

Spot Safety Project Evaluation

Project Information

Order ID: 41000028030

Project ID: 10-03-214

Location: NC 115 (Old Statesville Road) and SR 2427 (McCord Road)

County: Mecklenburg

City: Huntersville

Division: 10

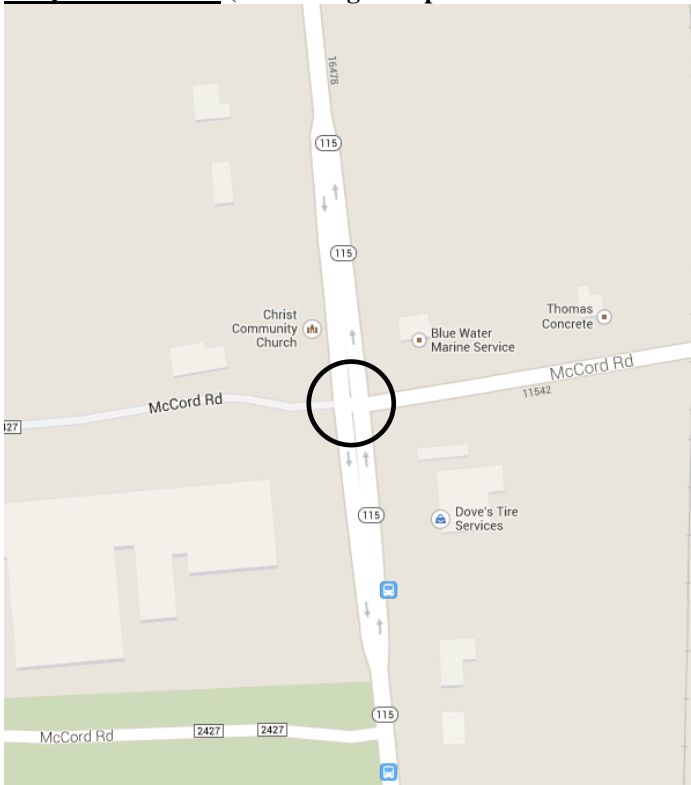
Signal ID: 10-1942

Countermeasure: Widen NC 115 to provide left-turn lanes
(Implemented November 2008)
Install a traffic signal with protected-permitted left-turn phasing
(Implemented February 2009)

Project Completion: April 29, 2009

Project Cost: \$145,000

Map and Aerial (from Google Maps – Coordinates are 35.434611,-80.843765)



Naive Before and After Analysis

Before Period: January 1, 2004 through October 31, 2008 (4 years 10 months)

Const. Period: November 1, 2008 through May 31, 2009

After Period: June 1, 2009 through March 31, 2014 (4 years 10 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the NC 115 and SR 2427 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)

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	39	10	- 74.4 %
Total Severity Index	2.90	3.22	+ 11.0 %
Target Crashes	18	2	- 88.9 %
Target Crash Severity Index	3.47	4.7	+ 35.4 %
Volume (2006, 2011)	18,200	16,900	- 7.1 %

<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	1	- 50.0 %
Class C Injury Crashes	8	2	- 75.0 %
Property Damage Only	29	7	- 75.9 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Frontal Impact Crashes (Target)	18	2	- 88.9 %
Angle Crashes	8	0	- 100.0 %
Left-turn, different roadway	7	0	- 100.0 %
Left-turn, same roadway	3	2	- 33.3 %
Rear End Crashes	19	6	- 68.4 %
Night Time Crashes	12	1	- 91.7 %

Overall Summary Results

Total Crashes:	- 74 %	(reduction)
Total Crash Severity:	+ 11 %	(increase)
Target Crashes:	- 89 %	(reduction)
Target Crash Severity:	+ 35 %	(increase)
Volume:	- 7 %	(reduction)

Additional Summary Results

Frontal Impact Crashes (Target):	- 89 %	(reduction)
Angle Crashes:	- 100 %	(reduction)
Left-turn, same roadway:	- 100 %	(reduction)
Left-turn, different roadway:	- 33 %	(reduction)
Rear End Crashes:	- 68 %	(reduction)
Night Time Crashes:	- 92 %	(reduction)

