Crash Reporting Data

NCDOT/FHWA Law Enforcement Outreach Initiative

Overview

This informational guide is being provided in an effort to help law enforcement officers and others develop a better understanding of the many uses of the crash data they collect on a daily basis. This guide will provide information on who uses the data, data collection requirements, known issues with data quality and some insight into the many uses of crash data. Finally, resources that are available to law enforcement to assist them in meeting the day to day demands of their jobs has been provided.

Who Uses Crash Data?

Believe it or not, the many data elements collected on the DMV-349 Collision Report form are utilized by a wide variety of end users that far exceeds just the insurance companies. While copies of crash reports are often obtained and reviewed for insurance purposes, this is far from the primary reason for collecting the data. Crash data collected by law enforcement is used by a variety of people and agencies at the local, state and even national level. The importance of crash data to these groups is significant in areas such as identifying highway safety deficiencies and prioritization of limited resources in both manpower and funding.

By bringing to light the many uses of crash data and the important role it plays in key business decisions in the highway safety arena and other venues, it is anticipated that law enforcement officers will be more efficient in providing quality data.

Some of the users of crash data include but are not limited to:

- NCDOT
  - Roadway Design
  - Public Information
  - Feasibility Studies
  - Board of Transportation
  - Design Services
  - District Offices
  - Division Offices
  - Rail Division
  - Transportation Mobility & Safety
  - Statewide Planning
  - Planning & Environmental
- Private Citizens
- Private Industry
- MPOs, TCC, TAC
- Division of Motor Vehicles
- Transit Authorities
- Medical Community
- Emergency Medical Services
- Federal Highway Administration
- State Highway Patrol
- Local Law Enforcement
- Research Institutions
- News Media
- Attorneys
- Private Engineering Firms
- Safety Advocacy Groups
- Legal System
- FARS

Crash Data 101

By law, any crash that meets the reporting criteria of a minimum of $1,000 in property damage or a personal injury must be reported. Law enforcement has 24 hours to complete a DMV-349 Collision Report which must then be submitted to the Division of Motor Vehicles (DMV) within 10 days of the crash. If an individual that is injured in the crash dies within 12 months from injuries sustained within the crash, the investigating agency is required to complete and submit a supplemental report to DMV. Failure to complete and submit crash reports as required by law is punishable as a misdemeanor.

Once the report is submitted to DMV, the collected data is entered into the Crash database. Currently crash data is available from January 1, 1990 to the present; although there is typically a 1-2 month delay in getting data entered into the system.

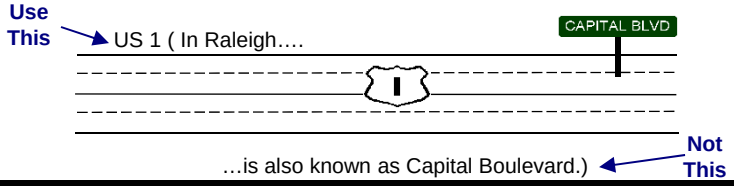
Crash Data Quality

Along with the need for timely report submittal, accuracy of the data reported is also key. Often one of the most troublesome, but most important pieces of information on the DMV-349 is the location information. When a crash is entered into the crash database, the system attempts to milepost or locate the crash based on the information provided by the officer. Being able to locate the crash is of vital importance to the end user and depends primarily on the quality and accuracy of the data provided.

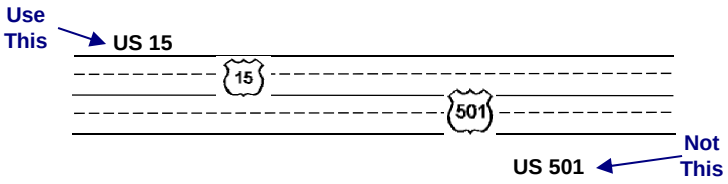
When referencing a road that has more than one route designation, the order in which the routes should be used is as follows:

I	Interstates routes (I-40)
US	US numbered routes (US 52)
NC	NC numbered routes (NC 180)
SR	State Secondary routes (SR 1010)
Local	City street name (Capital Boulevard)
PVA	Public vehicular area (Wal-Mart)
PP	Private road, property or driveway

Example: In cases where multiple routes run along the same stretch of roadway, the highest ordered route should be used.



In cases where multiple routes of the same classification run along the same stretch of roadway, use the lowest numbered route.



In an effort to standardize data collection and facilitate data entry, there are a few other areas where all officers should be consistent in how data is collected. Two of the most common abused examples of this are the abbreviation of street name suffixes and directional prefixes along with the use or non-use of periods after them. Shown below are the correct way to report these.

