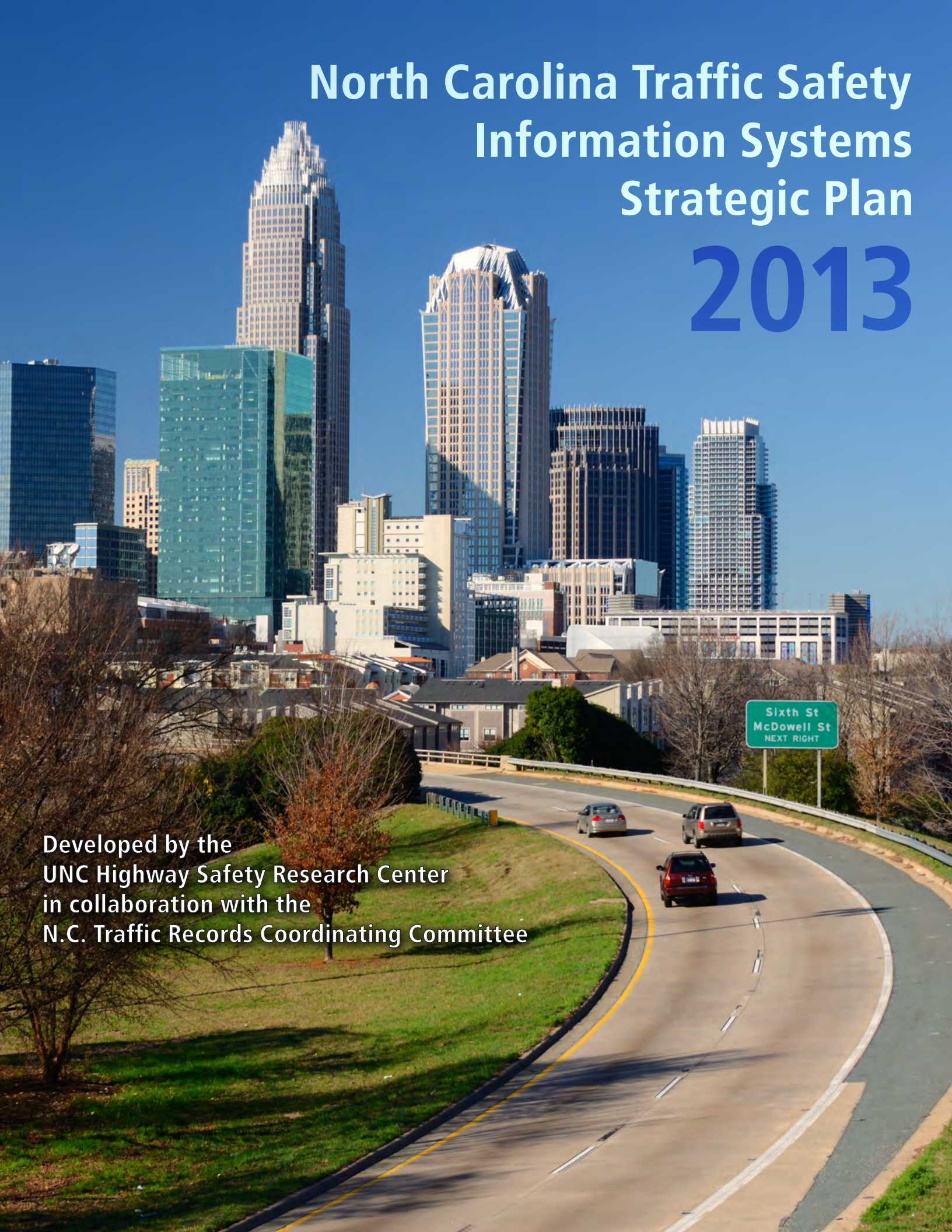
# North Carolina Traffic Safety Information Systems Strategic Plan 2013




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 2013

*Developed by the UNC Highway Safety Research Center*
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*for the Governor's Highway Safety Program*

**June 2013**

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# Commonly Used Abbreviations

