

Hazard Elimination Project Evaluation

Project Information

Order ID: 41000029715

Project ID: W-5208A

Location: US 74 from Robeson CL to US 74 Business (approximately 3.6 miles)

County: Scotland

Division: 8

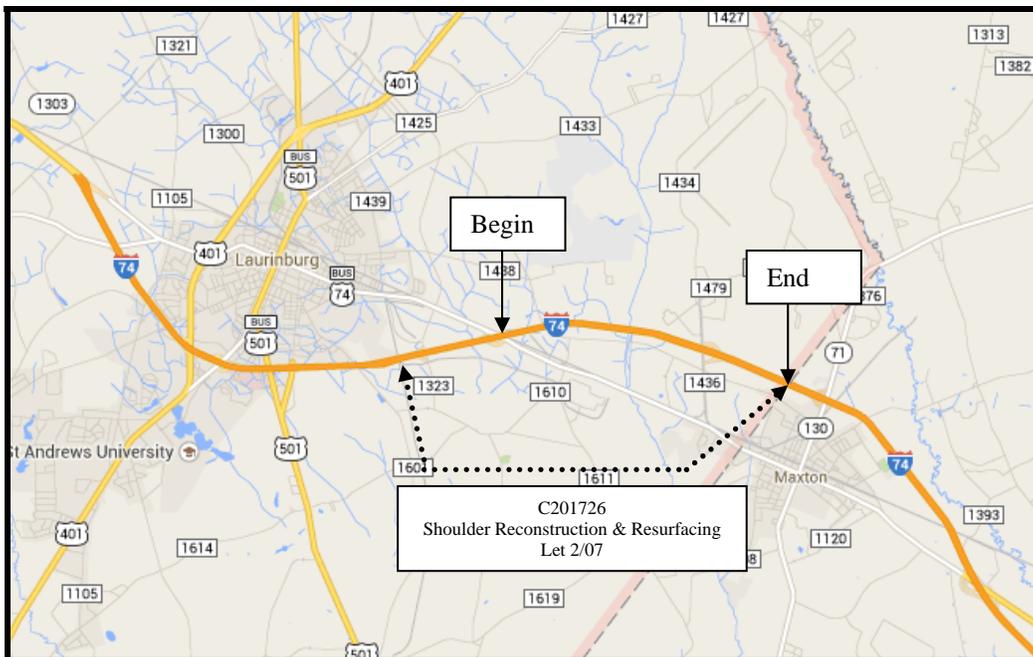
Countermeasure: Install shoulder rumble strips and pavement markings

Project Completion: August 7, 2010

Project Cost: \$116,700

Map (from Google Maps. Coordinates are 34.759305, -79.374897)

There was a TIP project that was completed on this section of roadway during the analysis period for this evaluation. It is noted in the location map for your reference but was not accounted for in this evaluation.



Naive Before and After Analysis

Before Period: October 1, 2006 through May 31, 2010 (3.66 years)

Const. Period: June 1, 2010 through August 31, 2010

After Period: September 1, 2010 through April 30, 2014 (3.66 years)

Analysis Criteria: Treatment data consisted of all crashes on US 74 from US 74B to the Robeson County Line

Target Crashes: Lane Departure crashes were the target crashes for the applied countermeasure. Lane Departure crashes include: Ran Off Road – Left, Ran Off Road – Right, Ran Off Road – Straight, Fixed Object, Head-on, Parked Motor Vehicle, Sideswipe – Opposite Direction, and Overturn/Rollover.

Correctable Crashes: Correctable crashes are Lane Departure crashes that are potentially correctable by rumble strips. Crashes are considered correctable if: the first event involved at least one vehicle crossing a roadway edge line; it was not caused by a vehicle swerving to avoid a vehicle, person, animal, or other object in the roadway; it was not caused by mechanical problems, blown tires, or a medical problem with the driver; it was not caused by the weather, such as hydroplaning or sliding on ice; and it was not clear from the crash diagram/narrative that the driver lost control prior to crossing the edge line.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	34	27*	-20.6
Total Severity Index	6.28	1.82	-71.0
Ran Off Road Crashes	24	8	-67.0
Ran Off Road Crash Severity Index	3.77	3.77	0.0
Correctable Crashes	12	3	-75.0
Correctable Crash Severity Index	5.32	3.47	-34.8
Volume (2008, 2012)	14,500	14,000	-3.4

*Seven crashes in the after period all involved the same incident.

