

Spot Safety Project Evaluation

Project Information

Order ID: 41000028039

Project ID: 05-08-204

Location: SR 2768 (Judd Parkway) at SR 2767 (Holland Road)

County: Wake

City: Fuquay Varina

Division: 5

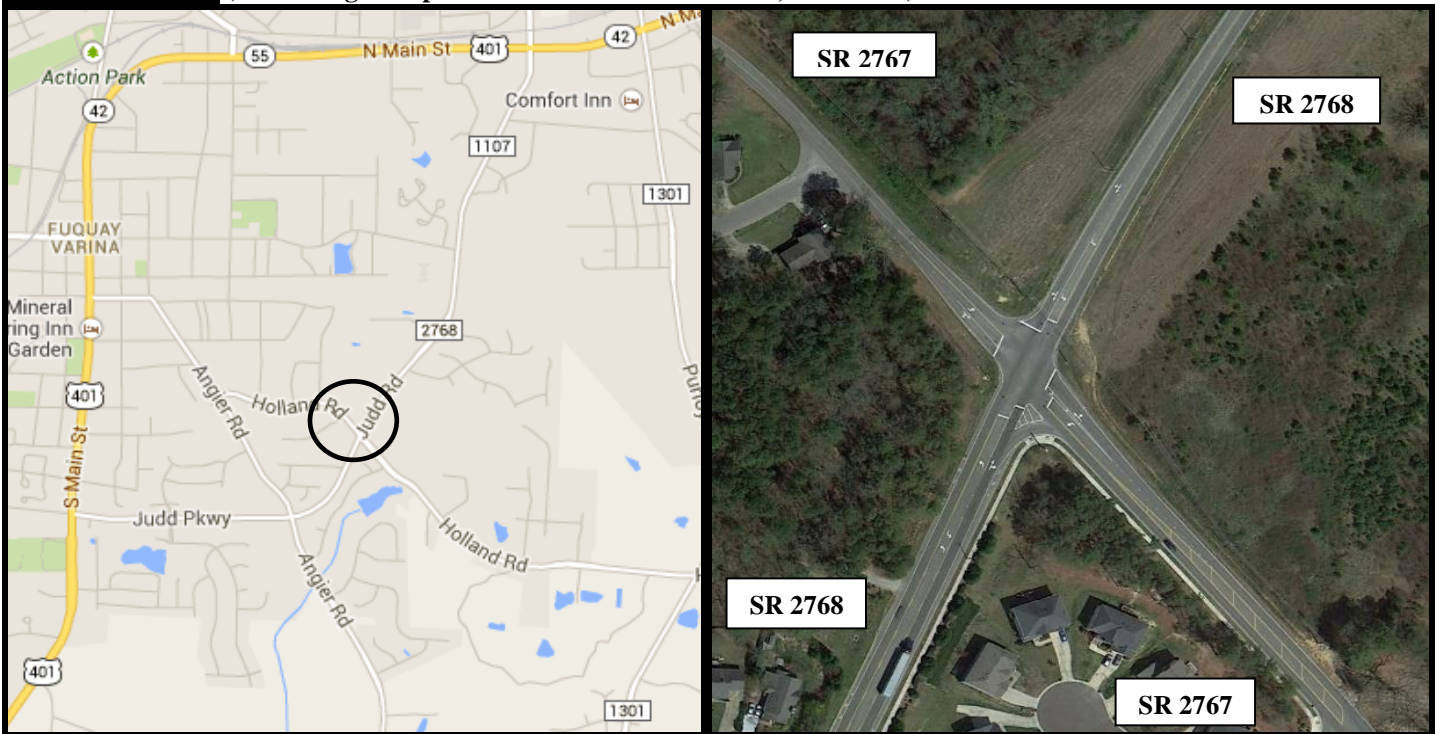
Signal ID: 05-2346

Countermeasure: Install traffic signal

Project Completion: March 11, 2009

Project Cost: \$49,500.00

Map and Aerial (from Google Maps – Coordinates are 35.576541,-78.787111)



Naive Before and After Analysis

Before Period: March 1, 2004 through January 31, 2009 (4 years, 11 months)

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

After Period: April 1, 2009 through February 28, 2014 (4 years, 11 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the SR 2768 and SR 2767 approaches.

