

# Geospatial Service Content Metadata Guide



Provided by:

NCDIT-T GIS Unit  
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### Document Control

Author	Version	Date	Description
NCDIT-T GIS Unit	0.1	June 2022	Initial draft
NCDIT-T GIS Unit	0.2	March 2023	Updated for anticipated distribution
NCDIT-T GIS Unit	0.3	April 2023	Reviewed by internal working group
NCDIT-T GIS Unit	1.0	April 10, 2023	Approved by Eric Wilson, GISU Manager
NCDIT-T GIS Unit	1.1	November 1, 2023	Minor revision approved by Eric Wilson, GISU Manager
NCDIT-T GIS Unit	1.2	March 27, 2024	Expansion of Title criteria, approved by Eric Wilson

# GISU – Geospatial Service Content Metadata Guide

## Overview

This document serves to provide guidance for the creation and application of service metadata for NCDOT Geospatial Services Content. This includes all content published to the NCDOT GO!NC Portal on ArcGIS Online. NCDOT Geospatial Service metadata is meant to provide information about the business purpose and use of the service entity and contained data. Information about the service construction or any information about the software is autopopulated inside of the service host site and additional information can be found from Esri guidance documentation.

This document should provide guidance for metadata compliance for items that include: feature service, map service, data upload, geocoding service, image service, service definitions, file upload, etc. For content items that reference the above, simplified descriptive information can be used to reference compliant metadata, i.e. a web map metadata record may provide brief pointers to the services it includes.

## Service Metadata Population

To simplify service metadata efforts, it is recommended that metadata for services be applied using the Description area on the Overview page of the service item. Given the free form entry style of this metadata, it is recommended that metadata section titles are included to provide structure. It is recommended that data owners keep local copies (MS Word Documents, PDFs, etc.) of their metadata records as backup retention for their ArcGIS Online Content.

The screenshot shows the ArcGIS Online metadata page for the service 'NCDOT\_ROWMSExistingRoad'. The page is divided into several sections:

- Header:** 'NCDOT\_ROWMSExistingRoad' with a pencil icon for editing. Navigation tabs for 'Overview', 'Usage', and 'Settings' are visible.
- Thumbnail:** A thumbnail image for the service titled 'ROWMS' with a 'Public' status and 'Add to Favorites' button.
- Metadata:** 'ROWMS project existing road' with an 'Edit' button. It includes a map image layer from the North Carolina Department of Transportation, managed by NCDOT.GOV. Metadata includes 'Item created: Aug 2, 2022', 'Item updated: Mar 28, 2023', and 'View count: 407'. An 'Authoritative' badge is present.
- Description:** A section with an 'Edit' button containing the following text:

The NCDOT\_ROWMSExistingRoad service contains a collection of existing road features in which NCDOT acquisition, in part, may be necessary for road construction or improvement, or is indirectly affected by the Right of Way. NCDOT Project ID information is included. Features in this service represent existing roads, alignments, guardrails, and railroads. These data support the NCDOT Right Of Way Management System (ROWMS) which allows for the continuous capture of right of way data. The data entered are the latest available to the NCDOT Right Of Way Branch, but data currency may vary across the system.

The Right of Way Branch of NCDOT is responsible for the acquisition of all necessary lands and rights of way used for construction and improvements of all highways which are part of the State Highway System. This includes roads on both the primary (Interstate, U.S., and N.C. routes) and secondary (SR routes) systems. Purchasing land for other public modes of transportation is also required for expansion and to accommodate increased demand.

Multiple facets make up the Right of Way business process from early NCDOT project development to appraisals and land purchases. NCDOT's "Understanding the Right of Way Process" document provides more information here:
- Actions:** A vertical menu on the right side with buttons for 'Open in Map Viewer Classic', 'Open in Scene Viewer', 'Open in ArcGIS Desktop', 'Share', and 'Metadata'.
- Item Information:** A section with a 'Learn more' link and a progress bar showing 'Low' to 'High' improvement. A 'Top Improvement: Add a longer summary' link is visible.
- Details:** A section with the following information:
  - Source: [Map Service](#)
  - Size: 1 KB
  - ID: c35762571847477d98dab6ce8f53c65f
  - Five star rating icons.

