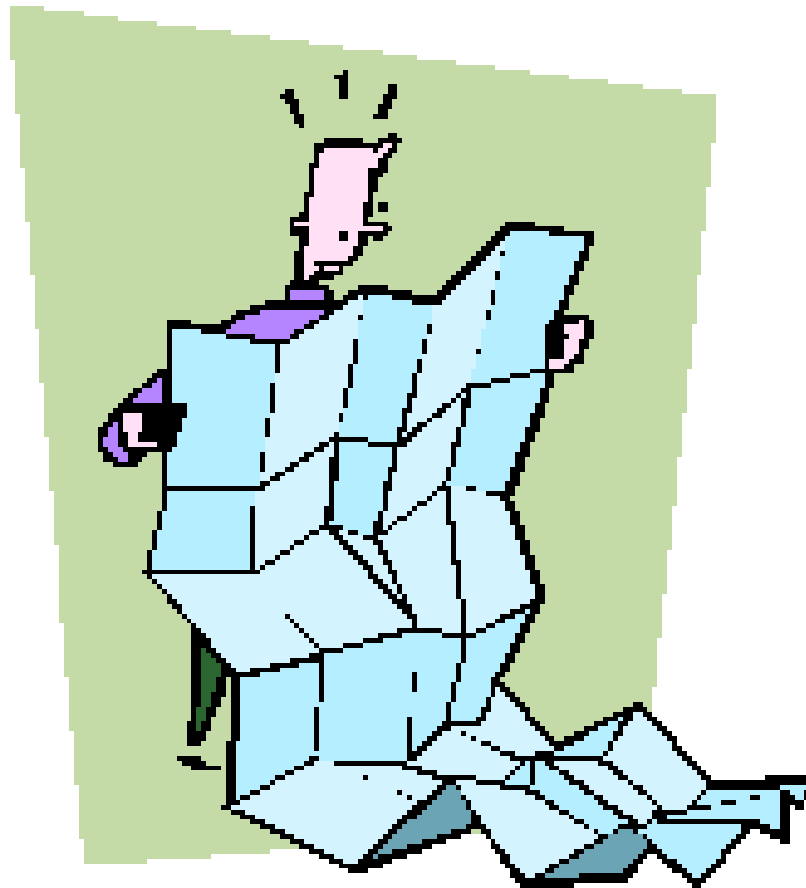


Chapter 6

Maps



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!!!!***

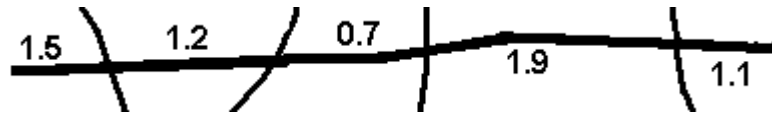
Terminology

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

Terminology (cont.)

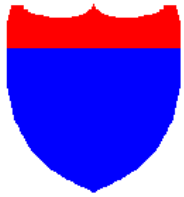
- **North Arrow** - A symbol which indicates the north direction on a map



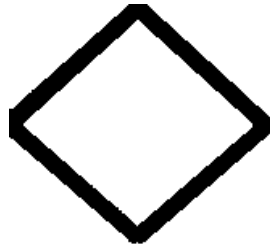
- **Legend** - Explanatory caption describing map symbols
- **Inset** - Small map within a larger map (insets use a different scale than the rest of the map)

Terminology (cont.)

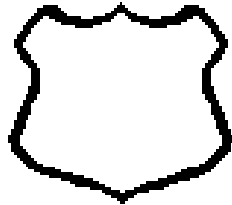
- **North Carolina Route Symbols** - Standard symbols used to identify different roadway types



Interstate



NC
Route



US
Route

1010

Secondary
Route

- **Feet/Miles Conversion**

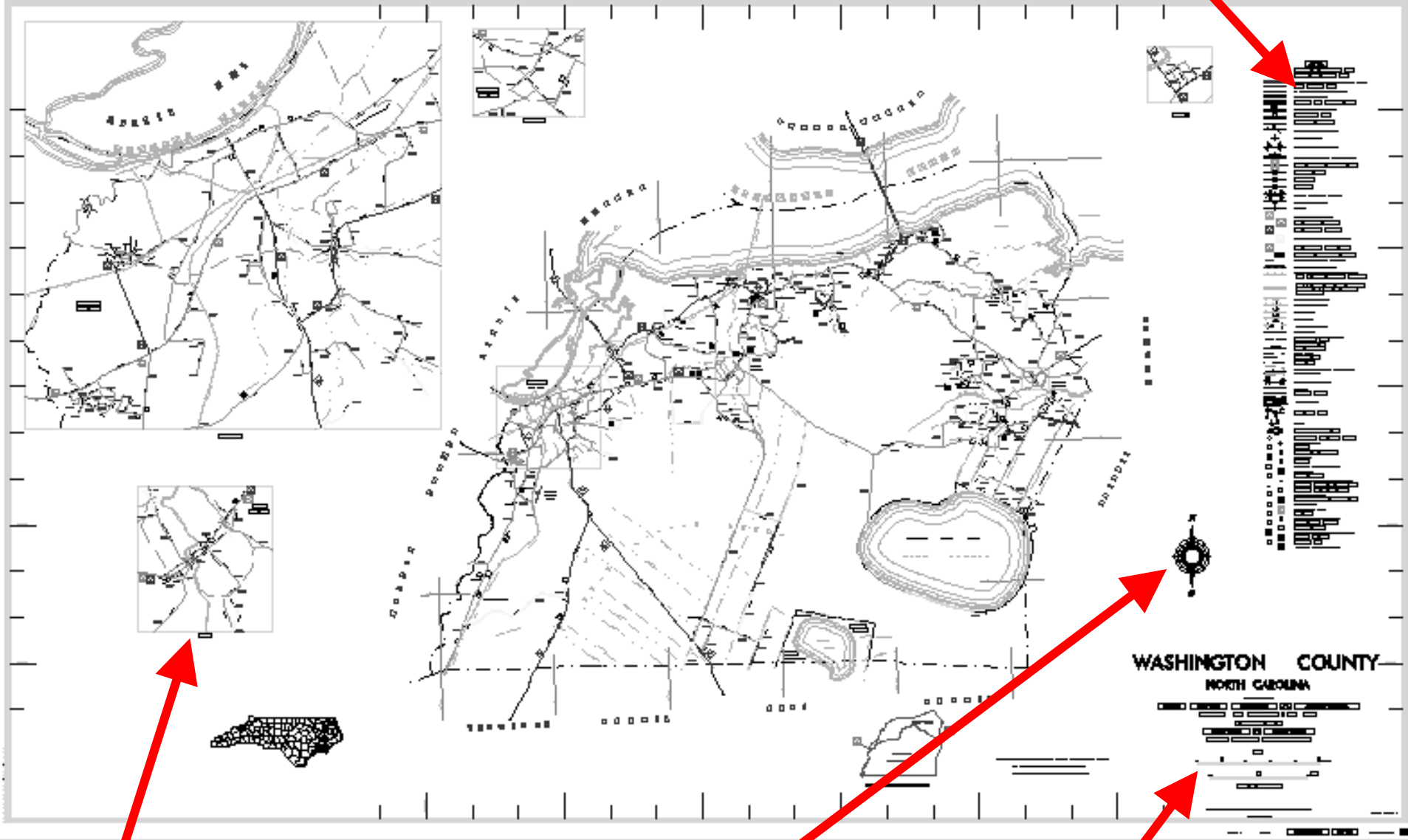
1 Mile = 5,280 feet (divide feet by 5,280 to get miles)