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	0	0	n/a
Class A injury Crashes	1	0	-100.0
Class B injury Crashes	3	0	-100.0
Class C Injury Crashes	11	3	-72.7
Property Damage Only	19	24	26.3

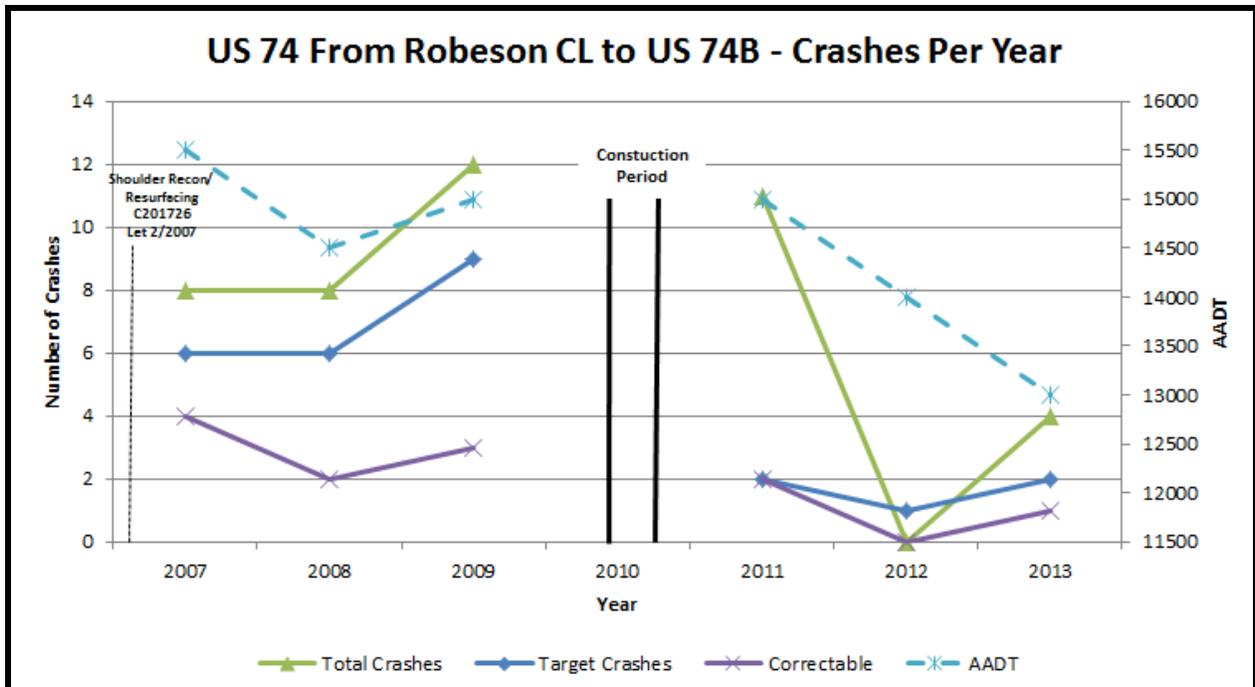
Overall Summary Results

Total Crashes:	- 21 %	(reduction)
Total Crash Severity:	- 71 %	(reduction)
ROR Crashes:	- 67 %	(reduction)
ROR Crash Severity:	- 0 %	(reduction)
Correctable Crashes:	- 75 %	(reduction)
Correctable Crash Severity:	- 35 %	(reduction)
Volume:	- 3 %	(reduction)

Items for Discussion/Concerns

As noted below the “Treatment Information” table, seven crashes in the after period occurred at relatively the same time and place. A vehicle’s tailgate failed and dropped large rocks onto US-74. Each of the seven crashes involved a vehicle striking the rocks.

The following chart shows Total, Target, and Correctable Crashes per year for the subject section of US 74, along with the AADTs. Also noted on the chart are any projects that were completed on the segment during the time periods according to the NCDOT TIP letting website.