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The Metadata button available on the right hand side of the page may be used if desired, but metadata compliance will be evaluated based on what is included in the Description area of the Overview page.

Use the Edit buttons along the right hand side of each Overview page element to alter the information contained within. The Edit buttons are available only to administrators, owners of the content item, and those in a shared edit group.



For information about additional elements on the Service Overview page including thumbnail, tags and other content, see the [NCDIT-T GIS Content Publication Standards and Policies](#).

There is a Summary area to the right of the thumbnail which can be used to provide a quick summary of the geospatial service metadata which will be contained in the below Description area in full. This should, at minimum include a brief descriptive sentence or two and the publication date on the service.

The Description area where the majority of metadata will be provided allows for different formatting options. These are optional for metadata entry but may prove useful for presentation of the information:

Edit Terms of Use

A screenshot of a rich text editor interface. The top toolbar includes buttons for Bold (B), Italic (I), Underline (U), Font Color (A with a color swatch), Text Color (Aa with a color swatch), Bulleted List, Numbered List, Indent, Outdent, Undo, Redo, Insert Image, Insert Link, and a font size dropdown menu set to "small". The main text area contains two paragraphs of text. The first paragraph reads: "The North Carolina Department of Transportation 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 construed to be a legal document. Primary sources from which this data was compiled must be consulted for verification of information contained in this data." The second paragraph reads: "All Right of Way data is the sole property of NCDOT and any public purpose use is subject to approval and release by NCDOT. No data, whole or in part, shall be released, published, or shared without prior written approval by NCDOT. No information concerning the data shall be divulged to anyone outside the proper officials at NCDOT or the Federal Highway Administration. All Right of Way data is strictly confidential to NCDOT and its approved contractors." At the bottom right of the editor are two buttons: "Save" (in a blue box) and "Cancel" (in a white box with a blue border).

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## Service Metadata Content

Service metadata in the Description area of the Overview page should minimally include the following:

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**Title** - Ensure the service metadata title has a unique, descriptive name revealing the “what”, “where”, and “when” of the data the service is providing. All GO!NC content should begin with either *NCDOT* or *NC* in the title in an effort to standardize products (see examples below).

### **Common Service Metadata Title formats:**

"NCDOT" + [descriptive data name] + [data time frame]

[descriptive data name] + [data time frame] + “NC Department of Transportation”.

Use "NC" in the title only when data provided by the service is entirely located within the state. Some data may cross into other states, such as the Carolina Thread Trail.

### **Examples**

*NCDOT Current 2024-2033 STIP*

*NCDOT County Boundaries Shoreline*

*NCDOT HMIP 2024-2028*

*NC Highway Historical Markers (NCHHM)*

*NCDOT Distance Hatches & Structures Map*

*NCDOT PCS – Combined Data (Network Master)*

*NCDOT PCS - Continuously Reinforced Concrete*

*NCDOT Concrete Certifications by ZIP Code*

*NCDOT Public Street Information Database Map (HB620) App*

*Sample Metadata Record Title*

*NCDOT Right of Way Management System (ROWMS) – Existing Road Features*

**Description** - A description of the service should be provided summarizing information to users. This should include service content, extent, and key operating features including purpose of the service.

A description should include information that can answer the following questions:

– What is the source of the data?

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- When was the data published?
- How often is the data updated?
- What does the data represent?
- How was the data collected?
- How should the data/map be used?
- Who should I contact if I have any questions?
- Are there any special use constraints or circumstances where I shouldn't use the data?