AASHTO – American Association of State Highway and Transportation Officials

ACIS – Automated Criminal Infraction System

DMV – Department of Motor Vehicles

DOT – Department of Transportation

DPH – Division of Public Health

ECHS – Executive Committee for Highway Safety

EMS – Emergency Medical Services

FARS – Fatality Analysis Reporting System

FHWA – Federal Highway Administration

HSRC – Highway Safety Research Center

ITRE – Institute for Transportation Research and Education

IVPB – Injury and Violence Prevention Branch

NCAOC – North Carolina Administrative Office of the Courts

NCAWARE – North Carolina Warrant Repository

NCDOT – North Carolina Department of Transportation

NCDMV – North Carolina Department of Motor Vehicles

NCGHSP – North Carolina Governor's Highway Safety Program

NHTSA – National Highway Traffic System Administration

PreMIS – Prehospital Medical Information System

SADLS – State Automated Driver License System

TARS – State Tilting and Registration System

TEAAS – Traffic Engineering Accident Analysis System

TraCS – Traffic and Criminal Software

TRCC – Traffic Records Coordinating Committee

UNC – University of North Carolina

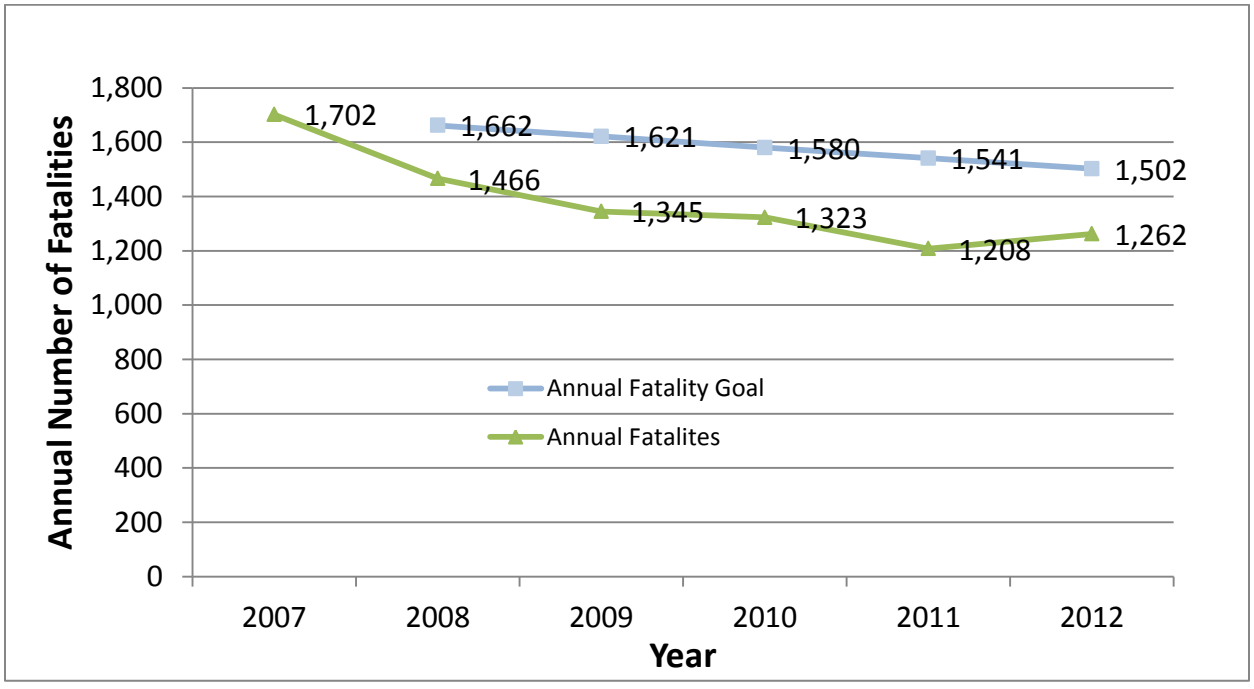
# Introduction

## *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 2012, there were 213,641 reported traffic crashes on state-maintained roads that resulted in 1,262 persons killed and 110,406 injured. The economic impact of these crashes is costly, resulting in an estimated loss of $10.5 billion to the economy of North Carolina annually (estimate as of 2011).

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 North Carolina Department of Transportation (NCDOT) 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 NCDOT*

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.

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 Traffic Safety Information Systems Strategic Plan documents progress toward the overall goal of providing high-quality data to users in timely and efficient processes. This document records 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 online 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 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 state's 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 NCDOT 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 reducing 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 SHSP 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 energy generated and knowledge of the multi-disciplined ECHS 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. 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 La Nica Allison, Deputy Secretary of Intergovernmental Affairs and Budget Coordination, NCDOT. The membership is listed below and includes representatives for the NCDOT, municipal transportation departments, state and local law enforcement, universities, and other state and local agencies.

- La Nica Allison, Deputy Secretary, Intergovernmental Affairs and Budget Coordination, NCDOT
- Robert Andrews, Jr, Director, Safety & Risk Management, NCDOT
- Deborah Barbour, Director, Preconstruction, NCDOT
- Greer Beaty, Director, Communications Office, NCDOT
- James Forte, Commissioner, NCDOT-DMV
- Terry Gibson, Chief Engineer, Division of Highways, NCDOT
- William J. Grey, Colonel, NCSHP
- Herbert Garrison, III, Executive Director, Eastern Carolina Injury Prevention Program
- Regina Godette-Crawford, Chief, NCEMS
- Wayne Goodwin, Commissioner, NC Department of Insurance
- David Harkey, Director, UNC HSRC
- Terry Hopkins, State Traffic Safety Engineer, NCDOT
- Kelvin Lacy, State Traffic Engineer, NCDOT
- Calvin Leggett, Manager, Program Development Branch, NCDOT
- Basil McVey, Chief Information Officer, NCAOC
- Don Nail, Director, NCGHSP
- Jon Nance, Deputy Chief Engineer, Division of Highways, NCDOT
- John Sullivan, III, Division Administrator, FHWA
- Michael Yaniero, Chief of Police, Jacksonville Police Department
- Gabriela Zabala, Director, Hispanic/Latino Affairs, NC Office of the Governor

### *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 Traffic Safety Information Systems Strategic Plan and provide a guide 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 create 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 wherever 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 geographic information systems; court, citation and adjudication systems; and medical outcome systems. Several key stakeholder agencies also serve in a membership role on the committee, including state and municipal law enforcement, NCDOT Traffic Safety Unit, North Carolina Governor's Highway Safety Program (NCGHSP), and a university research center. The current list of members is provided below.

- Brian Mayhew (NC TRCC Co-chairperson), NCDOT, Traffic Safety Unit
- Eric Rodgman (NC TRCC Co-chairperson), UNC HSRC
- Jonathon Arnold, NCDOT, Management Systems and Assessments
- Paul Cooper, NC EMS Performance Improvement Center
- Julian Council, NCDOT-DMV
- Alan Dellapenna, NCDPH, Injury and Violence Prevention Branch
- Janet Greene, NCAOC, Technology Services Division
- Frank Hackney (State Traffic Records Coordinator), NC GHSP
- John Ivarsson, NCSHP

In addition to the official membership, there are a number of additional stakeholders, including representatives from the Federal Highway Administration (FHWA) and National Highway Traffic Safety Administration (NHTSA), 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 about traffic safety systems for NHTSA, 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. Frank Hackney of the NCGHSP serves in this role. His contact information is provided below.

