Chapter 6

Maps

Revised: March 7, 2013
Introduction

- Map reading is required for crash analyses
- Used to identify coinciding routes, local road names, structures, affected intersections and other features, and any potential safety issues
- Used to identify locations on volume (AADT) maps
- Map reading is key to KNOWING YOUR LOCATION!!!!
Scale - Means of determining distances

Types that can be found on maps:

1) Direct measurement (many electronic maps such as microstation, GIS, Google Maps, etc. have a measuring tool)

2) Distance values at intervals between intersections – these are generally on NCDOT county maps and indicate distances between state-maintained roads (I, US, NC, or SR) and/or boundaries (state, county, or municipal)

   Example:

3) A calibrated line

   Example:

4) Proportion/Ratio (least preferred)

   Example: 1 inch = 1 mile
• **North Arrow** - A symbol which indicates the north direction on a map

• **Legend** - Explanatory caption describing map symbols

• **Inset** - Small map within a larger map (insets use a different scale than the rest of the map)
Terminology (cont.)

• **North Carolina Route Symbols** - Standard symbols used to identify different roadway types
  - Interstate
  - US Route
  - NC Route
  - Secondary Route

• **Feet/Miles Conversion**
  1 Mile = 5,280 feet (divide feet by 5,280 to get miles)

• **Notes in using North Carolina county maps**
  - Use the legend to identify any unknown features
  - Use the correct scale
  - Inset will labeled with a different scale
Secondary routes are generally confined to a specific part of each county…

…but those starting with “10” may be former primaries or major routes and can extend anywhere within a county and even cross county lines.

KEY TO COUNTY ROAD NUMBERS
ALSO NUMBERS 1001 - 1006, 2090
There is a bridge located on SR 1301.

SR 1175 is also known as Railroad Street.

SR 1122 is .30 mile long between US 64/NC 32 and SR 1126.

NC 32 and US 64 are coinciding routes.

SR 1175 is also known as Railroad Street.
NOTE – If no distances are indicated then rulers or dividers and the provided scale must be used to calculate distances.
Electronic Maps

• NCDOT county maps

• NCDOT bridge maps

• NCDOT Microstation maps

• North Carolina Truck Network (NCTN) map

• County GIS maps (tax/land records)

• Google Maps

• Other mapping software (Microsoft Streets and Trips, etc.)
NCDOT County Maps

These county maps identify routes that make up the North Carolina Department of Transportation State Highway System. These routes are maintained by the North Carolina Department of Transportation and consist of Primary and Secondary routes.

Select a county on the map or dropdown menu to view available maps.

Choose Your Map Type:

- County Maps
- Bridge Location Maps
- Federal Aid Route Maps
- Non Federal Aid Route Maps
- Microstation Map Files

Selected County: Johnston

County Map Images

TIFF Format

1 2 3 4 5

PDF Format

1 2 3 4 5

More County Maps:

Thumbnail Sheet Key

http://www.ncdot.org/travel/statemapping/default.html
NCDOT Bridge Maps

County Maps

These county maps identify routes that make up the North Carolina Department of Transportation State Highway System. These routes are maintained by the North Carolina Department of Transportation and consist of Primary and Secondary routes.

Select a county on the map or dropdown menu to view available maps.

Choose Your Map Type:
- County Maps
- Bridge Location Maps
- Federal Aid Route Maps
- Non Federal Aid Route Maps
- Microstation Map Files

More County Maps:

Selected County: Johnston

Bridge Location Maps

Bridge Locations

Bridge Locations with TIP Numbers

http://www.ncdot.org/travel/statemapping/default.html
NCDOT Microstation Maps

Microstation Files

About the Microstation Files

These Microstation-J files are provided by the State Road Maintenance Unit Mapping Section. They are available in meters or feet, depending on your application. The metric version of the designfiles should have all data available for all counties, including plot elements such as legends, sheet cells, titles, etc. The metric designfiles also show greater detail (on the 4X insets) that do not get converted to the designfiles stored as stateplane feet. We are providing this data with no guarantee regarding the accuracy or completeness of the data. You should examine the Leveling Chart to understand the structure of the County Maps.

Convert Metric to English

Copy the seed file (SRMU_MS_ENGLISH_seed.dgn) to your local drive. Download a copy of the metric lin file that you need to your local drive with the seed file. Open the seed file; reference the metric lin from your local drive. In the reference dialog box under file, merge into master. This will make the conversion to English.

Available Files

<table>
<thead>
<tr>
<th>County</th>
<th>English DGN file</th>
<th>Metric lin DGN file</th>
<th>Metric plt DGN file</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alamance</td>
<td>English DGN file</td>
<td>Metric lin DGN file</td>
<td>Metric plt DGN file</td>
</tr>
<tr>
<td>Alexander</td>
<td>English DGN file</td>
<td>Metric lin DGN file</td>
<td>Metric plt DGN file</td>
</tr>
</tbody>
</table>
NCDOT Microstation Maps (cont.)

Measuring Tool
## North Carolina Truck Restrictions

<table>
<thead>
<tr>
<th>Route</th>
<th>County</th>
<th>Type</th>
<th>Description</th>
<th>Ordinance</th>
<th>Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-26</td>
<td>HENDERSON</td>
<td>Truck Lane Restriction</td>
<td>Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined vehicle weight rating (GVWR) of greater than 26,000 pounds, shall be prohibited to use the leftmost lane between 0.40 mile east of US 25 (Exit 54) and 2.40 miles east of US 25 (Exit 54).</td>
<td>1062549</td>
<td>2/4/2011</td>
</tr>
<tr>
<td>I-26</td>
<td>MADISON</td>
<td>Truck Lane Restriction</td>
<td>Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined gross vehicle weight rating (GVWR) of greater than 26,000 pounds, shall be prohibited to use the leftmost lane between the Tennessee State line and 0.75 mile west of US 19-23 (Exit 9).</td>
<td>1059336</td>
<td>12/18/2008</td>
</tr>
<tr>
<td>I-26</td>
<td>POLK</td>
<td>Truck Lane Restriction</td>
<td>Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined gross vehicle weight rating (GVWR) of greater than 26,000 pounds, shall be prohibited to use the leftmost lane between 3.3 miles west of SR 1135 and 0.4 mile west of SR 1135.</td>
<td>1059342</td>
<td>12/18/2008</td>
</tr>
<tr>
<td>I-40</td>
<td>ALAMANCE</td>
<td>Truck Lane Restriction</td>
<td>Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined gross vehicle weight rating (GVWR) of greater than 26,000 pounds, shall be prohibited to use the leftmost two lanes between the Guilford County line and the Orange County line.</td>
<td>1059317</td>
<td>12/18/2008</td>
</tr>
<tr>
<td>I-40</td>
<td>BUNCOMBE</td>
<td>Truck Lane Restriction</td>
<td>Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined gross vehicle weight rating (GVWR) of greater than 26,000 pounds, shall be prohibited to use the leftmost lane on I-40 westbound between the Haywood County line and 0.3 mile west of SR 1200.</td>
<td>1059334</td>
<td>12/18/2008</td>
</tr>
</tbody>
</table>

December 28, 2012  
NCDOT - Traffic Safety Unit  
Page 1 of 25
County GIS maps can be located through an internet search.

Google search for: Harnett County GIS
Some county GIS maps also have a measuring tool.
Google Maps (cont.)

Weddington Road Exd, Concord, NC, United States
Address is approximate