## Interstate Highway 95 (I-95) Corridor Study, State of North Carolina Commercial Motor Vehicle (Heavy Truck) Crashes, 2001 through 2003

This study, completed in August, 2004, presents map sheets which contain geospatial, graphical, and tabular data, as well as summary reports, representing heavy truck crashes on Interstate Highway 95 in North Carolina between January 1, 2001 and December 31, 2003. The study was undertaken by the GIS group of the Institute for Transportation Research and Education (ITRE) at North Carolina State University at the request of the North Carolina State Highway Patrol.

Data sources: crash data is compiled in tabular form by the NC Dept. of Transportation's Transportation Engineering Accident Analysis System (TEAAS) and transferred to ITRE's GIS group for geolocation in a GIS. Reference data for geolocation is primarily provided by NCDOT.

Document organization: this document consists of two sections. The first section includes three summary reports: (1) all crashes along the length of the corridor; (2) crashes by county; and (3) crashes by NCSHP Troop/Troop District. The second section contains three map sheets: (1) an overview map; (2) a sectional crash rate map; and (3) a crashes-by-exit map. Note that the map sheets are large format (34 in. by 44 in.), requiring a large format plotter or printer. All pages require the Adobe Acrobat Reader, as they are in PDF format.

The corridor: the corridor in the study consists of 202 miles of roadway between the North Carolina/South Carolina line in the south to the North Carolina/Virginia line in the north, including the I-95 Business route in Cumberland County. All geolocated crashes on I-95, I-95 Business, and their contingent entrance/exit ramps are included in the study ( $n=927$ ).

Crash rates: the corridor was divided into twelve geographically logical segments. The number of crashes in each segment was divided by the number of miles in each segment to calculate the segment's crash-per-mile rate. Both tabular and color-coded graphical data is displayed on the Crash Rates map sheet.

Crashes by exit: if a crash was located on I-95 within a half-mile of an exit, it was assigned to that exit. There are fifty-eight exits (interchanges) from I-95 in North Carolina, identified by their nearest mile-marker. 455 crashes took place within I-95 exits' half-mile "buffers". On the Exit Crashes map sheet, both tabular data and color-coded graphical data is presented.

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CMV Crashes in North Carolina, 2001-2003
Summary Report of All Crashes by North Carolina State Highway Patrol Troop District

## NCSHP Troop: B Troop District: B1 Note: full troop summary (all districits) is located after the last district in the troop.

| Total Crashes | Severity* <br> (see Severity chart below) | Fatalities | Injuries | Alcohol Involved | Speed Involved | In Work Zone |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 196 | 4 Caused Disabling Injury (A) <br> 18 Caused Obvious Injury (B) <br> 51 Caused Possible Injury (C) <br> 3 Caused Fatality (K) <br> 120 Caused Property Damage O | 3 Fatal Crashes <br> 3 Fatalities | 130 Injury Crashes <br> 110 Injuries | 6 Crashes | 3 Crashes | 32 Crashes |



12 Angle
1 Animal
1 Backing Up
21 Fixed Object
0 Head On
2 Jackknife
1 Left Turn, Diff. Road
7 Left Turn, Same Road
0 Right Turn, Diff. Road
3 Right Turn, Same Road

45 Rear End, Slow/Stop
2 Rear End, Turning
6 Rollover
0 Run Off Road, Left
0 Run Off Road, Right
0 Run Off Road, Straight
8 Parked Vehicle
0 Pedalcyclist
3 Pedestrian
13 Movable Object

47 Sideswipe, Same Direction
1 Sideswipe, Opposite Direction
0 Railroad, Engine/Train
5 Other Collision
14 Other Non-Collision
4 Unknown


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Summary Report of All Crashes by North Carolina State Highway Patrol Troop District

## NCSHP Troop: B Troop District: B7 Note: full troop summary (all districits) is located after the last district in the troop.