Frank Hackney, Traffic Records Coordinator
North Carolina Governor's Highway Safety Program
215 East Lane Street
Raleigh, N.C. 27601
Phone: (919) 733-3083
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:

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

## *NC Department of Transportation*

**Traffic Engineering Accident Analysis System**

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 Department of Motor Vehicles (NCDMV). 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 NCDMV crash database, TEAAS data are only as timely as the data within the crash database. Crash data that are submitted to the NCDMV on the DMV-349 form are typically available within three months of the date of the crash. Electronic crash data submissions made through the Traffic Records Communications System (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 maintained by the Geographic Information Systems 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.

**North Carolina Geographic Information System**

The main objectives of the Information and Mapping Unit (IMG) 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 IMG 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 more than 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 IMG.

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 IMG 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 IMG indicate the date(s) for which the data are current.

## *NCDOT Division of Motor Vehicles*

**North Carolina Crash Data**

The NCDMV 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 NCDMV 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 CRS from the field. An appendix following this chapter provides more details on TRCS. Written crash reports are received by NCDMV 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 NCDMV receives the report. Crash data that must be manually entered from the DMV-349 form are usually available within 30 days after the NCDMV 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 NCDMV 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**

The North Carolina Traffic and Criminal Software (TraCS) is the NCDMV'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 NCDMV Traffic Records Communications System is an enhancement of the current CRS that enables NCDMV to receive and process crash reports electronically.

NCTraCS and NCDMV 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**

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 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 NCDMV 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. 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 NCDMV 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 (NCSHP), who enter the data into SAFETYNET. See the chapter elsewhere in this document with a more complete description of SAFETYNET as maintained by the NCSHP. 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 NCDMV maintains the 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 North Carolina Administrative Office of the Courts (NCAOC), 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 NCAOC. 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**
STARS is a database maintained by the NCDMV 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 NCDMV 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.

Data that are submitted online at NCDMV 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 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.

**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 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 ACIS.

eCitation was developed as a joint venture between the NCAOC and the NCSHP. Significant funding was also provided by NCGHSP 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-DMV: This interface automatically prefills demographic and vehicle data using the driver's license or vehicle plate number.

**Automated Criminal Infraction System (ACIS)**

All criminal and infraction court cases in North Carolina are tracked from initiation through disposition in the statewide 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 which in turn updates ACIS and NCAWARE cases with the state fingerprint identification number. ACIS data is a major data feed to the Criminal Justice Law Enforcement Automated Data Service (CJLEADS). All citation data for the NCSHP is transferred to them nightly.

In March 2012, the NCAOC added the Eastern Band of Cherokee Indians 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**
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.

**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.

**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.

As of 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 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 Disease Event Tracking and Epidemiologic Collection Tool**
The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) is North Carolina's statewide syndromic surveillance system. NC DETECT was created by the North Carolina Division of Public Health (NC DPH) in 2004 in collaboration with the Carolina Center for Health Informatics (CCHI) in the UNC Department of Emergency Medicine to address the need for early event detection and timely public health surveillance in North Carolina using a variety of secondary data sources. Authorized users are currently able to view data from emergency departments, the Carolinas Poison Center, and the Pre-hospital Medical Information System (PreMIS), as well as pilot data from select urgent care centers. NC DETECT is designed, developed and maintained by CCHI staff with funding by the NC DPH. New functionality is added regularly based on end user feedback.

## *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.

# 2013 TRCC Strategic Plan

## *Overview*

In 2013, the TRCC began the process of updating the 2012 Strategic Plan. The UNC 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 Traffic Safety Information Systems Strategic Plan, 2012.* This plan became the benchmark for progress with respect to improvements made over the past year.
- *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 and to set performance measures for each objective in the plan.

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*

**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 are 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 and performance measures 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.***

| *Objective* | *Performance Measure/Target* |
|---|---|
| Ensure that the membership of the TRCC consists of all key stakeholders, including the owners, stewards and users of the data in NC. | *An annual review of stakeholders and expansion of the TRCC membership as necessary.* |
| In collaboration with the North Carolina GHSP, review and improve upon the protocol used in the identification and prioritization of projects that are funded under the Section 405C State Traffic Safety Information System Improvement Grant program that was authorized under MAP-21 and is administered by NHTSA. | Annual review and improvement upon the project identification and prioritization process. *(Note: Recommendation is to do this during the fall meeting, following funding decisions from NHTSA but prior to when proposals are due to NCGHSP, for timing and planning purposes.)*<br><br>A prioritized list of recommended projects provided to NCGHSP that align with the specific objectives of the Strategic Plan. |

| | |
|---|---|
| Monitor and measure progress on existing goals and objectives. | Annual update of strategic plan.<br><br>Periodic review of ongoing projects, focusing on progress toward meeting performance measures outlined in the strategic plan.<br><br>Feedback to ECHS to report on progress made and new strategies proposed by the TRCC. |
| Identify gaps in the current traffic records systems and explore new solutions. | Establishment of new goals and objectives as part of development of the next strategic plan. (*Note: Explore external funding opportunities. Examples include: 405C, ECHS, FHWA, NHTSA, CDC).* |
| Share NC achievements and best practices in traffic safety information systems with other states. | Participation in regional and national conferences.<br><br>Participation in peer-to-peer exchanges. |
| Monitor and evaluate the achievements and best practices in traffic safety information systems in other states for potential implementation in NC. | Participation in regional and national conferences.<br><br>Participation in peer-to-peer exchanges. |
| Ensure that the new state highway safety plan includes traffic safety information systems as a major component. | Review of state highway safety plan. |

