

# Hazard Elimination Project Evaluation

## Project Information

Order ID: 41000037847 (Former Monitoring 41000030821)

Project ID: W-5210E

Location: SR 1650 (Northeast Connector) at SR 1535 (Mountain Creek Rd)

County: Stanly

City: Albemarle

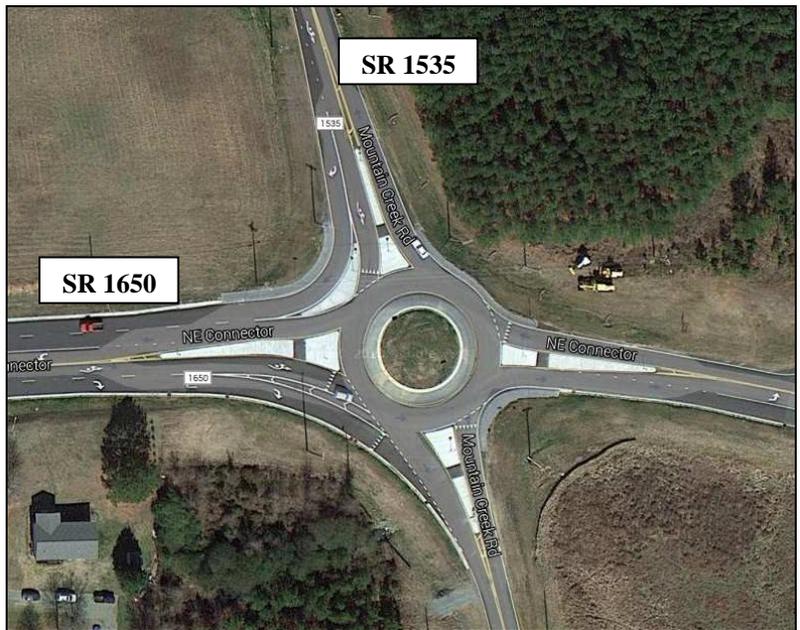
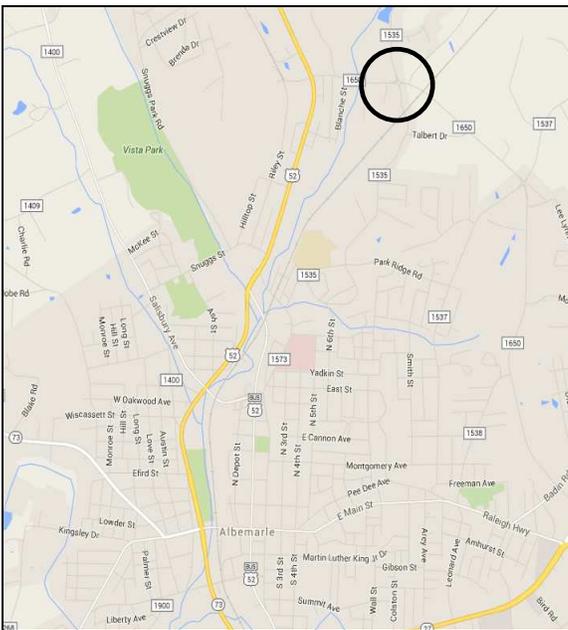
Division: 10

Signal ID: N/A

Countermeasure: Install Intersection Roundabout

Project Completion: September 5, 2012 Project Cost: \$550,000

## Map and Aerial (from Google Maps) – Coordinates 35.385112, -80.183743



## Naive Before and After Analysis

- Before Period: June 1, 2009 through May 31, 2012 (3 years)
- Const. Period: June 1, 2012 through September 30, 2012
- After Period: October 1, 2012 through September 30, 2015 (3 years)
- Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the SR 1650 (Northeast Connector) and SR 1535 (Mountain Creek Road) approaches.
- Target Crashes: Frontal Impact Crashes were the selected target crashes, which includes the following: Angle; Left Turn (Same and Different Roadway); and Right Turn (Different Roadway).