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Summary Report of All Crashes by North Carolina State Highway Patrol Troop District

## NCSHP Troop: B Troop District: B8 Note: full troop summary (all districits) is located after the last district in the troop.



| Weather Conditions | Driver Condition | Road Type | Urban/Rural Area |
| :---: | :---: | :---: | :---: |
| 44 Clear | 34 Apparently Normal | 55 Interstate | 22 Urban Crashes |
| 7 Cloudy | 1 Fatigue | 0 US Highway | 37 Rural Crashes |
| 7 Rain | 0 Fell Asleep, Fainted, Loss of Consciousness | 0 NC State Highway |  |
| 0 Fog, Smog, Smoke | 1 Illness | 0 Secondary Road |  |
| 0 Sleet, Hail, Freezing | 0 Impairment Due to Medcation, Drugs, Alcohol | 2 Local Road | 1. Driver Condition data not available for Crash Year 2001; |
| Rain/Drizzle | 0 Medical Condition | 2 Private or Other | 2. This summary is based on |
| 1 Snow <br> 0 Severe Crosswinds | 0 Other Physical Impairment |  | crashes actually geo-located. |


| 0 Angle | 15 | Rear End, Slow/Stop | 20 | Sideswipe, Same Direction |
| :---: | :---: | :---: | :---: | :---: |
| 0 Animal | 1 | Rear End, Turning | 1 | Sideswipe, Opposite Direction |
| 1 Backing Up | 0 | Rollover | 0 | Railroad, Engine/Train |
| 2 Fixed Object | 4 | Run Off Road, Left | 5 | Other Collision |
| 0 Head On | 1 | Run Off Road, Right | 2 | Other Non-Collision |
| 1 Jackknife | 0 | Run Off Road, Straight | 0 | Unknown |
| 0 Left Turn, Diff. Road | 0 | Parked Vehicle |  |  |
| 1 Left Turn, Same Road | 0 | Pedalcyclist |  |  |
| 1 Right Turn, Diff. Road | 0 | Pedestrian |  |  |
| 0 Right Turn, Same Road | 4 | Movable Object |  |  |



## CMV Crashes in North Carolina, 2001-2003

## Summary Report of All Crashes by North Carolina State Highway Patrol Troop District

## Summary of All Districts, NCSHP Troop: B

| Total Crashes | Severity* <br> (see Severity chart below) | Fatalities | Injuries | Alcohol Involved | Speed Involved | In Work Zone |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 436 | 8 Caused Disabling Injury (A) <br> 38 Caused Obvious Injury (B) <br> 113 Caused Possible Injury (C) <br> 7 Caused Fatality (K) <br> 270 Caused Property Damage On | 7 Fatal Crashes <br> 7 Fatalities | 323 Injury Crashes <br> 242 Injuries | 9 Crashes | 11 Crashes | 37 Crashes |


22 Angle

2 Backing Up
41 Fixed Object
0 Head On
4 Jackknife
2 Left Turn, Diff. Road
9 Left Turn, Same Road
1 Right Turn, Diff. Road
4 Right Turn, Same Road

112 Rear End, Slow/Stop
3 Rear End, Turning

## 12 Rollover

6 Run Off Road, Left
6 Run Off Road, Right
1 Run Off Road, Straight
8 Parked Vehicle
0 Pedalcyclist
5 Pedestrian
28 Movable Object

124 Sideswipe, Same Direction
3 Sideswipe, Opp. Direction
0 Railroad, Engine/Train
12 Other Collision
26 Other Non-Collision
4 Unknown



Interstate 95 Corridor Study
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## Summary Report of All Crashes by North Carolina State Highway Patrol Troop District

## NCSHP Troop: C Troop District: C1 Note: full troop summary (all districts) is located after the last district in the troop.

| Total Crashes | Severity* <br> (see Severity chart below) | Fatalities | Injuries | Alcohol Involved | Speed Involved | In Work Zone |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 98 | 4 Caused Disabling Injury (A) <br> 11 Caused Obvious Injury (B) <br> 22 Caused Possible Injury (C) <br> 3 Caused Fatality (K) <br> 58 Caused Property Damage On | 3 Fatal Crashes <br> 3 Fatalities | 61 Injury Crashes 70 Injuries | 0 Crashes | 3 Crashes | 10 Crashes |


| Weather Conditions | Driver Condition | Road Type | Urban/Rural Area |
| :---: | :---: | :---: | :---: |
| 62 Clear | 65 Apparently Normal | 97 Interstate | 3 Urban Crashes |
| 18 Cloudy | 1 Fatigue | 1 US Highway | 95 Rural Crashes |
| 7 Rain | 0 Fell Asleep, Fainted, Loss of Consciousness | 0 NC State Highway |  |
| 3 Fog, Smog, Smoke | 0 Illness | 0 Secondary Road |  |
| 4 Sleet, Hail, Freezing | 0 Impairment Due to Medcation, Drugs, Alcohol | 0 Local Road | 1. Driver Condition data not available for Crash Year 2001; |
| Rain/Drizzle | 1 Medical Condition | 0 Private or Other | 2 . This summary is based on |
| 4 Snow <br> 0 Severe Crosswinds | 0 Other Physical Impairment |  | crashes actually geo-located. |

