

# Safety Project Evaluation

|                  |                                                                            |
|------------------|----------------------------------------------------------------------------|
| Order ID:        | 41000074910                                                                |
| Project ID:      | B-4491/ 06-14-28066                                                        |
| Location:        | US 301 / I-95 Business at NC 59/new SR 1596 (S. Main St / Chicken Foot Rd) |
| Length:          | 1.115 miles                                                                |
| GPS Coordinates: | 34.94514, -78.93083                                                        |
| County:          | Cumberland                                                                 |
| City:            | Hope Mills                                                                 |
| Division:        | 6                                                                          |

|                         |                                                                                                                                                                                   |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Countermeasure(s):      | Replace Bridge. Revise interchange ramps and service roads. Widen NC 59 to a four-lane divided section. Signalize I-95 SB Ramp intersection and new SR 2274/SR 2284 intersection. |
| Estimated Project Cost: | \$20,600,000                                                                                                                                                                      |
| Completion Date:        | 11/25/2020                                                                                                                                                                        |

|                     | Start Date | End Date   | Length |
|---------------------|------------|------------|--------|
| Before Period       | 9/1/2013   | 4/30/2018  | 4y, 8m |
| Construction Period | 5/1/2018   | 11/30/2020 | 2y, 7m |
| After Period        | 12/1/2020  | 7/31/2025  | 4y, 8m |

|                    |                                                                                                                                                                                                                                                                                                                                 |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Analysis Criteria: | Treatment data includes<br>(1) all crashes on SR 1596 MP 9.015-10.130 and<br>(2) all crashes on US 301 ramps, I-95 SB ramps within 150' y-line, or road segments realigned (SR 1243 MP 0.000-0.320, SR 2285 MP 0.880-1.020, SR 2284 MP 1.080-1.514, SR 2275 MP 0.405-0.540, SR 2274 MP 1.450-1.603, and SR 4560 MP 0.000-0.145) |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                   |                                                                                                                                                                                      |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Target-1 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 Intersections |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                   |                  |
|-------------------|------------------|
| Target-2 Crashes: | Rear-End Crashes |
|-------------------|------------------|

## Project Development Comparison

| Crashes Per Year by Project Time Period | Project Development | Before Period | After Period |
|-----------------------------------------|---------------------|---------------|--------------|
| Years                                   | 5.00 years          | 4.67 years    | 4.67 years   |
| Start Date                              | 1/1/2009            | 9/1/2013      | 12/1/2020    |
| End Date                                | 12/31/2013          | 4/30/2018     | 7/31/2025    |
| Total                                   | 26.40               | 34.50         | 33.21        |
| Fatal Injury                            | 0.20                | 0.21          | 0.21         |
| Class A Injury                          | 0.00                | 0.21          | 0.43         |
| Class B Injury                          | 1.00                | 1.93          | 4.50         |
| Class C Injury                          | 9.20                | 7.07          | 6.00         |
| Property Damage Only                    | 16.00               | 25.07         | 22.07        |

## Items for Discussion

- o The I-95 SB ramp terminal intersection (#5) and the new SR 2274/SR 2284 intersection (#4) were signalized as part of the project. The US 301 NB ramp terminal intersection (#3) signal was upgraded to 4-section FYA for left turns from NC 59.
- o Prior to the project, I-95Bus/US 301 SB ramps terminated at SR 1243, which intersected NC 59 at intersection #2, and NB ramps terminated at SR 2284, which intersected NC 59 at intersection #3. Intersection #3 had four legs (SR 2275 truncated by project), and intersection #4 had three legs with SR 2274 following the alignment of new SR 4560. These revisions are necessary context for the totals in the Additional Information table.
- o Before period Target-1 crashes at the ramp terminals are included in the intersection #2 and #3 totals above. At intersection #2, 1 of 8 Target-1 crashes occurred at the ramp terminal, and at intersection #3, 4 of 6 occurred at the ramp terminal.
- o Target-2 rear-end crashes on NC 59/new SR 1596 increased from 36 to 48 (+33%). Rear-end crashes on side street and ramp approaches decreased from 39 to 12 (-69%). Most side street/ramp rear-end crashes occurred on the I-95 SB Off-Ramp (#5): 30 before, 8 after (-73%).
- o Total lane departure crashes increased from 29 to 31 (+7%). Sideswipe same direction crashes increased from 4 to 19 (100%+) while all other lane departures (head on, run-off-road, sideswipe opposite direction) decreased from 25 to 12 (-52%). Run-off-road crashes in the curves on SR 2285 decreased from 5 to 0 (-100%).
- o The project funding included a \$3.2 million HSIP contribution.