**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.***

| *Objective* | *Performance Measure/Target* |
|---|---|
| Continue to enhance and expand electronic crash reporting by all enforcement agencies in the State. | Number or percentage of law enforcement agencies submitting to the electronic crash reporting system.<br><br>Number or percentage of reportable crashes submitted via the electronic crash reporting system.<br><br>Integration and use of additional features or options for crash reporting. *(Example: geo-locating.)* |
| Continue to communicate data collection and data submission protocols and business rules with third-party software vendors of electronic crash submission products to keep them apprised of changes in the North Carolina crash data systems that need to be accommodated in their software applications. | Weekly meetings with third-party vendors to share business rules and communicate changes.<br>Periodic review and validation of third-party vendors' compliance capabilities.<br><br>Initial review and validation for new third-party vendors. |
| Explore the feasibility of LEA-level metrics for improving crash reporting. | Feasibility study on the potential range and use of LEA-specific metrics. |
| Continue to enhance the integration of crash data systems. | Frequency of correction of CRS records on the basis of analysis of TEAAS data.<br><br>Periodic review of the integration process between the traffic safety unit and DMV. |
| Ensure that crash data continue to be submitted in a timely manner to the CRS. | Average lapsed time between the time of the crash and the time of the submission.<br><br>Percentage of crash reports submitted within "x" time period. |

| | |
|---|---|
| Ensure that crash data continue to be accurately recorded and reported to the CRS. | The percentage of crash records that have no errors in the critical data elements. (Must define critical elements, example: crash severity.)<br><br>The percentage of rejected crash reports.<br><br>Periodic summary of crash report rejection reasons.<br><br>Periodic review of business rules to address inaccurate fields. |
| Ensure that crash data continues to be recorded as completely as possible. | Percentage of reports that have no missing critical data elements. *(Note: Must define critical elements.)*<br><br>Percentage of reports that have no missing data elements.<br><br>Periodic review of business rules to address completeness.<br><br>Feedback to LEAs with respect to their data quality.<br><br>Year-to-year comparison of the number of reports received to review for possible missing data. |
| Ensure that crash data is recorded uniformly. | Percentage of data elements that are MMUCC compliant.<br><br>Year-to-year comparison of reportable vs. non-reportable crashes by LEAs. |
| Ensure that the crash data is accessible to key stakeholders. | Annual survey of crash data accessibility by stakeholder groups, including internal users within the NCDOT and external users such as other state agencies and universities.<br><br>Potential workshop with stakeholders including IT to discuss accessibility issues. |
| Engage stakeholders in data quality management. | Enhancement of communications protocol between data providers and data owners.<br><br>Feedback to reporting agencies on the quantity and quality of the data received and recommendations for improving the crash data collected and delivered. |

| | |
|---|---|
| Enhance law enforcement training that will result in more complete and accurate crash reporting. | Review of alternative training methods, including distance learning and blended training options, including methods used in other fields. *(Note: EMS as an example.)*<br><br>Number of law enforcement officers who receive training, including a breakdown of standard and more extensive training.<br><br>Review of the current Basic Law Enforcement Training.<br><br>Updates to the SHP intranet "common errors" guide. |
| Explore the feasibility of creating a statewide streamlined or "limited" data entry protocol for non-injury crashes within the electronic crash reporting system at the time the DMV349 is updated. | Review of the implications on the CRS database.<br><br>Review of the implications on safety analysis and decision making.<br><br>*Note: 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.* |
| Develop standards for reporting location information. | Publication of location reporting standards available to third-party vendors for ECRS. |

**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.***

| *Objective* | *Performance Measure/Target* |
|---|---|
| Continue to improve electronic citation audit procedures and implement the most promising improvements to ensure citations are tracked from time of issuance to disposition of citations. | Percentage of citations that are tracked from issuance to disposition.<br><br>Implementation of a tracking system for unused citations. |
| Conduct a feasibility assessment of the value of and 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. | Feasibility study report. *(Note: This is a project that will be addressed in the future, when all parties are ready.)* |
| Increase data capture surrounding the case management of DWI charges and convictions to aide in the analysis and tracking of these cases. | Number of DWI data element fields added to the file. |
| Provide an interface between eCitation and NCAWARE for the most frequent arrestable offenses to reduce duplicate data entry. | Percent reduction in number of cases for which there is duplicate data entry. |
| Explore the value and feasibility of capturing detailed location information for citations. | Feasibility study report. |
| 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. | Feasibility study report. *(Note: This is a low priority issue based on recent discussions with NHTSA and will be discussed at a later time.)* |

**Injury Surveillance Systems**

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

| *Objective* | *Performance Measure/Target* |
|---|---|
| Conduct a demonstration project that links injury surveillance data with crash data to identify issues associated with linkage. | Identification of a project with defined objectives that require linking injury surveillance data and crash data.<br><br>Development of a work plan for the demonstration project.<br><br>Demonstration project report. |

**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.***

| *Objective* | *Performance Measure/Target* |
|---|---|
| Conduct a data quality assessment of key roadway elements and attributes, assess the feasibility of the enhancement of data where the quality is deemed substandard or there are gaps in the data. | Assessment report. *(Note: NCCU will be conducting an assessment.)*<br><br>Feasibility report for enhancement. |
| Expand the linear referencing system (foundation for linkage to roadway characteristics) to cover all public roads, state- and locally-owned. | Percentage of NC roadway mileage that is included in the LRS. |
| Improve the interoperability and linkage between the linear referencing system, road characteristics data, and the crash data system (TEAAS). | Successful implementation of a distributed ownership model for capturing and maintaining roadway data elements.<br><br>Ability of external customers to add or edit data to the primary roadway characteristics file. |
| Conduct a feasibility assessment of the development of supplemental roadway files that may be used in safety analysis. (*Examples include horizontal curves and grades.)* | Feasibility report that includes priorities for the development of supplemental files. |
| Explore the feasibility of an intersection database. | Feasibility report. |