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	4	6	50.0 %
Total Severity Index	4.70	3.47	- 26.2 %
Target Crashes	3	4	33.3 %
Target Crash Severity Index	5.93	2.85	- 51.9 %
Volume (2010, 2013)	11,600	11,000	- 5.2 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	0	0	N/A
Class A injury Crashes	0	0	N/A
Class B injury Crashes	2	0	- 100.0 %
Class C Injury Crashes	0	2	100.0 %
Property Damage Only	2	4	100.0 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Night Crashes	0	1	100.0 %
Wet Roadway Crashes	0	1	100.0 %
Alcohol/Drugs Involvement Crashes	0	0	N/A
Animal Crashes	0	0	N/A

## **Overall Summary Results**

Total Crashes:	50 %	(increase)
Total Crash Severity:	- 26 %	(reduction)
Target Crashes:	33 %	(increase)
Target Crash Severity:	- 52 %	(reduction)
Volume:	- 5 %	(reduction)

## **Items for Discussion/Concerns**

The after period roundabout experienced four (4) right turn different roadway crashes as vehicles approaching the intersection failed to yield to motorists already in the roundabout.

Please note that the before period crash data in this evaluation is not representative of the crash data this project was investigated, developed, justified, funded, and constructed with originally. Crash data counts can have random fluctuations from any given year to the next. The original crash data was analyzed for the time period of November 1, 2005 through October 31, 2010. Over this five year time frame there were 18 total crashes; of which there were 15 frontal impact crashes, 1 rear end crash, and 2 animal crashes. There was 1 fatal crash, 0 a-injury crashes, 4 b-injury crashes, 1 c-injury crash, and 12 property damage only crashes.

## **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**

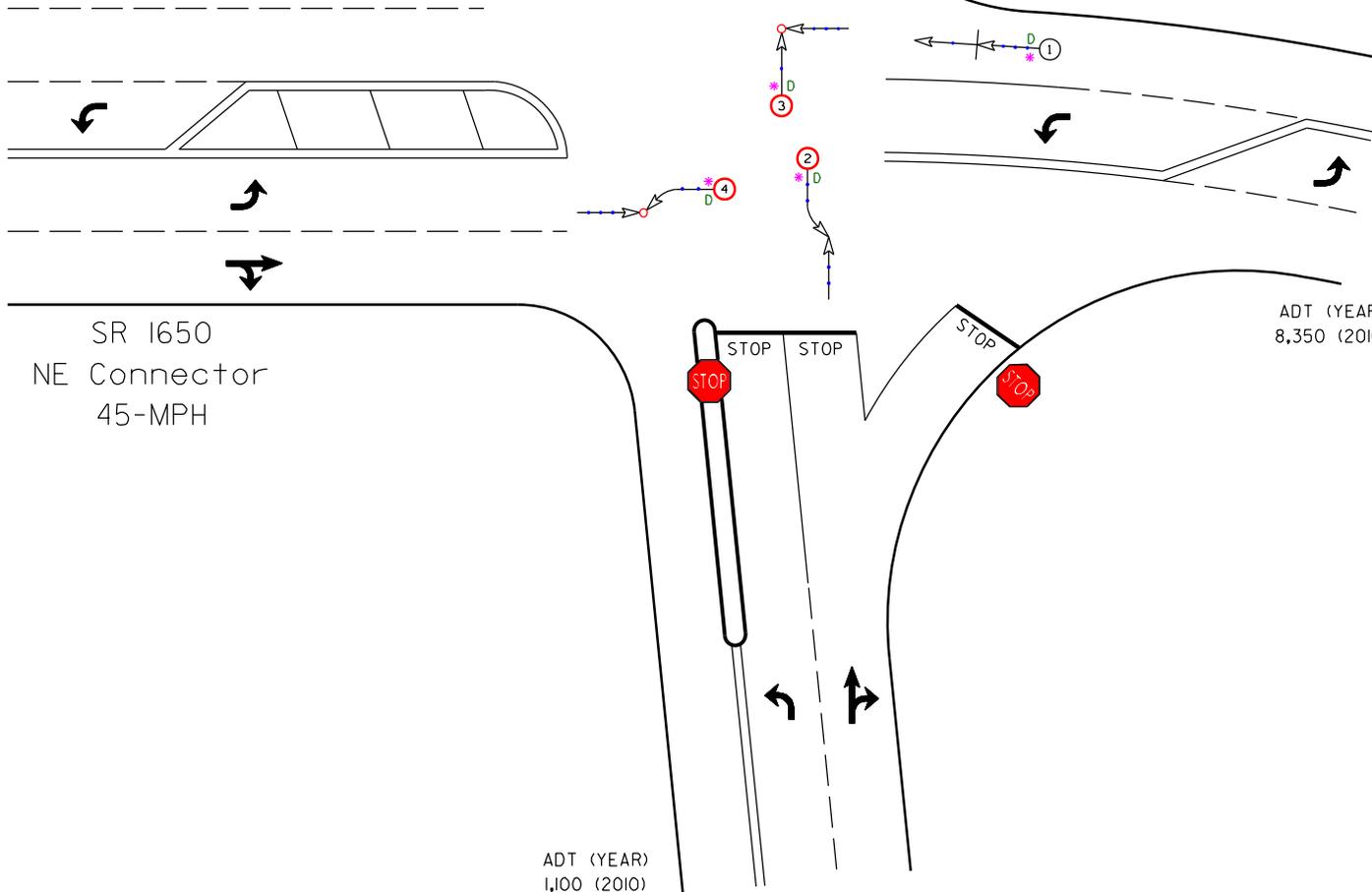
Principal Investigator: Jason B. Schronce, PE  
Work Group/Consultant: NCDOT - Safety Evaluation Group  
Date: December 30, 2015