## 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

| Treatment Information           | Before | After  | Percent Reduction (-)<br>Percent Increase (+) |
|---------------------------------|--------|--------|-----------------------------------------------|
| Total Crashes                   | 161    | 155    | -3.73%                                        |
| Total Severity Index            | 3.87   | 4.81   | 24.13%                                        |
| All Target Crashes              | 112    | 116    | 3.57%                                         |
| All Target Crash Severity Index | 3.05   | 4.92   | 61.49%                                        |
| Target-1 Crashes                | 37     | 56     | 51.35%                                        |
| Target-1 Crash Severity Index   | 4.00   | 6.75   | 68.66%                                        |
| Target-2 Crashes                | 75     | 60     | -20.00%                                       |
| Target-2 Crash Severity Index   | 2.58   | 3.22   | 24.87%                                        |
| Volume (2018, 2022)             | 15,200 | 15,900 | 4.61%                                         |

| Injury Crash Summary   | Before | After | Percent Reduction (-)<br>Percent Increase (+) |
|------------------------|--------|-------|-----------------------------------------------|
| Fatal Injury Crashes   | 1      | 1     | 0.00%                                         |
| Class A Injury Crashes | 1      | 2     | 100.00%                                       |
| Class B Injury Crashes | 9      | 21    | 133.33%                                       |
| Class C Injury Crashes | 33     | 28    | -15.15%                                       |
| Property Damage Only   | 117    | 103   | -11.97%                                       |

| All Target Injury Crash Summary | Before | After | Percent Reduction (-)<br>Percent Increase (+) |
|---------------------------------|--------|-------|-----------------------------------------------|
| Fatal Injury Crashes            | 0      | 0     | n/a                                           |
| Class A Injury Crashes          | 0      | 2     | n/a                                           |
| Class B Injury Crashes          | 3      | 15    | 400.00%                                       |
| Class C Injury Crashes          | 28     | 26    | -7.14%                                        |
| Property Damage Only            | 81     | 73    | -9.88%                                        |

| Additional Information   | Before | After | Percent Reduction (-)<br>Percent Increase (+) |
|--------------------------|--------|-------|-----------------------------------------------|
| Target-1 Crashes: Int. 1 | 0      | 2     | n/a                                           |
| Target-1 Crashes: Int. 2 | 9      | 19    | 111.11%                                       |
| Target-1 Crashes: Int. 3 | 6      | 2     | -66.67%                                       |
| Target-1 Crashes: Int. 4 | 10     | 25    | 150.00%                                       |
| Target-1 Crashes: Int. 5 | 12     | 8     | -33.33%                                       |

## Map/Satellite Views



## Data Prepared By:

|                         |                     |
|-------------------------|---------------------|
| Principal Investigator: | John Stanford, E.I. |
| Work Group/Consultant:  | HNTB                |
| Date:                   | 10/3/2025           |

**DISCLAIMER FOR 2020 DATA:**

*Reductions in typical roadway volumes were experienced Statewide in 2020 due to the COVID-19 pandemic. In addition, the frequency of total crashes in 2020 was found to have decreased from prior years, but the frequency of fatal crashes in 2020 was found to have increased from prior years. The potential impact of the COVID-19 pandemic and shift in data trends should be kept in mind when reviewing traffic safety analyses and/or data reports that incorporate 2020 volume and/or crash data. The analyses and reports that include this data may not represent typical conditions of the areas and locations being reviewed.*