Geographic Data Content Standard for
Transportation Roads Data:
Version 1

April 13, 2005

Adopted by the Geographic Information Coordinating Council
May 11, 2005

State of North Carolina

Statewide Mapping Advisory Committee
Road Data Content Standards Group
Preface

As a part of a larger effort by the Geographic Coordinating Council and the Statewide mapping Advisory Committee, this Road Data Standard model was created by the Road Content Standards Group. Of the several areas of Transportation: aviation, rail, etc., this Standards Group has focused exclusively on roads.

The references used in creating this standard were the USGS standards for Digital Line Graphs, the National Data Spatial Infrastructure Framework: Transportation Identification Standard, the American National Standard for Information Technology - Geographic Information Framework - Data Content Standards for Transportation: Roads, Open Geospatial Consortium’s simple features standard and ESRI’s UNETRANS model.

This Road Data Standard models the road infrastructure as a component of the entire transportation system, consisting of public ways with perhaps a number of carriageways that may either be paved or unpaved. Core non-graphic attributes for the transportation content include the state route number (where applicable), address component information, maintenance provider, zip code, service class, and county.

This Road Data Standard is not a mandate; data providers are encouraged, but not required to participate. It is not an implementation timeline; cooperating agencies are free to participate on their own schedule. The standard is not a business process; it is a minimum set of attributes and geometry required for exchange. Thus, organizations are not being asked to change their business processes, but to present for exchange the data they do have in the format specified in this standard. It is understood that all organizations will not have all data described in this standard. For example, all organizations may not keep RoadPostDirectionSuffix. It is only required that the data they are able to provide conform to the standard. The standard is also not a software application. In time, there will be many applications developed to support this standard, making it as simple as practical to maintain.

This Road Data Standard will serve as a template to promote the merger of road centerline and corresponding attribute data in North Carolina from various levels of government data sources and data providers. The design of the standard will accentuate the strengths of the different data sets and promote data provider participation in further data refinements for mutual benefit. Because different data agencies have independent functions and focuses, their data varies in schema, accuracy levels and content. The standard allows agencies to share common data in an expected/uniform method.
The Road Content Standards Group consists of the Statewide Mapping Advisory Committee Roads subcommittee members and contributors. The Group members are:

- Forrest Robson - DOT GIS
- Sean McGuire - Division of Coastal Mgmt.
- Rob Cushman - City of Durham
- Dan Madding - State Property Office
- Janet Lowe - Buncombe Co.
- Tim Johnson - CGIA
- L. C. Smith - DOT GIS
- John Farley - DOT GIS (partial)
- Jamie Kearney - DOT GIS (partial)
- Melissa Lewis - DOT GIS (partial)
- Edward Cherry - DOT GIS (partial)
- Greg Jones - DOT GIS (partial)
Road Data Standard

Section 1: Introduction

The Transportation Contents Standards Group has formulated a Road Data Standard that it believes will fulfill the objectives of NCOneMap with regards to the transportation framework layer.

The Road Data Standard is a minimum set of attributes and geometry description for road features used for publication and distribution of transportation information by road information producers and maintainers. This standard is intended to provide sufficient information to support integrating basic transportation information across jurisdictional boundaries, answering fundamental questions for business processes dependent upon transportation, and serve as a basis for other functionality within GIS applications (e.g. routing, geocoding).

This Road Data Standard encompasses a definition of OGC simple features and associated attributes that describe the complete network of public and private roads cleared and maintained for the passage of motor vehicles. Core non-graphic attributes for the transportation content include the state route number (where applicable), address component information, maintenance provider, zip code, service class, and county.

It is hoped and encouraged that local jurisdictions be able to provide data conforming to this Road Data Standard, and that some of the detailed road attributes (maintained by the NCDOT-GIS Branch or private firms) can be integrated into the data as needed. City, county and state agency stakeholders jointly determined attributes in this standard.

Section 2: Definition

The Road Data Standard models the road infrastructure as a component of the entire transportation system, consisting of public ways with perhaps a number of divided roadways that may either be paved or unpaved.
Section 3: General Data Requirements

Metadata Standards

Metadata is required for all geographical data produced. The metadata is as determined by the FGDC's Content Standard for Digital Geospatial Metadata. A description and example of metadata items are specified in Addendum 1.

Attribute Data

All required non-graphic attributes for the information are identified in Section 5 of this specification. Shorter Suggested Attribute headers are included in Addendum 2.

Simple Geometry - Centerline Feature Type

In order to maintain a consistent geographic database, the geometry requirements of this Road Data Standard are to provide shape and geolocation of a feature, e.g. centerlines. Vector lines constructed from a set of ordered co-ordinates shall be used to represent centerlines. Address ranges, if available, shall be organized along the linear feature in a manner that will support address matching. The address ranges shall be stored within the centerline non-graphic attribute table of the dataset. (See Section 5: Non-Graphic Attributes) Line features shall represent the visual centerline using a minimum number of shaping entities (vertices) without degradation of horizontal accuracy. Centerlines shall be oriented with roads pointing in the cardinal direction, from south to north and west to east or based on the ascending direction of the linear measurement system such as address ranges and milepost values when available. For example; the direction of a unique continuous routes/road center line segments shall not change direction from beginning to end. That is, if a route starts in a north direction the orientation of all segments of that route will be recorded in a north direction. The same goes for addresses, if a route’s address range starts at 1000 the route can not have a 900 address following the direction of the route’s orientation.

Section 4: Digital Graphic Construction

The general construction requirements for the Road Data Standard components are outlined in the following subsections.

Digital Construction

Road features in the physical or real world consist of tangible objects such as roads, bridges, and intersections. At a minimum, representations of physical objects require enough information to enable someone to locate and recognize them in the real world. This Standard supports the unambiguous identification of real world features by requiring
descriptive and qualitative positional information about each feature, and by allowing its augmentation with other information when users make it available.

Planar coordinates define the relative locations and shapes of cartographic objects on a two-dimensional Plane. These coordinates are typically transformations of real world geographic coordinates. Each feature following this Road Data Standard will be defined within a coordinate system identified in "Coordinate System" below.

Cartographic objects are used to represent real world features on a map. These real world objects are displayed as points, lines, or polygons. Transportation networks implement these concepts utilizing points (or nodes) and strings of line segments (or links) as illustrated below:

These transportation objects: links and nodes, together form networks and are inherently topological. Transportation networks provide information on the feasible paths between specified locations. Once a network has been created, other transportation application layers can be built upon it, including identified routes, linear referencing methods, and linear referenced points and linear events. All of these application layers can ultimately be mapped back to the transportation reference points and segments through specific network links and nodes on which these application layers were built.
Spatial Continuity

All data utilizing this standard should be spatially continuous. This requirement for spatial continuity means that the structure of the database will not inhibit the execution of software functions such as network trace across map or file boundaries or other artificial discontinuities such as model edges.