Street Name Suffixes:

Road = RD	Terrace = TR
Street = ST	Boulevard = BLVD
Avenue = AVE	Parkway = PKWY
Place = PL	Freeway = FRWY
Court = CT	Highway = HWY
Lane = LN	Circle = CIR
Trail = TL	

Street Direction Prefixes:

North = N	North East = NE
South = S	South East = SE
East = E	North West = NW
West = W	South West = SW

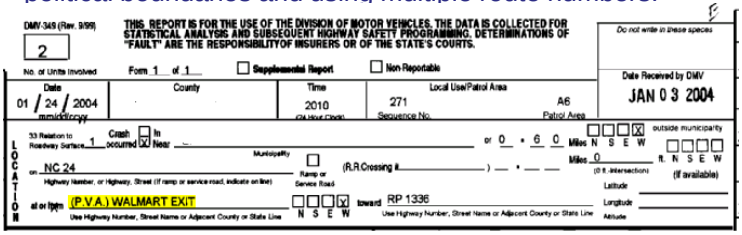
Do not enter periods at the end of street type suffixes or directional prefixes. For example:

Enter: N Franklin Dr
Instead of: N. Franklin Dr.

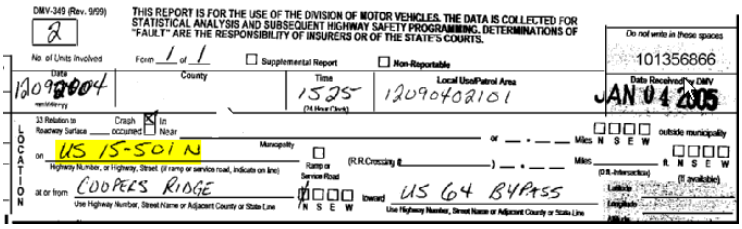
When referencing a crash, the officer should always reference valid streets or political boundaries and avoid using PVAs and PPs as reference points as these are not identified in the crash database. If a crash is referenced to a PVA or PP, it is often impossible for safety engineers to determine the location of the crash. Therefore, unless the crash actually occurs in a PVA parking lot, **DO NOT** use PVAs (ex. Wal-Mart entrance) as the on road, reference road, from road or towards road. The database and end users do not know where these are. Only state or city maintained roads or adjacent County, City Limits or State lines should be used as valid reference points.

The following are a few illustrations of common mistakes that are often made and should not be duplicated.

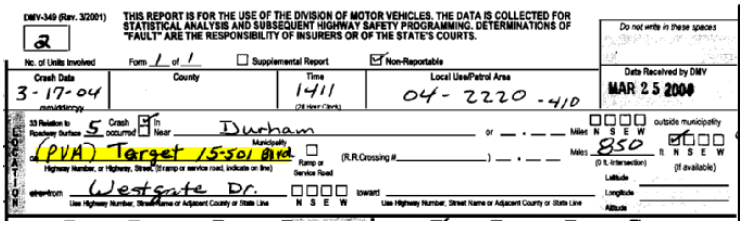
Bad Example: Not referencing valid street names or political boundaries and using multiple route numbers.



Bad Example: Referencing multiple route numbers.



Really Bad Example: Not referencing valid street names or political boundaries and using multiple route numbers.



Importance of Crash Data

As previously mentioned, there are many uses of crash data that is collected within North Carolina besides insurance companies deciding who will pay for whose damages. This section aims to provide a high level overview of some of the many uses of crash data and should prove beneficial for several reasons. First, it is believed that if an officer is aware of the importance of the data being collected, he/she is likely to be more thorough and accurate in investigating, collecting and reporting the data. Secondly, there are many potential end products of the data that individual officers or police departments may find beneficial to their needs.

To begin, it should be noted that there are many programs, projects, etc. at the local, state and national level that rely on crash data as a basis for justification. In conjunction with this, the opportunity to identify and subsequently prioritize and fund projects based upon a demonstrated safety need can only be completed through the availability of quality crash data.

The following is a common example at the local level that demonstrates the need for quality crash data in conjunction with timely reporting and submission of the data. *"The town council or mayor has received numerous phone calls about a "problem" location. These same people along with the mayor or his representatives have also contacted highway*

safety engineers either with the town or with the Department of Transportation." Unfortunately, due to the manner (or lack thereof) in which law enforcement has investigated, reported and/or submitted the crash data for this location, when an investigation is begun, detailed crash analysis of the location in question fails to substantiate the complaints coming in. Now not only can the safety engineers not make an informed decision on the proper countermeasure to implement, but they will be fighting an uphill battle to justify the required resources to do so.

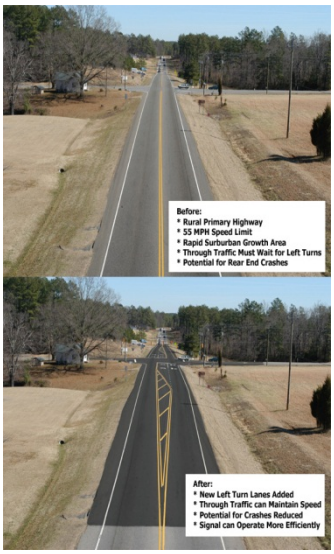
Crash Data Uses

There are literally hundreds if not thousands of uses of the crash data that is collected on a daily basis within North Carolina on our nearly 100,000 miles of state and local maintained roadways. This section will outline just a few of these in an effort to not only demonstrate the significance of crash data, but to also increase awareness of some of the resources available that utilize the data.

N.C.'s Spot Safety Program – is state funded and receives approximately $9 million annually on July 1st. This program targets relatively small and low cost (max $250,000) safety and operational improvements that can be implemented quickly and provide a high benefit to cost ratio. Examples of typical spot safety program projects include installing traffic signals, guardrail, left turn lanes and improving roadway geometrics.