- **Notes in using North Carolina county maps**

- Use the legend to identify any unknown features
- Use the correct scale
- Inset will be labeled with a different scale

County Map Example

Legend



Inset

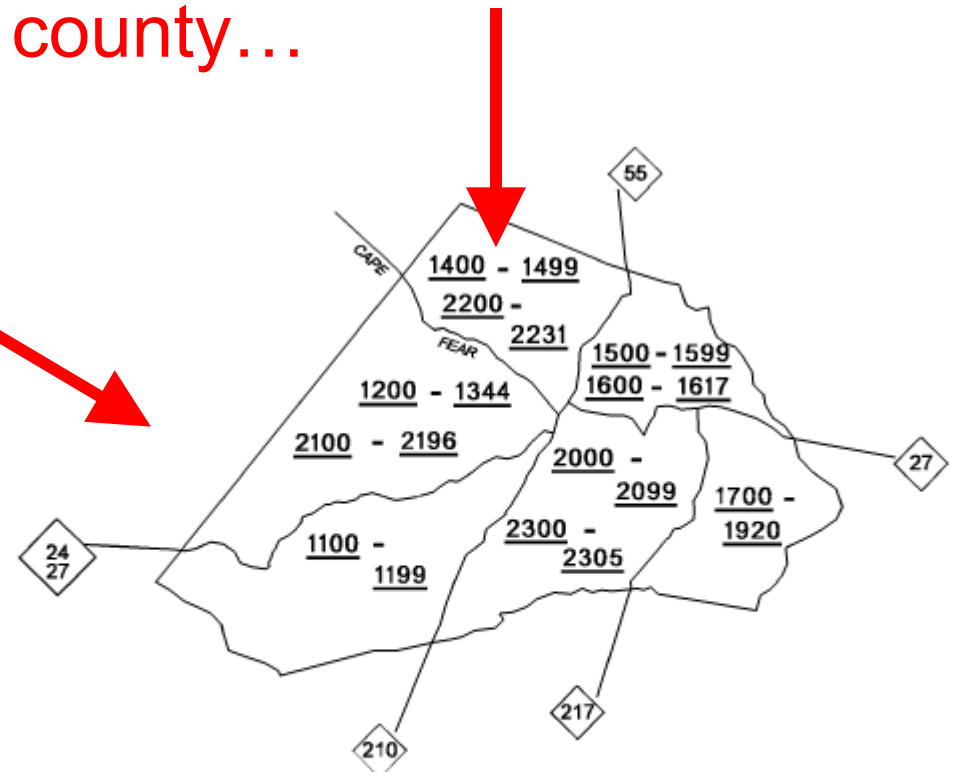
North Arrow

Scales

County Map Example (cont.)



