

Spot Safety Project Evaluation

Project Information

Order ID: 41000033972

Project ID: 06-04-203

Location: Intersection of SR 1112 (Rockfish Road/Stoney Point Road) at SR 1108 (Lakewood Road/King Road)

County: Cumberland

City: Fayetteville

Division: 6

Signal ID: 06-0707

Countermeasures: Construct right turn lane on westbound SR 1112 and on northbound SR 1108

Widen SR 1108 (Lakewood Rd) to extend three lanes north to existing three lane section

Upgrade traffic signal

Project Completion: August 4, 2011

Project Cost: \$174,000.00

Map and Aerial (from Google Maps, Coordinates are 34.982050, -79.016737)



Naive Before and After Analysis

Before Period: August 1, 2007 through May 31, 2011 (3 years, 10 months)

Const. Period: June 1, 2011 through August 31, 2011

After Period: September 1, 2011 through June 30, 2015 (3 years, 10 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the SR 1112 and SR 1108 approaches.

Target Crashes: Target Crash 1 – 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

Note- The Right Turn, Same Roadway crash in the Before Period was not considered as a frontal impact crash, therefore it was not included as a target crash

Target Crash 2- Westbound Rear End Crashes on SR 1112 from 150’ east of the SR 1108 intersection and Northbound Rear End Crashes on SR 1108 from 150’ south of the SR 1112 intersection

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	12	22	+ 83.3 %
Total Severity Index	3.47	3.02	- 13.0 %
Target 1 Crashes	6	13	+ 116.7 %
Target 1 Crash Severity Index	2.23	3.85	+ 72.6 %
Target 2 Crashes	1	0	- 100.0 %
Target 2 Crash Severity Index	8.4	0	- 100.0 %
Volume (2009, 2013)	16,200	19,200	+ 18.5 %

<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	1	1	0.0 %
Class C Injury Crashes	3	5	+ 66.7 %
Property Damage Only	8	16	+ 100.0 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Left Turn, Same Roadway Crashes (Target 1)	1	9	+ 800.0 %
Left Turn, Different Roadway Crashes (Target 1)	1	1	0.0 %
Right Turn, Different Roadway Crashes (Target 1)	1	0	- 100.0 %
Angle Crashes (Target 1)	3	3	0.0 %
SR 1112 Westbound Rear End, Slow or Stop (Target 2)	1	0	- 100.0 %
SR 1108 Northbound Rear End, Slow or Stop (Target 2)	0	0	N/A
Rear End, Slow or Stop	3	7	+ 133.3 %
Right Turn, Same Roadway	1	0	- 100.0 %
Head On	1	0	- 100.0 %
Sideswipe	0	1	+ 100.0 %
Run Off, Right	0	1	+ 100.0 %

Overall Summary Results

Total Crashes:	+ 83 %	(increase)
Total Crash Severity:	- 13 %	(reduction)
Target 1 Crashes:	+ 117 %	(increase)
Target 1 Crash Severity:	+ 73%	(increase)
Target 2 Crashes:	- 100 %	(reduction)
Target 2 Crash Severity:	- 100 %	(reduction)
Volume:	+ 19 %	(increase)

Additional Summary Results

LTSR (Target 1):	+ 800 %	(increase)
RTDR (Target 1):	- 100 %	(reduction)
Rear End, Slow or Stop (Target 2):	- 100 %	(reduction)
Rear End, Slow or Stop:	+ 133 %	(increase)

Items for Discussion/Concerns

Left Turn, Same Roadway crashes within the intersection increased from 1 crash in the before period to 9 crashes in the after period.

The Rear End, Slow or Stop crashes on westbound SR 1112 decreased from one crash in the before period to 0 crashes in the after period.

Rear End, Slow or Stop crashes on eastbound SR 1112 and southbound SR 1108 increased from 3 crashes in the before period to 7 crashes in the after period.

The one Left Turn, Same Roadway crash in the before period occurred between southbound and northbound SR 1108. Of the 9 Left Turn, Same Roadway crashes in the after period, 6 of them occurred between southbound and northbound SR 1108.

