

Spot Safety Project Evaluation

Project Information

Order ID: 41000030099

Project ID: 01-08-201

Location: US 64 / NC 32 at SR 1342 (Rankin Ln)

County: Washington

City: Plymouth

Division: 1

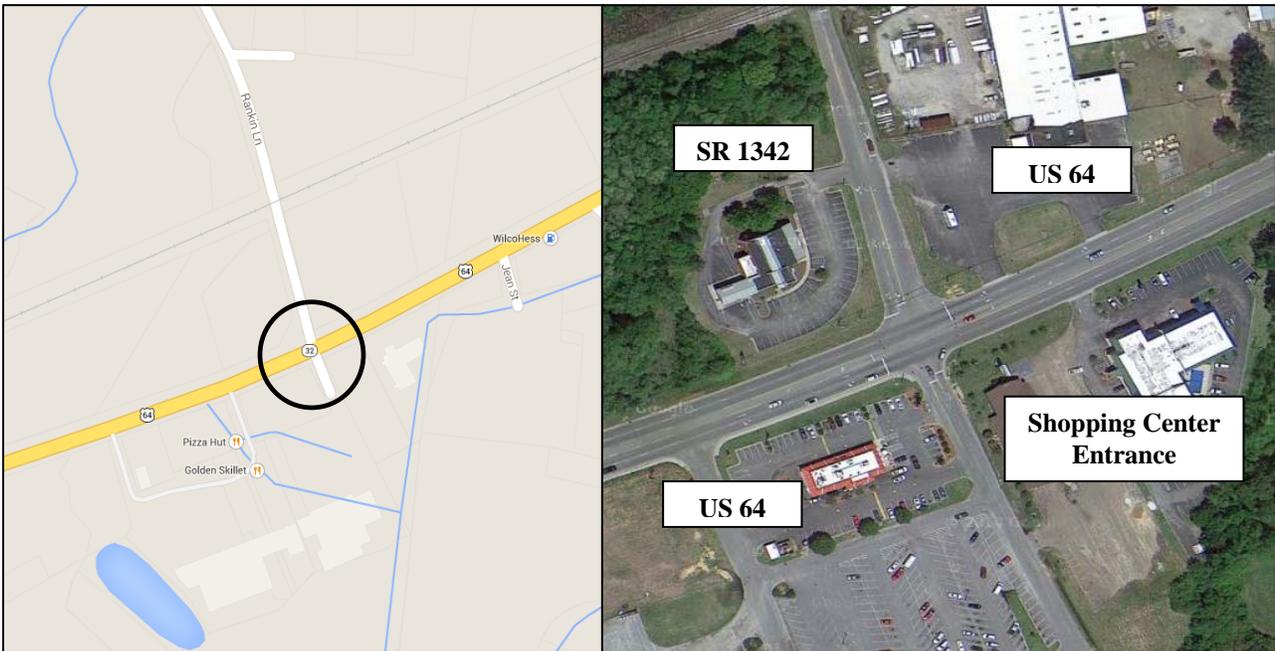
Signal ID: 01-0236

Countermeasure: Revise signal plans, install flashing yellow for mainline left turns, and re-mark intersection

Project Completion: August 20, 2009

Project Cost: \$38,000

Map and Aerial (from Google Maps – Coordinates are 35.860592, -76.737646)



Naive Before and After Analysis

Before Period: October 1, 2004 through June 30, 2009 (4 years 9 months)

Const. Period: July 1, 2009 through September 30, 2009

After Period: October 1, 2009 through June 30, 2014 (4 years 9 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the US 64 and SR 1342 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	11	12	+ 9.1 %
Total Severity Index	11.93	3.47	- 70.9 %
Target Crashes	9	10	+ 11.1 %
Target Crash Severity Index	13.53	3.96	- 70.7 %
Volume (2007, 2012)	19,600	20,000	+ 2.0%

<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	4	4	0.00 %
Property Damage Only	4	8	+ 100.0 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Frontal Impact Crashes (Target)	9	10	+ 11.1 %
Left-Turn, Same Roadway	4	3	- 25.0 %
Angle Crashes	5	5	0.00 %
Night Crashes	3	1	- 66.7 %

Overall Summary Results

Total Crashes:	+ 9 %	(increase)
Total Crash Severity:	- 71 %	(reduction)
Target Crashes:	+ 11 %	(increase)
Target Crash Severity:	- 71 %	(reduction)
Volume:	+ 2 %	(increase)

Additional Summary Results

Frontal Impact Crashes (Target):	+ 11 %	(reduction)
Left-Turn, Same Roadway Crashes:	- 25 %	(reduction)
Angle Crashes:	0 %	(no change)
Night Crashes:	- 67 %	(reduction)

Items for Discussion/Concerns

The study intersection experienced a 9 % increase in total crashes (11 to 12 crashes) however it showed a 71 % reduction in crash severity.

The target crashes (Frontal Impact Crashes) experienced an 11 % increase (9 to 10 crashes) however it showed a 71 % reduction in crash severity.