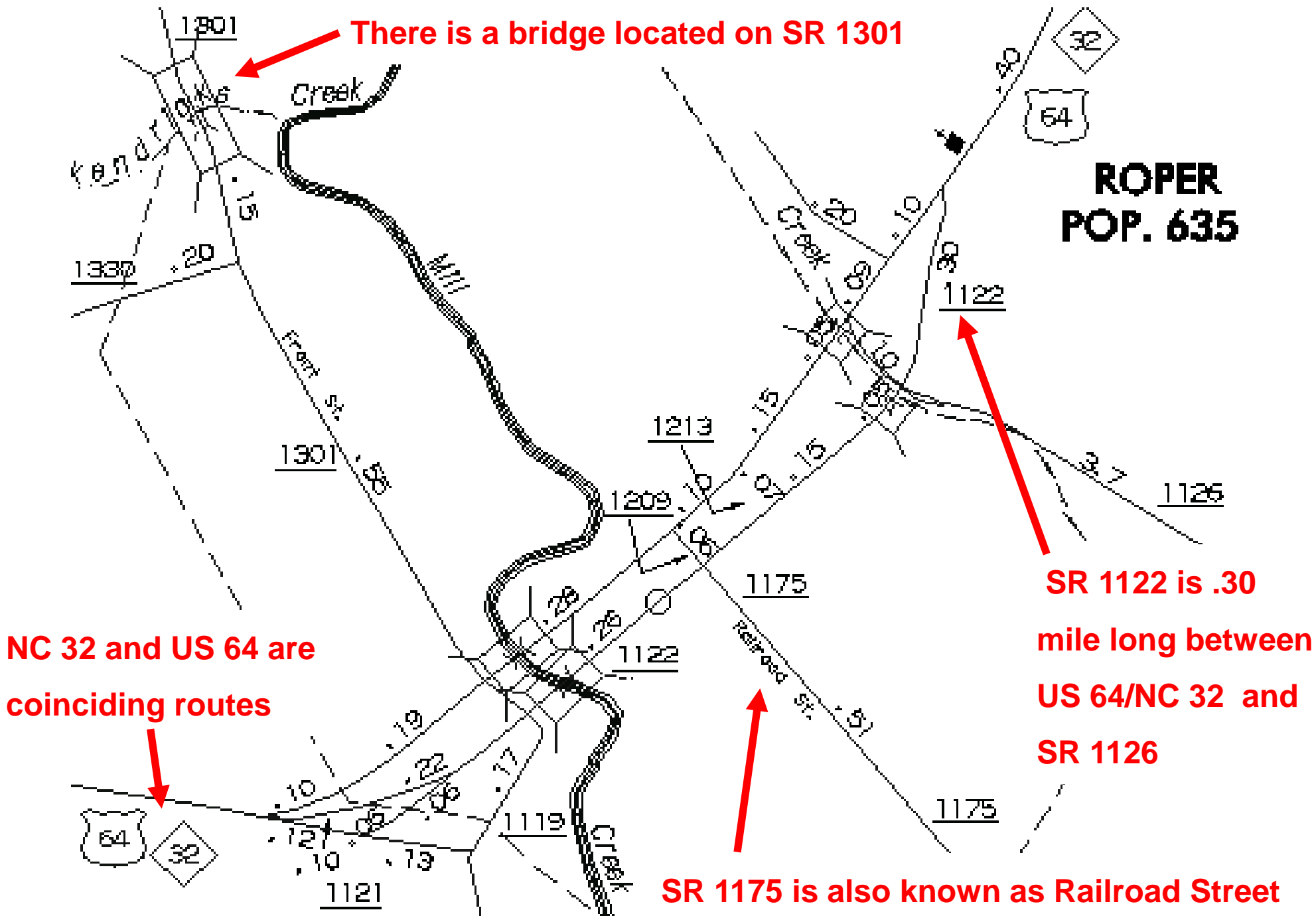
Secondary routes are generally confined to a specific part of each county...



...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

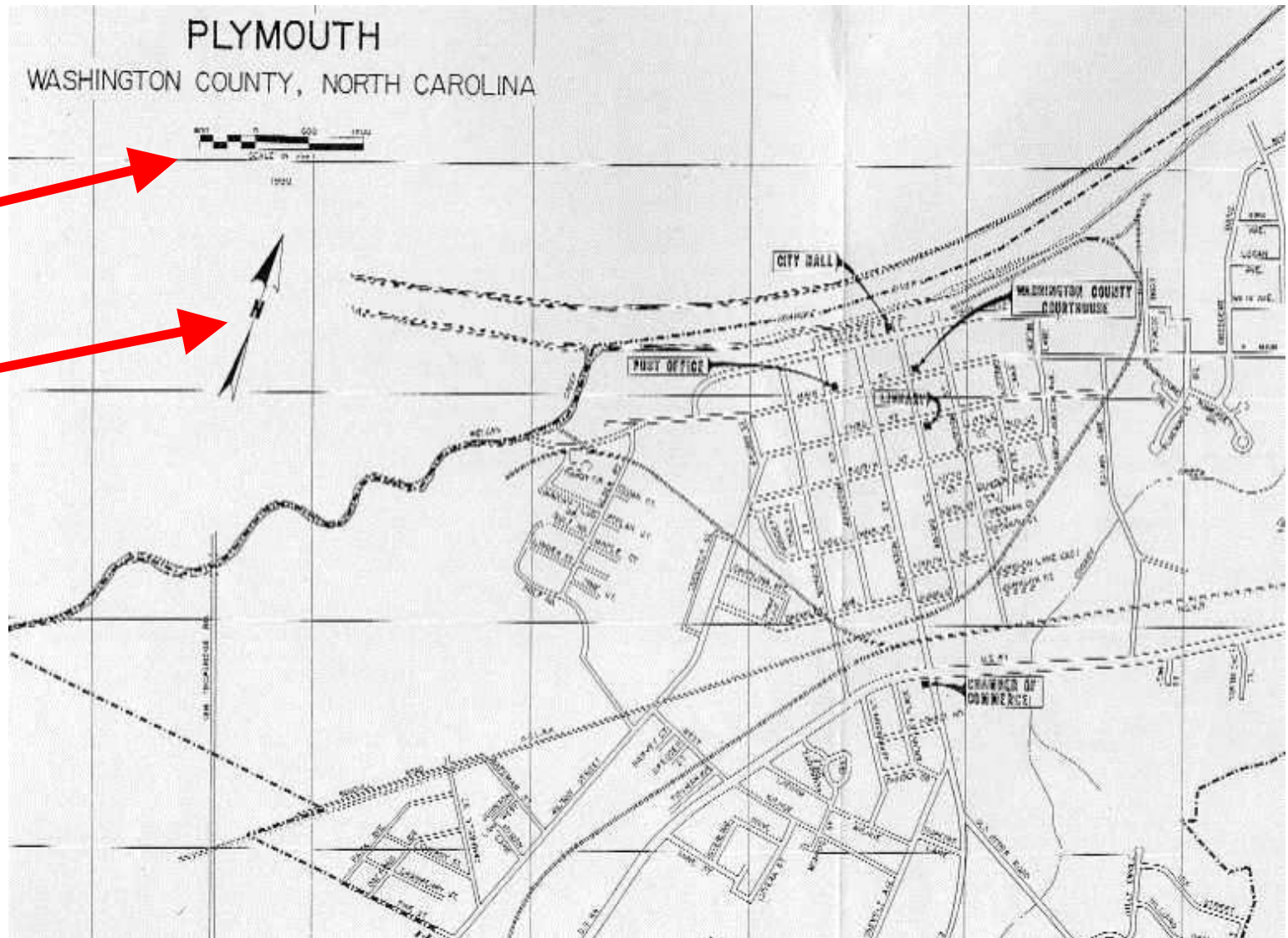
Inset Example



Paper Map Example

Scale

North
Arrow



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

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.