Data Prepared For

The Traffic Safety Unit *of the*
 Transportation Mobility and Safety Division *of the*
 Division of Highways *of the*
 North Carolina Department of Transportation

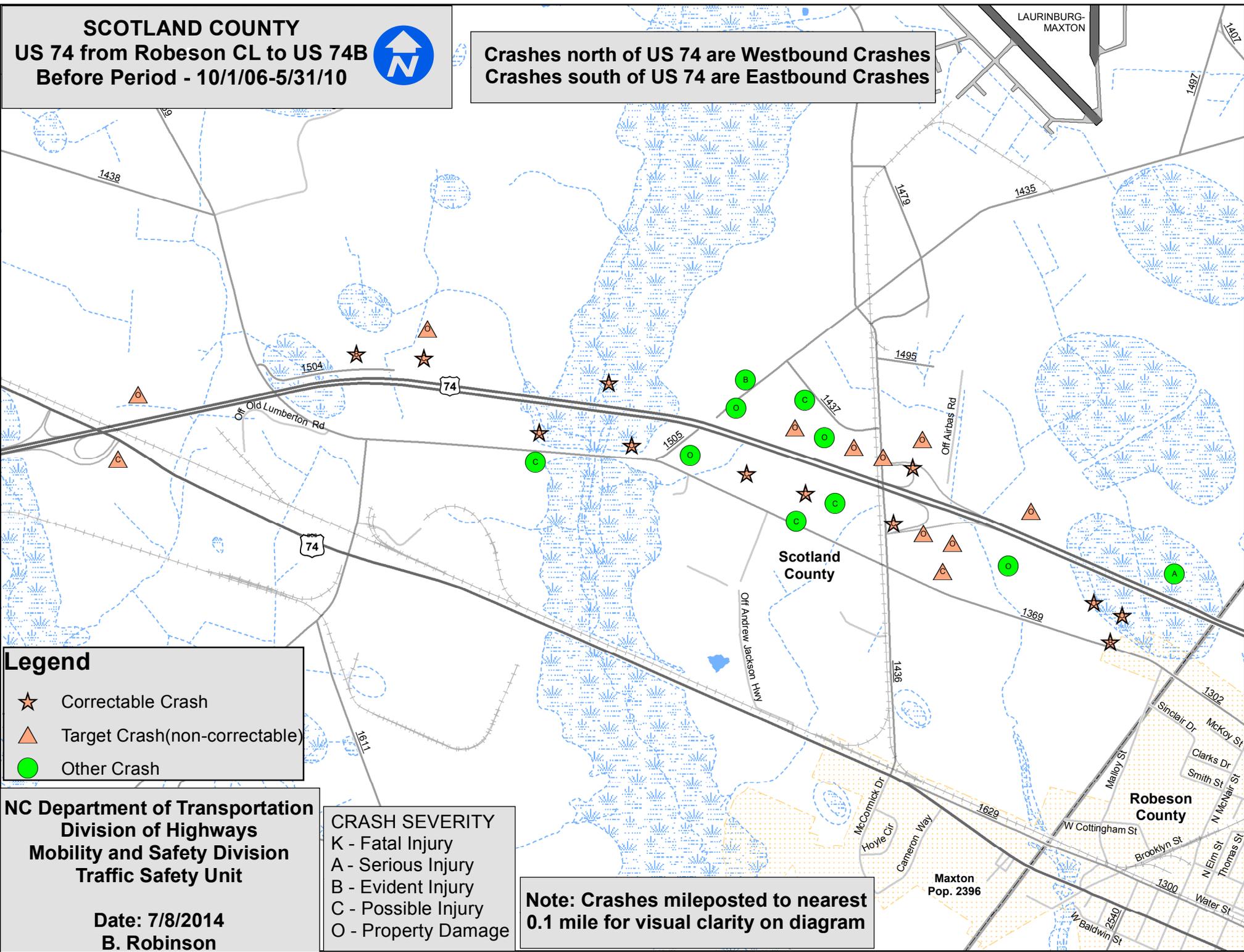
Data Prepared By

Principal Investigator: Brad Robinson, PE
 Work Group/Consultant: NCDOT - Safety Evaluation Group
 Date: September 19, 2014

SCOTLAND COUNTY
US 74 from Robeson CL to US 74B
Before Period - 10/1/06-5/31/10



Crashes north of US 74 are Westbound Crashes
Crashes south of US 74 are Eastbound Crashes



Legend

- ★ Correctable Crash
- ▲ Target Crash(non-correctable)
- Other Crash

NC Department of Transportation
Division of Highways
Mobility and Safety Division
Traffic Safety Unit

Date: 7/8/2014
B. Robinson

CRASH SEVERITY
 K - Fatal Injury
 A - Serious Injury
 B - Evident Injury
 C - Possible Injury
 O - Property Damage

Note: Crashes mileposted to nearest 0.1 mile for visual clarity on diagram

Maxton
 Pop. 2396

LAURINBURG-
 MAXTON