ADT (YEAR)  
1,750 (2010)

SR 1535  
Mountain Creek Rd  
35-MPH

ADT (YEAR)  
12,000 (2010)



SR 1650  
NE Connector  
45-MPH

ADT (YEAR)  
8,350 (2010)

ADT (YEAR)  
1,100 (2010)

LEGEND

	MOVING VEHICLE		ANGLE		9 MPH OR LESS		PEDESTRIAN
	PAVED VEHICLE		TURNING		10 MPH TO 19		TRAIN
	PARKING VEHICLE		BACKING		20 MPH TO 29		DRIVER AT FAULT
	FIXED OBJECT		SIDEWIPES		30 MPH TO 39		DRY
	HEAD ON		REAR END		40 MPH TO 49		WET
	REAR END		REAR END		50 MPH TO 59		ICY OR SNOWY
	RAN OFF ROAD		REAR END		60 MPH TO 69		FATALITY
			FATALITY		70 AND UP		OTHER
			FATALITY		SPEED UNKNOWN		

Hazard W-5210E  
Order# 41000037847  
Stanly County  
BEFORE Period  
6/1/09 - 5/31/12  
3.0 Years

Frontal Impact  
Target Crashes

**N.C. DEPARTMENT of TRANSPORTATION**  
**DIVISION of HIGHWAYS**  
**TRANSPORTATION MOBILITY and SAFETY DIVISION**

**TRAFFIC SAFETY UNIT**

Date: 10-26-2015      Prepared By: J. Schronce