- Target Crashes: Frontal impact crashes including:
- Left-turn, same roadway
 - Left-turn, different roadways
 - Right-turn, same roadway
 - Right-turn, different roadways
 - Head-on
 - Angle

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	20	15	-25.0%
Total Severity Index	3.59	4.45	+24.0%
Target Crashes	19	7	-63.2%
Target Crash Severity Index	3.73	5.23	+40.3%
Volume (2006, 2011)	10,500	10,900	+3.8%

<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	4	1	-75.0%
Class C Injury Crashes	3	6	100.0%
Property Damage Only	13	8	-38.5%

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Eastbound SR 2767 Frontal Impact (Target)	7	3	-57.1%
Westbound SR 2767 Frontal Impact (Target)	12	4	-66.7%
Rear-End Crashes	0	2	N/A

Overall Summary Results

Total Crashes:	-25 %	(reduction)
Total Crash Severity:	+24 %	(increase)
Target Crashes:	-63.2 %	(reduction)
Target Crash Severity:	+40.3 %	(increase)
Volume:	+3.8 %	(reduction)

Additional Summary Results

Eastbound SR 2767 Frontal Impact (Target):	-57.1 %	(reduction)
Westbound SR 2767 Frontal Impact (Target):	-66.7 %	(reduction)
Rear-End Crashes:	N/A	

Items for Discussion/Concerns

The number of Total Crashes and Frontal Impact target Crashes both decreased between the before and after periods. Both the Total Crashes and Frontal Impact target Crashes experienced an increase in crash severity between the before and after periods.

Frontal Impact Crashes involving vehicles on both the eastbound and westbound approaches of SR 2767 experienced a reduction between the before and after periods. These approaches operated under stop-control in the before period. Rear-End Crashes increased from zero (0) in the before period to two (2) in the after period.

Data Prepared For

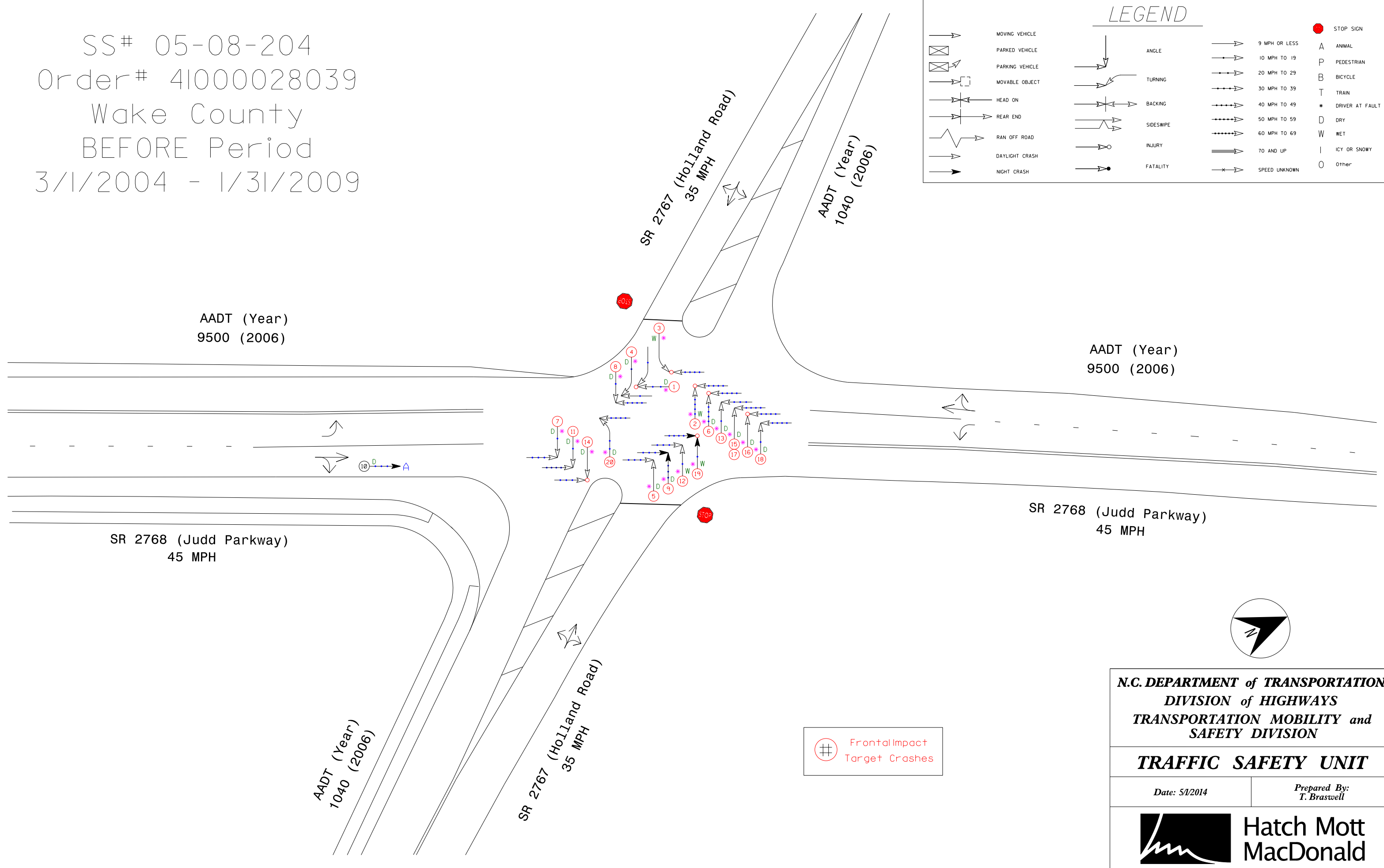
The Traffic Safety Unit *of the*
Transportation Mobility and Safety Division *of the*
Division of Highways *of the*
North Carolina Department of Transportation