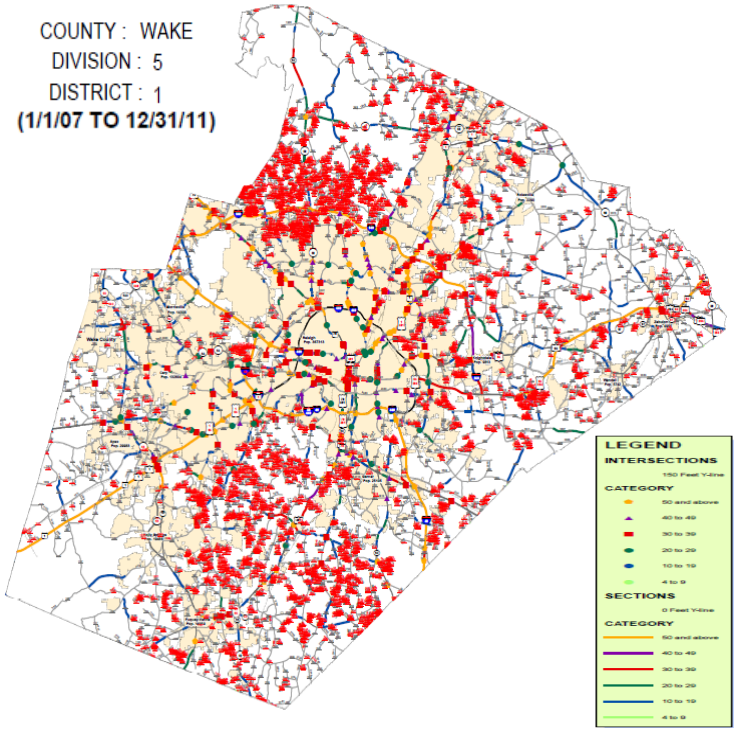
Hazard Elimination Program – is used to develop larger improvement projects to address safety issues. The program is funded with 90% federal funds and 10% state funds. The cost of Hazardous Elimination Program projects typically ranges between $400,000 and $1 million.

North Carolina Moving Ahead – a two year program targeting two lane roads with an average daily travel volume of greater than 2,000 vehicles. $700 million in highway trust funds were programmed for eligible roads that had a demonstrated safety need based upon crash data.



Comprehensive Highway Safety Documents – are provided in the initial planning stages of TIP projects. These documents provide detailed crash analysis within the project limits and serve to assist planning engineers in making better informed decisions in identifying and addressing safety needs during the initial stages of a project. Statistics provided in these documents include: reported crashes on roadways, type of crashes, work zone related crashes, alcohol/drug related crashes, seat belt use, high frequency crash locations, red light running crash locations, time of day crashes and age and race of drivers involved in the crashes.

High Frequency Crash Location Maps – are most often completed on a county level and provide engineers, town council members and others with a easy to understand graphical representation of where crashes are occurring within the selected county.



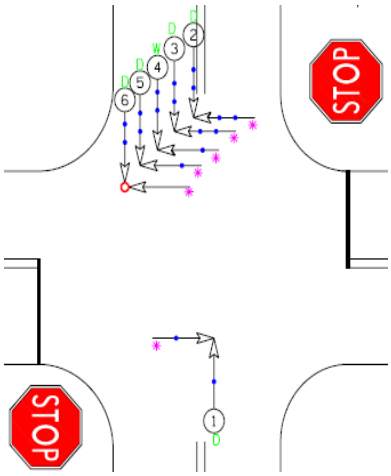
High Frequency Crash Location Listings – provide a tabular listing of high frequency crash locations that are based upon the selected criteria.

High Accident Intersections in Mecklenburg County for the period 1/1/2010 through 12/31/2012 with a minimum of 15 accidents within 150 feet of the Intersection

High Accident Intersections

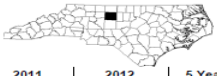
Serial Number	Number of Crashes	Road A	Road B
1	271	I 85	MALLARD CREEK CH
2	156	I 77	SUNSET
3	149	I 485	SOUTH
4	127	I 77	GILEAD
5	126	I 85	BROOKSHIRE
6	124	I 85	NC 16
7	123	SUGAR CREEK	TRYON
8	121	ALBEMARLE	W T HARRIS
9	118	I 485	NC 49
10	114	FOURTH	KING
11	112	CENTRAL	SHARON AMITY
12	111	FAIRVIEW	SHARON
13	106	I 77	TYVOLA
14	105	PINEVILLE MATTHEWS	PROVIDENCE
15	102	CENTRAL	EASTWAY
16	102	I 85	SUGAR CREEK

Collision Diagrams – are another form of graphical representation of the crashes for a particular intersection or section of road. Each crash on the diagram is drawn so that it provides pertinent information about the crash such as speed of vehicle, crash type, wet/dry road conditions, etc.



County Crash Profiles – provide detailed information about the crashes within a county for a given time period.