**Driver Information Systems**

***Goal – Continue to maintain and update the North Carolina driver license record data to be used in road safety studies and statistical analysis and to track all North Carolina drivers and their driving records according to North Carolina law.***

| *Objective* | *Performance Measure/Target* |
|---|---|
| Publish online a basic summary of the number of licensed North Carolina drivers, which includes their age, race, sex and county of residence. *(Note: the publication should include motorcycle endorsements, commercial licenses and learner's permits.)* | Annual online publication as part of NC Crash Facts. |

**Vehicle Information Systems**

***Goal – Continue to maintain and update all North Carolina vehicle registration record data for the state to be used in road safety studies and statistical analysis and to insure all vehicles are properly licensed according to the laws of NC.***

| *Objective* | *Performance Measure/Target* |
|---|---|
| Publish online a summary of the number of NC registered vehicles – by type of vehicle and county. | Annual online publication as part of NC Crash Facts. |
| Explore the value and feasibility of adding vehicle color as a data element. *(Note: This could be accessed from the VIN.)* | Feasibility study report. |

# 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 NCGHSP 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 ECHS, 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.

## Current projects

| Cross Ref. # | Project | Project Number | Coordinating Agency | Budget | Budget Source |
|---|---|---|---|---|---|
| | ***408-funded projects*** | | | | |
| 1 | Air Cards Technology to Reduce Speed Related Crashes and Increase Seat Belt Use | K9-13-11-02 | NCSHP | $608,160 | GHSP |
| 2 | eCitation Printers | K9-13-11-03 | NCAOC | $214,500 | GHSP |
| 3 | E-Citation/Electronic Crash Reporting | K9-13-11-05 | Enfield PD | $8,000 | GHSP |
| 4 | eCitation/NCAWARE Arrestables Interface | K9-13-11-06 | NCAOC | $133,572 | GHSP |
| | ***Non 408-funded Projects*** | | | | |
| 5 | Quick Response System for GHSP Inquiries: A Continuation | TR-13-10-01 | HSRC | $44,146 | GHSP |
| 6 | Web Site Using NC Crash Data | TR-13-10-02 | HSRC | $55,421 | GHSP |
| 7 | 2013 North Carolina Traffic Safety Information Systems Strategic Plan Update | TR-13-10-03 | HSRC | $22,807 | GHSP |
| 8 | SADIP 2010 | SD-10-37-01-000000 | NCDMV-TR | $90,218 | NCDMV-TR |
| 9 | SADIP 2011 | FM-SAD-003-11-01-00 | NCDMV-TR | $872,400 | NCCMV- TR, NCSHP |
| 10 | SADIP 2012 | FM-SAD-0022-12-01-00 | NCDMV-TR | $946,400 | NCDMV-TR |
| 11 | PreMIS migration to NEMSIS v3 Standard | | EMSPIC | | EMSPIC |
| 12 | Quantifying and Describing EMS Patient Transports following Motor Vehicle Crashes in North Carolina | | EMSPIC | | EMSPIC |
| 13 | Linkage Project | | EMSPIC | | EMSPIC |

| Cross Ref. # | Project | Project Number | Coordinating Agency | Budget | Budget Source |
|---|---|---|---|---|---|
| 14 | ACIS/Eastern Band of Cherokee Indians (ECBI) | | NCAOC | $67,990 | EBCI/NCAOC |
| 15 | Automated Criminal Infraction System (ACIS) | | NCAOC | | NCAOC |
| 16 | Criminal Court Information System – District Attorney Component (CCIS-DA) | | NCAOC | $3,333,348.24 | NCAOC |
| 17 | Criminal Court Information System – Clerk Component (CCIS-CC) | | NCAOC | $ 6,301,022 | NCAOC |
| 18 | North Carolina Warrant Repository/NCAWARE | | NCAOC | $13,000,000 | NCAOC |
| 19 | payNCticket | | NCAOC | $185,459 | NCAOC |

# 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) | NCDOT | bmayhew@ncdot.gov |
| Eric Rodgman (Co-chair) | UNC HSRC | rodgman@hsrc.unc.edu |
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| Carol Martell | UNC HSRC | martell@claire.hsrc.unc.edu |

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

**Completed (historical) projects**

| Project | Project Number | Coordinating Agency | Budget | Budget Source |
|---|---|---|---|---|
| ***408-funded Projects*** | | | | |
| Linking EMS, Trauma, Healthcare and Crash Data Systems | K9-10-11-03 | EMSPIC | | |
| E-citation/Electronic Crash Reporting | K9-12-11-15 | NCSHP | $46,000 | GHSP |
| NCSHPGIS Decision Support from Motor Carrier Enforcement to Traditional Enforcement | K9-12-11-02 | NCSU ITRE | $28,049 | GHSP |
| Geocode Pedestrian Crashes Statewide and Traffic Records Strategic Plan | K9-12-11-04 | HSRC | $51,421 | GHSP |
| Purchase/Distribution of Printers to Expand the eCitation Program | K9-11-11-02 | NCAOC | $325,000 | GHSP |
| GIS location of Crashes | K9-11-11-03 | ITRE | $15,898 | GHSP |
| Purchase of MDTs for Electronic Crash Reporting - MDPS | K9-11-11-06 | Morganton Department of Public Safety | $8,000 | GHSP |
| Purchase of MDTs for Electronic Crash Reporting - SPD | K9-11-11-07 | Sylva Police Department | $4,132 | GHSP |
| Purchase of MDTs for Electronic Crash Reporting - RMPD | K9-11-11-11 | Rocky Mount Police Department | $4,000 | GHSP |
| Purchase of MDTs for Electronic Crash Reporting - WPD | K9-11-11-12 | Warrenton Police Department | $5,425 | GHSP |
| Salary and Benefits for a State Traffic Records Coordinator | K9-10-11-01 | GHSP-Traffic Records | $67,000 | GHSP |
| Purchase of Printers | K9-10-11-02 | NCAOC | $325,000 | GHSP |