Select a County to View Available Maps

Johnston

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

County Map Images

TIFF Format



PDF Format



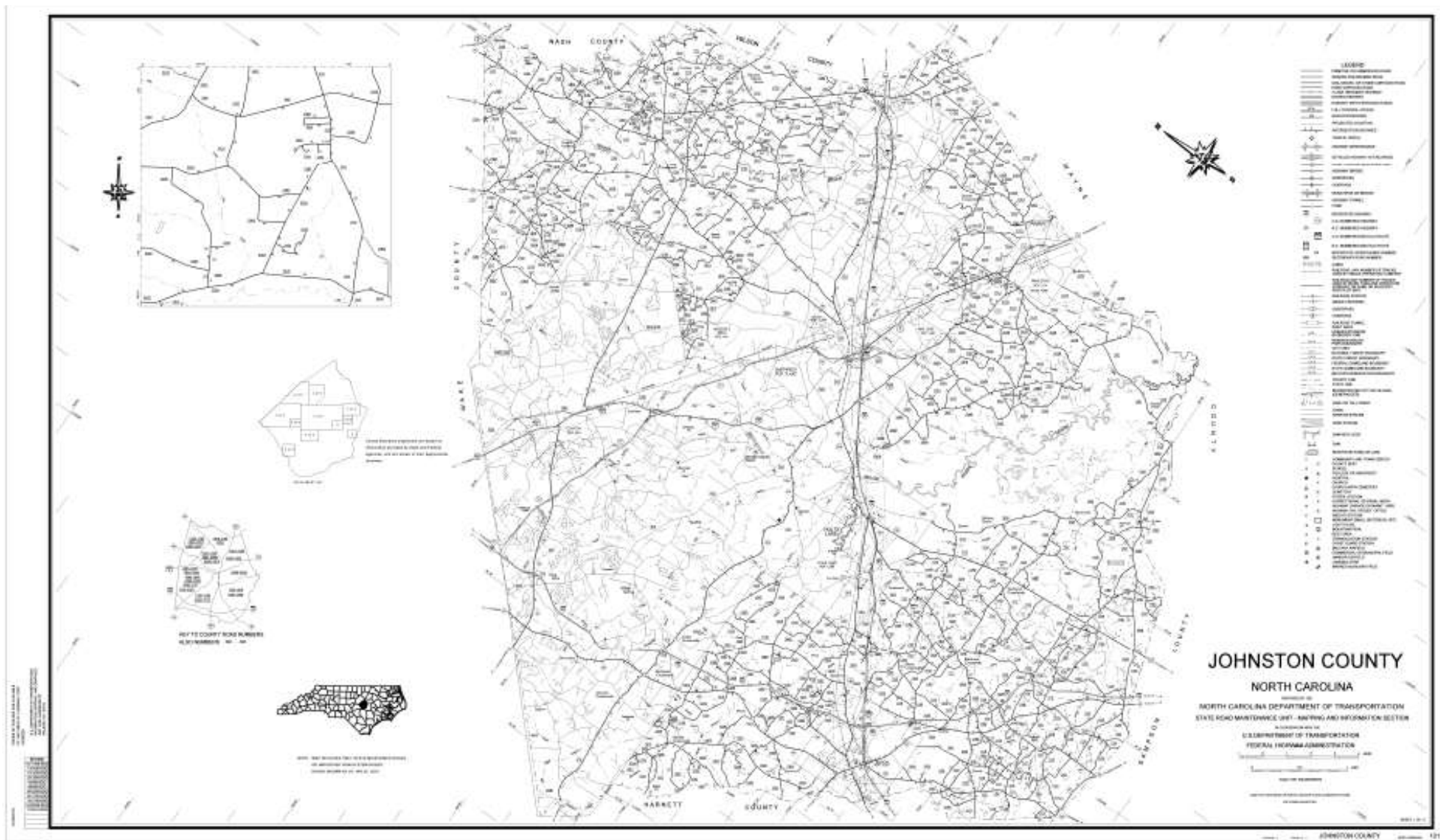
[Thumbnail Sheet Key](#)

[View Map Image](#)



<http://www.ncdot.org/travel/statemapping/default.html>

NCDOT County Maps (cont.)

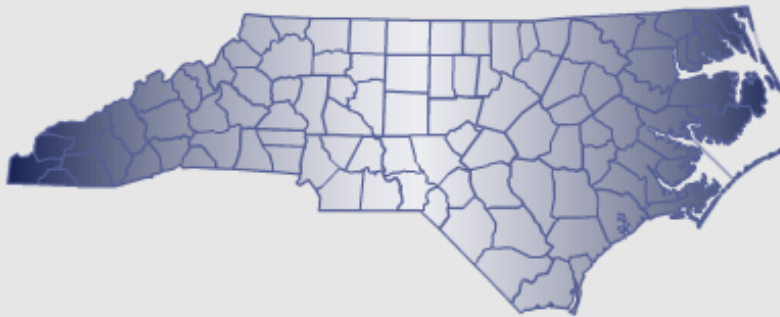


NCDOT Bridge Maps

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.