Guilford County



Reportable	2008 Crashes	2008 Injuries	2009 Crashes	2009 Injuries	2010 Crashes	2010 Injuries	2011 Crashes	2011 Injuries	2012 Crashes	2012 Injuries	5 Year Avg. Crashes	5 Year Avg. Injuries
Fatal	68	72	41	43	50	60	39	44	39	42	47	52
Non Fatal Injury	4,286	6,509	4,474	6,945	4,186	6,523	4,232	6,491	4,589	7,273	4,353	6,748
PDO	7,155		7,238		7,197		7,026		7,404		7,204	
Total	11,509	6,581	11,753	6,988	11,433	6,583	11,297	6,535	12,032	7,315	11,605	6,800
Alcohol Related Crashes												
Fatal	20	20	6	6	21	24	15	18	12	12	15	16
Non Fatal Injury	329	480	356	528	291	462	293	443	319	488	318	480
PDO	309		281		258		298		304		290	
Total	658	500	643	534	570	486	606	461	635	500	622	496
Percent Alcohol Related												
Fatal	29.4%	27.8%	14.6%	14.0%	42.0%	40.0%	38.5%	40.9%	30.8%	28.6%	31.2%	30.7%
Non Fatal Injury	7.7%	7.4%	8.0%	7.6%	7.0%	7.1%	6.9%	6.8%	7.0%	6.7%	7.3%	7.1%
Total	5.7%	7.6%	5.5%	7.6%	5.0%	7.4%	5.4%	7.1%	5.3%	6.8%	5.4%	7.3%
Pedestrian Crashes												
Fatal	7	7	6	6	6	6	2	2	9	10	6	6
Non Fatal Injury	123	134	136	151	138	151	124	135	167	189	138	152
PDO	0		3		2		1		3		2	
Total	130	141	145	157	146	157	127	137	179	199	145	158
Bicycle Crashes												
Fatal	0	0	1	1	0	0	1	1	1	1	1	1
Non Fatal Injury	48	48	38	43	62	64	45	47	53	56	49	52
PDO	0		0		1		1		1		1	
Total	48	48	39	44	63	64	47	48	55	57	50	52
Motorcycle Crashes												
Fatal	10	10	6	6	9	9	5	5	1	1	6	6
Non Fatal Injury	134	150	128	151	121	136	114	127	132	149	126	143
PDO	21		15		21		15		19		18	
Total	165	160	149	157	151	145	134	132	152	150	150	149
County Ranking	46		42		39		39		44			

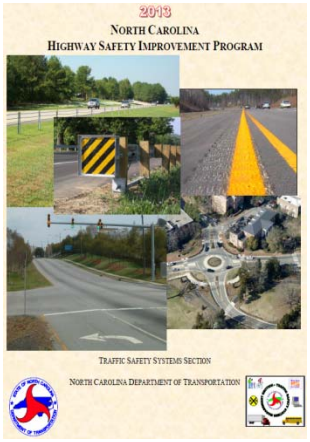
General Information		Ranking 2011	Ranking 2012
Population (2011)	495,231	3	3
Registered Vehicles (2011)	395,827	3	3
Estimated Avg. Annual Miles Traveled (100 MVMT) (2011)	56.53	3	3

Crash Rates (Based on a 3 Year Average of All Reported Crashes)			
Total Crash Rate (/100 MVMT)	241.56	28	58
Fatal Crash Rate (/100 MVMT)	0.81	86	92
Non Fatal Injury Crash Rate (/100 MVMT)	81.64	5	13
Crash Injuries Per 1000 People	14.49	12	9
Fatal Crash Injuries Per 1000 People	0.11	87	85
Crashes Per 1000 Reg. Veh.	34.50	18	18
Fatal Crashes Per 1000 Reg. Veh.	0.12	83	80
Percent Alcohol Related Crashes	4.9%	61	58
Severity Index	4.15	44	38

$$ Comprehensive Crash Cost $$ (Based on a 3 Year Average of All Reported Crashes in 2011 Dollars)		Ranking 2011	Ranking 2012
Average Annual Cost	$492,092,067	3	3
Average Cost Per Crash	$36,035	87	82
Average Cost Per Person	$994	83	76
Average Cost Per Vehicle	$1,243	53	48
Average Cost / 100 Miles Traveled	$8.70	71	85

Time To Next....	
Crash	0.6 Hours
Fatal Injury	167.4 Hours
Injury	1.2 Hours
Crash Cost Per Hour	$56,175

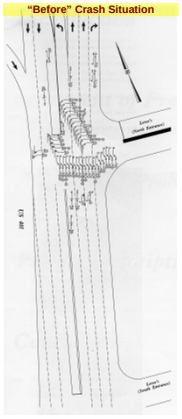
Highway Safety Improvement Program – is produced every year and identifies potentially hazardous locations for intersections, sections, and bicycle and pedestrian locations for further investigation and recommendation of countermeasures to reduce and/or alleviate the identified crash pattern. The 2013 program identified 1,799 intersections, 577 sections, and 93 bicycle and pedestrian intersection locations.



