

Hazard Elimination Project Evaluation

Project Information

Order ID: 41000032314

Project ID: W-5212A

Location: 500-feet north of SR 1912 (Horseshoe Bend Beach Rd) / SR 1922 (Lucia Riverbend Highway) to 2.13 miles south of Lincoln County – MP 0.482 to 2.057

County: Gaston

City: near Mount Holly

Division: 12

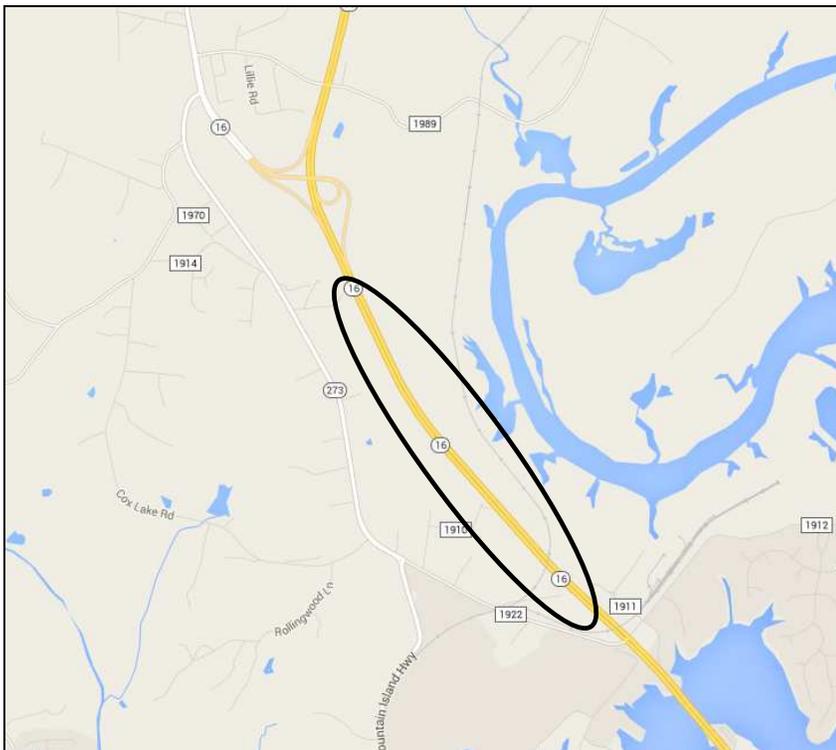
Signal ID: N/A

Countermeasure: Single strand of cable median guardrail

Project Completion: August 6, 2010

Project Cost: \$200,000

Map and Aerial (from Google Maps) – Coordinates: 35.359899, -80.984020



Naive Before and After Analysis

- Before Period: October 1, 2005 through April 30, 2010 (4 years, 7 months)
- Const. Period: May 1, 2010 through August 31, 2010
- After Period: September 1, 2010 through March 31, 2015 (4 years, 7 months)
- Analysis Criteria: Treatment data consisted of all crashes with the segment from 500-feet north of SR 1912/1922 (MP 0.482) to 2.13 miles south of Lincoln County line (MP 2.057) with a 0-foot y-line.
- Target Crashes: Cross Median Lane Departure Crashes were the selected Target Crashes: Ran-Off Road (Left, Straight), and Head-On.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	18	17	- 5.6 %
Total Severity Index	2.64	1.44	- 45.5 %
Cross Median Lane Departure (Target)	2	0	- 100.0 %
Cross Median LD Crash Severity Index	8.40	0.00	- 100.0 %
Lane Departure Median Barrier Hits	0	4	+100 %
LD Median Barrier Hit Severity Index	0.00	2.85	+100 %
Volume (2008, 2012)	24,000	27,000	12.5 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	0	0	0.0 %
Class A injury Crashes	0	0	0.0%
Class B injury Crashes	1	0	- 100.0 %
Class C Injury Crashes	3	1	- 67.0 %
Property Damage Only	14	16	14.3 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Night Crashes	8	7	- 12.5 %
Wet Roadway Crashes	5	3	- 40.0 %
Alcohol / Drugs Involvement Crashes	1	0	- 100.0%
Animal Crashes	10	7	- 30.0 %

Overall Summary Results

Total Crashes:	- 6 %	(reduction)
Total Crash Severity:	- 46 %	(reduction)
Target Crashes:	- 100 %	(reduction)
Target Crash Severity:	- 100 %	(reduction)
Volume:	13 %	(increase)

Additional Summary Results

Animal Crashes:	- 30 %	(reduction)
Wet Roadway Crashes:	- 40 %	(reduction)

Items for Discussion/Concerns

This segment experienced similar crash patterns in the before and after periods. There were two (2) cross median crashes in the before period where vehicles entered the opposing lanes. After the cable guardrail installation, there were four (4) lane departure median crashes but none of them penetrated the treatment.