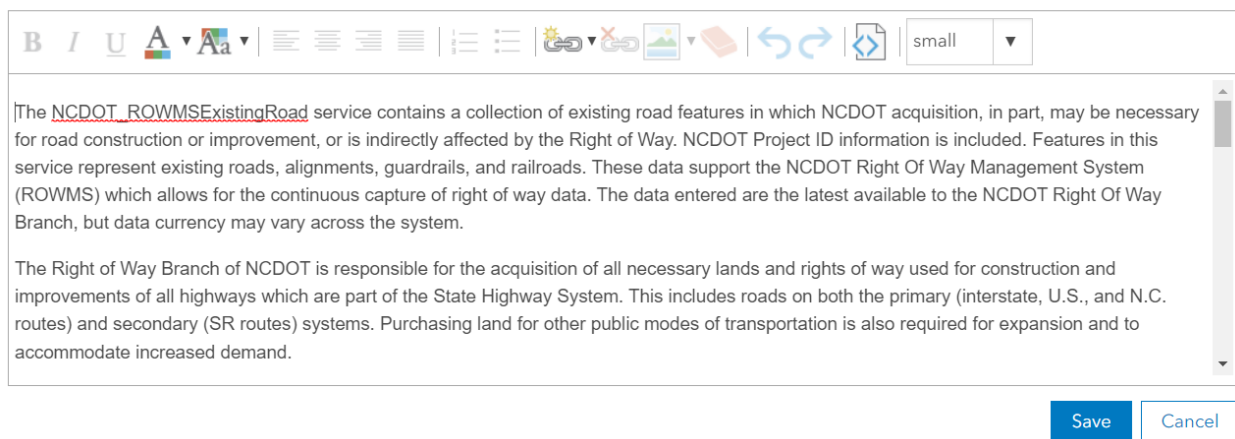
**Data Metadata References** - List all contained data layers and provide links for relevant external data metadata records. This will allow for existing data metadata for the layers in the services to be exposed. While service metadata is minimally compliant without compliant data metadata references for all contained layers, it is best practice to reference metadata content about content that feed the service.

**Contact information** - The metadata should include contact information for the primary point of contact for the service, map, or application. The information should denote "point of contact". This POC may be different from the data/service owner. The POC should be the identified party who should be the first contact point about any issues or questions for the service itself.

**Publication Date** - This is the initial date of publication of the service. The metadata should denote "published". Any additional information for updates made to the service may also be included.

**Use Constraints** - Constraints for use of the service or information contained in the service should be provided. The Terms of Use area of the Overview page provides a separate entry box for Use Limitation information. It is recommended that this box be used for this piece of the service metadata.

Edit Description



The [NCDOT\\_ROWMSExistingRoad](#) service contains a collection of existing road features in which NCDOT acquisition, in part, may be necessary for road construction or improvement, or is indirectly affected by the Right of Way. NCDOT Project ID information is included. Features in this service represent existing roads, alignments, guardrails, and railroads. These data support the NCDOT Right Of Way Management System (ROWMS) which allows for the continuous capture of right of way data. The data entered are the latest available to the NCDOT Right Of Way Branch, but data currency may vary across the system.

The Right of Way Branch of NCDOT is responsible for the acquisition of all necessary lands and rights of way used for construction and improvements of all highways which are part of the State Highway System. This includes roads on both the primary (interstate, U.S., and N.C. routes) and secondary (SR routes) systems. Purchasing land for other public modes of transportation is also required for expansion and to accommodate increased demand.

Save Cancel

### Access and Use Constraints (Disclaimer)

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At a minimum, the following disclaimer is recommended to be used in all NCDOT published services and web maps.

Additional information, specific to the data/map, may also be included.

*The North Carolina Department of Transportation 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 construed to be a legal document. Primary sources from which this data was compiled must be consulted for verification of information contained in this data.*

### **Disclaimer for Non-NCDOT Services**

In some cases, AGOL will contain links to external services. At a minimum, the following is recommended to be included with any external service and is in addition to any disclaimer provided by the agency or organization providing the external service.

*This service is not published or maintained by the North Carolina Department of Transportation. The North Carolina Department of Transportation 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 construed to be a legal document. Primary sources from which this data was compiled must be consulted for verification of information contained in this data.*

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## Sample Geospatial Metadata Record

The following Right of Way Management System service metadata may serve as a sample of compliance and stylistic structure for geospatial service metadata. This metadata is applied to both feature service and map image service. The order of content in the below sample is the recommended order for presentation of geospatial service metadata in the Overview Description page for the service.