Data Prepared For

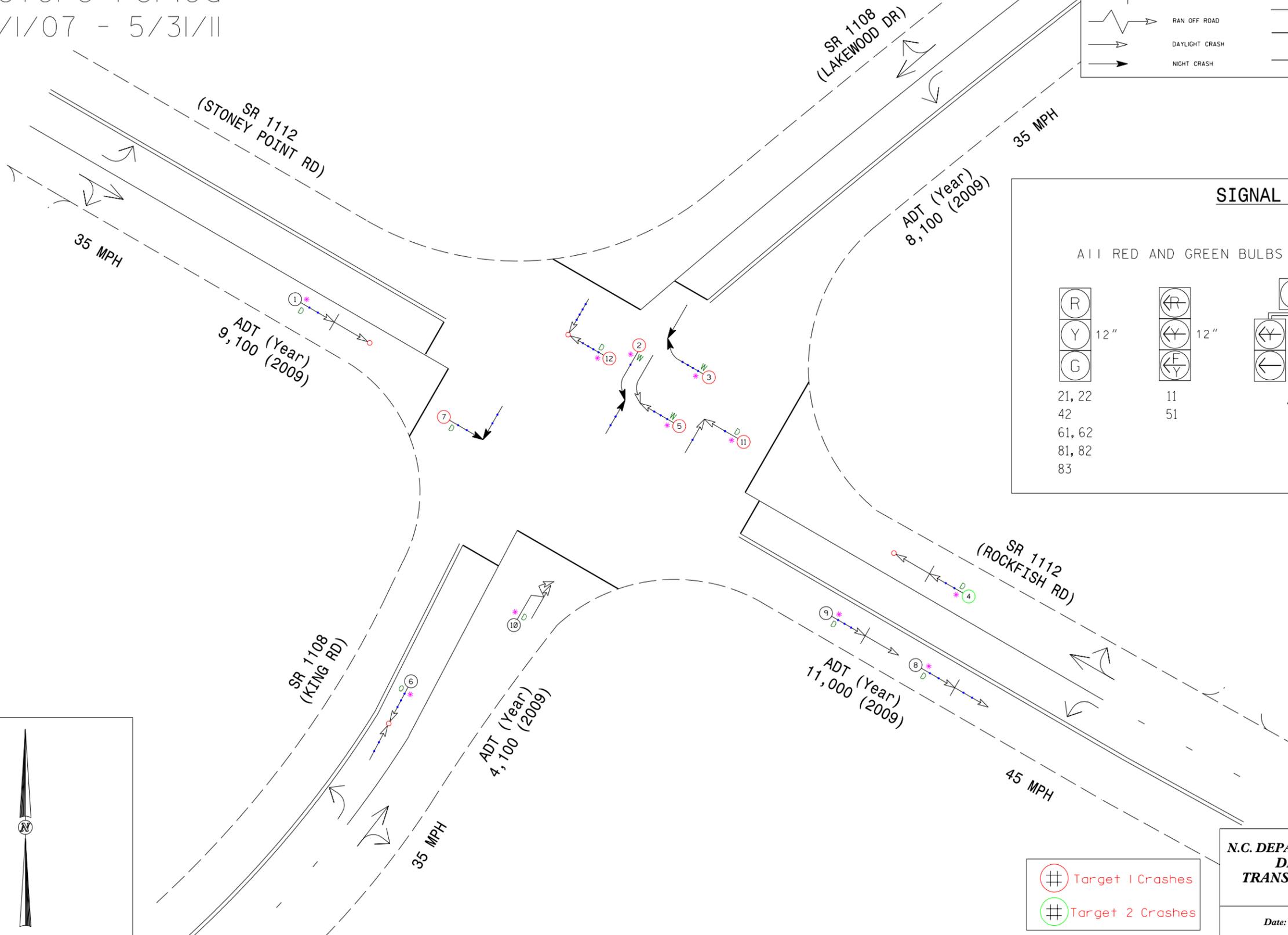
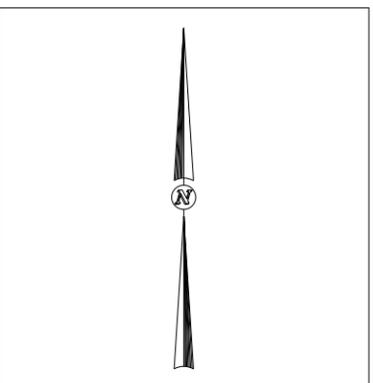
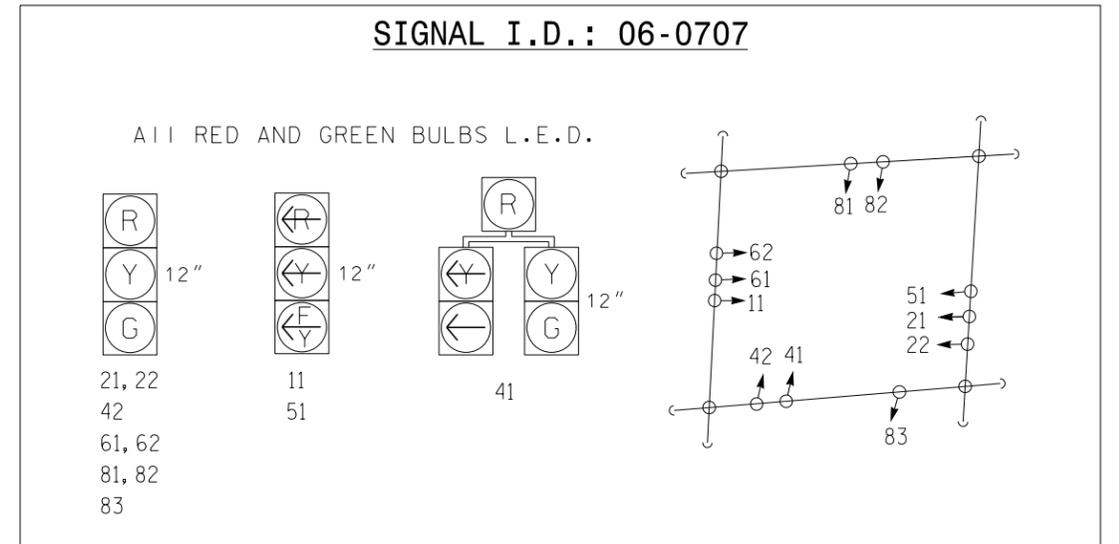
The Traffic Safety Unit *of the*
Transportation Mobility and Safety Division *of the*
Division of Highways *of the*
North Carolina Department of Transportation