Select a County to View Available Maps

Johnston

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

1 2 3 4 5

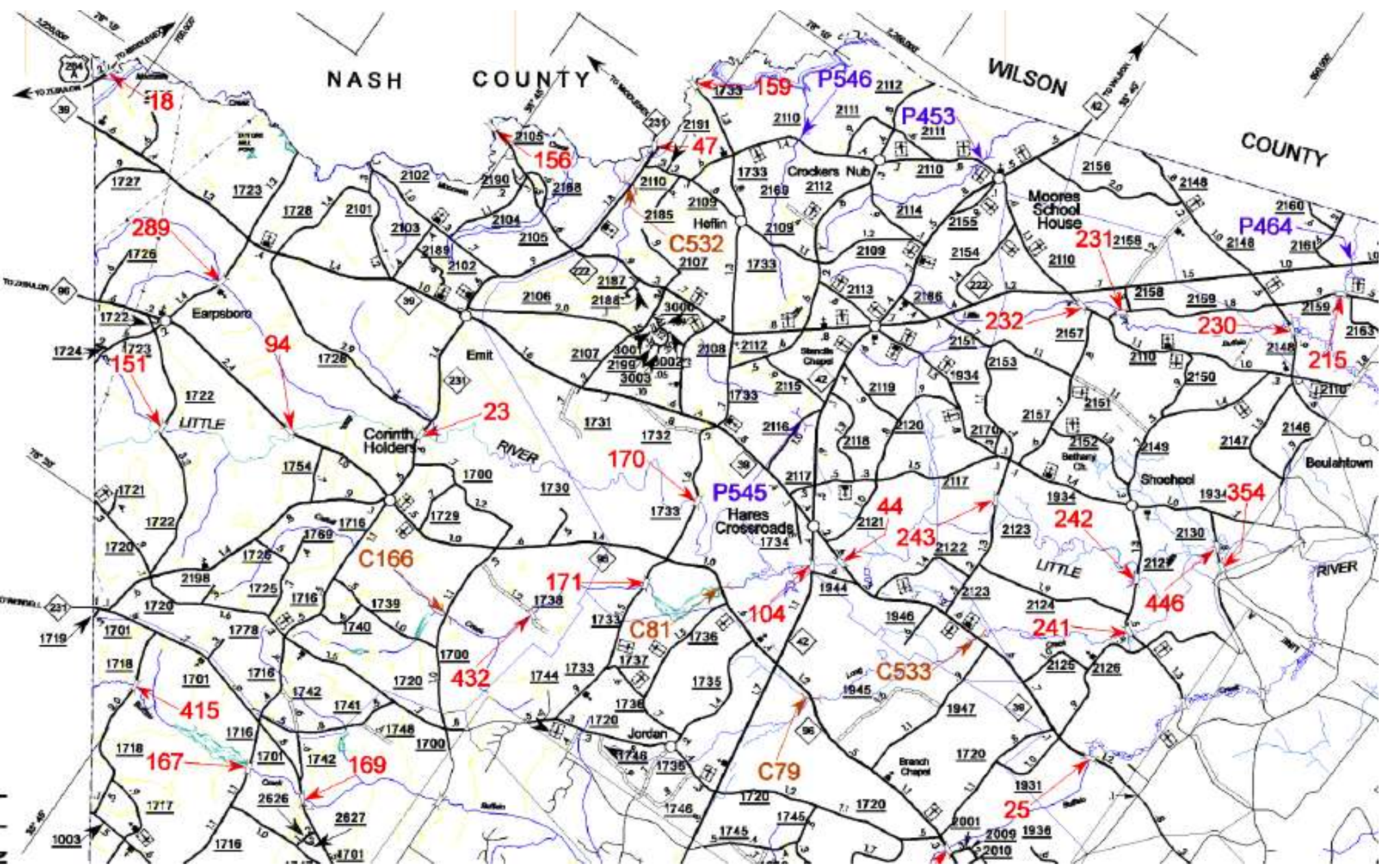
Bridge Locations with TIP Numbers

1 2 3 4

Bridge Map Grid Sheet

<http://www.ncdot.org/travel/statemapping/default.html>

NCDOT Bridge Maps (cont.)



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.

Leveling Resources

- [Linework Leveling Chart](#)
- [County Text File \(text\)](#)
- [Urban Leveling Symbols \(text\)](#)
- [Urban Leveling Chart \(text\)](#)
- [Excel SpreadSheet Download of Chart Data](#)

On this page

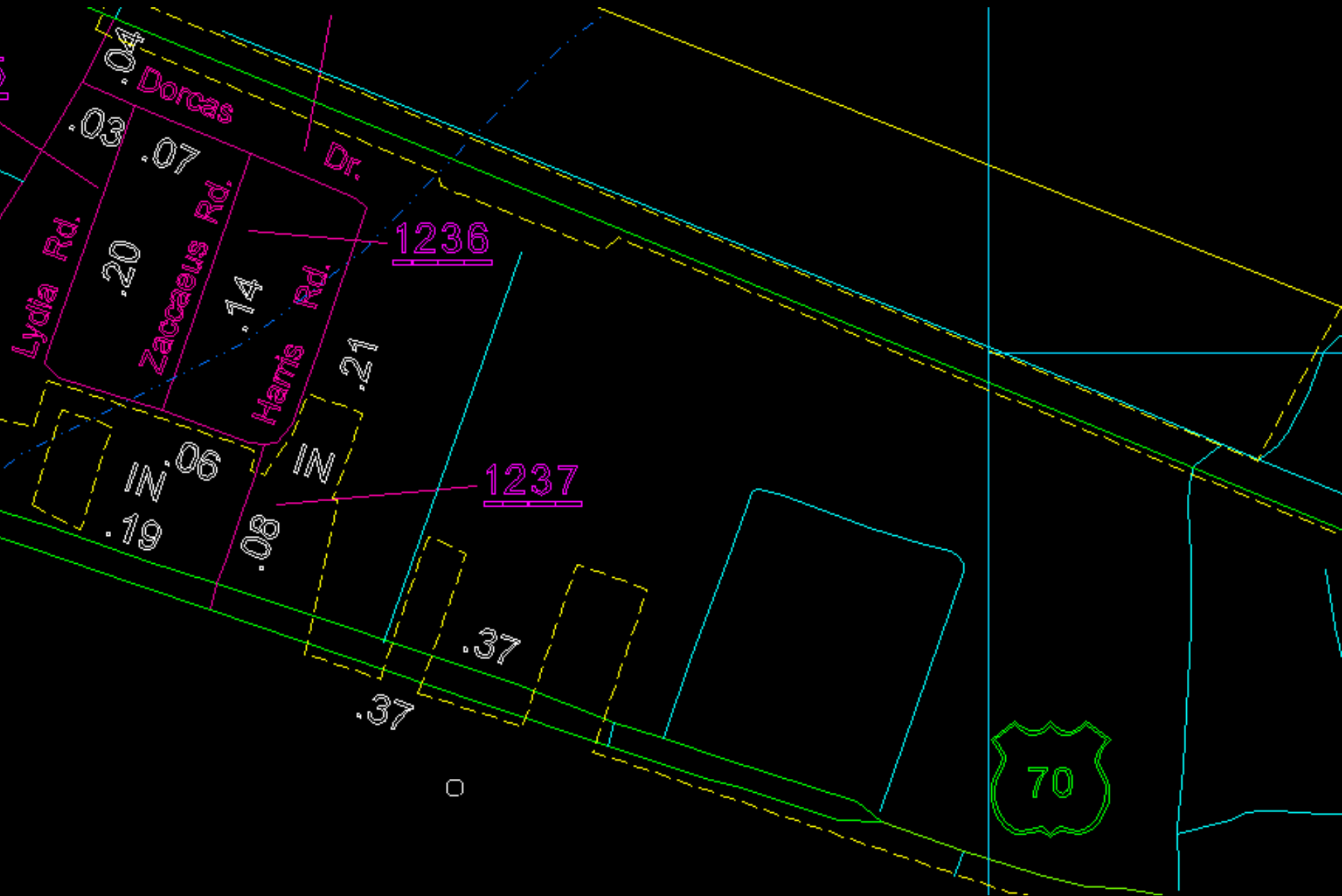
- [About the Microstation Files](#)
- [Available Files](#)