The study intersection experienced a decrease in left-turn, same roadway crashes (4 to 3 crashes) and night crashes (3 to 1). Angle crashes remained the same with 5 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: September 26, 2014

SS# 01-08-201
 Order# 41000030099
 Washington County
 BEFORE Period
 10/1/2004 - 6/30/2009
 4.75 Years

SR 1342 (Rankin Lane)
 35 MPH
 2007 ADT - 2,600

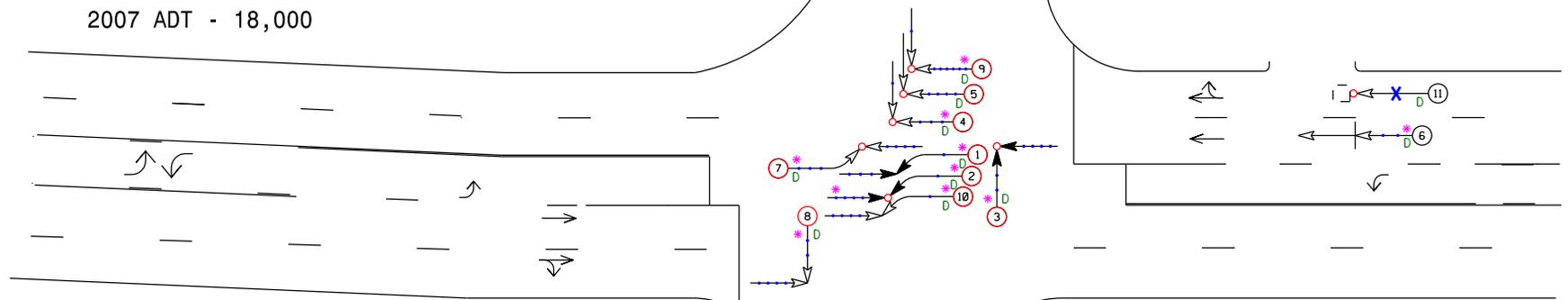
US 64 / NC 32
 45 MPH
 2007 ADT - 18,000

LEGEND

	MOVING VEHICLE		ANGLE		1 MPH OR LESS		PEDESTRIAN
	PEDESTRIAN		TURNING		10 MPH TO 19		TRAIN
	PARKED VEHICLE		BACKING		20 MPH TO 29		DRIVER AT FAULT
	PARKED VEHICLE		SLOESLOPE		30 MPH TO 39		DRY
	FIXED OBJECT		OUT OF CONTROL		40 MPH TO 49		WET
	HEAD ON		HURRY		50 MPH TO 59		ICE OR SNOW
	NEAR END		FATALITY		60 MPH TO 69		SPEED UNKNOWN
	RAN OFF ROAD				70 AND UP		ONLY



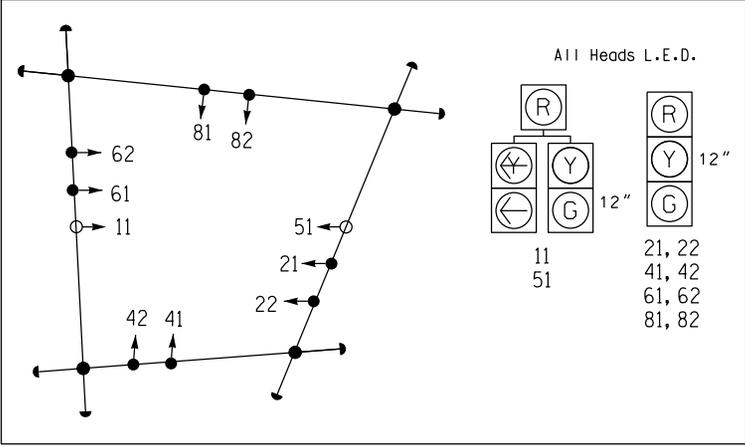
Note: Crash 11 had cargo come loose and hit cab of vehicle



US 64 / NC 32
 45 MPH
 2007 ADT - 16,000

Shopping Center Entrance
 Speed Unposted
 2007 ADT - Assume 2,600

SIG ID No. 01-0236 (5 Phase Fully Actuated)



Frontal Impact Crashes

AECOM

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

TRAFFIC SAFETY UNIT

Date: 9-26-2014 Prepared By: Austin Bell, EI

SS# 01-08-201
 Order# 41000030099
 Washington County
 AFTER Period
 10/1/2009 - 6/30/2014
 4.75 Years