Items for Discussion/Concerns

The target crashes (frontal impact crashes) experienced an 89% percent reduction (18 to 2 crashes). There was a 100 % reduction in angle crashes (8 to 0 crashes) and left turn, different roadway crashes (7 to 0 crashes). There was a 33 % reduction in left turn, different roadway crashes (3 to 2 crashes) and a 68 % reduction in rear end crashes (19 to 6 crashes). Night time crashes were reduced by 92% (12 to 1 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: May 23, 2013

SS# 10-03-214
 Order# 41000028030
 Mecklenburg County
 BEFORE Period
 1/1/04 - 10/31/08

Church Driveway
 No Speed Limit Posted
 2006 ADT - 1,000 (Assumed)

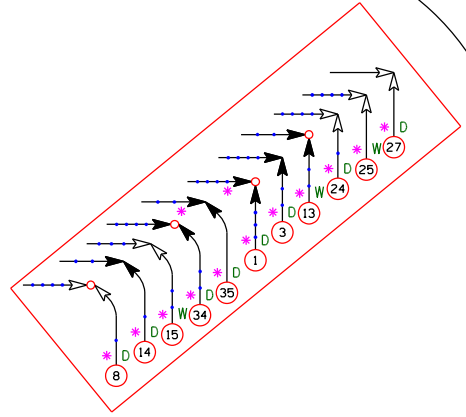
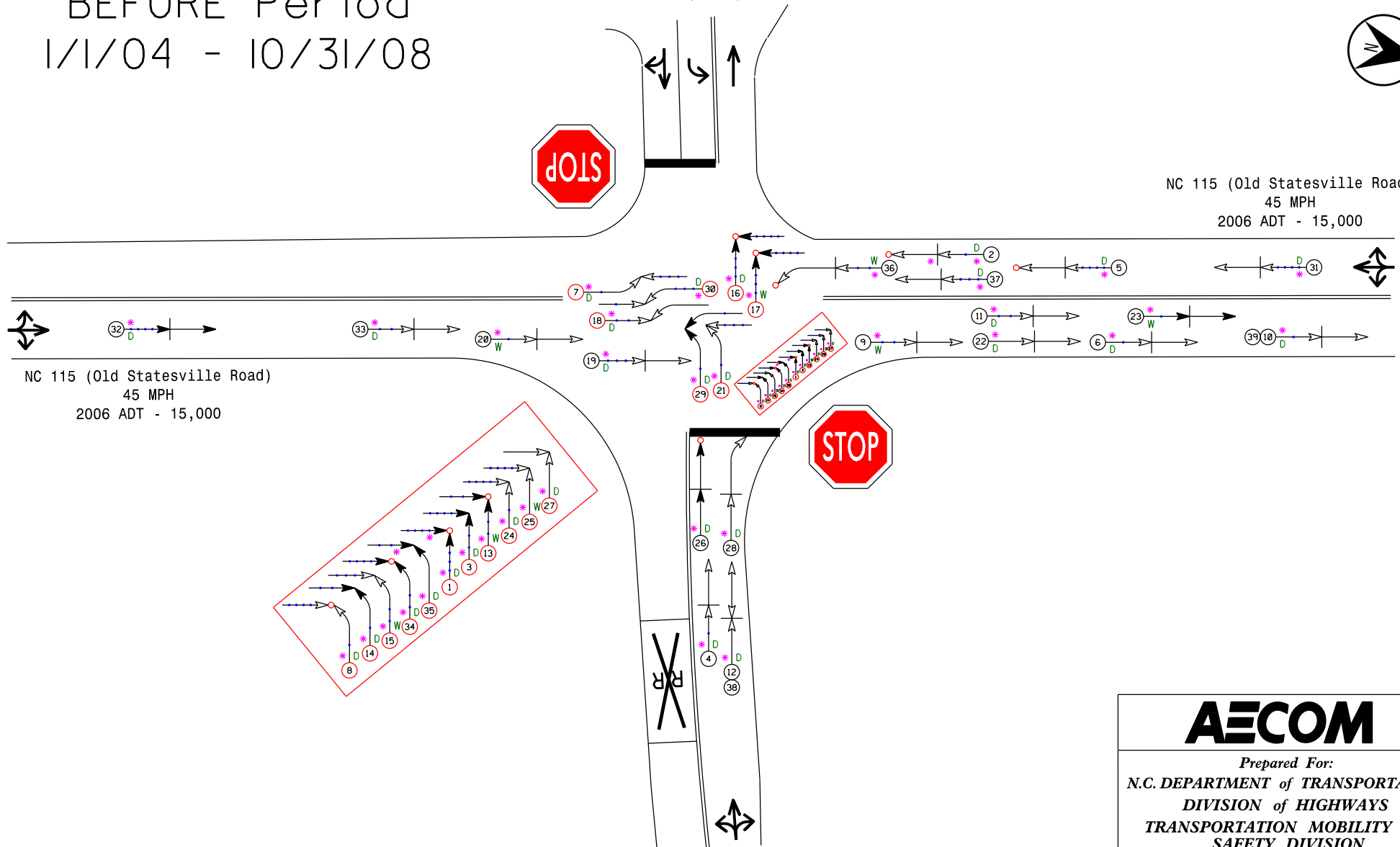
LEGEND							
	MOVING VEHICLE		ANGLE		9 MPH OR LESS		A ANIMAL
	PARKED VEHICLE		TURNING		10 MPH TO 19		P PEDESTRIAN
	PARKING VEHICLE		BACKING		20 MPH TO 29		B BICYCLE
	MOVABLE OBJECT		SIDESWIPE		30 MPH TO 39		T TRAIN
	HEAD ON		INJURY		40 MPH TO 49		• DRIVER AT FAULT
	REAR END		FATALITY		50 MPH TO 59	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