## 6 Angle

1 Animal
0 Backing Up
11 Fixed Object
1 Head On
1 Jackknife
0 Left Turn, Diff. Road
1 Left Turn, Same Road
0 Right Turn, Diff. Road
0 Right Turn, Same Road

19 Rear End, Slow/Stop
0 Rear End, Turning

## 3 Rollover

2 Run Off Road, Left
0 Run Off Road, Right
0 Run Off Road, Straight
5 Parked Vehicle
0 Pedalcyclist
0 Pedestrian
8 Movable Object

28 Sideswipe, Same Direction
1 Sideswipe, Opposite Direction
0 Railroad, Engine/Train
2 Other Collision
6 Other Non-Collision
3 Unknown



Interstate 95 Corridor Study
CMV Crashes in North Carolina, 2001-2003
Summary Report of All Crashes by North Carolina State Highway Patrol Troop District

## NCSHP Troop: C Troop District: C5 Note: full troop summary (all districts) is located after the last district in the troop.

| Total Crashes | Severity* <br> (see Severity chart below) | Fatalities | Injuries | Alcohol Involved | Speed Involved | In Work Zone |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 49 | 1 Caused Disabling Injury (A) <br> 7 Caused Obvious Injury (B) <br> 11 Caused Possible Injury (C) <br> 1 Caused Fatality (K) <br> 29 Caused Property Damage On | 1 Fatal Crashes <br> 1 Fatalities | 32 Injury Crashes <br> 32 Injuries | 3 Crashes | 2 Crashes | 14 Crashes |


| Weather Conditions | Driver Condition | Road Type | Urban/Rural Area |
| :---: | :---: | :---: | :---: |
| 32 Clear | 30 Apparently Normal | 49 Interstate | 1 Urban Crashes |
| 11 Cloudy | 2 Fatigue | 0 US Highway | 48 Rural Crashes |
| 4 Rain | 0 Fell Asleep, Fainted, Loss of Consciousness | 0 NC State Highway |  |
| 0 Fog, Smog, Smoke | 0 Illness | 0 Secondary Road |  |
| 1 Sleet, Hail, Freezing | 0 Impairment Due to Medcation, Drugs, Alcohol | 0 Local Road | 1. Driver Condition data not available for Crash Year 2001; |
| Rain/Drizzle | 0 Medical Condition | 0 Private or Other | 2. This summary is based on |
| 1 Snow <br> 0 Severe Crosswinds | 1 Other Physical Impairment |  | crashes actually geo-located. |

0 Angle
1 Animal
1 Backing Up
5 Fixed Object
0 Head On
0 Jackknife
0 Left Turn, Diff. Road
0 Left Turn, Same Road
0 Right Turn, Diff. Road
0 Right Turn, Same Road

10 Rear End, Slow/Stop
0 Rear End, Turning
2 Rollover
0 Run Off Road, Left
3 Run Off Road, Right
0 Run Off Road, Straight
1 Parked Vehicle
0 Pedalcyclist
0 Pedestrian
5 Movable Object

15 Sideswipe, Same Direction
0 Sideswipe, Opposite Direction
0 Railroad, Engine/Train
2 Other Collision
4 Other Non-Collision
0 Unknown


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CMV Crashes in North Carolina, 2001-2003
Summary Report of All Crashes by North Carolina State Highway Patrol Troop District

## NCSHP Troop: C Troop District: C6 Note: full troop summary (all districts) is located after the last district in the troop.