Coordinate System

The Coordinate System required for all geographical data produced using this standard should be as determined for the NCOOneMap for all data frameworks.
## Section 5: Non-Graphic Attributes

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
<th>Data Type</th>
<th>Length</th>
<th>Values limited to ‘Null’ or ‘unknown’ allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>StateRouteNumber</td>
<td>A descriptive number to be used as a label or road sign.</td>
<td>N</td>
<td>5</td>
<td>&gt; 1,000 and &lt; 50,000</td>
</tr>
<tr>
<td>RoadNameBody (formerly RoadName)</td>
<td>The officially designated name as determined by the street data steward.</td>
<td>A/N</td>
<td>50</td>
<td>No domain limit</td>
</tr>
<tr>
<td>RoadPrefix</td>
<td>The geographic direction</td>
<td>A</td>
<td>2</td>
<td>N, S, E, W, NE, NW, SE, SW</td>
</tr>
<tr>
<td>RoadType (formerly RoadSuffix)</td>
<td>The street type as referenced by the National Emergency Number Association (e.g., “RD,” “ST”)</td>
<td>A</td>
<td>4</td>
<td><a href="http://www.nena9-1-1.org/9-1-1TechStandards/nena_standards.htm">http://www.nena9-1-1.org/9-1-1TechStandards/nena_standards.htm</a> - doc 02-010 - USPS Publication 28</td>
</tr>
<tr>
<td>RoadPostDirectionSuffix</td>
<td>Additional information, typically geographic direction, that appears at the end of the road name.</td>
<td>A/N</td>
<td>2</td>
<td>No domain limit</td>
</tr>
<tr>
<td>MaintenanceProvider</td>
<td>The entity responsible for the upkeep of the road.</td>
<td>N</td>
<td>1</td>
<td>1=State, 2=Municipality, 3=Private, 4=Federal, 5=Other (e.g., paper roads, county-maintained)</td>
</tr>
<tr>
<td>LeftLowAddress (formerly LeftFromAddress)</td>
<td>The lowest house number on the left side of the street when facing in the direction of ascending house numbers. It is suggested that the addresses be coded based on the structures that actually exist on that road segment, rather than fixed ranges (e.g., block number ranges). Numbers should be coded as numerals, not spelled out.</td>
<td>N</td>
<td>8</td>
<td>&gt; 0</td>
</tr>
<tr>
<td>LeftHighAddress (formerly LeftToAddress)</td>
<td>The highest house number on the left side of the street when facing in the direction of ascending house numbers. It is suggested that the addresses be coded based on the structures that actually exist on that road segment, rather than fixed ranges (e.g., block number ranges). Numbers should be coded as numerals, not spelled out.</td>
<td>N</td>
<td>8</td>
<td>&gt; 0</td>
</tr>
</tbody>
</table>

*Alpha/Numeric
### Section 5: Non-Graphic Attributes continued.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
<th>Data Type*</th>
<th>Length</th>
<th>Values limited to</th>
</tr>
</thead>
<tbody>
<tr>
<td>RightLowAddress (formerly RightFromAddress)</td>
<td>The lowest house number on the right side of the street when facing in the direction of ascending house numbers. It is suggested that the addresses be coded based on the structures that actually exist on that road segment, rather than fixed ranges (e.g., block number ranges). Numbers should be coded as numerals, not spelled out.</td>
<td>N</td>
<td>8</td>
<td>&gt; 0</td>
</tr>
<tr>
<td>RightHighAddress (formerly RightToAddress)</td>
<td>The highest house number on the right side of the street when facing in the direction of ascending house numbers. It is suggested that the addresses be coded based on the structures that actually exist on that road segment, rather than fixed ranges (e.g., block number ranges). Numbers should be coded as numerals, not spelled out.</td>
<td>N</td>
<td>8</td>
<td>&gt; 0</td>
</tr>
<tr>
<td>LeftZip</td>
<td>The five-digit zip code on the left side of the street when facing in the direction of ascending house numbers.</td>
<td>N</td>
<td>5</td>
<td>Valid NC zip</td>
</tr>
<tr>
<td>RightZip</td>
<td>The five-digit zip code on the right side of the street when facing in the direction of ascending house numbers.</td>
<td>N</td>
<td>5</td>
<td>Valid NC zip</td>
</tr>
<tr>
<td>LeftZipPlusFour</td>
<td>The additional four digits of the zip code on the left side of the street when facing in the direction of ascending house numbers.</td>
<td>N</td>
<td>4</td>
<td>Valid NC zip + four</td>
</tr>
<tr>
<td>RightZipPlusFour</td>
<td>The additional four digits of the zip code on the left side of the street when facing in the direction of ascending house numbers.</td>
<td>N</td>
<td>4</td>
<td>Valid NC zip + four</td>
</tr>
</tbody>
</table>

*Alpha/Numeric
### Section 5: Non-Graphic Attributes continued.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
<th>Data Type*</th>
<th>Length</th>
<th>Values limited to ‘Null’ or ‘unknown’ allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ServiceClass</td>
<td>The grouping of roads into classes or systems according to the character of service they are intended to provide.</td>
<td>N</td>
<td>1</td>
<td>1=Interstate (e.g., I40) 2=US Highways (e.g., US1) 3=NC Highways (e.g., NC50) 4=Secondary Roads (e.g., SR1001) 5=Local Roads (e.g., Main St) 6=Other (Trail?)</td>
</tr>
<tr>
<td>CountyName</td>
<td>County name.</td>
<td>A/N</td>
<td>13</td>
<td>No domain limit</td>
</tr>
<tr>
<td>RoadNameBodyAlias</td>
<td>A name by which the road is commonly known that is not the officially designated name as determined by the street data steward.</td>
<td>A/N</td>
<td>50</td>
<td>No domain limit</td>
</tr>
<tr>
<td>RoadPrefixAlias</td>
<td>The geographic direction of the road alias</td>
<td>A</td>
<td>2</td>
<td>N, S, E, W, NE, NW, SE, SW</td>
</tr>
<tr>
<td>RoadTypeAlias</td>
<td>The street type of the road alias as referenced by the National Emergency Number Association (e.g., “RD,” “ST”)</td>
<td>A</td>
<td>4</td>
<td><a href="http://www.nena9-1-1.org/9-1-1TechStandards/nena_recommended_standards.htm">http://www.nena9-1-1.org/9-1-1TechStandards/nena_recommended_standards.htm</a></td>
</tr>
<tr>
<td>RoadPostDirectionSuffixAlias</td>
<td>Additional information, typically geographic direction, that appears at the end of the alias road name.</td>
<td>A/N</td>
<td>2</td>
<td>No domain limit</td>
</tr>
<tr>
<td>MapTextRoadName</td>
<td>A concatenation of RoadPrefix, RoadNameBody, RoadType, and RoadPostDirectionSuffix with spaces separating the items. This should be formatted in mixed-case, appropriate for map labeling.</td>
<td>A/N</td>
<td>75</td>
<td>No domain limit</td>
</tr>
<tr>
<td>Date</td>
<td>Last date that change occurred to this record (example would be road name change, or address range change).</td>
<td>A/N</td>
<td>8</td>
<td>Valid dates.</td>
</tr>
</tbody>
</table>

