

# Transportation Staff Meeting

September 18, 2013

2:00 PM

Room 601, CMGC

## AGENDA

### 1. **Functional Classification System Updates** (Panicker)

#### Description:

A review of the Functional Classification system will begin soon. The deadline for completion is December 2, 2013.

See the attached documents for more information about the review process.

[Click here](#) for more information about the Functional Classification system.

**Phone Access Number:** 704-432-5485

**Go To Meeting Access:** <https://global.gotomeeting.com/join/198295925>



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

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PAT MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

August 30, 2013

**MEMORANDUM**

**TO:** MPO Local Contacts

**FROM:** Terry C. Arellano, PE   
Systems Planning Group

**SUBJECT:** Functional Classification System Update within North Carolina MPOs

All of the North Carolina Metropolitan Planning Organizations (MPO) have completed a review of their 2010 Census designated urbanized area boundaries and adjusted their planning area boundaries. We are now set to embark on a review of the federal Functional Classification (FC) system within both urban and rural areas. This review will be accomplished cooperatively by staff at the Transportation Planning Branch and within your organization.

In the past, this review was necessary to accommodate changes in urbanized area and MPO boundaries since there were different FC designations for rural and urban areas. The Highway Performance Monitoring System (HPMS) Reassessment 2010+ resulted in recommendations for the revision of highway functional classifications that impact this decennial review. The Reassessment included three modifications relevant to functional classification: 1) collapsing the number of classification codes from 12 to 7; 2) eliminating the need to "drop down" functional classification designations when transitioning from an urban to a rural area; and 3) eliminating the urban versus rural qualifier from functional classification designations. The last of these modifications essentially eliminates the need to update the functional classification designation whenever a change occurs in an urban or urbanized area boundary and will hopefully lead to more consistent reporting of highway functional classes across and within States.

NCDOT implemented changes relevant to this modification in 2009 by merging the urban and rural systems into one set of codes as part of the development of its Attribute Road Inventory Database (ARID) tool.

However, TPB feels that a review of the FC system is a worthwhile endeavor at this time since it will:

- Help to validate the wholesale systems modifications that were made to respond to the functional classification modifications required by the HPMS Reassessment 2010+; and

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- Help to identify any justifiable modifications deemed necessary from the local perspective.

When combined with future careful monitoring of the system and modifications as needed upon the completion of new roadways, this should alleviate the need to perform this review after future Census updates.

In light of this, we are asking that you work with your MPO Coordinator from TPB and members of your MPO to review the functional classification system within your planning jurisdiction and propose any modifications that your MPO feels are justified at this time. The attached guidelines offer an overview of the tasks/responsibilities and the attached schedule outlines the timeline for the completion of this review. An FTS transmission containing the ArcMap package needed to complete this review will be distributed on Tuesday, September 3, 2013. **Please note that comments/proposed modifications are due to Rockne Bryant no later than December 2, 2013.** If you have any questions or concerns regarding this endeavor, feel free to contact me by telephone (919-707-0960) or email ([tarellano@ncdot.gov](mailto:tarellano@ncdot.gov)).

#### Attachments

cc: Mike Bruff, PE, Transportation Planning Branch  
Travis Marshall, PE, Transportation Planning Branch  
Dan Thomas, PE, Transportation Planning Branch  
Earlene Thomas, PE, Transportation Planning Branch  
Rockne Bryant, Transportation Planning Branch  
Geographic Planning Group Supervisors, Transportation Planning Branch  
MPO Coordinators, Transportation Planning Branch

## SUBMITTING PROPOSED FUNCTIONAL CLASSIFICATION (FC) MODIFICATIONS:

### Metropolitan Planning Organizations

The Functional Classification System (FC) Update is being conducted in GIS utilizing the most recent Road Characteristics data obtained from ARID. This will allow a quick and accurate update of the Road Characteristics data, which can then be loaded back into the ARID system.

Accompanying this guidance package, you received a Functional Classification Modification Map Package for your MPO that should be loaded into ArcMap (Version 10). Please use the procedure outlined on the following pages to review the current functional classification system within your MPO and to propose any modifications to the system utilizing this map package. ***(Note - If your organization does not use ArcMap 10.1, please contact Rockne Bryant ([rbryant@ncdot.gov](mailto:rbryant@ncdot.gov)) to be sent the appropriate shape files needed to complete the update.***

With this update, there are three basic types of modifications that might be needed:

- Corrections to official functional classification mapping;
- Adjustments due to previous designation based on urbanized boundaries; and
- Modifications at the MPO's request.