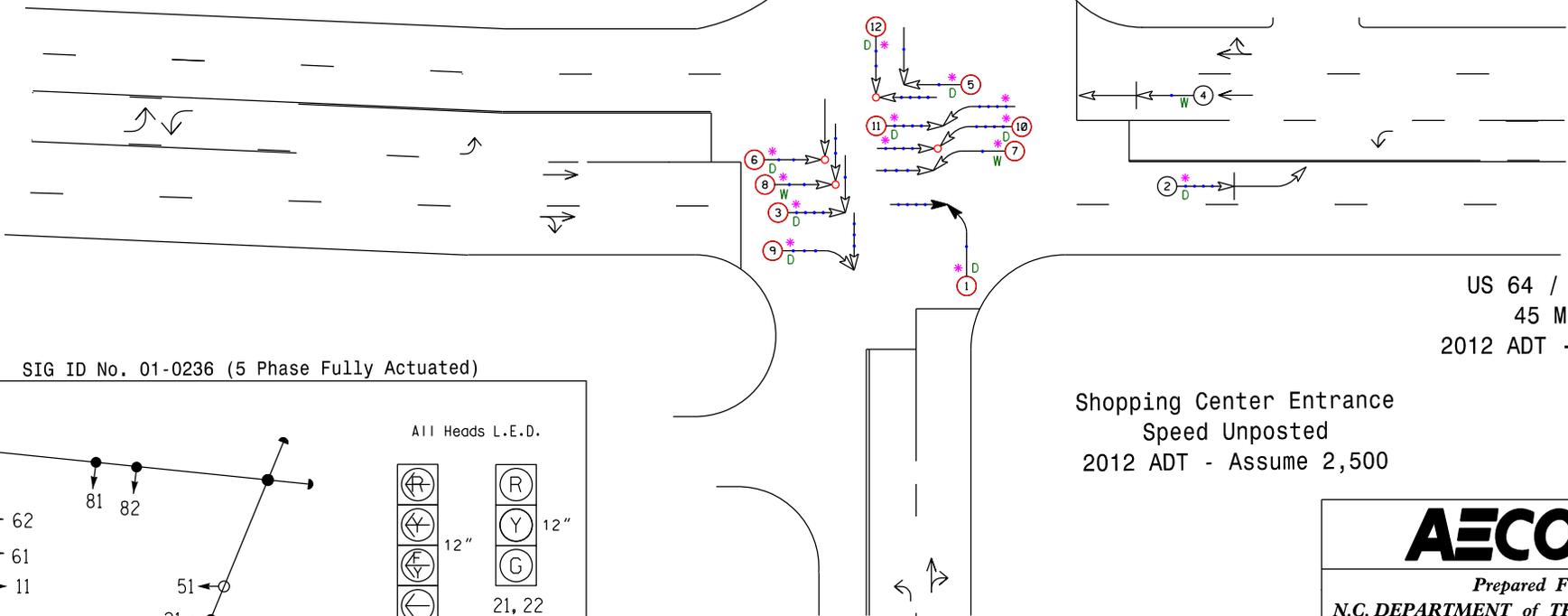
SR 1342 (Rankin Lane)
 35 MPH
 2012 ADT - 2,500

US 64 / NC 32
 45 MPH
 2012 ADT - 19,000

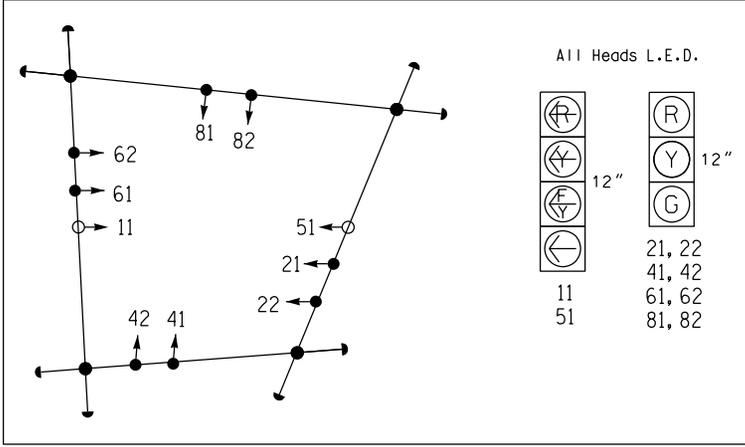
US 64 / NC 32
 45 MPH
 2012 ADT - 16,000

LEGEND

	MOVING VEHICLE		ANGLE		9 MPH OR LESS		PEDESTRIAN
	PEDESTRIAN		TURNING		10 MPH TO 19		TRAIN
	PAKED VEHICLE		BACKING		20 MPH TO 29		DRIVER AT FAULT
	PAKED VEHICLE		BACKING		40 MPH TO 49		DRY
	FIXED OBJECT		OUT OF CONTROL		50 MPH TO 59		WET
	HEAD ON		RAN OFF ROAD		60 MPH TO 69		TO AND UP
	REAR END		HURRY		SPEED UNKNOWN		ICY OR SNOWY
	RAN OFF ROAD		FATALITY				ONLY



SIG ID No. 01-0236 (5 Phase Fully Actuated)



Shopping Center Entrance
 Speed Unposted
 2012 ADT - Assume 2,500

Frontal Impact Crashes

AECOM

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TRAFFIC SAFETY UNIT

Date: 9-26-2014 Prepared By: Austin Bell, EI