*Alpha/Numeric*
Addendum 1: Minimal Recommended Metadata

Metadata for this Road Data Standard is required for all geographical data produced. It is the same as required by the FGDC's Content Standard for Digital Geospatial Metadata:

Content Standard for Digital Geospatial Metadata (CSDGM):
http://www.fgdc.gov/metadata/contstan.html

"The objectives of the (CSDGM) standard are to provide a common set of terminology and definitions for the documentation of digital geospatial data. The standard establishes the names of data elements and compound elements (groups of data elements) to be used for these purposes, the definitions of these compound elements and data elements, and information about the values that are to be provided for the data elements."

"The (CSDGM) standard was developed from the perspective of defining the information required by a prospective user to determine the availability of a set of geospatial data, to determine the fitness the set of geospatial data for an intended use, to determine the means of accessing the set of geospatial data, and to successfully transfer the set of geospatial data. As such, the standard establishes the names of data elements and compound elements to be used for these purposes, the definitions of these data elements and compound elements, and information about the values that are to be provided for the data elements. The standard does not specify the means by which this information is organized in a computer system or in a data transfer, nor the means by which this information is transmitted, communicated, or presented to the user."

The following is an example of metadata for roads that exist in a county provided by Stacey E. Kimmel of the NC Center for Geographic Information & Analysis.

US Interstates, US Highways, NC Highways, and Roads that exist in County A, North Carolina, 2004

Metadata also available as

Metadata:

Identification_Information
Data_Quality_Information
Spatial_Data_Organization_Information
Spatial_Reference_Information
Entity_and_Attribute_Information
Distribution_Information
Metadata_Reference_Information
Identification_Information:
Citation:
   Originator: County A GIS Department
   Publication_Date: 19810504
   Title: US Interstates, US Highways, NC Highways, and Roads that exist in County A, North Carolina, 2004
   Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
   Publication_Place: City A, North Carolina
   Publisher: County A GIS Department
   Online_Linkage: <http://www.countya.nc.org/gis.html>
   Online_Linkage: getmap request
Description:
   Abstract: A GIS data layer created by the County A GIS Department to display US Interstates, US Highways, NC Highways, and roads that exist in County A, North Carolina. The data was originally acquired through digitizing of cadastral maps with scales of 1:1200, 1:2400, and 1:4800. The County A GIS Department and County A Planning Department maintain and update the data as needed.
   Purpose: Data was created to assist in locating roads and addresses, E911 dispatch, and network and routing applications.
   Supplemental_Information: Many of the entries in this sample metadata record were based upon actual information found within Henderson County's and Johnston County's metadata records. Thanks to both North Carolina Counties for allowing their metadata records to be referenced for this sample.
Time_Period_of_Content:
   Time_Period_Information:
   Single_Date/Time:
      Calendar_Date: 20040320
   Currentness_Reference: publication date
Status:
   Progress: Complete
   Maintenance_and_Update_Frequency: Continually
Spatial_Domain:
   Bounding_Coordinates:
      West_Bounding_Coordinate: -78.7092199
      East_Bounding_Coordinate: -78.0649781
      North_Bounding_Coordinate: 35.8177421
      South_Bounding_Coordinate: 35.2544095
Keywords:
   Theme: Theme_Keyword_Thesaurus: None
   Theme_Keyword: Major Roads
   Theme_Keyword: Centerline
   Theme_Keyword: Roads
   Theme_Keyword: Streets
   Theme_Keyword: Interstate
   Theme_Keyword: Highway
   Theme_Keyword: Transportation
Theme:
   Theme_Keyword_Thesaurus: ISO 19115 Topic Category
Theme_Keyword: Transportation
Place:
  Place_Keyword_Thesaurus: None
  Place_Keyword: County A
  Place_Keyword: North Carolina
Access_Constraints: None
Use_Constraints:
  County A GIS Department shall not be held liable for any errors in this data. This includes errors of omission, commission, errors concerning the content of the data, and relative and positional accuracy of the data. This data cannot be constructed to be a legal document. Primary sources from which this data was compiled must be consulted for verification of information contained in this data. This data may not be resold.
Point_of_Contact:
  Contact_Information:
    Contact_Organization_Primary:
      Contact_Organization: County A GIS Department
    Contact_Position: GIS Coordinator
    Contact_Address:
      Address_Type: mailing and physical address
      Address: 123 Main St
      City: City A
      State_or_Province: North Carolina
      Postal_Code: 12345
      Country: USA
    Contact_Voice_Telephone: (987) 654-3210
    Contact_Facsimile_Telephone: (123) 456-7890
    Contact_Electronic_Mail_Address: giscoordinator@countya.nc.org
    Hours_of_Service: Monday - Friday 8:00am - 5:00pm
    Contact_Instructions: Email is preferred.
Native_Data_Set_Environment:
  Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 1; ESRI ArcCatalog 8.3.0.800
Cross_Reference:
  Citation_Information:
    Originator: County A Emergency Management
    Publication_Date: 19810504
    Title: Streets
    Edition: Version 3
    Geospatial_Data_Presentation_Form: vector digital data
    Publication_Information:
      Publication_Place: City A, North Carolina
      Publisher: County A Emergency Management

Data_Quality_Information:
  Attribute_Accuracy:
    Attribute_Accuracy_Report:
      Attribute data in this data set was converted from distance based addresses to real world addresses. It is known to contain some level of error especially as related to intersections.
  Logical_Consistency_Report:
    Software checks for topology consistency. Software ensures that there are no duplicate lines, overshoots, or undershoots.
  Completeness_Report:
    Data set is complete to our knowledge. If an omission is located, it is corrected by a County A GIS Department staff member. New streets are added
based on subdivision maps as are discoveries, found by other methods, that were not originally mapped.

