

Results

Crash Reductions For Both Intersections (Using 5.17 Year Before and After Periods)

Total Crashes:	72.2% Reduction	(From 126 crashes to 35 crashes)
Target Crashes*:	94.6% Reduction	(From 56 crashes to 3 crashes)
Target Injury Crashes:	100.0% Reduction	(From 28 crashes to 0 crashes)
Target PDO Crashes:	89.3% Reduction	(From 28 crashes to 3 crashes)
AADT:	No Change	(13,000 vehicles)

* Target Crashes include all Left Turn – Same Roadway Crashes on NC 18 (Grover St).

The Treatment Location appears to have had a substantial decrease in both Total and Target Crashes from the before to the after period. The traffic signal installation appears to have been effective at reducing the pattern of Left Turn – Same Roadway Crashes and the high severity injuries associated with this crash type.

Location Photos Taken on July 11, 2007



Driving West on Grover St
Approaching Washington St



Driving East on Grover St
Approaching Washington St



Driving East on Grover St
Approaching Lafayette St



Driving East on Grover St
Approaching Lafayette St

For the complete project evaluation report and reports on other projects, please go to:
<http://www.ncdot.org/doh/preconstruct/traffic/Safety/ses/projects/completed.html>

North Carolina Department of Transportation Traffic Engineering and Safety Systems Branch Traffic Safety Systems Management Section Safety Evaluation Group

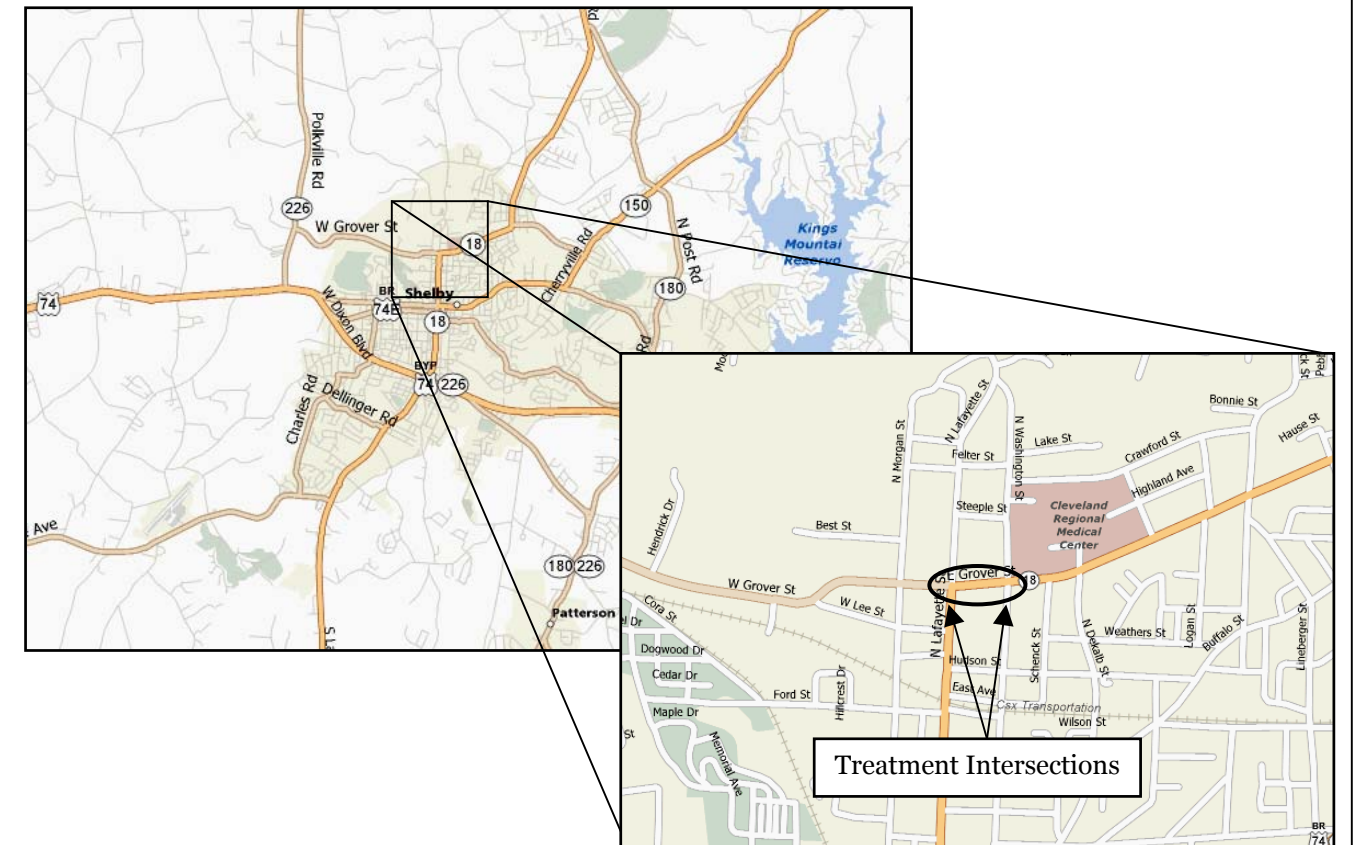
Evaluation of Spot Safety Project # 12-99-216 & 12-01-213

Traffic Signal Revisions & Changes in Pavement Markings To Include Exclusive Left Turn Lanes on NC 18 (Grover St) at Washington St and at SR 1861/Lafayette St, Cleveland Co

The subject intersections are located in Shelby, NC. Prior to the improvements, NC 18 was a four-lane undivided facility with a through-left and a through-right lane on each approach. The pavement markings were changed on the through-left lanes in order to make them exclusive left turn lanes at both intersections. The projects also involved coordinating the existing signals at both intersections, which are a distance of approximately 550' apart.