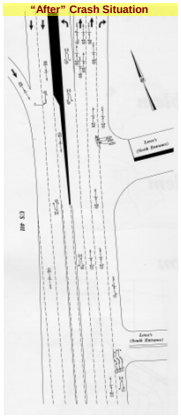
Corridor Review Program – was developed as a result of a resolution passed by the NCDOT Board of Transportation calling for the development of a program to reduce crashes, fatalities and injuries on two lane facilities with higher than average crash rates. Once corridors are identified, they are reviewed by a panel of safety experts from multiple disciplines to determine the nature of the crashes and to recommend countermeasures to correct the identified issues.

Before and After Analyses – are completed to determine if an implemented countermeasure achieved the desired effect of reducing and/or eliminating the crash pattern at a given location. The results of these analyses are utilized in determining the appropriate countermeasure based upon cost, effectiveness and other measures for future projects.

Utilization of aerial photography to develop base maps



Initial crash patterns at entrance to Lowe's in Garner



Crash pattern after project completion

Site Evaluation Projects – analyze specific locations to determine the effectiveness of implemented countermeasures.

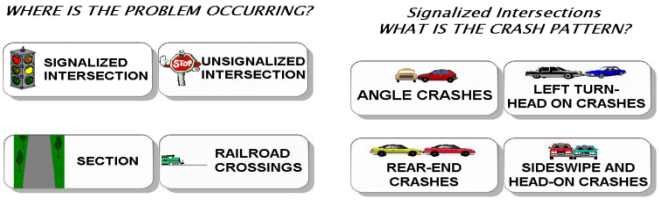
Project Location: NC 97 at SR 2329 (Marshburn Rd), Wake County

Overview: Due to a high number of angle crashes, the overhead flasher was removed and a two-phase signal was installed in 1997.

Evaluation: Crashes were compared before and after the spot safety project to measure the effect of the signal installation on the intersection.

Before		After	Predicted	Percent Change
35	Total Crashes	16	38	-58%
19	Injury Crashes	6	18	-67%
19	PDO Crashes	10	21	-52%
17	Angle Crashes	5	19	-74%
11	Rear-End Crashes	6	12	not significant

Crash Modification Factors – are used as a guide in helping traffic engineers to determine safety projects based upon the location, pattern of crashes and the effectiveness of different countermeasures.



ANGLE CRASHES

at Signalized Intersections

POSSIBLE CAUSES OF CRASH PATTERN	COUNTERMEASURES
Restricted sight distance	• Remove sight obstructions • Restrict parking near corners • Install warning signs (see MUTCD) • Reduce speed limit on approaches • Channelize intersections • Install advance markings to supplement signs
Excessive speed on approaches	• Reduce speed limit on approaches • Increase amber phase • Install rumble strips

NC Crash Costs – are developed to provide the actual monetary and comprehensive costs of crashes based upon the severity of the crash and associated injuries.

Table 6 Monetary and Comprehensive Cost for Traffic Crashes In North Carolina

	Monetary 2012 Dollars	Comprehensive 2012 Dollars
Fatal Crash	$1,600,000	$4,600,000
A Injury Crash	$87,000	$270,000
B Injury Crash	$32,000	$80,000
C Injury Crash	$19,000	$40,000
Property Damage Only Crash	$4,700	$5,400
Average Crash	$20,000	$48,000
Non-Fatal Injury Crash	$24,000	$56,000
Severe Injury Crash (F+A)	$700,000	$2,000,000
Moderate Injury Crash (B+C)	$22,000	$50,000

NC Statewide Crash Rates – are various crash statistics and rates grouped by rate type including: Rural / Urban, Severity, Light Conditions, Wet Cross Section, and Truck / Car.

North Carolina Department of Transportation
Transportation Mobility and Safety Division
Traffic Safety Unit
2009-2011 Three Year Crash Rates
ALL STATE HIGHWAYS

ITEMS	INTER-STATE	UNITED STATES	NORTH CAROLINA	PRIMARY	SECONDARY ROAD	NON-SYSTEM	TOTAL System
TOTAL CRASHES	55,547	131,137	110,055	296,739	225,251	158,248	680,238
FATAL CRASHES	267	718	741	1,726	1,479	309	3,514
NON-FATAL INJURY CRASHES	13,709	40,357	34,624	88,690	67,751	43,543	199,984
NIGHT CRASHES	15,653	34,849	32,945	83,447	78,301	38,162	199,910
WET CRASHES	13,409	22,511	17,412	53,332	35,781	24,164	113,277
RUN-OFF-ROAD CRASHES (4)	17,966	24,991	23,585	66,542	77,473	38,720	182,735
PERCENT FATAL CRASHES	0.48%	0.55%	0.67%	0.58%	0.66%	0.20%	0.52%
PERCENT NON-FATAL INJURY CRASHES	24.68%	30.77%	31.46%	29.89%	30.08%	27.52%	29.40%
PERCENT NIGHT CRASHES	28.18%	26.57%	29.94%	28.12%	34.76%	24.12%	29.39%
PERCENT WET CRASHES	24.14%	17.17%	15.82%	17.97%	15.88%	15.27%	16.65%
PERCENT RUN-OFF-ROAD CRASHES	32.34%	19.06%	21.43%	22.42%	34.39%	24.47%	26.86%
MILES OF ROAD	1,125	5,612	8,163	14,900	65,234	24,431	104,565
AVERAGE DAILY TRAFFIC	52,500	12,300	5,800	11,800	1,000	1,000	2,500
TRAVEL (100MVM) (1)	646.73	752.86	517.69	1,917.27	681.46	267.52	2,866.25
TOTAL CRASH RATE (2)	85.89	174.19	212.59	154.77	330.54	591.54	237.33
FATAL CRASH RATE (2)	0.41	0.95	1.43	0.90	2.17	1.16	1.23
NON-FATAL INJURY CRASH RATE (2)	21.20	53.61	66.88	46.26	99.42	162.77	69.77
NIGHT CRASH RATE (2)	24.20	46.29	63.64	43.52	114.90	142.65	69.75
WET CRASH RATE (2)	20.73	29.90	33.63	27.82	52.51	90.33	39.52
RUN-OFF-ROAD CRASH RATE (2)	27.78	33.19	45.56	34.71	113.69	144.74	63.75
SEVERITY INDEX (3)	3.60	4.28	4.58	4.26	4.53	3.78	4.26