| Total Crashes | Severity* <br> (see Severity chart below) | Fatalities | Injuries | Alcohol Involved | Speed Involved | In Work Zone |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 200 | 3 Caused Disabling Injury (A) <br> 16 Caused Obvious Injury (B) <br> 39 Caused Possible Injury (C) <br> 2 Caused Fatality (K) <br> 140 Caused Property Damage On | 2 Fatal Crashes <br> 3 Fatalities | 121 Injury Crashes 155 Injuries | 4 Crashes | 7 Crashes | 34 Crashes |



| $\mathbf{3}$ | Angle | $\mathbf{6 3}$ | Rear End, Slow/Stop | $\mathbf{7 0}$ | Sideswipe, Same Direction |
| ---: | :--- | ---: | :--- | ---: | :--- |
| $\mathbf{1}$ | Animal | $\mathbf{1}$ | Rear End, Turning | $\mathbf{2}$ | Sideswipe, Opposite Direction |
| $\mathbf{1}$ | Backing Up | $\mathbf{6}$ | Rollover | $\mathbf{0}$ | Railroad, Engine/Train |
| $\mathbf{2 6}$ | Fixed Object | $\mathbf{0}$ | Run Off Road, Left | $\mathbf{1}$ | Other Collision |
| $\mathbf{0}$ | Head On | $\mathbf{0}$ | Run Off Road, Right | $\mathbf{3}$ | Other Non-Collision |
| $\mathbf{2}$ | Jackknife | $\mathbf{0}$ | Run Off Road, Straight | $\mathbf{1}$ | Unknown |
| $\mathbf{1}$ | Left Turn, Diff. Road | $\mathbf{1}$ | Parked Vehicle |  |  |
| $\mathbf{0}$ | Left Turn, Same Road | $\mathbf{0}$ | Pedalcyclist |  |  |
| $\mathbf{1}$ | Right Turn, Diff. Road | $\mathbf{0}$ | Pedestrian |  |  |
| $\mathbf{2}$ | Right Turn, Same Road | $\mathbf{1 5}$ | Movable Object |  |  |




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Summary Report of All Crashes by North Carolina State Highway Patrol Troop District

## NCSHP Troop: C Troop District: C8 Note: full troop summary (all districts) is located after the last district in the troop.

| Total Crashes | Severity* <br> (see Severity chart below) | Fatalities | Injuries | Alcohol Involved | Speed Involved | In Work Zone |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 144 | 3 Caused Disabling Injury (A) <br> 5 Caused Obvious Injury (B) <br> 39 Caused Possible Injury (C) <br> 5 Caused Fatality (K) <br> 92 Caused Property Damage On | 5 Fatal Crashes <br> 9 Fatalities | 101 Injury Crashes 114 Injuries | 2 Crashes | 2 Crashes | 6 Crashes |


| Weather Conditions | Driver Condition | Road Type | Urban/Rural Area |
| :---: | :---: | :---: | :---: |
| 98 Clear <br> 14 Cloudy | 104 Apparently Normal <br> 1 Fatigue | 139 Interstate <br> 1 US Highway | 1 Urban Crashes 143 Rural Crashes |
| 21 Rain | 3 Fell Asleep, Fainted, Loss of Consciousness | 4 NC State Highway |  |
| 7 Fog, Smog, Smoke | 0 Illness | 0 Secondary Road |  |
| 1 Sleet, Hail, Freezing | 0 Impairment Due to Medcation, Drugs, Alcohol | 0 Local Road | 1. Driver Condition data not available for Crash Year 2001; |
| Rain/Drizzle | 1 Medical Condition | 0 Private or Other | 2. This summary is based on |
| 3 Snow <br> 0 Severe Crosswinds | 0 Other Physical Impairment |  | crashes actually geo-located. |


| $\mathbf{7}$ | Angle | $\mathbf{4 0}$ | Rear End, Slow/Stop | $\mathbf{3 1}$ | Sideswipe, Same Direction |
| :--- | ---: | :--- | ---: | :--- | :--- |
| $\mathbf{2}$ | Animal | $\mathbf{0}$ | Rear End, Turning | $\mathbf{1}$ | Sideswipe, Opposite Direction |
| $\mathbf{0}$ | Backing Up | $\mathbf{4}$ | Rollover | $\mathbf{0}$ | Railroad, Engine/Train |
| $\mathbf{1 1}$ | Fixed Object | $\mathbf{3}$ | Run Off Road, Left | $\mathbf{3}$ | Other Collision |
| $\mathbf{0}$ | Head On | $\mathbf{2}$ | Run Off Road, Right | $\mathbf{1 0}$ | Other Non-Collision |
| $\mathbf{1}$ | Jackknife | $\mathbf{0}$ | Run Off Road, Straight | $\mathbf{0}$ | Unknown |
| $\mathbf{1}$ | Left Turn, Diff. Road | $\mathbf{2}$ | Parked Vehicle |  |  |
| $\mathbf{0}$ | Left Turn, Same Road | $\mathbf{0}$ | Pedalcyclist |  |  |
| $\mathbf{2}$ | Right Turn, Diff. Road | $\mathbf{0}$ | Pedestrian |  |  |
| $\mathbf{0}$ | Right Turn, Same Road | $\mathbf{2 4}$ | Movable Object |  |  |