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: Jason B. Schronce, PE
Work Group/Consultant: NCDOT - Safety Evaluation Group
Date: May 20, 2015

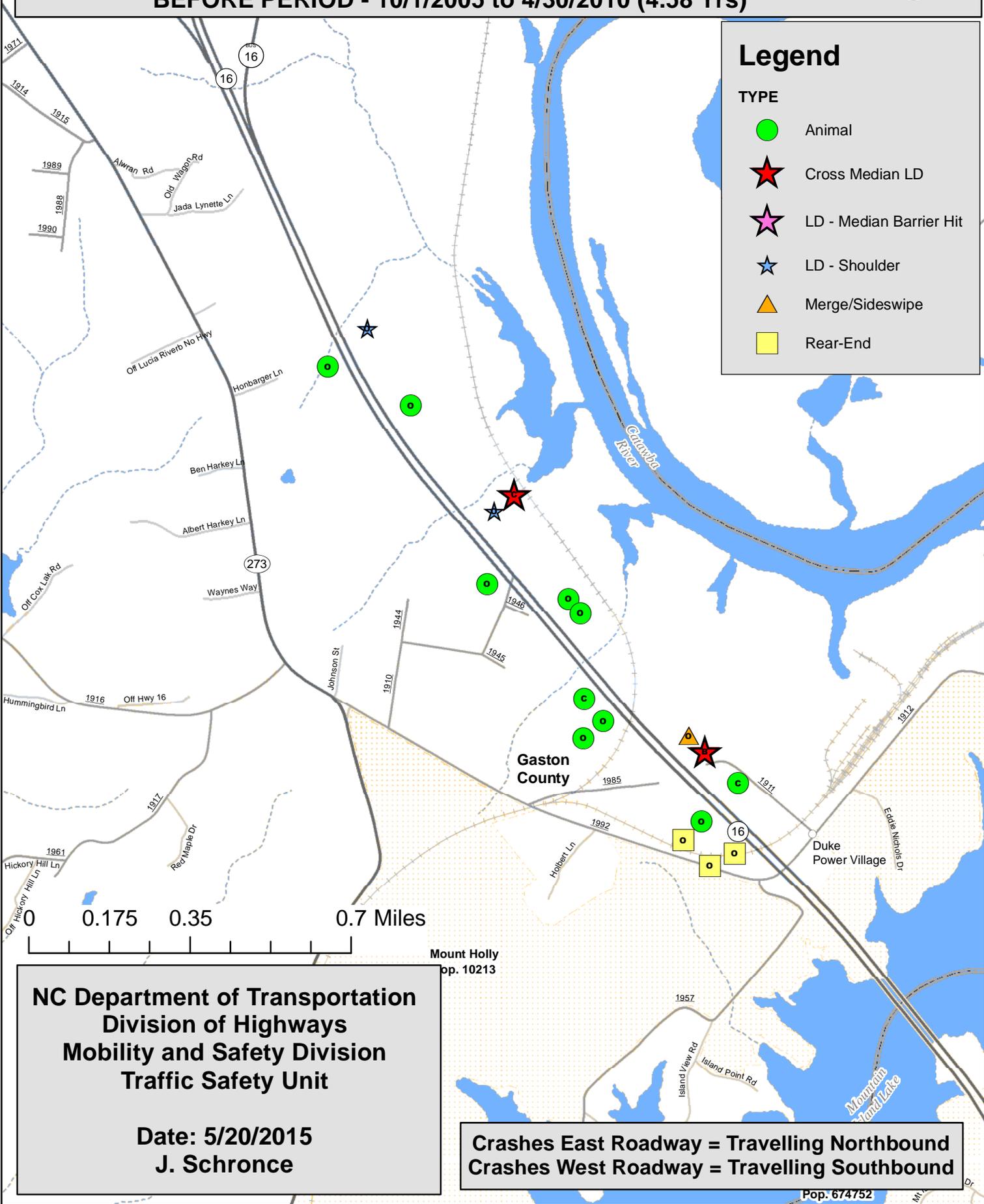
W-5212A - GASTON County
NC-16 from 500-ft north of SR 1912 to 2.13 miles south of CL-Lincoln
Milepost 0.482-2.057
BEFORE PERIOD - 10/1/2005 to 4/30/2010 (4.58 Yrs)