Across Median Study – was completed to identify sections of freeways with a higher than average occurrence of across median crashes in an effort to install median barrier systems to prevent these types of crashes. While less than 5% of all crashes on our freeways are across median crashes, 23% of the fatal crashes and 13 % of the severe injury crashes are across median crashes.

Developing & Publishing Specialized Reports – These reports are often developed to document a particular safety issue or in order to document the investigation and analysis of a specific highway safety event. Examples of these reports include:

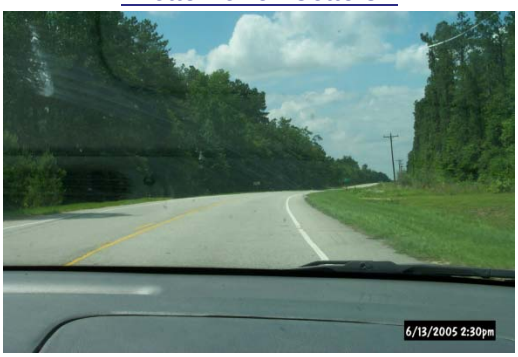
1. *Four Lane versus Five Lane Cross Sections*
2. *Truck Lane Restrictions*
3. *Speed Limit Increases*
4. *Cable Median Barrier Penetrations*
5. *Long Term Median Barrier Analysis*
6. *Long Term Rumble Strip Effectiveness*
7. *Late Night Flash Signal Mode Analysis*
8. *Signal Span-Wire Slippage*
9. *Signal Head Configuration Safety Analysis*
10. *Bridge Replacement Reduction Factors*
11. *Protected vs. Protected-Permitted Signal Installations*
12. *Development of Rumble Strip Application on 2-Lane Roads*
13. *Statewide Study of Wrong Way Crashes on Freeways in North Carolina*

Local Improvements – Crash data is utilized to identify locations where safety improvements are needed as well as to provide insight as to the types countermeasures for each site. Below is an example of one such project:

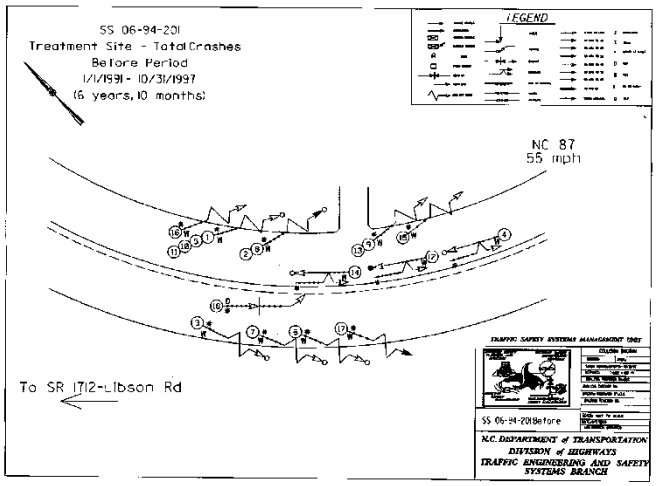
Problem Identification: *NC 87 in Bladen county with a history of ran-off-road crashes during wet pavement conditions.*

Countermeasure: *Pavement was resurfaced to improve skid resistance and pavement wedging was added in the curve where vehicles were leaving the road to provide additional superelevation.*

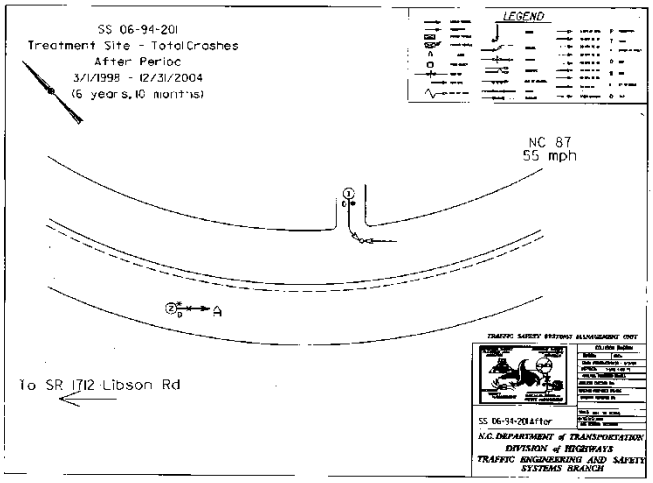
Treatment Location



Collision Diagram - Before



Collision Diagram - After



Results: – *A simple before and after analysis showed an 89% decrease in total crashes and a 100% decrease in target crashes. The severity index decreased by 65% all while the average daily traffic increased by 30%.*

Resources Available to You

There are a lot of resources available to law enforcement officers and agencies to assist in meeting individual and agency goals. The remainder of this guide will detail a few of these that are most often utilized by law enforcement.