**Positional Accuracy:**

**Horizontal Positional Accuracy:**

**Horizontal Positional Accuracy Report:** Within ±20 feet. Based off Aerial Photography control.

**Lineage:**

**Process Step:**

**Process Description:**

This data set was created through the use of cadastral maps. Centerlines were digitized into a database.

**Process Date:** 1981

**Spatial Data Organization Information:**

**Indirect Spatial Reference:** County A E911 Addressing

**Direct Spatial Reference Method:** Vector

**Point and Vector Object Information:**

**SDTS Terms Description:**

**SDTS Point and Vector Object Type:** String

**Point and Vector Object Count:** 13519

**Spatial Reference Information:**

**Horizontal Coordinate System Definition:**

**Planar:**

**Grid Coordinate System:**

**Grid Coordinate System Name:** State Plane Coordinate System 1927

**State Plane Coordinate System:**

**SPCS Zone Identifier:** 3200

**Lambert Conformal Conic:**

**Standard Parallel:** 34.2

**Standard Parallel:** 36.1

**Longitude of Central Meridian:** -79

**Latitude of Projection Origin:** 33.45

**False Easting:** 2000000

**False Northing:** 0

**Planar Coordinate Information:**

**Planar Coordinate Encoding Method:** coordinate pair

**Coordinate Representation:**

**Abscissa Resolution:** 1

**Ordinate Resolution:** 1

**Planar Distance Units:** survey feet

**Geodetic Model:**

**Horizontal Datum Name:** North American Datum of 1927

**Ellipsoid Name:** Clarke 1866

**Semi-major Axis:** 6378206

**Denominator of Flattening Ratio:** 294.9786982

**Entity and Attribute Information:**

**Detailed Description:**

**Entity Type:**

**Entity Type Label:** Major Roads
Entity_Type_Definition: Vector Street Centerline Data
Entity_Type_Definition_Source: County A GIS Department

Attribute:
  Attribute_Label: FID
  Attribute_Definition: Internal feature number
  Attribute_Definition_Source: ESRI
  Attribute_Domain_Values:
    Unrepresentable_Domain:
      Sequential unique whole numbers that are automatically generated

Attribute:
  Attribute_Label: Shape
  Attribute_Definition: Feature geometry
  Attribute_Definition_Source: ESRI
  Attribute_Domain_Values:
    Unrepresentable_Domain: Coordinates defining the features

Attribute:
  Attribute_Label: StreetLong
  Attribute_Definition: Entire street name (prefix, street name, type, and suffix)
  Attribute_Definition_Source: County A E911 Addressing
  Attribute_Domain_Values:
    Unrepresentable_Domain: Each street name is uniquely different

Attribute:
  Attribute_Label: Prefix
  Attribute_Definition: The direction of the road
  Attribute_Definition_Source: County A E911 Addressing
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: N
      Enumerated_Domain_Value_Definition: North
      Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
    Enumerated_Domain:
      Enumerated_Domain_Value: S
      Enumerated_Domain_Value_Definition: South
      Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
    Enumerated_Domain:
      Enumerated_Domain_Value: E
      Enumerated_Domain_Value_Definition: East
      Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
    Enumerated_Domain:
      Enumerated_Domain_Value: W
      Enumerated_Domain_Value_Definition: West
      Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
    Enumerated_Domain:
      Enumerated_Domain_Value: NE
      Enumerated_Domain_Value_Definition: Northeast
      Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
    Enumerated_Domain:
      Enumerated_Domain_Value: NW
      Enumerated_Domain_Value_Definition: Northwest
      Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
    Enumerated_Domain:
      Enumerated_Domain_Value: SE
      Enumerated_Domain_Value_Definition: Southeast
      Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
    Enumerated_Domain:
      Enumerated_Domain_Value: SW
Enumerated_Domain_Value_Definition: Southwest
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Attribute:
Attribute_Label: Name
Attribute_Definition: The name of the street
Attribute_Definition_Source: County A E911 Addressing
Attribute_Domain_Values:
  Unrepresentable_Domain: Each street name is uniquely different

Attribute:
Attribute_Label: Type
Attribute_Definition: This indicates the road type
Attribute_Definition_Source: County A E911 Addressing
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: ALY
    Enumerated_Domain_Value_Definition: Alley
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
  Enumerated_Domain:
    Enumerated_Domain_Value: AVE
    Enumerated_Domain_Value_Definition: Avenue
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
  Enumerated_Domain:
    Enumerated_Domain_Value: BLVD
    Enumerated_Domain_Value_Definition: Boulevard
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
  Enumerated_Domain:
    Enumerated_Domain_Value: BYP
    Enumerated_Domain_Value_Definition: Bypass
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
  Enumerated_Domain:
    Enumerated_Domain_Value: CTR
    Enumerated_Domain_Value_Definition: Center
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
  Enumerated_Domain:
    Enumerated_Domain_Value: COR
    Enumerated_Domain_Value_Definition: Corner
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
  Enumerated_Domain:
    Enumerated_Domain_Value: CT
    Enumerated_Domain_Value_Definition: Court
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
  Enumerated_Domain:
    Enumerated_Domain_Value: CRK
    Enumerated_Domain_Value_Definition: Creek
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
  Enumerated_Domain:
    Enumerated_Domain_Value: XING
    Enumerated_Domain_Value_Definition: Crossing
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
  Enumerated_Domain:
    Enumerated_Domain_Value: DR
    Enumerated_Domain_Value_Definition: Drive
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
  Enumerated_Domain:
    Enumerated_Domain_Value: EXPY
    Enumerated_Domain_Value_Definition: Expressway
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: EXT
    Enumerated_Domain_Value_Definition: Extension
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: FRST
    Enumerated_Domain_Value_Definition: Forest
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: FWY
    Enumerated_Domain_Value_Definition: Freeway
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: HTS
    Enumerated_Domain_Value_Definition: Heights
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: HWY
    Enumerated_Domain_Value_Definition: Highway
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: HOLW
    Enumerated_Domain_Value_Definition: Hollow
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: JCT
    Enumerated_Domain_Value_Definition: Junction
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: LNDG
    Enumerated_Domain_Value_Definition: Landing
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: LN
    Enumerated_Domain_Value_Definition: Lane
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: LOOP
    Enumerated_Domain_Value_Definition: Loop
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: PKWY
    Enumerated_Domain_Value_Definition: Parkway
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: PASS
    Enumerated_Domain_Value_Definition: Pass
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: PL
    Enumerated_Domain_Value_Definition: Place
    Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
    Enumerated_Domain_Value: PLZ
    Enumerated_Domain_Value_Definition: Plaza
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: PT
  Enumerated_Domain_Value_Definition: Point
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: RDG
  Enumerated_Domain_Value_Definition: Ridge
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: RIV
  Enumerated_Domain_Value_Definition: River
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: RD
  Enumerated_Domain_Value_Definition: Road
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: RTE
  Enumerated_Domain_Value_Definition: Route
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: SQ
  Enumerated_Domain_Value_Definition: Square
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: ST
  Enumerated_Domain_Value_Definition: Street
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: TER
  Enumerated_Domain_Value_Definition: Terrace
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: TRL
  Enumerated_Domain_Value_Definition: Trail
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: WAY
  Enumerated_Domain_Value_Definition: Way
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Attribute:
  Attribute_Label: Suffix
  Attribute_Definition:
    Additional information, typically geographic direction, that appears at the end of the road name
  Attribute_Definition_Source: County A E911 Addressing
  Attribute_Domain_Values:
    Unrepresentable_Domain: Each street suffix is uniquely different

