soon as possible to allow the remaining third-party vendors to electronically submit e-crash reports generated from their software. **(Section 2-A)**

- ❑ Study the case for accepting non-reportable crash data into the crash file and work with the Traffic Records Coordinating Committee to develop a short form crash report to address crashes that can easily be handled without a full DMV-349 report. If developed, carefully implement and market the short form crash report to ensure there is no intentional degradation in the reportable crash experience. **(Section 2-A)**

- ❑ Provide for a specific structured field to document citation numbers on all versions of the crash report and include this field in both the data entry process and the Oracle database crash file. **(Section 2-A)**

- ❑ Develop and implement a broader and more specific data quality metric report that can leverage the validation error logs and share them regularly with the law enforcement

community. Such an effort will more clearly indicate the level of training required to use and understand the crash report. **(Section 2-A)**

Citation and Adjudication Records

- ❑ Develop a centralized database for warning tickets that is available to law enforcement officers and others in the traffic records community. **(Section 2-E)**
- ❑ Create electronic citation audit procedures to ensure citations are tracked from time of issuance to disposition of citations. **(Section 2-E)**
- ❑ Develop an effective way of sharing data across multiple systems within the data collection process, such as crash and citation, for consistency and accuracy of data. **(Section 2-E)**

Traffic Records Coordinating Committee (TRCC)

- ❑ Add representation to the Traffic Records Coordinating Committee including local law enforcement and local engineers. **(Section 1-A)**
- ❑ Add representation to the Executive Committee for Highway Safety from the Division of Public Health to represent EMS, Trauma and Injury and Violence Prevention sections. **(Section 1-A)**
- ❑ Develop meaningful data quality metrics and measures following the guidelines in NHTSA's *Model Performance Measures for State Traffic Records Systems*. **(Section 1-A)**

Statewide Injury Surveillance System (SWISS)

- ❑ Develop one comprehensive, inclusive of all components, injury surveillance system. **(Section 2-F)**
  - ○ Employ the services of the North Carolina Institute of Medicine whose mission, according to their website, is "To seek constructive solutions to statewide problems that impede the improvement of health and efficient and effective delivery of healthcare for all North Carolina citizens."

  Or

  - ○ Form a subcommittee of the Traffic Records Coordinating Committee, including representation from all components of the injury surveillance system. The subcommittee would be charged with:
    - ▪ Developing policies and procedures to govern the integrated data.

- Identifying obstacles to data linkage for each component and solutions to overcome said obstacles.
- Identifying gaps in the components' data and solutions to close those gaps.
- Determining the best agency or entity to perform the linkage, house, and maintain the data. The agency or entity would be responsible for analyzing and/or releasing the linked data only. Data owners and/or custodians would remain responsible for any requests for their respective component. The best type of agency or entity would be one that is HIPAA compliant whether as a covered entity or business associate.
- Other tasks as necessary to realize an injury surveillance system.

Roadway Information

- ❑ Perform a benefit/cost analysis of collecting the subset of fundamental data elements of MIRE for use in enhanced safety analyses. **(Section 2-B)**

Strategic Planning

- ❑ Charge the TRCC with the development of a new Traffic Safety Information Systems Strategic Plan addressing the recommendations in this traffic records assessment. Identify deficiencies apart from those noted in the traffic records assessment by canvassing each TRCC member and especially each traffic records system component custodian for their input. **(Section 1-B)**
- ❑ Assure that all TRCC members participate in the development of the Traffic Safety Information Systems Strategic Plan and the selection and priority setting of the projects in the Plan. It is advisable to acquire the skills of a facilitator to conduct workshops for the Plan development. **(Section 1-B)**

Model Minimum Uniform Crash Criteria

The TRCC recognizes the Model Minimum Uniform Crash Criteria (MMUCC) and recommends continuing adherence and implementation of standardized data elements to promote comparability of data within the highway safety community. The use of standardized data elements provides the necessary foundation for North Carolina's crash data system.

