

# Spot Safety Project Evaluation

## Project Information

Order ID: 41000030292

Project ID: 01-09-202

Location: US 17 - 158 (Hughes Blvd. - N. Road St.) at US 17 Business (Road St.) and SR 1327 (Griggs St.)

County: Pasquotank

City: Elizabeth City

Division: 1

Signal ID: 01-0025

Countermeasure: Upgrade existing traffic signal by installing a flashing yellow arrow and queue loop for left turns from southbound US17 - 158 onto US17 Bus., and improve signal timing.

Project Completion: March 19, 2010

Project Cost: \$15,000

## Map and Aerial (from Google Maps, Google coordinates are -- 36.312047,-76.220567)



## Naive Before and After Analysis

Before Period: June 1, 2005 through December 31, 2009 (4 years, 7 months)

Const. Period: January 1, 2010 through March 31, 2010

After Period: April 1, 2010 through October 31, 2014 (4 years, 7 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the US 17 -158 and US 17 Business – SR 1327 approaches and both slip ramps on NB US 17 – 158 and US 17 Business.

Target Crashes: Left Turn Same Roadway (LTSR) Crashes on Southbound US 17 -158, where the Flashing Yellow Arrow was installed in the after period.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	80	50	- 37.5 %
Total Severity Index	5.00	3.52	- 29.6 %
Target Crashes	32	9	- 71.9 %
Target Crash Severity Index	4.93	3.47	- 29.6 %
Volume (2007, 2012)	31,500	29,880	- 5.1 %

<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	11	4	- 63.6 %
Class C Injury Crashes	22	13	- 40.9 %
Property Damage Only	46	33	- 28.3 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
SB US 17 - 158 LTSR (Target)	32	9	- 71.9 %
NB US 17 – 158 LTSR	4	0	- 100.0 %
NB US 17 – 158 Rear Ends	4	11	+ 175.0 %
SB US 17 – 158 Rear Ends	4	6	+ 50.0 %

### **Overall Summary Results**

Total Crashes:	- 38 %	(reduction)
Total Crash Severity:	- 30 %	(reduction)
Target Crashes:	- 72 %	(reduction)
Target Crash Severity:	- 30%	(reduction)
Volume:	- 5 %	(reduction)

### **Additional Summary Results**

SB US 17 - 158 LTSR (Target):	- 72 %	(reduction)
NB US 17 - 158 LTSR:	- 100 %	(reduction)
NB US 17 - 158 Rear-Ends:	+ 175 %	(increase)
SB US 17 - 158 Rear-Ends:	+ 50 %	(increase)

### **Items for Discussion/Concerns**

Southbound US 17 -158 Left Turn, Same Roadway Crashes (with fault on the left turning vehicle) were reduced from 32 crashes in the before to 9 crashes in the after. Northbound US 17 -158 Left Turn, Same Roadway Crashes were eliminated in the after period.

North and southbound rear end crashes for vehicles approaching the intersection on US 17 158 increased in the after period.