Attribute:
  Attribute_Label: SRNumber
  Attribute_Definition: State Route Number
  Attribute_Definition_Source: County A E911 Addressing
  Attribute_Domain_Values:
    Unrepresentable_Domain: Each numeric State Road Number is unique different and not all street segments will have a State Round Number
Attribute:
  Attribute_Label: LeftLow
  Attribute_Definition:
  The lowest address on a segment which is located on the left side of the street when
  facing in the direction of ascending house numbers.
  Attribute_Definition_Source: County A E911 Addressing
  Attribute_Domain_Values:
  Unrepresentable_Domain:
  The left low address value for each street segment is uniquely different

Attribute:
  Attribute_Label: LeftHigh
  Attribute_Definition:
  The highest address on a segment which is located on the left side of the street when
  facing in the direction of ascending house numbers.
  Attribute_Definition_Source: County A E911 Addressing
  Attribute_Domain_Values:
  Unrepresentable_Domain:
  The left high address value for each street segment is uniquely different

Attribute:
  Attribute_Label: RightLow
  Attribute_Definition:
  The lowest address on a segment which is located on the right side of the street when
  facing in the direction of ascending house numbers.
  Attribute_Definition_Source: County A E911 Addressing
  Attribute_Domain_Values:
  Unrepresentable_Domain:
  The right low address value for each street segment is uniquely different

Attribute:
  Attribute_Label: RightHigh
  Attribute_Definition:
  The highest address on a segment which is located on the right side of the street when
  facing in the direction of ascending house numbers.
  Attribute_Definition_Source: County A E911 Addressing
  Attribute_Domain_Values:
  Unrepresentable_Domain:
  The right high address value for each street segment is uniquely different

Attribute:
  Attribute_Label: LeftZip
  Attribute_Definition:
  The five-digit zip code on the left side of the street when facing in the direction of
  ascending house numbers
  Attribute_Definition_Source: County A E911 Addressing
  Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: 12345
    Enumerated_Domain_Value_Definition: Zip Code for City A
    Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
  Enumerated_Domain:
    Enumerated_Domain_Value: 12346
    Enumerated_Domain_Value_Definition: Zip Code for City A
    Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
  Enumerated_Domain:
    Enumerated_Domain_Value: 12347
    Enumerated_Domain_Value_Definition: Zip Code for City A
    Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
Attribute:

Attribute_Label: LeftZipFour
Attribute_Definition: The additional four digits of the zip code on the left side of the street when facing in the direction of ascending house numbers
Attribute_Definition_Source: County A E911 Addressing

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 12345-0001
Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
Enumerated_Domain_Value_Definition_Source: County A E911 Addressing

Enumerated_Domain:
Enumerated_Domain_Value: 12345-0002
Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
Enumerated_Domain_Value_Definition_Source: County A E911 Addressing

Enumerated_Domain:
Enumerated_Domain_Value: 12345-0003
Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
Enumerated_Domain_Value_Definition_Source: County A E911 Addressing

Enumerated_Domain:
Enumerated_Domain_Value: 12346-0001
Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
Enumerated_Domain_Value_Definition_Source: County A E911 Addressing

Enumerated_Domain:
Enumerated_Domain_Value: 12346-0002
Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
Enumerated_Domain_Value_Definition_Source: County A E911 Addressing

Enumerated_Domain:
Enumerated_Domain_Value: 12347-0001
Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
Enumerated_Domain_Value_Definition_Source: County A E911 Addressing

Attribute:

Attribute_Label: RightZip
Attribute_Definition: The five-digit zip code on the right side of the street when facing in the direction of ascending house numbers
Attribute_Definition_Source: County A E911 Addressing

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 12345
Enumerated_Domain_Value_Definition: Zip Code for City A
Enumerated_Domain_Value_Definition_Source: County A E911 Addressing

Enumerated_Domain:
Enumerated_Domain_Value: 12346
Enumerated_Domain_Value_Definition: Zip Code for City A
Enumerated_Domain_Value_Definition_Source: County A E911 Addressing

Enumerated_Domain:
Enumerated_Domain_Value: 12347
Enumerated_Domain_Value_Definition: Zip Code for City A
Enumerated_Domain_Value_Definition_Source: County A E911 Addressing

Attribute:

Attribute_Label: RightZipFour
Attribute_Definition: The additional four digits of the zip code on the right side of the street when facing in the direction of ascending house numbers
Attribute_Definition_Source: County A E911 Addressing
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: 12345-0001
    Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
    Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
  Enumerated_Domain:
    Enumerated_Domain_Value: 12345-0002
    Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
    Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
  Enumerated_Domain:
    Enumerated_Domain_Value: 12345-0003
    Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
    Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
  Enumerated_Domain:
    Enumerated_Domain_Value: 12346-0001
    Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
    Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
  Enumerated_Domain:
    Enumerated_Domain_Value: 12346-0002
    Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
    Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
  Enumerated_Domain:
    Enumerated_Domain_Value: 12347-0001
    Enumerated_Domain_Value_Definition: Zip Code for City A plus it's 4 additional digits
    Enumerated_Domain_Value_Definition_Source: County A E911 Addressing

