

Spot Safety Project Evaluation

Project Information

Order ID: 41000033828

Project ID: 06-08-203

Location: NC 20 (E Broad St) at SR 1907 (Shaw Mill Rd)

County: Robeson

City: East of St. Pauls

Division: 6

Signal ID: N/A

Countermeasure: Widen/construct left turn lane on eastbound NC 20 at the intersection of SR 1907.

Project Completion: June 21, 2011

Project Cost: \$285,000

Map and Aerial (from Google Maps – Coordinates are 34.802960, -78.950534)



Naive Before and After Analysis

Before Period: July 1, 2007 through April 30, 2011 (3 years 10 months)

Const. Period: May 1, 2011 through July 31, 2011

After Period: August 1, 2011 through May 31, 2015 (3 years 10 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the NC 20 and SR 1907 approaches.

Target Crashes: NC 20 Eastbound Rear End Crashes

<u>Treatment Information – Countermeasure Left Turn Lane</u>			
<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	10	2	- 80.0 %
Total Severity Index	13.76	1.00	- 92.7 %
Target Crashes	5	0	- 100.0 %
Target Crash Severity Index	6.92	0.00	- 100.0 %
Volume (2009, 2013)	8,400	9,400	+ 11.9 %

<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	2	0	- 100.0 %
Class C Injury Crashes	5	0	- 100.0 %
Property Damage Only	2	2	0.00 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
NC 20 EB Rear End Crashes (Target)	4	0	- 100.0 %
Night Crashes	4	0	- 100.0 %

Table 1 Summary Results

Total Crashes:	- 80 %	(reduction)
Total Crash Severity:	- 93 %	(reduction)
Target Crashes:	- 100 %	(reduction)
Target Crash Severity:	- 100 %	(reduction)
Volume:	+ 12 %	(increase)

Additional Summary Results

NC 20 EB Rear End Crashes (Target):	- 100 %	(reduction)
Night Crashes:	- 100 %	(reduction)

Items for Discussion/Concerns

The study intersection experienced an 80 % reduction in total crashes (10 to 2 crashes).

The target crashes (NC 20 EB Rear End Crashes) experienced a 100 % reduction (4 to 0 crashes).

The intersection experienced a decrease in Night Crashes (4 to 0 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: Andrew Covington, EI

Work Group/Consultant: AECOM

Date: July 10, 2015

SS# 06-08-203
 Order # 41000033828
 Robeson County
 Before Period
 7/1/07 - 4/30/11

SR 1907 (Shaw Mill Rd)
 55 MPH
 2009 ADT 2,450

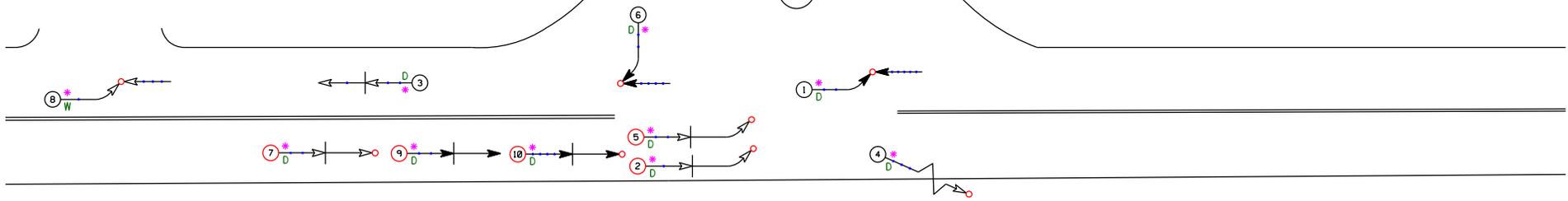
LEGEND

	MOVING VEHICLE		ANGLE		1 MPH OR LESS		P PEDESTRIAN
	PEDESTRIAN		TURNING		10 MPH TO 19		T TRAIN
	PARKED VEHICLE		BACKING		20 MPH TO 29		* DRIVER AT FAULT
	PARKED VEHICLE		SIDESWIPE		30 MPH TO 39		D DRY
	FIXED OBJECT		OUT OF CONTROL		40 MPH TO 49		W WET
	HEAD ON		HURRY		50 MPH TO 59		I ICY OR SNOW
	REAR END		FATALITY		60 MPH TO 69		O SPEED UNKNOWN
	RAN OFF ROAD				70 AND UP		



Convenient Zone

NC 20 (E Broad St)
 55 MPH
 2009 ADT 6,000



NC 20 (E Broad St)
 55 MPH
 2009 ADT 8,300

NC 20 EB
 Rear End Crashes

AECOM

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

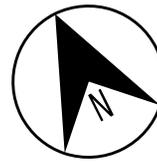
TRAFFIC SAFETY UNIT

Date: 7-10-2015 Prepared By: Andrew Covington, EI

SS# 06-08-203
 Order # 41000033828
 Robeson County
 After Period
 8/1/11 - 5/31/15

SR 1907 (Shaw Mill Rd)
 55 MPH
 2013 ADT 2,600

LEGEND							
	MOVING VEHICLE		ANGLE		1 MPH OR LESS		P PEDESTRIAN
	PEDESTRIAN		TURNING		10 MPH TO 19		T TRAIN
	PAKED VEHICLE		BACKING		20 MPH TO 29		• DRIVER AT FAULT
	PARKING VEHICLE		SLOPES		30 MPH TO 39		D DRY
	FIXED OBJECT		OUT OF CONTROL		40 MPH TO 49		W WET
	HEAD ON		HURRY		50 MPH TO 59		I ICY OR SNOW
	REAR END		FATALITY		60 MPH TO 69		O ONLY
	RAN OFF ROAD				70 AND UP		



Convenient Zone

NC 20 (E Broad St)
 55 MPH
 2013 ADT 6,100

NC 20 (E Broad St)
 55 MPH
 2013 ADT 10,000

NC 20 EB
 Rear End Crashes

AECOM

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

TRAFFIC SAFETY UNIT

Date: 7-10-2015 Prepared By: Andrew Covington, EI