| Project | Project Number | Coordinating Agency | Budget | Budget Source |
|---|---|---|---|---|
| State Highway Patrol (SHP) Mobile Data Computers | K9-09-11-03 | SHP | $445,639 | GHSP |
| MDTs to Enable More Officers to Perform eCitation and Electronic Crash - LPD | K9-10-11-04 | Lenoir Police Department | $44,000 | GHSP |
| MDTs to Enable More Officers to Perform eCitation and Electronic Crash – MCSO | K9-10-11-05 | Macon County Sheriff's Office | $16,000 | GHSP |
| MDTs to Enable More Officers to Perform eCitation and Electronic Crash – TPD | K9-10-11-06 | Taylorsville Police Department | $11,372 | GHSP |
| 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 | GHSP |
| MDTs to Enable More Officers to Perform eCitation and Electronic Crash - GPD (Gastonia) | K9-10-11-08 | Gastonia Police Department | $3,340 | GHSP |
| NCAOC-Batmobile for purchase of MDTs to Place Aboard Each BAT Units | K9-10-11-09 | NCAOC | $10,992 | GHSP |
| Systems Gap Analysis | K9-10-11-10 | N. C. DOT - Division of Motor Vehicles | $117,420 | GHSP |
| MDTs to Enable More Officers to Perform Ecitation and Electronic Crash - GPD (Garner) | K9-10-11-11 | Garner Police Department | $10,000 | GHSP |
| MDTs to Enable More Officers to Perform eCitation and Electronic Crash – NPD | K9-10-11-12 | Norwood Police Department | $4,850 | GHSP |

| Project | Project Number | Coordinating Agency | Budget | Budget Source |
|---|---|---|---|---|
| Administrative Office of the Courts (NCAOC) e-Citation Printers | K9-09-11-04 | NCAOC | $328,157 | GHSP |
| Division of Motor Vehicles (DMV) Gap Analysis | K9-09-11-05 | DMV | $56,109 | GHSP |
| NC DOT Traffic Engineering TR Guidebook | K9-09-11-06 | DOT | $6,342 | GHSP |
| NC DOT Traffic Engineering TRCC Support | K9-09-11-07 | DOT | $33,000 | GHSP |
| Electronic Submission of Crash Reports (DMV-349) from NCSHP | K9-08-11-04 | NCSHP | $331,240 | GHSP |
| ***Non 408-funded Projects*** | | | | |
| E-citation/Electronic Crash Reporting | TR-12-10-06 | Roxboro PD | $40,000 | GHSP |
| E-citation/Electronic Crash Reporting | TR-12-10-04 | Enfield PD | $16,000 | Enfield PD/ GHSP |
| UNC HSRC Crash Web Site Update | | HSRC | $48,483 | GHSP |
| Local Law Enforcement MDT Projects | | Local PD | $19,682 | GHSP |
| SADIP 2009 | SD-09-37-G-00000 | NCDMV-TR, NCSHP | $562,651 | NCDMV- TR, NCSHP |
| SADIP 2010 | SD-10-37-01-000000 | NCDMV-TR | $90,218 | NCDMV-TR |
| ECRS Program Manager Position Continuation | K9-11-11-13 | NCDMV-TR | $27,400 | NCDMV-TR |
| NC Crash Data Web-site | TR-12-10-02 | HSRC | $51,782 | GHSP |
| Quick Response System | TR-12-10-01 | HSRC | $45,537 | GHSP |

### *2012 Traffic Records Project Status Reports*

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

**1.) Air Cards Technology to Reduce Speed Related Crashes and Increase Seat Belt Use**

**Number:** TR-13-11-02
**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

**2.) eCitation Printers**

**Number:** TR-13-11-03
**Agency(ies):** AOC
**Project Leader(s):** Charles Lane/Kimberly Gibney
**Performance Period (NCAOC):** 1/2012 – 12/2012
**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:**

- 04/12 Implemented language access data capture to identify the need for an interpreter and the language spoken
- 08/12 Received additional GHSP grant ($214,500) to purchase printers for law enforcement agencies
- 12/12 From May 2011 through June 2012, 1083 printers were distributed
- 12/12 Year-to-date implemented 35 new agencies and processed 1,205,292 eCitations. As of December 31, 2012, 86.1% of citations were electronic.
- 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. 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 NCAOC Budget:** $1,521,616
**GHSP 2013 Funding:** $214,500
**For More Information Contact:** Janet Greene, 919-890-2041, Janet.greene@nccourts.org

**3.) E-Citation/Electronic Crash Reporting**
**Number(s):** TR-09-13-11-05
**Agency(ies):** Enfield Police Department
**Project Leader(s):** Chief Eddie Buffaloe
**Performance Period:** 10/01/2012 – 09/31/2013
**Description:** To purchase MDTs to enable the department to perform eCitation reporting and electronic crash reporting.
**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:** Eddie Buffaloe, 252-455-5122, ebuffaleo@enfieldnc.org

**4.) eCitation/NCAWARE Interface for Arrestable Offenses**
**Number(s):** K9-13-11-06
**Agency(ies):** Administrative Office of the Courts
**Project Leader(s):** Janet Greene
**Performance Period:** January 2012 – January 2013
**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 4.2 million processes and over 39,000 court and law enforcement users.

