

Spot Safety Project Evaluation

Project Information

Order ID: 41000028035

Project ID: 14-08-204

Location: NC 9 at SR 1520 (Landrum Rd) / SR 1005 (Sandy Plains Rd)

County: Polk

City: Near Columbus

Division: 14

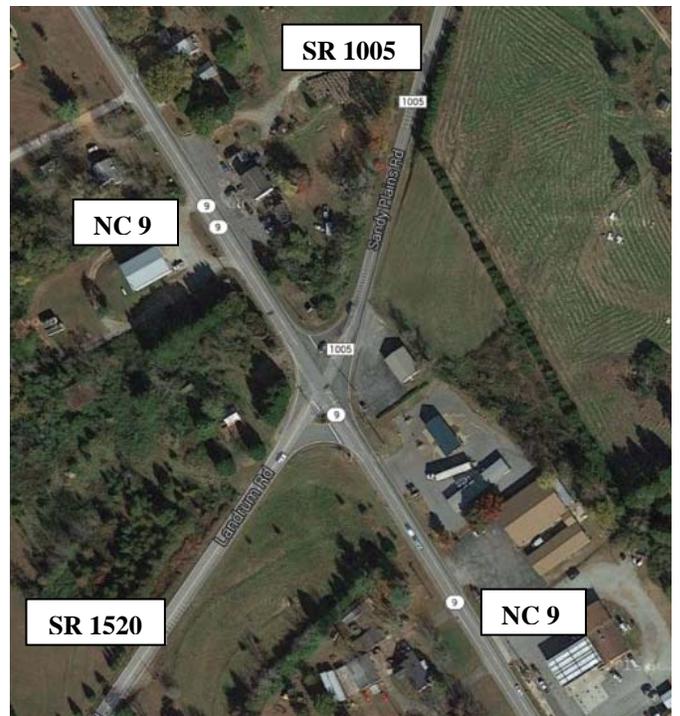
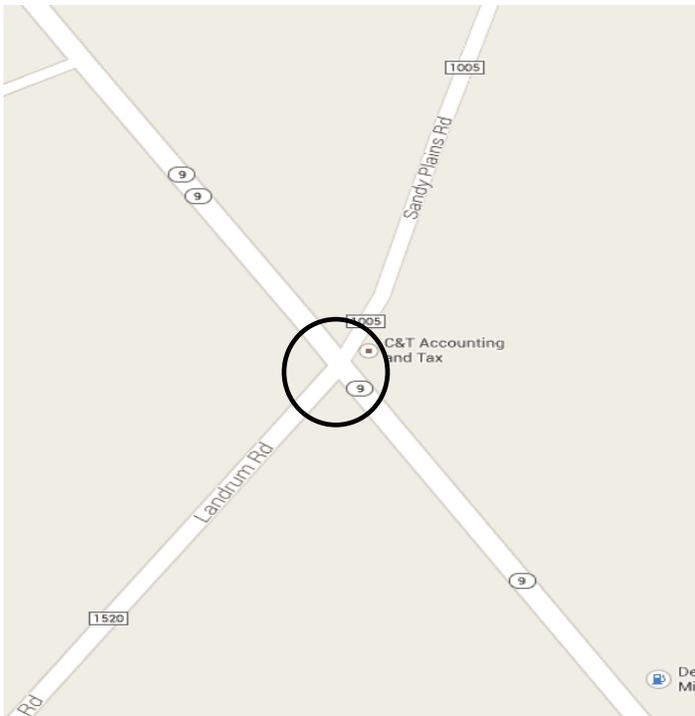
Signal ID: 14-1239

Countermeasure: Revise standard overhead flasher to an actuated flasher and signs warning the side streets with “Watch for Approaching Vehicle” signs as well as both approaches on NC 9 with “Vehicle Entering when Flashing” signs

Project Completion: March 11, 2009

Project Cost: \$39,000

Map and Aerial (from Google Maps – Coordinates are 35.244511, -82.088924)



Naive Before and After Analysis

Before Period: May 1, 2004 through January 31, 2009 (4 years 9 months)

Const. Period: February 1, 2009 through April 31, 2009

After Period: May 1, 2009 through January 31, 2013 (4 years 9 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the NC 9 and SR 1520 / SR 1005 approaches.