Attribute:
  Attribute_Label: County Name
  Attribute_Definition: County Name
  Attribute_Definition_Source: County A E911 Addressing
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: CO-A
      Enumerated_Domain_Value_Definition: County A
      Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
    Enumerated_Domain:
      Enumerated_Domain_Value: CO-B
      Enumerated_Domain_Value_Definition: County B
      Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
    Enumerated_Domain:
      Enumerated_Domain_Value: CO-C
      Enumerated_Domain_Value_Definition: County C
      Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
    Enumerated_Domain:
      Enumerated_Domain_Value: CO-D
      Enumerated_Domain_Value_Definition: County D
      Enumerated_Domain_Value_Definition_Source: County A E911 Addressing
    Enumerated_Domain:
      Enumerated_Domain_Value: CO-E
      Enumerated_Domain_Value_Definition: County E
      Enumerated_Domain_Value_Definition_Source: County A E911 Addressing

Attribute:
  Attribute_Label: ServiceClass
  Attribute_Definition:
    The grouping of roads into classes or systems according to the character of
    service they are intended to provide
  Attribute_Definition_Source: NC Dept of Transportation
Attribute_Domain_Values:

Enumerated_Domain:
   Enumerated_Domain_Value: 1
   Enumerated_Domain_Value_Definition: Interstate (ex. I40)
   Enumerated_Domain_Value_Definition_Source: County A GIS Department

Enumerated_Domain:
   Enumerated_Domain_Value: 2
   Enumerated_Domain_Value_Definition: US Highways (ex. US1)
   Enumerated_Domain_Value_Definition_Source: County A GIS Department

Enumerated_Domain:
   Enumerated_Domain_Value: 3
   Enumerated_Domain_Value_Definition: NC Highways (ex. NC50)
   Enumerated_Domain_Value_Definition_Source: County A GIS Department

Enumerated_Domain:
   Enumerated_Domain_Value: 4
   Enumerated_Domain_Value_Definition: Secondary Roads (ex. SR1001)
   Enumerated_Domain_Value_Definition_Source: County A GIS Department

Enumerated_Domain:
   Enumerated_Domain_Value: 5
   Enumerated_Domain_Value_Definition: Local Roads (ex. Main St)
   Enumerated_Domain_Value_Definition_Source: County A GIS Department

Enumerated_Domain:
   Enumerated_Domain_Value: 6
   Enumerated_Domain_Value_Definition: Other
   Enumerated_Domain_Value_Definition_Source: County A GIS Department

Attribute:

   Attribute_Label: Maintenance
   Attribute_Definition: The Maintenance Provider responsible for the upkeep of the road
   Attribute_Definition_Source: NC Dept of Transportation

Attribute_Domain_Values:

Enumerated_Domain:
   Enumerated_Domain_Value: 1
   Enumerated_Domain_Value_Definition: State
   Enumerated_Domain_Value_Definition_Source: County A GIS Department

Enumerated_Domain:
   Enumerated_Domain_Value: 2
   Enumerated_Domain_Value_Definition: Municipality
   Enumerated_Domain_Value_Definition_Source: County A GIS Department

Enumerated_Domain:
   Enumerated_Domain_Value: 3
   Enumerated_Domain_Value_Definition: Private
   Enumerated_Domain_Value_Definition_Source: County A GIS Department

Enumerated_Domain:
   Enumerated_Domain_Value: 4
   Enumerated_Domain_Value_Definition: Federal
   Enumerated_Domain_Value_Definition_Source: County A GIS Department

Enumerated_Domain:
   Enumerated_Domain_Value: 5
   Enumerated_Domain_Value_Definition: Other (ex. county maintained)
   Enumerated_Domain_Value_Definition_Source: County A GIS Department

Attribute:

   Attribute_Label: PrefixAlias
   Attribute_Definition: The geographic direction of the road alias
   Attribute_Definition_Source: County A E911 Addressing

Attribute_Domain_Values:

Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: North
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
Enumerated_Domain_Value: S
Enumerated_Domain_Value_Definition: South
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
Enumerated_Domain_Value: E
Enumerated_Domain_Value_Definition: East
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
Enumerated_Domain_Value: W
Enumerated_Domain_Value_Definition: West
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
Enumerated_Domain_Value: NE
Enumerated_Domain_Value_Definition: Northeast
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
Enumerated_Domain_Value: NW
Enumerated_Domain_Value_Definition: Northwest
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
Enumerated_Domain_Value: SE
Enumerated_Domain_Value_Definition: Southeast
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
Enumerated_Domain_Value: SW
Enumerated_Domain_Value_Definition: Southwest
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Attribute:
Attribute_Label: NameAlias
Attribute_Definition:
   A name by which the road is commonly known that is not the officially
designated name as determined by the street data steward
Attribute_Definition_Source: County A E911 Addressing
Attribute_Domain_Values:
   Unrepresentable_Domain: Each street name is uniquely different

Attribute:
Attribute_Label: TypeAlias
Attribute_Definition:
   The street type of the road alias as referenced by the US Postal Service
Attribute_Definition_Source: County A E911 Addressing
Attribute_Domain_Values:
   Enumerated_Domain:
      Enumerated_Domain_Value: ALY
      Enumerated_Domain_Value_Definition: Alley
      Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
   Enumerated_Domain:
      Enumerated_Domain_Value: AVE
      Enumerated_Domain_Value_Definition: Avenue
      Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
   Enumerated_Domain:
      Enumerated_Domain_Value: BLVD
      Enumerated_Domain_Value_Definition: Boulevard
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: BYP
  Enumerated_Domain_Value_Definition: Bypass
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: CTR
  Enumerated_Domain_Value_Definition: Center
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: COR
  Enumerated_Domain_Value_Definition: Corner
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: CT
  Enumerated_Domain_Value_Definition: Court
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: CRK
  Enumerated_Domain_Value_Definition: Creek
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: XING
  Enumerated_Domain_Value_Definition: Crossing
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
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  Enumerated_Domain_Value: DR
  Enumerated_Domain_Value_Definition: Drive
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
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  Enumerated_Domain_Value_Definition: Expressway
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
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  Enumerated_Domain_Value_Definition: Extension
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
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  Enumerated_Domain_Value_Definition: Forest
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
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  Enumerated_Domain_Value_Definition: Freeway
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Enumerated_Domain:
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  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
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  Enumerated_Domain_Value_Definition: Highway
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: HOLW
  Enumerated_Domain_Value_Definition: Hollow
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
  Enumerated_Domain_Value: JCT
  Enumerated_Domain_Value_Definition: Junction
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

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  Enumerated_Domain_Value: LNDG
  Enumerated_Domain_Value_Definition: Landing
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

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  Enumerated_Domain_Value: LN
  Enumerated_Domain_Value_Definition: Lane
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