**Performance Measures:**

- 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: As of January 2013, NCAWARE is operational in 99 counties. The Statewide Warrant Search feature pulls all processes in NCAWARE and any non-converted cases (including those cases from 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 99 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:**

1/12 Added Provision License CVR functionality
2/12 Added ability to have single character last name
6/12 Added ability to capture need for an interpreter
12/12 Over 999, 000 processes as of end of 2012
1/13 Implemented Mecklenburg County (99th county) including integration county's local systems
Currently working with Buncombe County to integrate NCAWARE with their local criminal justice systems.

**Sponsoring Agency 1:** GHSP (Budget $133,572)
**Total NCAOC Budget:** $13,000,000
**For More Information Contact:** Janet Greene, 919-890-2041, Janet.greene@nccourts.org

**5.) Quick Response System for GHSP Inquiries: A Continuation**

**Number:** TR-13-10-01
**Agency(ies):** HSRC
**Project Leader(s):** Eric Rodgman
**Performance Period:** October 1, 2012 – September 30, 2013

**Description:** GHSP, NC Law Enforcement agents and citizens of the state of North Carolina continue to request the most up-to-date and accurate data and information on a wide variety of motor vehicle safety issues. Once a request has been specified, HSRC uses NC DMV 349 Crash Report data, NC AOC DWI Conviction Summary Report data, NC driver license record data and NC vehicle registration data to run a query and provide a summary.
**Status:** HSRC continues to provide the necessary database analyst and traffic safety consulting support to address and support the needs of this project. There are consistently about 100 calls/contacts per year
**Sponsoring Agency 1:** GHSP
**Total Budget:** $44,146
**For More Information Contact:** Eric Rodgman, 919-962-8709, eric_rodgman@unc.edu

**6.) Web Site Using NC Crash Data**
**Number:** TR-13-10-02
**Agency(ies):** HSRC
**Project Leader(s):** William Hunter
**Performance Period:** October 1, 2012 – September 30, 2013
**Description:** An interactive website of crash data, which is available to the public, allows users to create single-variable or cross tabulations by choosing from among three orientations: (1) crash data, (2) persons involved in crashes, and (3) vehicles involved in crashes. This new project will add the 2012 crash data to the website, further increasing its utility.
**Status:** The addition of the 2012 year will begin in the fall of 2012 and be completed in the late summer of 2013. As in past projects, the crash data will be beta tested and any problems corrected.
**Sponsoring Agency 1:** GHSP
**Total Budget:** $55,421
**For More Information Contact:** William Hunter, 919-962-8716, bill_hunter@unc.edu

**7.) 2013 North Carolina Traffic Safety Information Systems Strategic Plan Update**
**Number:** TR-13-10-03
**Agency(ies):** HSRC
**Project Leader(s):** David Harkey
**Performance Period:** October 1, 2012 – September 30, 2013
**Description:** A 2013 Traffic Safety Information Systems Strategic Plan will be completed, using input from TRCC membership planning sessions and the review of existing materials. The plan will document the roles of the ECHS and TRCC, provide strategic direction for improving transportation data systems in the state, provide progress reports on ongoing safety data projects and include status information about the various traffic records systems in North Carolina.
**Status:** A draft plan will be developed and delivered to GHSP and the TRCC members for review. The final plan will be submitted at the end of June 2013 and will incorporate the recommended changes.
**Sponsoring Agency 1:** GHSP
**Total Budget:** $22,807

**For More Information Contact:** David Harkey, 919-962-8705, harkey@hsrc.unc.edu

**8.) 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
**Performance Period:** September 2010 – September 2012
**Description:** SaDIP 2010 – TraCS 10 Upgrade Project. This grant was 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:** Closed 9/2012

- 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 (hired a Tech Writer and have begun to update instructional materials for TraCS 10).

**Total Budget:** $ 90,218
**For More Information Contact:** Julian H. Council, 919-861-3061, jhcouncil@ncdot.gov

**9.) 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.
- These funds are being used for training of Staff and train the trainer users of TraCS program for implementation of TraCS 10.
- Successfully began receiving electronic crash reports from Charlotte/Mecklenburg, Davidson, Charlotte Airport, Greensboro, Burlington, Greenville, Thomasville, and New Bern PDs. **Currently in final stages of deploying Huntersville PD
- We have 10 successful completed 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

**10.) SADIP 2012**
**Number(s):** FM-SAD-0022-12-01-00
**Agency(ies):** NCDMV-TRAFFIC RECORDS
**Project Leader(s):** Michael Bryant, Julian H. Council, Michael Thomas
**Performance Period:**
**Description:** SaDIP 2012 – To purchase the supported version of "Easy Street Draw" crash diagraming tool which is currently being used by law enforcement.
**Status:** In Progress

- Purchased the latest version of Easy Street Draw diagraming tool which is currently being used by law enforcement.
- Currently Testing ESD 5.0 version into the TraCS 10 upgrade project.

**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

**11.) PreMIS migration to NEMSIS v3 Standard**
**Agency(ies):** EMSPIC
**Project Leader(s):** Paul Cooper, Chad Lohmeier, David Yoshikawa, Antonio R. Fernandez
**Performance Period:** Ongoing
**Description:** To move the state EMS data system from version 2.2.1 to NEMSIS v3. Meet with stakeholders to discuss the common descriptions of elements and to decide what NC will require to collect. Develop a disconnected application that will run on any Desktop, Tablet or smart phone. The application will communicate and deliver data through web services. Implement business rules for data validity and accuracy.
**Status:** We are currently working with the EMS stakeholders to determine what should be collected for NC and to discuss definition standards of the dataset. The NEMSIS v3 standard is not final, as minor changes are still occurring with the XSD schema. The EMSPIC is currently working on the design standard for the disconnected PreMIS application. Many database changes and migration mappings have occurred. A new data warehouse and transaction database have been designed for the v3 implementation.
**Total Budget:** unknown
**For More Information Contact:** David Yoshikawa , Chad Lohmeier, Tony Fernandez, 919-843-0201, dyoshikawa@emspic.org