Target Crashes: Frontal Impact Crashes (left-turn, same roadway; left-turn, different roadway; right-turn, same roadway; right-turn, different roadway; head-on; and angle crashes) in the intersection.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	17	8	- 52.9 %
Total Severity Index	4.92	3.78	- 23.2 %
Target Crashes	16	8	- 50.0 %
Target Crash Severity Index	4.70	3.78	- 19.6 %
Volume (2006, 2011)	4,900	4,600	- 6.1 %

<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	7	3	- 57.1 %
Property Damage Only	8	5	- 37.5 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Frontal Impact Crashes (Target)	16	8	- 50.0 %
Angle Crashes	15	7	- 53.3 %

Overall Summary Results

Total Crashes:	- 53 %	(reduction)
Total Crash Severity:	- 23 %	(reduction)
Target Crashes:	- 50 %	(reduction)
Target Crash Severity:	- 20 %	(reduction)
Volume:	- 6 %	(reduction)

Additional Summary Results

Frontal Impact Crashes (Target):	- 50 %	(reduction)
Angle Crashes:	- 53 %	(reduction)

Items for Discussion/Concerns

The study intersection experienced a 53 % reduction in total crashes (17 to 8 crashes).

The target crashes (Frontal Impact Crashes) experienced a 50 % reduction (16 to 8).

The intersection experienced a decrease in angle crashes (15 to 7 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: Austin Bell, EI
Work Group/Consultant: AECOM
Date: April 18, 2014

SS# 14-08-204
 Order# 41000028035
 Polk County
 BEFORE Period
 5/1/04 - 1/31/09



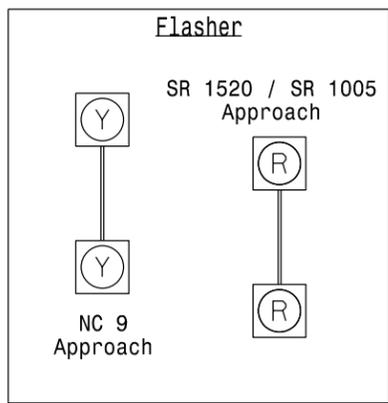
LEGEND			
	MOVING VEHICLE		ANGLE
	PARKED VEHICLE		TURNING
	PARKING VEHICLE		BACKING
	MOVABLE OBJECT		SIDESWIPE
	HEAD ON		INJURY
	REAR END		FATALITY
	RAN OFF ROAD		9 MPH OR LESS
	DAYLIGHT CRASH		10 MPH TO 19
	NIGHT CRASH		20 MPH TO 29
			30 MPH TO 39
			40 MPH TO 49
			50 MPH TO 59
			60 MPH TO 69
			70 AND UP
			SPEED UNKNOWN
			A ANIMAL
			P PEDESTRIAN
			B BICYCLE
			T TRAIN
			* DRIVER AT FAULT
			D DRY
			W WET
			I ICY OR SNOWY
			O Other