The crash report form (DMV-349) was last revised in the year 2000 and has been in use since January 1, 2000. The form was revised in a collaborative effort involving numerous agencies, law enforcement, research interests, medical outcome interests, as well as outside input from MMUCC expert panel members, and others. In 2010, the form was reviewed and decisions were made regarding updating form elements and attributes. However, due to the State fiscal crisis, the effort to implement these changes was postponed.

Plans are to update and modify the North Carolina crash report form in 2013. When this is initiated, effort will be made to increase compliance on the crash report form and in the data dictionaries. The goal would be to adopt the MMUCC elements and attribute recommendations as much as possible and document the reasoning for any deviations from MMUSS. The current 96% compliance on the crash report form demonstrates this intent.

A summary of N.C.'s MMUSS compliance can be found in the table below.

N.C.'s MMUCC Compliance can be summarized as follows:

The State of North Carolina certifies that it will undertake projects as part of the Traffic Safety Information System Improvement Program which will endeavor to collect the missing data elements and attributes as soon as practical. The North Carolina TRCC will review the 2012 MMUCC Guideline (4th Edition) when it is released. No specific projects are scheduled regarding MMUCC at this time, but a review of the North Carolina 349 is planned for 2013.

National EMS Information System NEMSIS

North Carolina's emergency medical data system is the PreHospital Medical Information System (PreMIS). PreMIS is technically located within the North Carolina Office of EMS, but it is administered through the University of North Carolina, Department of Emergency Medicine, EMS Performance Improvement Center in Chapel Hill. North Carolina has been one of the founding states involved with the NEMSIS and Greg Mears, MD was the principal investigator for NEMSIS for NHTSA's Office of Emergency Medical Services.

N.C. is one of the initial five states to begin submitting data into the National EMS Database. North Carolina collects all of the NEMSIS "national elements" with the exception of the two outcome data elements, Emergency Department Disposition and Hospital Disposition. The information required for these two data elements is not known at the time of an EMS event and therefore is not currently collected by EMS Systems across the state. Linkage has been done with hospital, trauma registry and plans for linking the medical examiner data sources to obtain the required information for these two elements. These two data elements would also be extremely valuable to highway safety as well as traffic records, which could be linked to EMS records containing this outcome information. It is a goal of the TRCC to obtain funding to work on this linkage.

A summary of N.C.'s NEMSIS compliance can be found in the table below.

N.C.'s NEMSIS Compliance can be summarized as follows:

- The State of North Carolina ***does*** maintain a state EMS pre-hospital database.
- The database currently collects all of the national data elements with the exception of the outcome data elements, E22_01 (Emergency Department Disposition) and E22_02 (Hospital Disposition) currently defined in NEMSIS.
- The system currently collects data per the NEMSIS standard from all 100 EMS Systems within N.C.
- The state of North Carolina certifies that it currently ***is*** capable of exporting data to the NHTSA EMS data repository.
- The State of North Carolina certifies that it will undertake project as part of the State Traffic Safety Information System Improvement Program which will establish a NEMSIS compliant, state EMS pre-hospital database to collect the missing national data elements and attributes; and to be able to export data to the NHTSA EMS data repository as soon as practical.

Model Inventory of Roadway Elements (MIRE)

The North Carolina Department of Transportation has reviewed the MIRE, 1st Edition, data elements as well as the Fundamental Data Elements (a subset of MIRE). Both of these documents were produced by the FHWA. MIRE includes 202 unique data elements and the FDE includes 38 data elements that are included in a number of safety analysis tools and seen as critical for safety analysis.

In 2011, North Carolina began integrating their roadway inventory data into a geographic information system (GIS). The result of this migration was the ability to assess the quality of the roadway inventory data throughout the almost 80,000 miles of roads in the network. The short-term strategy for the department is to enhance the quality of the data that currently exist and fill gaps in the inventory by completing missing information for elements that already exist. Future efforts will focus on a more detailed review of MIRE and FDE and whether there is the need and the resources available to add any of the elements or attributes in these guidance documents.