Utilization of Crash Data – All of the products described above that utilize crash data can be customized and provided to individual law enforcement agencies/officers on an as needed basis. In addition to these resources, another beneficial resource available from the Traffic Safety Unit is detailed crash analyses. These analyses can be of the standard type such as for specific intersections or sections of roadways within your community, or ad hoc queries can be created to extract specific data elements from the DMV crash database.

Traffic Engineering Accident Analysis System (TEAAS) – is the software that is utilized to perform standard crash analysis. The TEAAS software provides the end user with two methods of accessing crash data. The first is through a series of canned reports that require a minimum amount of input from the end user. There are eight different reports within this section that can be produced at either the city or the county level. Due to the limited amount of input required from the end user, training requirements to utilize these are very minimal.

The second option that is available allows the production of more detailed and in depth analysis for either intersections or sections of roadways. Producing these analyses is a bit more involved and therefore requires additional training prior to being able to producing these analyses.

Detailed below is a list along with a brief description of the canned city/county reports that are available from within TEAAS.

City/County-Wide Crash Reports Descriptions

Accident Types and Violations - *used to list accident types and violations occurred*

Age and Sex of Driver - *used to list age and sex of the driver involved in crashes*

Alcohol, Ambulance and Vision - *used to list involvement of alcohol, percentage of ambulance requests and percentage of crashes where the driver's vision was obstructed*

Environmental Conditions - *used to list light, road and weather conditions when an crash occurred*

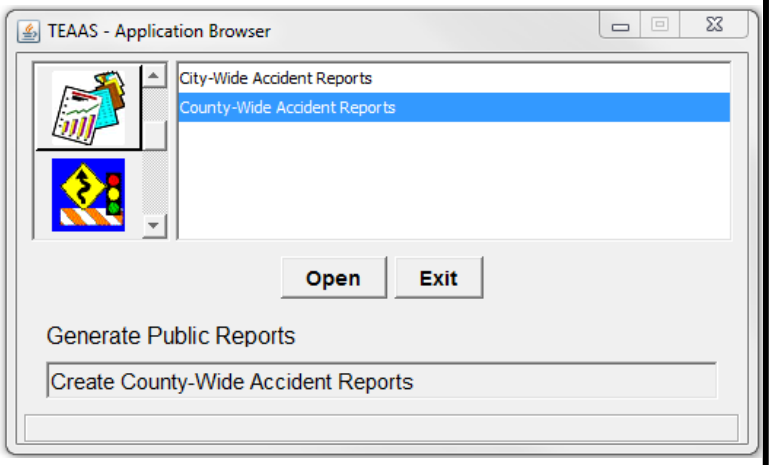
High Accident Intersections - *used to list high crash intersections and their crash types*

Injuries and Restraint Usage - *used to list driver and right front passenger's restraint usage during an crash*

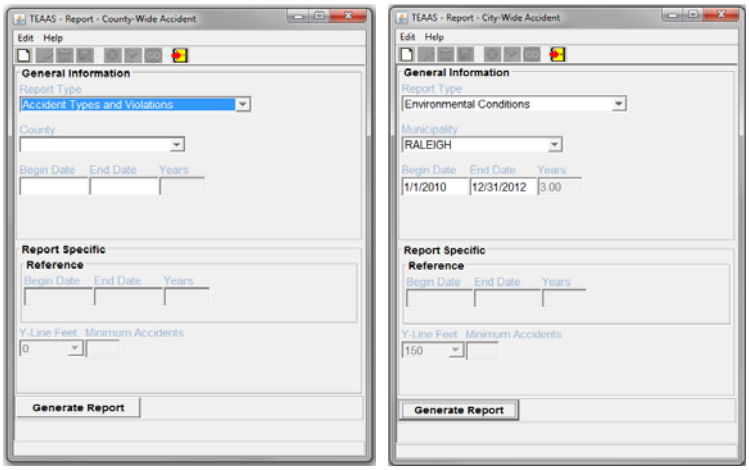
Month, Day and Hourly Summary - *used to list percentage of crashes that occurred during specific time frames*

Severity at High Accident Intersections - *used to list severity of accidents that occurred at high crash intersections*

The City/County reports are easily produced by accessing a menu of available reports and then through a series of fill in the blank and drop down menu fields to provide the information needed to create the report.