Legend

TYPE

- Animal
- ★ Cross Median LD
- ★ LD - Median Barrier Hit
- ★ LD - Shoulder
- ▲ Merge/Sideswipe
- Rear-End



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

Date: 5/20/2015
J. Schronce

Crashes East Roadway = Travelling Northbound
Crashes West Roadway = Travelling Southbound

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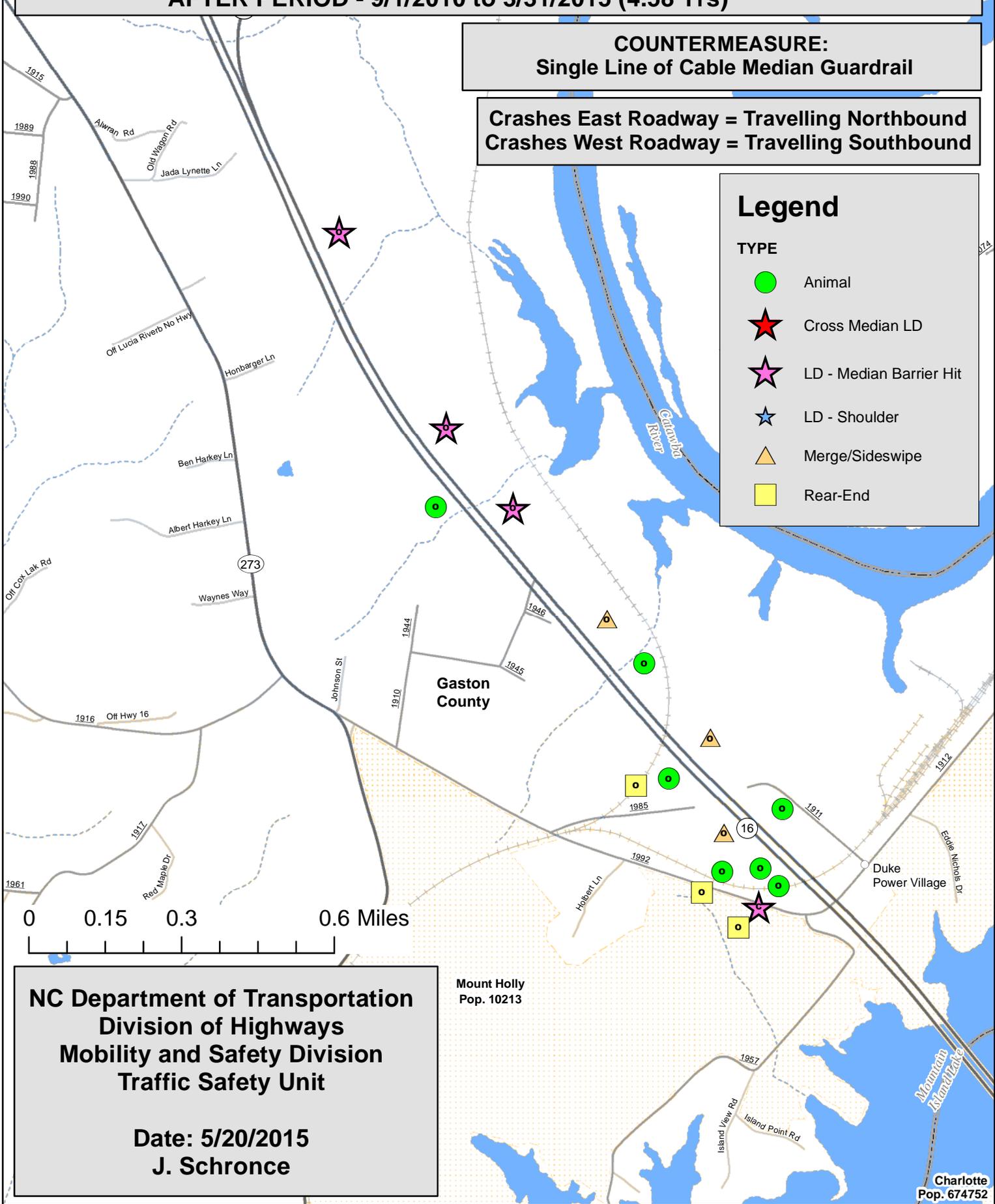
COUNTERMEASURE:
Single Line of Cable Median Guardrail

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J. Schronce

Mount Holly
 Pop. 10213

Charlotte
 Pop. 674752