Available Files

County	English	Metric lin	Metric plt
Alamance	English DGN file	Metric lin DGN file	Metric plt DGN file
Alexander	English DGN file	Metric lin DGN file	Metric plt DGN file

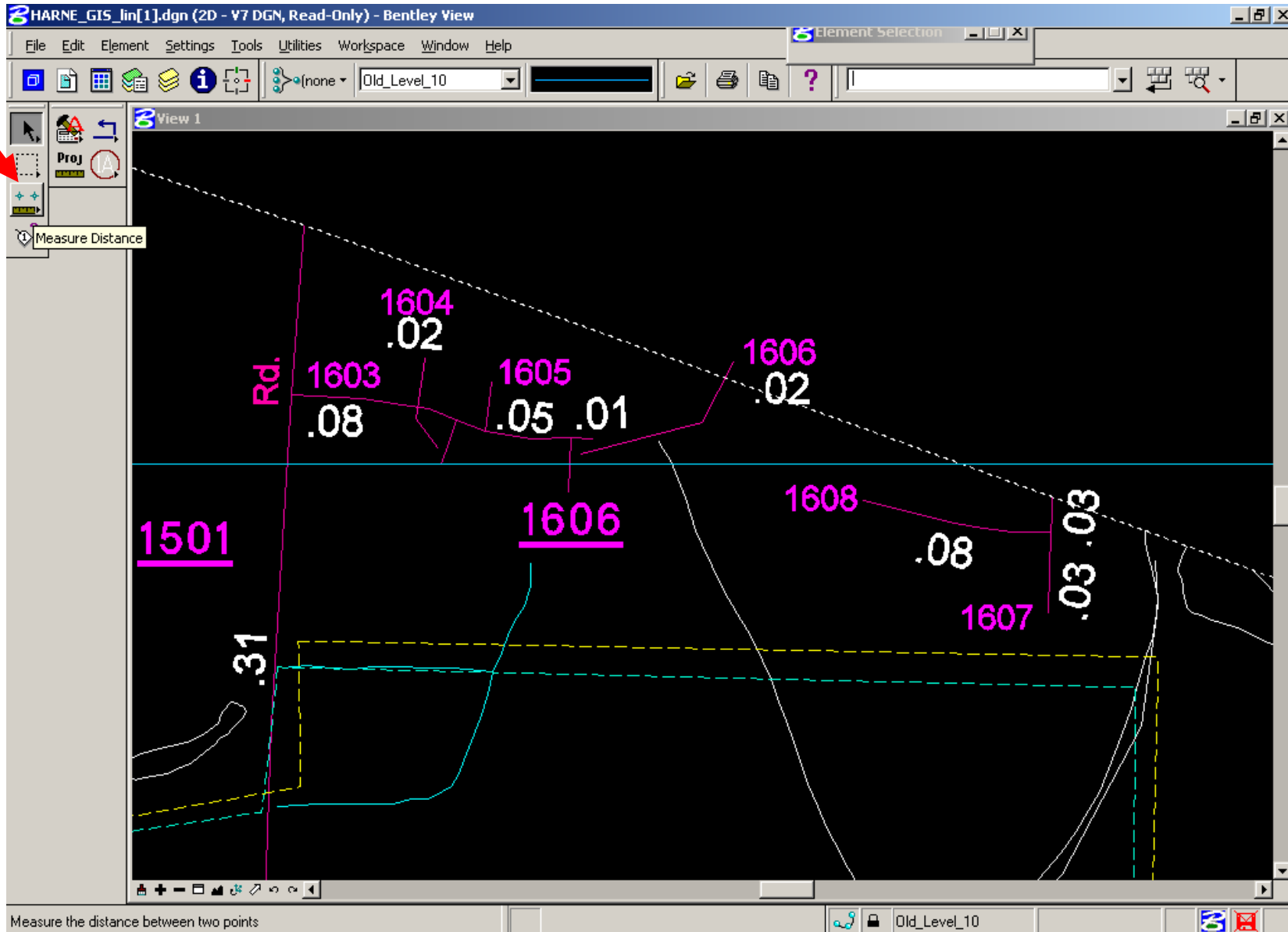
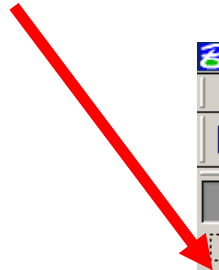
<http://www.ncdot.org/travel/statemapping/microstation/>

NCDOT Microstation Maps (cont.)