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  Enumerated_Domain_Value: LOOP
  Enumerated_Domain_Value_Definition: Loop
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

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  Enumerated_Domain_Value: PKWY
  Enumerated_Domain_Value_Definition: Parkway
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
  Enumerated_Domain_Value: PASS
  Enumerated_Domain_Value_Definition: Pass
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

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  Enumerated_Domain_Value: PL
  Enumerated_Domain_Value_Definition: Place
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
  Enumerated_Domain_Value: PLZ
  Enumerated_Domain_Value_Definition: Plaza
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
  Enumerated_Domain_Value: PT
  Enumerated_Domain_Value_Definition: Point
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
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  Enumerated_Domain_Value_Definition: Ridge
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
  Enumerated_Domain_Value: RIV
  Enumerated_Domain_Value_Definition: River
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
  Enumerated_Domain_Value: RD
  Enumerated_Domain_Value_Definition: Road
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
  Enumerated_Domain_Value: RTE
  Enumerated_Domain_Value_Definition: Route
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Enumerated_Domain:
  Enumerated_Domain_Value: SQ
  Enumerated_Domain_Value_Definition: Square
Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: ST
  Enumerated_Domain_Value_Definition: Street
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: TER
  Enumerated_Domain_Value_Definition: Terrace
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: TRL
  Enumerated_Domain_Value_Definition: Trail
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28
Enumerated_Domain:
  Enumerated_Domain_Value: WAY
  Enumerated_Domain_Value_Definition: Way
  Enumerated_Domain_Value_Definition_Source: US Postal Service Publication #28

Attribute:
  Attribute_Label: SuffixAlias
  Attribute_Definition:
    Additional information, typically geographic direction, that appears at the end of the alias road name
  Attribute_Definition_Source: County A E911 Addressing
  Attribute_Domain_Values:
    Unrepresentable_Domain: Each street suffix is uniquely different

Attribute:
  Attribute_Label: MapName
  Attribute_Definition:
    A concatenation of a street's Prefix, Name, Type, and Suffix aliases with spaces separating the items. This should be formatted in mixed-case, appropriate for map labelling
  Attribute_Definition_Source: Software generated
  Attribute_Domain_Values:
    Unrepresentable_Domain: Each concatenated street alias is uniquely different

Distribution_Information:
  Distributor:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: County A GIS Department
        Contact_Position: GIS Coordinator
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 123 Main St
        City: City A
        State_orProvince: North Carolina
        Postal_Code: 12345
        Country: USA
        Contact_Voice_Telephone: (987) 654-3210
        Contact_Facsimile_Telephone: (123) 456-7890
        Contact_Electronic_Mail_Address: giscoordinator@countya.nc.org
Hours of Service: Monday - Friday 8:00am - 5:00pm
Contact Instructions: Email is preferred.
Resource Description: Downloadable Data: <http://www.countya.nc.org/gis/download.html>

Distribution Liability:
County A GIS Department is charged with the development and maintenance of the county's corporate geographic database and, in cooperation with other mapping organizations, is committed to offering its users accurate, useful, and current information about the county. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected in the data supplied. The user must be aware of the data conditions and bear responsibility for the appropriate use of the information with respect to possible errors, original map scale, collection methodology, currency of date, and other conditions specific to certain data. The use of trade names or commercial products does not constitute their endorsement by the county. Data may not be resold.

See the Disclaimer: <http://www.countya.nc.org/gis/disclaimer.html>

Standard Order Process:
Digital Form:
Digital Transfer Information:
Format Name: ArcGIS shapefile
Transfer Size: 6.213
Digital Transfer Option:
Online Option:
Computer Contact Information:
Network Address:
Network Resource Name: <http://www.countya.nc.org/gis/download.html>

Digital Form:
Digital Transfer Information:
Format Name: ArcGIS Shapefile
Transfer Size: 6.213
Digital Transfer Option:
Offline Option:
Offline Media: CD-ROM
Recording Format: ISO 9660
Compatibility Information: Data CD is the most compatible

Fees: Please contact distributor for pricing information
Ordering Instructions: Contact distributor via email requests.
Turnaround: Turnaround times are dependent upon the project.
Custom Order Process: Please contact distributor for ordering information.

Metadata Reference Information:
Metadata Date: 20040713
Metadata Review Date: 20040713
Metadata Contact:
Contact Information:
Contact Organization Primary:
Contact Organization: County A GIS Department
Contact Position: GIS Coordinator
Contact Address:
Address Type: mailing and physical address
Address: 123 Main St
City: City A
State or Province: North Carolina
Postal Code: 12345
Country: USA
Contact Voice Telephone: (987) 654-3210
Contact Facsimile Telephone: (123) 456-7890
Contact Electronic Mail Address: giscoordinator@countya.nc.org
Hours of Service: Monday - Friday 8:00am - 5:00pm
Contact Instructions: Email is preferred
Metadata Standard Name: FGDC Content Standards for Digital Geospatial Metadata

Generated by mp version 2.8.12 on Fri Jul 16 07:47:07 2004
### Addendum 2: Non-Graphic Attributes Suggested Headers