Information Entry Screens



Summary Report Sample

Environmental Conditions in Raleigh City for the period 1/1/2010 through 12/31/2012

Light Condition

Condition	Number of Crashes	Percent
DAYLIGHT	43,920	72.6
DUSK	1,671	2.8
DAWN	494	0.8
DARK - LIGHTED ROADWAY	10,279	17.0
DARK - ROADWAY NOT LIGHTED	3,141	5.2
DARK - UNKNOWN LIGHTING	220	0.4
OTHER	36	0.1
UNKNOWN	720	1.2

Road Condition

Condition	Number of Crashes	Percent
DRY	51,153	84.6
UNKNOWN	333	0.6
WET	7,913	13.1
WATER (STANDING, MOVING)	446	0.7
ICE	292	0.5
SNOW	181	0.3
SLUSH	100	0.2
SAND, MUD, DIRT, GRAVEL	53	0.1
FUEL, OIL	3	0.0
OTHER	7	0.0

Why Use TEAAS - Many law enforcement agencies find that it is beneficial to have direct access to the crash data contained within the DMV Crash database for a variety of reasons. Having access provides instant data availability without having to wait days and often weeks for requests to be processed and allows the individual agencies more freedom to analyze other alternatives as questions arise without having to be dependant on someone else.

TEAAS is available to any law enforcement personnel or agency who would like to have access and only requires a PC with Windows operating software, an internet connection and the TEAAS software. One of the best parts of getting TEAAS is the cost. The software, training and support are all ***FREE***!

For more information on TEAAS including training dates, training materials and other related links, please visit: *https://connect.ncdot.gov/resources/safety/Pages/TEAAS-Crash-Data-System.aspx*

Traffic Records Communications System (TRCS) - NC TraCS is the North Carolina DMV's implementation of the National Model of the Traffic and Criminal Software (TraCS) package. TraCS provides officers with all of the functionality necessary to record and retrieve incident information wherever and whenever an incident occurs.

NC TraCS and DMV TRCS are collectively referred to as TRCS and work together to allow officers to collect crash information and then transmit the data to a central repository and DMV using wireless and wired technologies. TRCS allows officers to collect and validate information in the vehicle using a notebook computer or at a local office using a workstation. TRCS can obtain driver and vehicle information corresponding to a driver license or a vehicle (plate or VIN) from the centralized location. TRCS is designed to be a paperless system, where creation, validation and transmission are performed electronically.

The goal of TRCS is to reduce the time needed to create a crash report while in the field. DMV processes all submitted crash report data nightly, so all data is processed within 24 hours of being received at DMV. This translates to faster correction time and in turn, expedited public availability of crash data. Crash data is used by applications such as the Traffic Engineering Accident Analysis System (TEAAS) to analyze and report on crashes occurring within the state. The ultimate benefactor of TEAAS is the population at large, as the primary goal of its use is to improve public safety along North Carolina's roadways.

What will TRCS give local law enforcement agencies?

TRCS uses the latest mobile computing technologies to facilitate data collection where incidents occur. TRCS is a complete data collection solution that provides an electronic form browser, specialized databars to expedite data entry, and a contact manager that enables users to work with and manage their electronic forms. Overall it will reduce the time needed to create a crash report while in the field. It provides both driver and vehicle search capability. After the data is validated and accepted, the crash report is sent to DMV for final approval. DMV rejected crash reports are received by the officer who entered the data when the officer performs the Send and Receive Crash Reports function. DMV processes all submitted crash report data nightly, so all data is processed within 24 hours of being received at DMV. This translates to faster correction time and in turn, expedited public availability of crash data.

What are the benefits of TRCS?

•TRCS will guide and expedite data entry when creating a crash report by providing pull down lists (instead of using a pad to lookup codes), disabling and enabling fields based on data already entered, validation of fields and cross validation of fields.

•TRCS can obtain driver and vehicle information corresponding to a driver license or a vehicle (plate or VIN) from the centralized location. Obtaining this information from the central location will let the officer to validate and save the time and effort of entering data.

•Avoids repeated data entry into systems there by reducing the number of errors.

•All transactions are paperless, unless a report is printed (like the Driver Exchange and Request for Information Report).

•Expedited public availability of crash data.

•TraCS provides integrated diagramming capability with Easy Street Draw. It provides the ability to open Easy Street Draw from the form and complete a diagram; the diagram is then displayed and saved with the TraCS form when Easy Street Draw is closed. DMV has statewide licenses for Easy Street Draw software, eliminating the need by the law enforcement agencies to acquire separate licenses.

•TraCS and the TRCS client have a small footprint.

•TraCS provides a streamlined interface and navigation tree features with the Data Browser, the Databar, and the Contact Manager facilities.

•TRCS encrypts and compresses information in transit between a TRCS client and the Server.

Summary

There are many uses of the crash data contained in the over 225,000 crash reports that are completed and submitted into the NCDMV Crash Database on an annual basis. Hopefully, the contents of this guide will provide the law enforcement officer and others with valuable insight into the many actual uses of the crash data they collect on a regular basis. By better understanding the potential impacts this data can have on issues such as project identification, prioritization and funding all of which ultimately affect highway safety, its is hoped that the law enforcement officers collecting this data will be more willing to put a little extra effort into providing crash data of the highest quality.

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