**12.) Quantifying and Describing EMS Patient Transports following Motor Vehicle Crashes in North Carolina**
**Agency(ies):** EMSPIC
**Project Leader(s):** Antonio R. Fernandez
**Performance Period:** Ongoing
**Description:** There is a paucity of literature examining the relationship between motor vehicle crashes (MVC) and transport of crash victims to emergency departments by EMS. Therefore,

we are seeking to utilize data from the NC EMS Data System, in conjunction with data obtained from the North Carolina Division of Motor Vehicles Crash Database, to address our two study objectives. We will first estimate the percentage of individuals who experienced an MVC and were transported by EMS to an emergency department for evaluation. Further, we will determine if the rate of EMS transport after MVC increases with increasing age of the crash victim.
**Status:** This project is in the very early stages. We have recently received approval to utilize both Crash Data and PreMIS data for this research project. We have also recently submitted for IRB approval. Following IRB approval, we will perform statistical analyses to meet the objectives described above. Following analysis, we intend to develop a manuscript suitable for peer-review and subsequently publish this work in a scientific journal.
**Total Budget:** unknown
**For More Information Contact:** Antonio Fernandez, 919-843-0201, afernandez@emspic.org

**13.) Linkage Project**
**Agency(ies):** EMSPIC
**Project Leader(s):** Chad Lohmeier
**Performance Period:** Ongoing
**Description:** To maintain ongoing linkages with the following data sources: EMS, Trauma, Crash, Emergency Department, Hospital Discharge, Stroke and RACE. Maintain and continue creation of an online reporting system that includes reports of the linked data. Currently, these are developed on an as-needed basis. Create security levels for various stakeholders, including the TRCC members.
**Performance Areas:** Integration, uniformity, accessibility
**Status:** The EMSPIC currently maintains linkage of the above mentioned data sources. This is an ongoing initiative. Currently, EMS data is linked to the various data sources on different intervals:

- ED – daily
- Trauma – weekly
- Discharge – quarterly
- Crash – yearly
- Stroke – quarterly
- RACE – quarterly

**Total Budget:** unknown
**For More Information Contact:** Chad Lohmeier or Paul Cooper, 919-843-0201, clohmeier@emspic.org, pcooper@emspic.org

**14.) ACIS/Eastern Band of Cherokee Indians (ECBI)**
**Agency(ies):** North Carolina Administrative Office of the Courts
**Project Leader(s):** Charles Lane
**Performance Period:** 1/2012 – 12/2012

**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:** 03/12 ECBI began using ACIS as their system of record for criminal and infraction cases.

**Sponsoring Agency 1:** ECBI (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

**15.) Automated Criminal Infraction System (ACIS)**

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

**Project Leader(s):** Wanda Thomas/Paul Cash

**Performance Period:** 1/2012 – 12/2012

**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:**

- 1/12 Implemented additional Provisional CVR edits
- 3/12 Implemented changes to allow reporting on the Eastern Band of Cherokee Indians
- 3/12 Added language access indicators for citations and court calendars
- 4/12 Added additional language access information to process add and supplemental Information screens
- 6/12 Modified edits for Justice Reinvestment Act for Intermediate Punishment and Intensive Probation
- 7/12 Added new offense codes
- 8/12 Allowed Dismissed With Leave disposition for show cause offense codes
- 10/12 Implemented web print version of the Bill of Indictment

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

**16.) 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:** 1/2012 – 12/2012
**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:**

- 05/12 Implemented Release 5.2 which included a DNA expunction summary page and the ability to schedule standard ACIS calendars from within CCIS-DA

**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

**17.) 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/ 2012 – 12/2012
**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:**

- 6/12 Implemented Release 5.3 statewide which allows the entry and tracking of bill of cost information and provides new judgment data capture of sentencing and probation.
- Currently re-designing ACIS disposition functionality for CCIS-CC to add new capabilities for entering judgment details, transfers, appeals, withdrawals and remands. The team will also begin replacing the functionality of CourtFlow and will add the initial data elements identified by the Sentencing Commission group for the Justice Reinvestment Act (JRA).

**Sponsoring Agency 1:** NCAOC (Budget $6,301,022)
**Total Budget:** $ 6,301,022
**For More Information Contact:** Janet Greene, 919-890-2041, Janet.greene@nccourts.org

**18.) North Carolina Warrant Repository/NCAWARE**

**Agency(ies):** North Carolina Administrative Office of the Courts
**Project Leader(s):** Stephanie Taborn
**Performance Period:** 1/2012– 2/2013
**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:**

- 1/12 Added Provision License CVR functionality
- 2/12 Added ability to have single character last name
- 6/12 Added ability to capture need for an interpreter
- 12/12 Over 999, 000 processes as of end of 2012
- 1/13 Implemented Mecklenburg County (99th county) including integration
- county's local systems
- Currently 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

**19.) payNCticket**
**Agency(ies):** North Carolina Administrative Office of the Courts
**Project Leader(s):** Wanda Thomas
**Performance Period:** 1/2012 – 2/2013
**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.
- 05/12 Expanded payable offenses to include non-traffic offenses for Wildlife, Parks and Recreation, ALE and Marine Fisheries.
- 12/12 Implemented the NIC Common Checkout Payment Processor
- 12/12 Collected $60 million in citation payments

**Sponsoring Agency 1:** NCAOC (Budget $185,459)
**Total Budget:** $185,459
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## Traffic Records Coordinating Committee Certification

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

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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
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**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 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 NCAOC 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.