NC 115 (Old Statesville Road)
 45 MPH
 2006 ADT - 15,000

NC 115 (Old Statesville Road)
 45 MPH
 2006 ADT - 15,000

SR 2427 (McCord Road)
 35 MPH
 2006 ADT - 5,300



Frontal Impact Crashes

AECOM

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

TRAFFIC SAFETY UNIT

Date: May 23, 2014	Prepared By: Andrew Covington, EI
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SS# 10-03-214
 Order# 41000028030
 Mecklenburg County
 AFTER Period
 6/1/09 - 3/31/14

Church Driveway
 No Speed Limit Posted
 2011 ADT - 1,000 (Assumed)

LEGEND

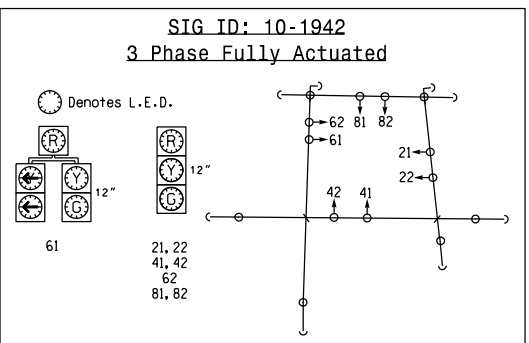
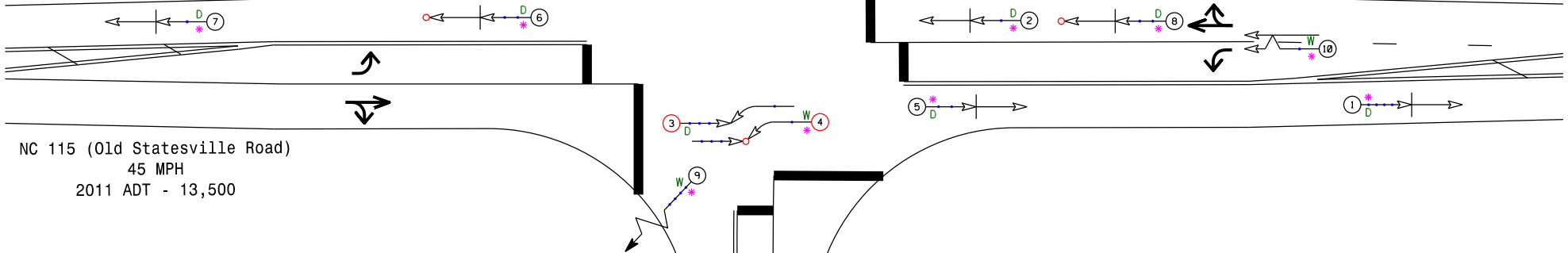
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NC 115 (Old Statesville Road)
 45 MPH
 2011 ADT - 13,500

NC 115 (Old Statesville Road)
 45 MPH
 2011 ADT - 13,500

SR 2427 (McCord Road)
 35 MPH
 2011 ADT - 5,700



Frontal Impact Crashes

AECOM

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 DIVISION of HIGHWAYS
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