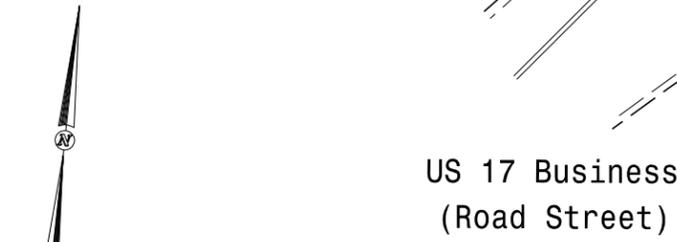
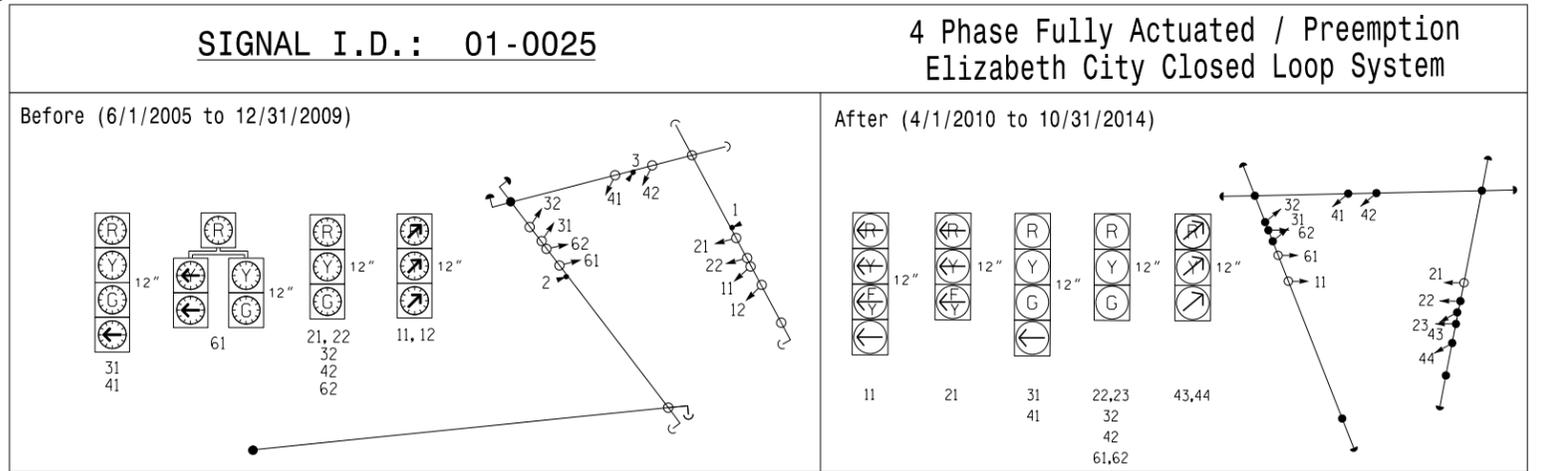
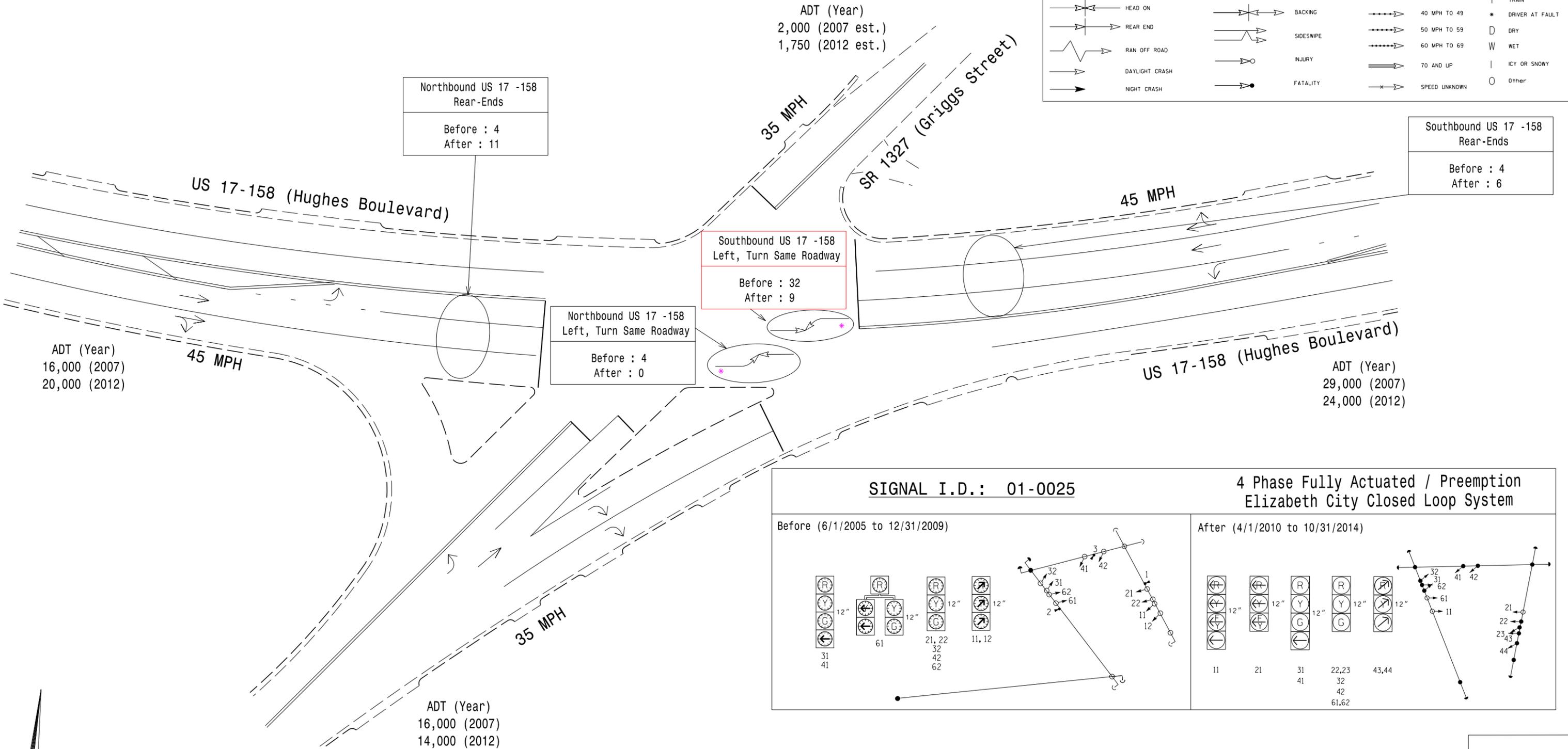
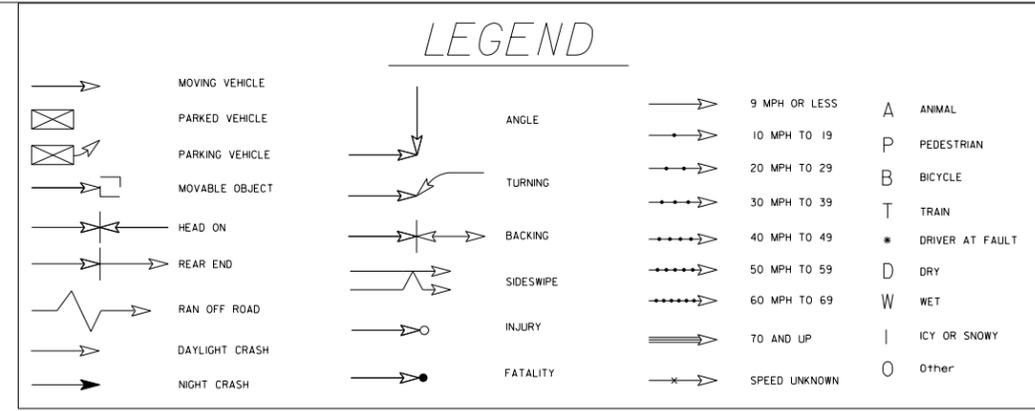
### **Data Prepared For**

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: Elizabeth Scott, EI  
Work Group/Consultant: Stantec Consulting Services Inc.  
Date: December 5, 2014

SS# 01-09-202  
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 Pasquotank County



Left Turn, Same Roadway  
 Crashes