Traffic Engineering staff originally recognized these location as needing safety improvements because the intersection of NC 18 (Grover St) and Lafayette St had experienced 30 Total Crashes in the three year time period between September 1, 1996 through August 31, 1999, including 9 Left Turn-Same Roadway Crashes. The intersection of NC 18 (Grover St) and Washington St had experienced 37 Total Crashes in the three-year time period between June 1, 1997 through May 31, 2000, including 16 Left Turn-Same Roadway Crashes. Almost 40 percent of the crashes were Left Turn-Same Roadway Crashes, which were considered correctable by the treatment.

The improvements at NC 18 (Grover St) and Lafayette St were completed on April 30, 2001 while the improvements at NC 18 (Grover St) and Washington St were completed on January 16, 2002. The total cost of the combined projects was \$55,000.



Treatment Intersections

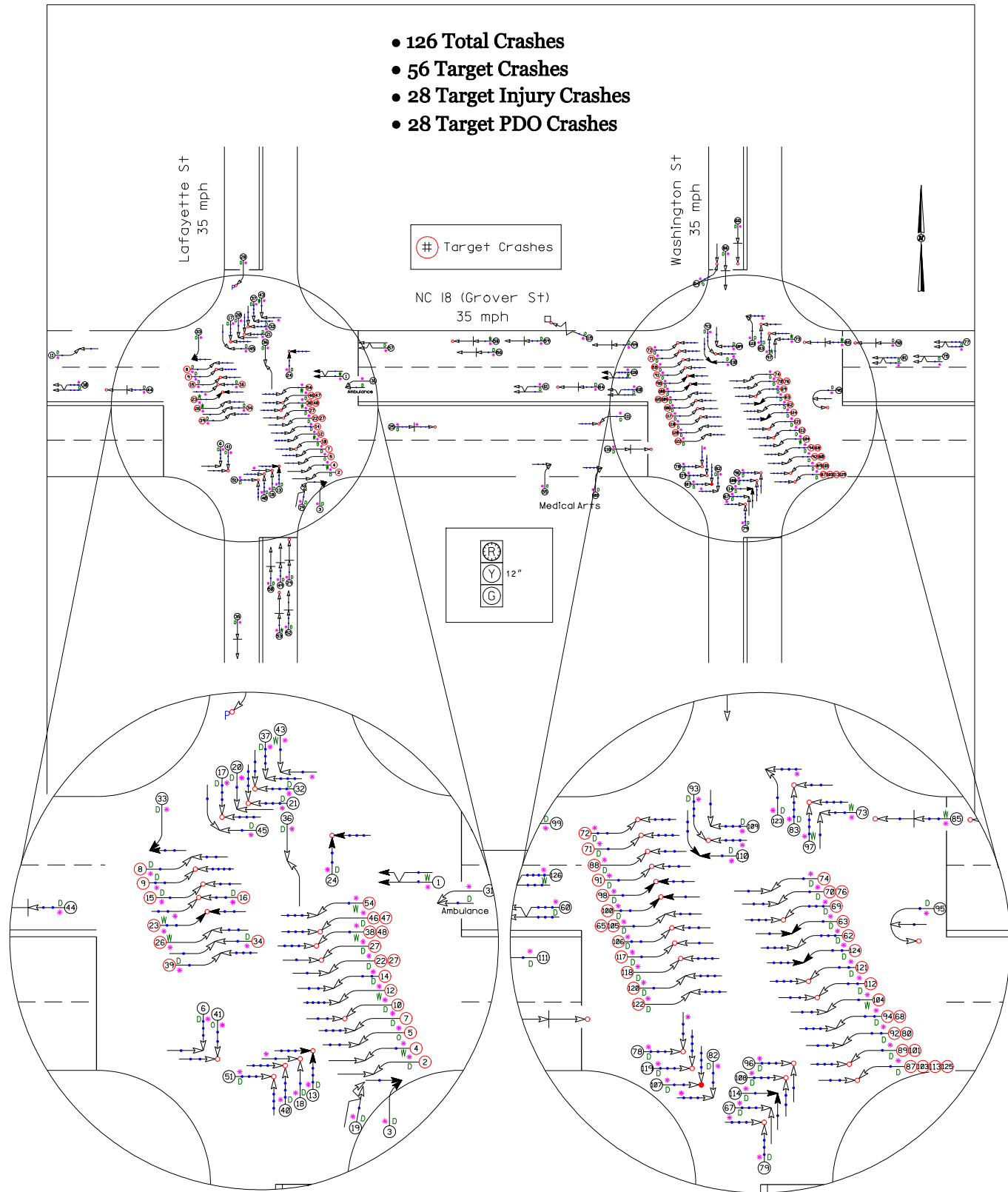
Before Period Collision Diagram

January 1, 1996 through February 28, 2001

(5.17 Years of Crash Data)

1998 ADT = 13,000

- 126 Total Crashes
- 56 Target Crashes
- 28 Target Injury Crashes
- 28 Target PDO Crashes



After Period Collision Diagram

March 1, 2002 through April 30, 2007

(5.17 Years of Crash Data)

2004 ADT = 13,000

- 35 Total Crashes
- 3 Target Crashes
- 0 Target Injury Crashes
- 3 Target PDO Crashes