Data Prepared By

Principal Investigator: Rosi Hennein
Work Group/Consultant: Stantec Consulting Services Inc
Date: August 14, 2015

SS# 06-04-203
 Order# 41000033972
 Cumberland County
 Before Period
 8/1/07 - 5/31/11

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



Target 1 Crashes
 Target 2 Crashes

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

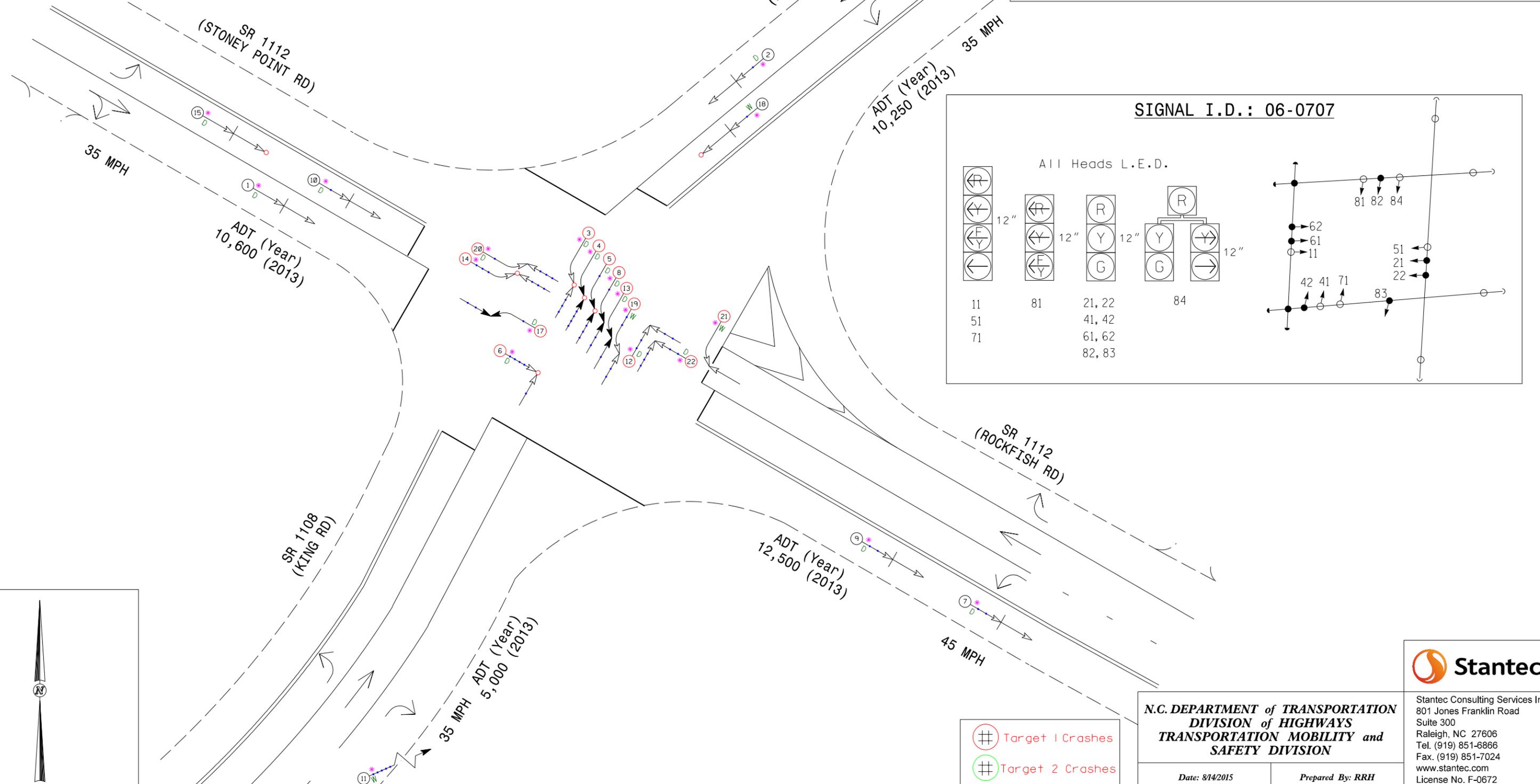
Date: 8/14/2015 Prepared By: RRH

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SS# 06-04-203
 Order# 41000033972
 Cumberland County
 After Period
 9/1/11 - 6/30/15

LEGEND

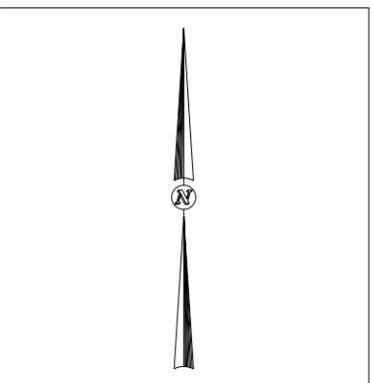
	MOVING VEHICLE		ANGLE		9 MPH OR LESS		A ANIMAL
	PARKED VEHICLE		TURNING		10 MPH TO 19		P PEDESTRIAN
	PARKING VEHICLE		BACKING		20 MPH TO 29		B BICYCLE
	MOVABLE OBJECT		SIDESWIPE		30 MPH TO 39		T TRAIN
	HEAD ON		INJURY		40 MPH TO 49		* DRIVER AT FAULT
	REAR END		FATALITY		50 MPH TO 59		D DRY
	RAN OFF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



SIGNAL I.D.: 06-0707

All Heads L.E.D.

11	81	21, 22	84
51		41, 42	
71		61, 62	
		82, 83	



Target 1 Crashes
 Target 2 Crashes

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

Date: 8/14/2015

Prepared By: RRR



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