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### **ROWMS Service Metadata: NCDOT Right of Way Management System (ROWMS) – Existing Road Features**

#### **Description**

The NCDOT Right of Way Management System (ROWMS) service contains a collection of existing road features in which NCDOT acquisition, in part, may be necessary for road construction or improvement, or is indirectly affected by the Right of Way. NCDOT Project ID information is included. Features in this service represent existing roads, alignments, guardrails, and railroads. These data support the NCDOT Right of Way Management System (ROWMS)

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which allows for the continuous capture of right of way data. The data entered are the latest available to the NCDOT Right of Way Branch, but data currency may vary across the system.

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Multiple facets make up the Right of Way business process from early NCDOT project development to appraisals and land purchases. NCDOT's "Understanding the Right of Way Process" document provides more information here:

[https://connect.ncdot.gov/business/ROW/ROWManualsandPublications/Right-of-Way-Brochure-Single Page layout.pdf](https://connect.ncdot.gov/business/ROW/ROWManualsandPublications/Right-of-Way-Brochure-Single%20Page%20layout.pdf)

The Right of Way Management System (ROWMS) is a web-based application that captures Right of Way (ROW) information and documents, provides workflow and reporting capabilities, and interfaces with internal systems. ROWMS supports NC legislative mandates requiring Right of Way to have a role-based, data management system used by all projects.

A major benefit ROWMS provides is a 25% workflow cycle time reduction. It also facilitates process standardization, cross-department integration, collaboration across the organization, a detailed audit trail, and contractor integration. ROWMS integrates systems such as SAP (Vendors, Invoices, POs, Asset Management, etc.), SharePoint (public documents and deeds), DocuSign (electronic signatures, eNotary), and GIS.

The GIS Unit of the North Carolina Department of Information Technology-Transportation (NCDIT-T) has developed a process to convert the Right of Way Unit's original DGN/CAD files into a GIS format, that can then be managed and disseminated to meet the ROWMS project needs. These are adjacent and nearby critical features such as existing roads, buildings, utilities, and property, affected or impacted in some way due to NCDOT's state highway system construction or improvement projects. Proposed features for ROW acquisition, proposed roads and related features are also included. This ROW data can be viewed overlaying maps in the application. The GIS capability of ROWMS enables management and dissemination of Right of Way-based spatial data.

### Metadata

The metadata for the contained layers of the ROWMSExistingRoad Service are available through the following links:

[https://xfer.services.ncdot.gov/gisdot/Metadata/ROWMS/ExistingRoad/NC Existing Alignment Lines.pdf](https://xfer.services.ncdot.gov/gisdot/Metadata/ROWMS/ExistingRoad/NC%20Existing%20Alignment%20Lines.pdf)



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<https://xfer.services.ncdot.gov/gisdot/Metadata/ROWMS/ExistingRoad/NC Existing Guardrail Lines.pdf>

<https://xfer.services.ncdot.gov/gisdot/Metadata/ROWMS/ExistingRoad/NC Existing Railroad Lines.pdf>

<https://xfer.services.ncdot.gov/gisdot/Metadata/ROWMS/ExistingRoad/NC Existing Road Lines.pdf>

<https://xfer.services.ncdot.gov/gisdot/Metadata/ROWMS/ExistingRoad/NC Existing Road Polygons.pdf>

### Point of Contact

Point of Contact for ROWMSExistingRoad Service:

North Carolina Department of Information Technology -Transportation, GIS Unit

GIS Data and Services Consultant

Contact information:

[gishelp@ncdot.gov](mailto:gishelp@ncdot.gov)

Century Center – Building B

1020 Birch Ridge Drive

Raleigh, NC 27610

Hours of service: 9:00am - 5:00pm Monday - Friday

Contact instructions: Please send an email with any issues, questions, or comments regarding the Right of Way Geodatabase. If it is an immediate need, please call the contact number or indicate as such in the subject line in an email.

(publish date: 9/13/2018)

### Layers

ExistingAlignmentsPolyline

ExistingGuardrailPolyline

ExistingRailroadPolyline

ExistingRoadPolygon

ExistingRoadPolyline

### Terms of Use

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