Data Prepared By

Principal Investigator: R. Travis Braswell, PE, PTOE
Work Group/Consultant: Hatch Mott MacDonald
Date: May 7, 2014

SS# 05-08-204
 Order# 41000028039
 Wake County
 BEFORE Period
 3/1/2004 - 1/31/2009

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
	STOP SIGN		A ANIMAL
	P PEDESTRIAN		B BICYCLE
	T TRAIN		* DRIVER AT FAULT
	D DRY		W WET
	I ICY OR SNOWY		O Other



Frontal Impact
Target Crashes

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

TRAFFIC SAFETY UNIT

Date: 5/1/2014
 Prepared By:
 T. Braswell



SS# 05-08-204
 Wake County
 Order# 41000028039
 AFTER Period
 4/1/2009 - 2/28/2014

LEGEND			
	MOVING VEHICLE		ANGLE
	PARKED VEHICLE		TURNING
	PARKING VEHICLE		BACKING
	MOVABLE OBJECT		SIDESWIPE
	HEAD ON		INJURY
	REAR END		FATALITY
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AADT (Year)
 10,000 (2011)

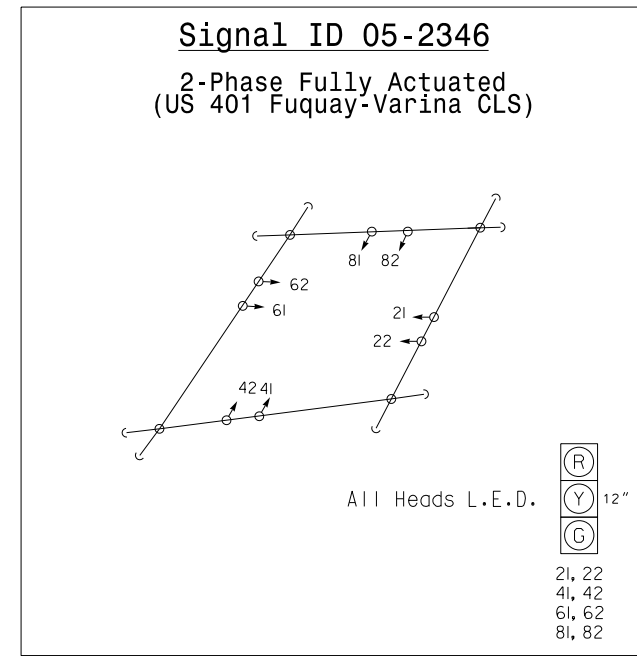
AADT (Year)
 10,000 (2011)

SR 2768 (Judd Parkway)
 45 MPH

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 45 MPH

AADT (Year)
 900 (2011)

SR 2767 (Holland Road)
 35 MPH



Frontal Impact
 Target Crashes



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

TRAFFIC SAFETY UNIT

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