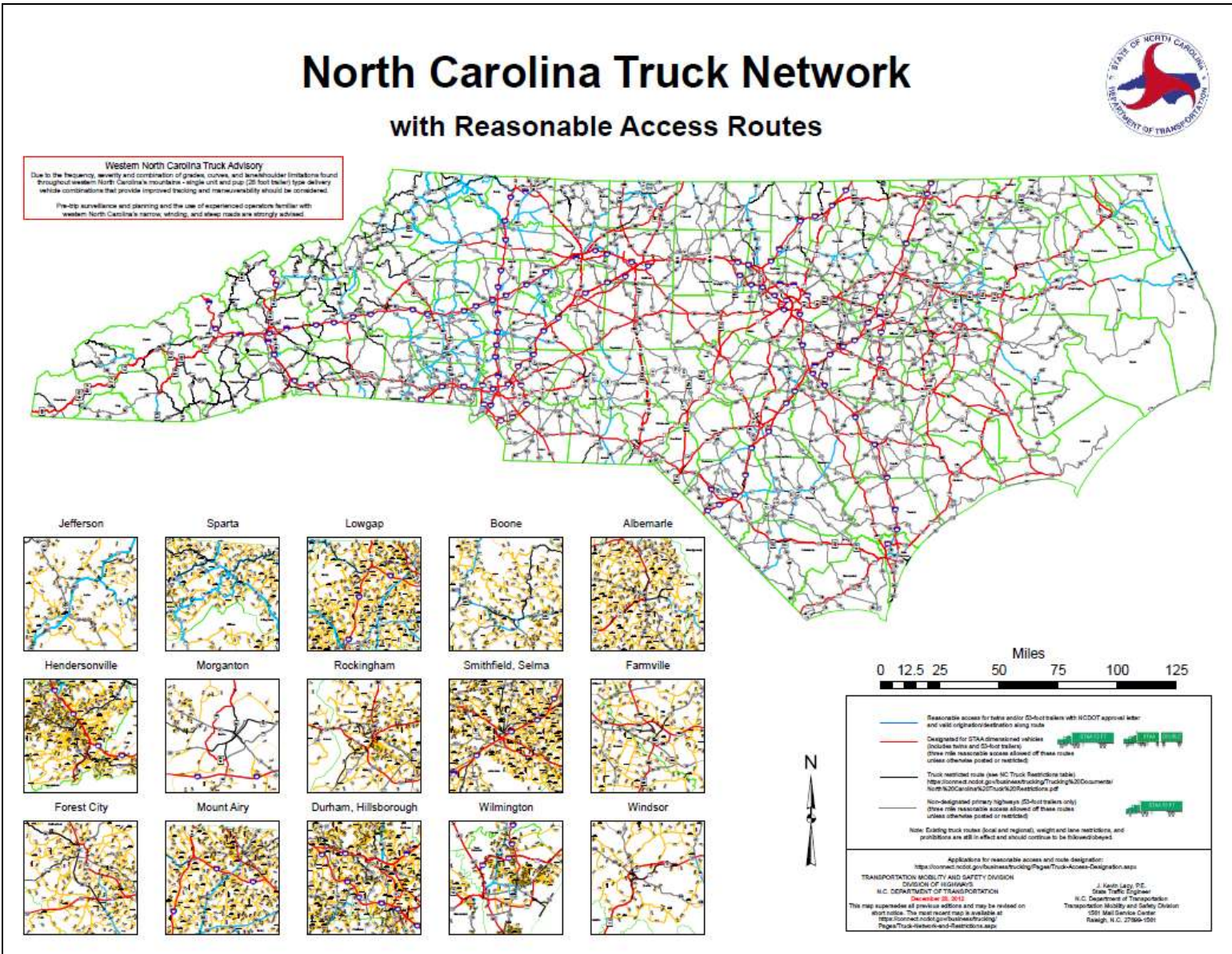


NCDOT Microstation Maps (cont.)

Measuring Tool



North Carolina Truck Network (NCTN) Map



NCTN Truck Restriction Table

North Carolina Truck Restrictions

Route	County	Type	Description	Ordinance	Effective
I 26	HENDERSON	Truck Lane Restriction	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).	1062549	2/4/2011
I 26	MADISON	Truck Lane Restriction	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).	1059336	12/18/2008
I 26	POLK	Truck Lane Restriction	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.	1059342	12/18/2008
I 40	ALAMANCE	Truck Lane Restriction	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.	1059317	12/18/2008
I 40	BUNCOMBE	Truck Lane Restriction	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.	1059334	12/18/2008

County GIS Maps

County GIS maps can be located through an internet search...

[Web](#) [Images](#) [Videos](#) [Maps](#) [News](#) [Shopping](#) [Gmail](#) [more](#) ▼

[iGoogle](#) | [Search settings](#) | [Sign in](#)



Harnett County GIS

[Advanced Search](#)
[Language Tools](#)

Google Search

I'm Feeling Lucky

 [Make Google my homepage](#)

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County GIS Maps (cont.)

HARNETT COUNTY GIS

Mapping Search

Welcome to the Harnett County GIS

Use the Map toolbar or the click the Map Tools link above to get started

DISCLAIMER: Maps and other data used in this site were developed from public records and data sources, including recorded deeds, plats and other public records. Users of this map are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information contained on the website. While efforts have been made to use the most current and accurate data, Harnett County, NC assumes no legal responsibilities for the information contained in this site.

Parcels last update: July 08, 2010

Send Comments or Support to: webgis@harnett.org

New Subdivision Search - turn on Subdivision layer

Site Information

Active Tool: Zoom In

Map Tool Options

The current cursor mode is set to 'Zoom In'. Clicking on the map directly will zoom in on the map centered at the point clicked. Dragging on the map will create a 'Zoom Window' which will be used to approximate the new extent of the map.

5 Mi
5 km

freance

Done Internet

Some county GIS maps also have a measuring tool

Google Maps

Google maps

Search Maps

Show search options

Find businesses, addresses and places of interest.