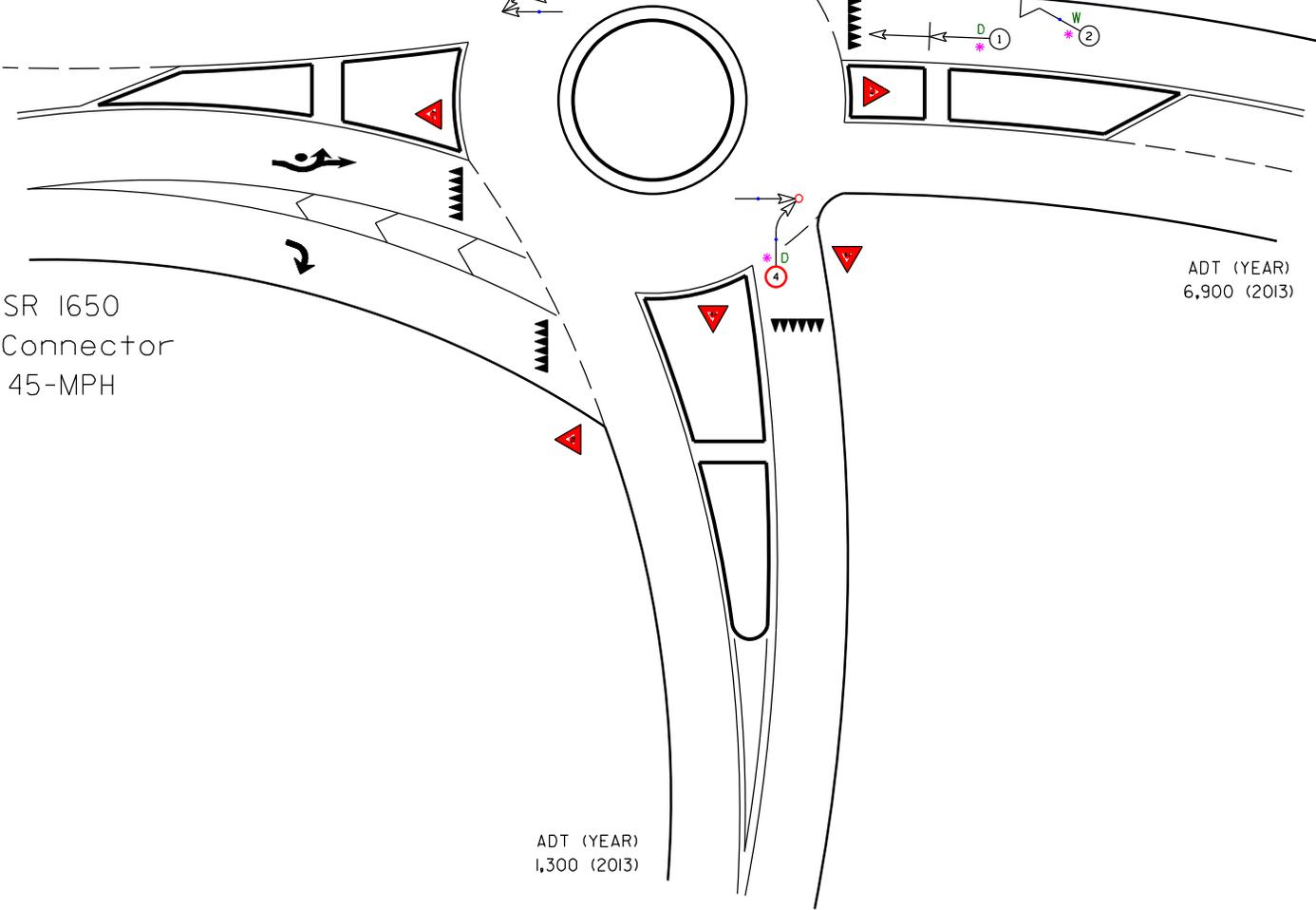
ADT (YEAR)  
1,700 (2013)

SR 1535  
Mountain Creek Rd  
35-MPH

ADT (YEAR)  
12,000 (2013)

Hazard W-5210E  
Order# 41000037847  
Stanly County  
AFTER Period  
10/1/12 - 9/30/15  
3.0-Years

LEGEND							
	MOVING VEHICLE		ANGLE		9 MPH OR LESS		PEDESTRIAN
	PARKED VEHICLE		TURNING		10 MPH TO 19		TRAIN
	PARKING VEHICLE		BACKING		20 MPH TO 29		DRIVER AT FAULT
	FIXED OBJECT		SIDEWIPES		30 MPH TO 39		DRY
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	RAN OFF ROAD		FATALITY		60 MPH TO 69		OTHER
					70 AND UP		
					SPEED UNKNOWN		



SR 1650  
NE Connector  
45-MPH

ADT (YEAR)  
6,900 (2013)

ADT (YEAR)  
1,300 (2013)

Frontal Impact  
Target Crashes

**N.C. DEPARTMENT of TRANSPORTATION**  
**DIVISION of HIGHWAYS**  
**TRANSPORTATION MOBILITY and SAFETY DIVISION**

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