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## CMV Crashes in North Carolina, 2001-2003

## Summary Report of All Crashes by North Carolina State Highway Patrol Troop District

## Summary of All Districts, NCSHP Troop: C

| Total Crashes | Severity* <br> (see Severity chart below) | Fatalities | Injuries | Alcohol Involved | Speed Involved | In Work <br> Zone |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 491 | 11 Caused Disabling Injury (A) <br> 39 Caused Obvious Injury (B) <br> 111 Caused Possible Injury (C) <br> 11 Caused Fatality (K) <br> 319 Caused Property Damage On | 11 Fatal Crashes <br> 16 Fatalities | 315 Injury Crashes <br> 371 Injuries | 9 Crashes | 14 Crashes | 64 Crashes |


| Weather Conditions | Driver Condition | Road Type | Urban/Rural Area |
| :---: | :---: | :---: | :---: |
| 352 Clear | 315 Apparently Normal | 482 Interstate | 28 Urban Crashes |
| 61 Cloudy | 5 Fatigue | 4 US Highway | 463 Rural Crashes |
| 51 Rain | 6 Fell Asleep, Fainted, Loss of Consciousness | 4 NC State Highway |  |
| 10 Fog, Smog, Smoke | 0 Illness | 0 Secondary Road | Notes: <br> 1. Driver Condition data not |
| 8 Sleet, Hail, Freezing Rain/Drizzle | 0 Impairment Due to Medcation, Drugs, Alcohol | 1 Local Road | available for Crash Year 2001; |
| 9 Sn | 2 Medical Condition | 0 Private or Other | 2. This summary is based on |
| O Severe Crosswinds | 1 Other Physical Impairment |  | crashes actually geo-located. |

## 16 Angle

5 Animal
2 Backing Up
53 Fixed Object
1 Head On
4 Jackknife
2 Left Turn, Diff. Road
1 Left Turn, Same Road
3 Right Turn, Diff. Road
2 Right Turn, Same Road

132 Rear End, Slow/Stop
1 Rear End, Turning
15 Rollover
5 Run Off Road, Left
5 Run Off Road, Right
0 Run Off Road, Straight
9 Parked Vehicle
0 Pedalcyclist
0 Pedestrian
52 Movable Object

144 Sideswipe, Same Direction
4 Sideswipe, Opp. Direction
0 Railroad, Engine/Train
8 Other Collision
23 Other Non-Collision
4 Unknown

CMV Crashes in North Carolina, 2001-2003
Summary Report of All Crashes by County

## CUMBERLAND



## HALIFAX

NC State Highway Patrol Troop:
C District:
C8

| Total Crashes | Severity* <br> (see Severity chart below) | Fatalities | Injuries | Alcohol Involved | Speed Involved | In Work Zone |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 93 | 0 Caused Disabling Injury (A) <br> 5 Caused Obvious Injury (B) <br> 24 Caused Possible Injury (C) <br> 3 Caused Fatality (K) <br> 61 Caused Property Damage Only (PDO) | 3 Fatal Crashes <br> 4 Fatalities | 31 Injury Crashes 64 Injuries | 2 Crashes | 2 Crashes | 6 Crashes |



## HARNETT



## JOHNSTON



## NASH NC State Highway Patrol Troop: C District: C1



CMV Crashes in North Carolina, 2001-2003
Summary Report of All Crashes by County

NORTHAMPTON

CMV Crashes in North Carolina, 2001-2003
Summary Report of All Crashes by County

ROBESON

CMV Crashes in North Carolina, 2001-2003
Summary Report of All Crashes by County

## WILSON



## Summary Report of All Crashes



## Commercial Motor Vehicle (Heavy Truck)



Commercial Motor Vehicle (Heavy Truck) Crashes in North Carolina, 2001-2003




[^0]:    This study was conducted by Carl Furney, MA, Research Associate and Ted Donlan, MEd, Research Assistant, GIS group, Institute for Transportation Research and Education, North Carolina State University in Raleigh. Reports and maps compiled and produced by Ted Donlan. The CMV Safety project is directed by Ron Hughes, PhD.