<table>
<thead>
<tr>
<th>Suggested Header</th>
<th>Attribute</th>
<th>Description</th>
<th>Data Type*</th>
<th>Length</th>
<th>Values limited to ‘Null’ or ‘unknown’ allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRNUM</td>
<td>StateRouteNumber</td>
<td>A descriptive number to be used as a label or road sign.</td>
<td>N</td>
<td>5</td>
<td>&gt; 1,000 and &lt; 50,000</td>
</tr>
<tr>
<td>RDNAME</td>
<td>RoadNameBody (formerly RoadName)</td>
<td>The officially designated name as determined by the street data steward.</td>
<td>A/N</td>
<td>50</td>
<td>No domain limit</td>
</tr>
<tr>
<td>PREDIR</td>
<td>RoadPrefix</td>
<td>The geographic direction</td>
<td>A</td>
<td>2</td>
<td>N, S, E, W, NE, NW, SE, SW</td>
</tr>
<tr>
<td>RDTYP</td>
<td>RoadType (formerly RoadSuffix)</td>
<td>The street type as referenced by the National Emergency Number Association (e.g., “RD,” “ST”)</td>
<td>A</td>
<td>4</td>
<td><a href="http://www.nena9-1-1.org/9-1-1TechStandards/nena_recommended_standards.htm">http://www.nena9-1-1.org/9-1-1TechStandards/nena_recommended_standards.htm</a></td>
</tr>
<tr>
<td>SUFDIR</td>
<td>RoadPostDirectionSuffix</td>
<td>Additional information, typically geographic direction, that appears at the end of the road name.</td>
<td>A/N</td>
<td>2</td>
<td>No domain limit</td>
</tr>
<tr>
<td>RDOWNER</td>
<td>MaintenanceProvider</td>
<td>The entity responsible for the upkeep of the road.</td>
<td>N</td>
<td>1</td>
<td>1=State</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2=Municipality</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3=Private</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4=Federal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5=Other (e.g., paper roads, county-maintained)</td>
</tr>
<tr>
<td>LOWLEFT</td>
<td>LeftLowAddress (formerly LeftFromAddress)</td>
<td>The lowest house number on the left side of the street when facing in the direction of ascending house numbers. It is suggested that the addresses be coded based on the structures that actually exist on that road segment, rather than fixed ranges (e.g., block number ranges). Numbers should be coded as numerals, not spelled out.</td>
<td>N</td>
<td>8</td>
<td>&gt; 0</td>
</tr>
<tr>
<td>HIGHLEFT</td>
<td>LeftHighAddress (formerly LeftToAddress)</td>
<td>The highest house number on the left side of the street when facing in the direction of ascending house numbers. It is suggested that the addresses be coded based on the structures that actually exist on that road segment, rather than fixed ranges (e.g., block number ranges). Numbers should be coded as numerals, not spelled out.</td>
<td>N</td>
<td>8</td>
<td>&gt; 0</td>
</tr>
<tr>
<td>Suggested Header</td>
<td>Attribute</td>
<td>Description</td>
<td>Data Type*</td>
<td>Length</td>
<td>Values limited to ‘Null’ or ‘unknown’ allowed</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>------------</td>
<td>--------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>LOWRIGHT</td>
<td>RightLowAddress (formerly RightFromAddress)</td>
<td>The lowest house number on the right side of the street when facing in the direction of ascending house numbers. It is suggested that the addresses be coded based on the structures that actually exist on that road segment, rather than fixed ranges (e.g., block number ranges). Numbers should be coded as numerals, not spelled out.</td>
<td>N</td>
<td>8</td>
<td>&gt; 0</td>
</tr>
<tr>
<td>HIGHRIGHT</td>
<td>RightHighAddress (formerly RightToAddress)</td>
<td>The highest house number on the right side of the street when facing in the direction of ascending house numbers. It is suggested that the addresses be coded based on the structures that actually exist on that road segment, rather than fixed ranges (e.g., block number ranges). Numbers should be coded as numerals, not spelled out.</td>
<td>N</td>
<td>8</td>
<td>&gt; 0</td>
</tr>
<tr>
<td>ZIPL</td>
<td>LeftZip</td>
<td>The five-digit zip code on the left side of the street when facing in the direction of ascending house numbers.</td>
<td>N</td>
<td>5</td>
<td>Valid NC zip</td>
</tr>
<tr>
<td>ZIPR</td>
<td>RightZip</td>
<td>The five-digit zip code on the right side of the street when facing in the direction of ascending house numbers.</td>
<td>N</td>
<td>5</td>
<td>Valid NC zip</td>
</tr>
<tr>
<td>ZIP4L</td>
<td>LeftZipPlusFour</td>
<td>The additional four digits of the zip code on the left side of the street when facing in the direction of ascending house numbers.</td>
<td>N</td>
<td>4</td>
<td>Valid NC zip + four</td>
</tr>
<tr>
<td>ZIP4R</td>
<td>RightZipPlusFour</td>
<td>The additional four digits of the zip code on the left side of the street when facing in the direction of ascending house numbers.</td>
<td>N</td>
<td>4</td>
<td>Valid NC zip + four</td>
</tr>
<tr>
<td>SER_CLASS</td>
<td>ServiceClass</td>
<td>The grouping of roads into classes or systems according to the character of service they are intended to provide.</td>
<td>N</td>
<td>1</td>
<td>1=Interstate(e.g., I40) 2=US Highways(e.g., US1) 3=NC Highways(e.g., NC50) 4=Secondary Roads (e.g., SR1001) 5=Local Roads(e.g. Main St) 6=Other (Trail?)</td>
</tr>
<tr>
<td>Suggested Header</td>
<td>Attribute</td>
<td>Description</td>
<td>Data Type*</td>
<td>Length</td>
<td>Values limited to ‘Null’ or ‘unknown’ allowed</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------</td>
<td>--------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>COUNTY</td>
<td>CountyName</td>
<td>County name.</td>
<td>A/N</td>
<td>13</td>
<td>No domain limit</td>
</tr>
<tr>
<td>RD_ALIAS</td>
<td>RoadNameBodyAlias</td>
<td>A name by which the road is commonly known that is not the officially designated name as determined by the street data steward.</td>
<td>A/N</td>
<td>50</td>
<td>No domain limit</td>
</tr>
<tr>
<td>PREDIR_ALIAS</td>
<td>RoadPrefixAlias</td>
<td>The geographic direction of the road alias</td>
<td>A</td>
<td>2</td>
<td>N, S, E, W, NE, NW, SE, SW</td>
</tr>
<tr>
<td>RDTYP_ALIAS</td>
<td>RoadTypeAlias</td>
<td>The street type of the road alias as referenced by the National Emergency Number Association (e.g., “RD,” “ST”)</td>
<td>A</td>
<td>4</td>
<td><a href="http://www.nena9-1-1.org/9-1-1TechStandards/nena_recommended_standards.htm">http://www.nena9-1-1.org/9-1-1TechStandards/nena_recommended_standards.htm</a></td>
</tr>
<tr>
<td>SUFDIR_ALIAS</td>
<td>RoadPostDirectionSuffixAlias</td>
<td>Additional information, typically geographic direction, that appears at the end of the alias road name.</td>
<td>A/N</td>
<td>2</td>
<td>No domain limit</td>
</tr>
<tr>
<td>RDTXT</td>
<td>MapTextRoadName</td>
<td>A concatenation of RoadPrefix, RoadNameBody, RoadType, and RoadPostDirectionSuffix with spaces separating the items. This should be formatted in mixed-case, appropriate for map labeling.</td>
<td>A/N</td>
<td>75</td>
<td>No domain limit</td>
</tr>
<tr>
<td>DATE</td>
<td>Date</td>
<td>Last date that a non-geometric change occurred to this record (example would be road name change, or address range change).</td>
<td>A/N</td>
<td>8</td>
<td>Valid dates.</td>
</tr>
</tbody>
</table>

*Alpha/Numeric