SR 1005 (Sandy Plains Rd)
 55 MPH
 2006 ADT - 1,800

NC 9
 45 MPH
 2006 ADT - 3,400

NC 9
 45 MPH
 2006 ADT - 3,000

SR 1520 (Landrum Rd)
 55 MPH
 2006 ADT - 1,650



Frontal Impact Crashes

AECOM

Prepared For:
 N.C. DEPARTMENT of TRANSPORTATION
 DIVISION of HIGHWAYS
 TRANSPORTATION MOBILITY and SAFETY DIVISION

TRAFFIC SAFETY UNIT

Date: April 18, 2014 Prepared By: Austin Bell, EI

SS# 14-08-204
 Order# 41000028035
 Polk County
 AFTER Period
 5/1/09 - 1/31/14

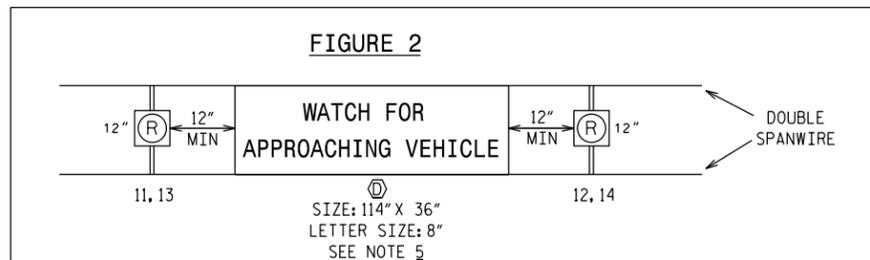
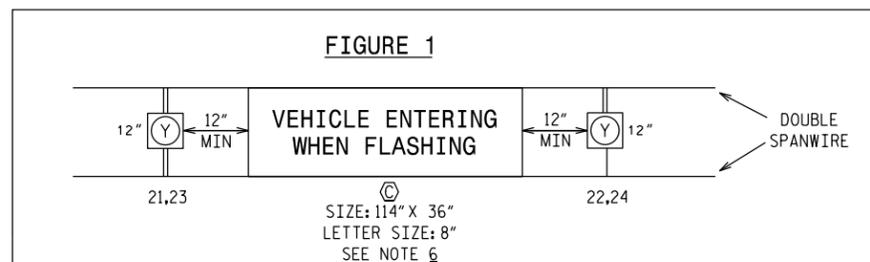
NC 9
 45 MPH
 2011 ADT - 3,200

SR 1005 (Sandy Plains Rd)
 55 MPH
 2011 ADT - 1,600

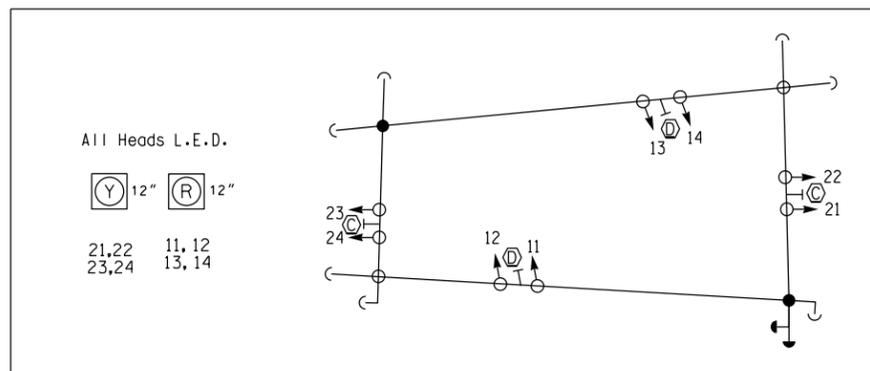
NC 9
 45 MPH
 2011 ADT - 3,000

SR 1520 (Landrum Rd)
 55 MPH
 2011 ADT - 1,400

LEGEND							
	MOVING VEHICLE		ANGLE		9 MPH OR LESS		ANIMAL
	PARKED VEHICLE		TURNING		10 MPH TO 19		PEDESTRIAN
	PARKING VEHICLE		BACKING		20 MPH TO 29		BICYCLE
	MOVABLE OBJECT		SIDESWIPE		30 MPH TO 39		TRAIN
	HEAD ON		INJURY		40 MPH TO 49		DRIVER AT FAULT
	REAR END		FATALITY		50 MPH TO 59		DRY
	RAN OFF ROAD		SPEED UNKNOWN		60 MPH TO 69		WET
	DAYLIGHT CRASH				70 AND UP		ICY OR SNOWY
	NIGHT CRASH				SPEED UNKNOWN		Other



SIG ID 14-1239 (2 Circuit Actuated Flasher)



Frontal Impact Crashes

AECOM

Prepared For:
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
TRANSPORTATION MOBILITY and SAFETY DIVISION

TRAFFIC SAFETY UNIT

Date: April 18, 2014 Prepared By: Austin Bell, EI