[Get Directions](#) [My Maps](#)

[Print](#) [Send](#) [Link](#)

[Try Maps in Google Chrome: a faster, safer browser.](#)

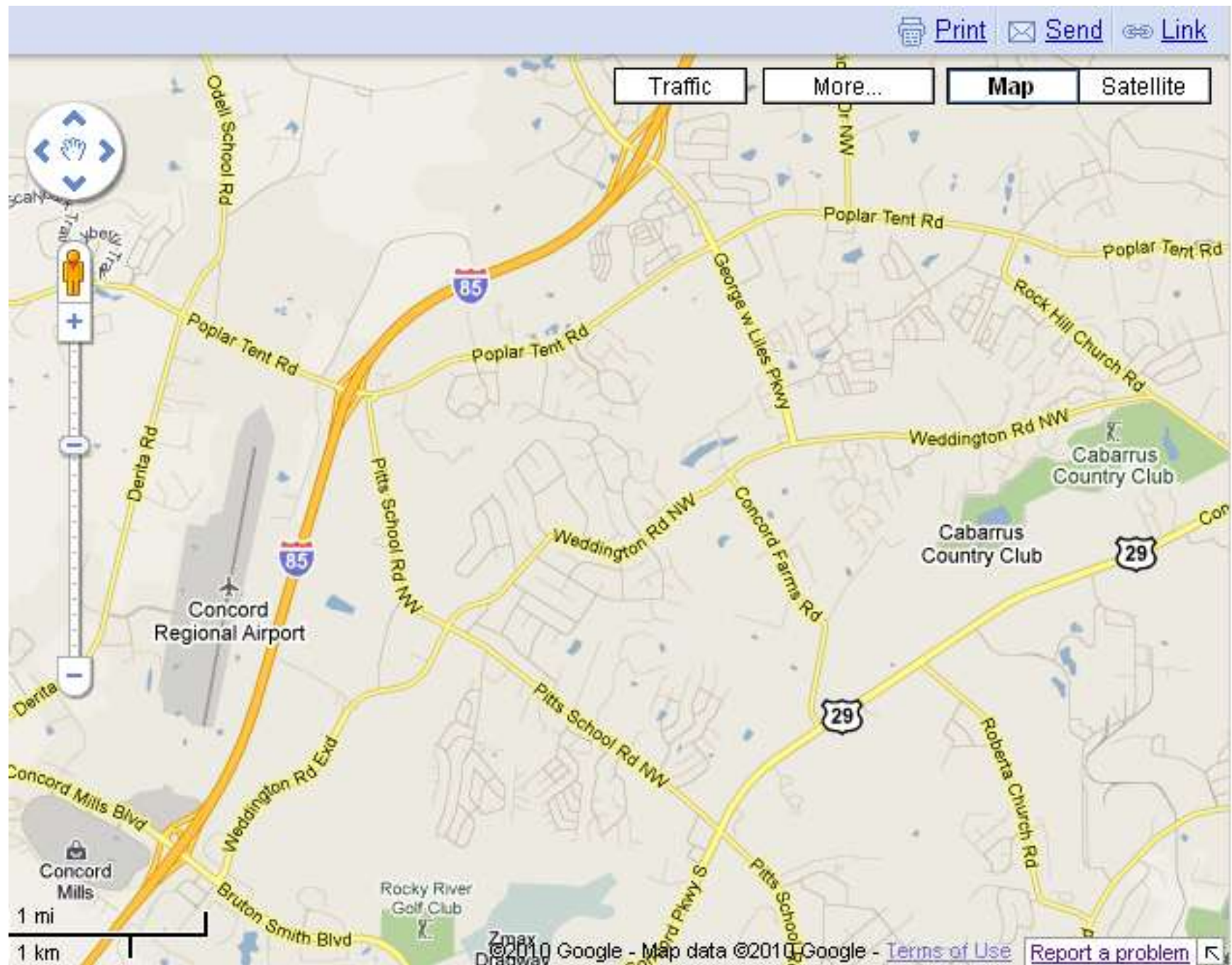
[Set default location](#)

Put [your business on Google Maps](#)



http://maps.google.com/maps?f=s&utm_campaign=en&utm_source=en-ha-na-us-bk-gm&utm_medium=ha&utm_term=google%20maps

Google Maps (cont.)



Google Maps (cont.)



TEAAS Resources

Connect NCDOT
BUSINESS PARTNER RESOURCES

Home Help Site Map

Doing Business Bidding & Letting Projects **Resources** Local Governments

CADD Environmental Geotechnical Hydraulics Materials & Tests Products Specifications State Roads Structures **Traffic Safety**

TEAAS Resources and Information

Mileposting, TEAAS Links

Resources > Traffic Safety > TEAAS Resources and Information

TEAAS Mileposting

Mileposting is the process of determining the location of features on a road, in miles, from the beginning of the road, and is a fundamental requirement of the Traffic Engineering and Accident Analysis System (TEAAS) necessary for crash studies and analyses, crash rates, and ordinance overlap checks. Mileposts are based on information in NCDOT's Linear Referencing System (LRS) maintained by the Geographic Information Systems (GIS) Unit, and are used to determine where crashes occurred, or where ordinances are located, in relation to roadway features. Features requiring mileposts are intersections and interchanges, at-grade railroad crossings, mile markers, structures (that carry the road), and political boundaries (municipal, county, and state lines).

Mileposting Links

- Exclusion List (LRS synchronization)
- Guidelines.pdf
- High Order Routes Sheet.zip
- List of County Information.zip

Employee Directory

Staff contacts for *Transportation Safety and Mobility*.

Local City Crash Reports

- Charlotte Crash Reports
- Greensboro Police Reports
- Raleigh Crash Reports
- Wilmington Police Reports
- Winston-Salem Crash Reports

Links and Information

- Bridge Document Management System (BridgeDocs)

Links and Information

Bridge Document Management System (BridgeDocs)

County GIS Maps

Crash Rates

DMV CrashWeb

DMV CrashWeb Access North Carolina Identity Management Service (NCID)

DMV CrashWeb NCID New Account Instructions

DMV User Management Application (UMM)

Historical Roadway Characteristics Data (MLI1)

Information, Mapping, & Graphics (IMG)

List of County Information

MANTIS Bug Tracking System

NCDOT GIS Data Layers

NCDOT GIS Unit

Project Breakdown Maps

Project Search

Project Server (by let date)

SR Number Lookup

TEAAS Website

TRACS Website

Volume (AADT) Maps