
Available Data for Model Development at NCDOT

North Carolina Model Users Group Meeting
October 30, 2012

Hong Qi Lu | NC DOT | 919-707-0959 | hlu@ncdot.gov



Model Data

- Roads
 - Road Characteristics Arcs
 - Linear Referencing System (LRS) Arcs
- Employment Data
 - InfoUSA
 - Dun & Bradstreet



Model Data (Cont.)

- Average Annual Daily Traffic (AADT)
 - AADT Stations
 - AADT Segments
- State Transportation Improvement Program (STIP)
- 2009 The National Household Travel Survey (NHTS) NC Add-on Data
- NAVTEQ Data



Model Data (Cont.)

- **Census Data**
 - Blocks, Block Groups and Tracts
 - 2009 The American Community Survey (ACS)
- **Other GIS Data**
 - County/Municipal/MPO/RPO boundaries
 - Water bodies, railroads, schools, colleges, and aerial photography



Roads – Road Characteristics Arcs

- From NCDOT GIS Unit
- Contains interstate, US, NC, secondary routes, ramps, and some non-state maintained and projected roads
- Updated quarterly
- Downloadable at:

http://dotw-xfer01.dot.state.nc.us/gisdot/DistDOTData/Rd_CHAR_MLPST_SHP.zip



Roads – Road Characteristics Arcs (Cont.)

- View data field descriptions at:

<http://dotw->

[xfer01.dot.state.nc.us/gisdot/DistDOTData/Road_Characteristics_Field_Descriptions.pdf](http://dotw-xfer01.dot.state.nc.us/gisdot/DistDOTData/Road_Characteristics_Field_Descriptions.pdf)

- Commonly used data fields:
 - Route Class (Interstate, US, NC, Secondary Route, etc.)
 - Route Number
 - Route Subcategory (Divided, Undivided, Centerline, etc.)



Roads - Road Characteristics Arcs (Cont.)

- Commonly used data fields (cont.):
 - Street (route) Name
 - Functional Classification
 - Median Type
 - Number of Lanes
 - Speed Limit
 - AADT



Roads - Road Characteristics Arcs (Cont.)

- Things to be aware of:
 - The data need to be verified



Roads - LRS Arcs

- From NCDOT GIS Unit
- Contains interstate, US, NC, secondary routes, ramps, and some non-state maintained and projected roads
- Updated quarterly
- Downloadable at:

[\[xfer01.dot.state.nc.us/gisdot/DistDOTData/LRS_ARCS_SHP.zip\]\(http://dotw-xfer01.dot.state.nc.us/gisdot/DistDOTData/LRS_ARCS_SHP.zip\)](http://dotw-</p></div><div data-bbox=)



Roads – Road Characteristics Arcs vs. LRS Arcs

- Road Characteristics Arcs
 - Used by model projects
 - Has more data
- LRS Arcs
 - Used for CTP maps, and as reference for model projects
 - Has longer segments



Employment Data - InfoUSA

- From InfoUSA
- Contains NC employment data
- Purchased Oct. 2010
- Limited access from NC DOT TPB
- Things to be aware of:
 - The data need to be verified
 - Some has wrong geo-coding



Employment Data - Dun & Bradstreet

- From NC Dept. Of Commerce
- Contains NC employment data
- Updated biannual, 2008-2012
- Limited access from NC DOT TPB
- Things to be aware of:
 - The data need to be verified
 - Some has wrong geo-coding



Employment Data – InfoUSA vs. Dun & Bradstreet

- Depends on areas



Average Annual Daily Traffic – Stations

- From NCDOT Traffic Survey Group
- 2002 – 2011 AADT, point layer
- Updated annually
- Downloadable at:

http://www.ncdot.gov/doh/preconstruct/tpb/traffic_survey/

- Data description document :

http://www.ncdot.gov/doh/preconstruct/tpb/traffic_survey/



Average Annual Daily Traffic – Segment

- From NCDOT Traffic Survey Group
- 2011 AADT, line layer
- Updated annually
- Downloadable at:

http://www.ncdot.gov/doh/preconstruct/tpb/traffic_survey/

- Data description document:

http://www.ncdot.gov/doh/preconstruct/tpb/traffic_survey/



State Transportation Improvement Program (STIP)

- From NCDOT
- TIP roads and bridges
- TIP2012_2020, TIP 2009 – 2015 and TIP_2004-2010
- TPB can provide the data



2009 NC NHTS Add-on Data

- From Federal Highway Administration
- NC add-on survey records
- Limited access



NAVTEQ Data

- From Caliper
- Including 6 layers: ntStreet, ntHighway, ntBuilding, ntRailroad, ntLandmarkArea, and ntLandmark
- Requires a NAVTEQ license



Census Data

- Census Blocks, BlockGroup and Tract
 - TransCAD layers from Caliper
- 2009 ACS
 - TransCAD layer from PB



Other GIS Data

- County/Municipal/MPO/RPO Boundaries
Water Bodies, Railroads, Schools,
Colleges, and Aerial Photography
 - Some are from NC One Map
 - Some are stored on TPB server
 - TPB can provide the data