#### **Corrections to Official Functional Classification Mapping**

In addition to the review that is being requested of the MPOs and completed in the RPO areas, TPB will be conducting a review to verify that the functional classification system represented in ARID is consistent with the official maps kept prior to implementation of the ARID tool and to reclassify roads affected by the 2010 Census UZA/UCA revisions. **However, if you are aware of any instances such as this, please submit them with the additional modification requests for your MPO. Indicate in one of the "Comment" fields that this proposed modification is a technical correction.**

#### **Adjustments Due to Previous Designation Based on Urban Boundaries**

Historically, the functional classification system has been updated once an MPO approved a revised urbanized area boundary based on the decennial Census. As part of these updates, functional classification was automatically upgraded along a route as it transitioned from rural to urbanized areas. This practice has been eliminated, per FHWA guidance, and upgrading the functional classification due to an actual change in roadway function is the operative criterion that is to be used.

For this reason, we are asking that MPOs closely review the functional classification designations near the urbanized area boundary. If the functional classification "steps down" as a roadway transitions from the urbanized area to the rural area, this should be adjusted so that changes occur at logical termini. **Indicate in one of the "Comment" fields that this proposed modification is due to removal of UZA .**

#### **Modifications at the MPO's Request**

As traffic patterns change over time through either roadway construction or land use change, roadway functions may change as well. Reclassifying roadways to match their current purpose helps to maintain the proper hierarchy, reflecting the importance of each roadway in the network. If such modifications are proposed within your area, then NCDOT requires documentation to support the request. **Indicate in one of the "Comment" fields the reasoning that substantiates the proposed modification.**

**Please be mindful of the following guidelines when requesting modifications to the existing functional classification system for your area:**

**Connectivity –**

- Roadway segments that do not connect in the system (i.e., stubs) may not be functionally classified above the Local classification.
- Roadways that change classification along their routing should change at the nearest cross street.

**Function –** Follow guidance as outlined in the [Federal Functional Classification Guidelines](#).

**Land Use –** The level of accessibility to surrounding land uses is a critical element in determining the functional classification of a roadway:

- In an area where a high degree of access to abutting land use is required (residential, agricultural, etc.) service should be provided primarily by the collector system.
- In an area where access is restricted (commercial, industrial, etc.) service should be provided by the principal arterial system.
- In an area where a moderate level of access is desirable service should be provided by the minor arterial system.

**Trip Length –** As functional classification moves up the hierarchy from collector to principal arterial, trips of increasing length should be accommodated.

**Spacing –** The distance between identical classification types should increase as the level of classification increases (i.e., principal arterials should be spaced further apart than collectors)

**Vehicle Miles Traveled (VMT) –** A properly developed system should be balanced based on the percentage of mileage and VMT each classification carries in comparison to the entire system. The following guidance is offered by FHWA concerning the VMT percentages:

- All Arterials and Collectors combined – maximum of 35 percent of statewide route mileage. (Rural Minor Collector mileage and VMT does not contribute, but it is included here as "Collectors" because the existing extent guidance does not break out any separate guidance for them.)
- All Arterials and Collectors combined – between 70 percent and 80 percent of statewide VMT.

Note that this guidance is intended to be applied on a **statewide** basis, rather than by county, or by individual urbanized or small urban area.

**Traffic Volume –** Traffic counts should be considered, but are not the only determining factor in establishing classification.

**Federal Aid –** While functionally classifying a roadway makes it eligible for Federal Aid funding, functional classification modifications cannot be approved solely for Federal Aid funding eligibility.

**Systemwide Considerations –** Consideration should be given to the effect a classification change may have on the larger system (both inside and outside your area). As a result, there may be the need to change (downgrade or upgrade) a roadway(s) in the area whether directly connected to the request or not.

**TIMELINE:**

<u>Task</u>	<u>Responsibility</u>	<u>Timeframe</u>
• Review FC Review Process with Planning Groups	TPB	8/19/2013 to 8/30/2013
• Send guidance to MPOs	TPB	Deadline: 8/30/2013
• <i>RPO Areas – Review current FC and make recommended revisions</i>	<i>TPB - RPO Coordinators</i>	<i>8/30/2013 to 10/31/2013</i>
• <i>RPO Areas – Review recommended revisions &amp; submit any comments</i>	<i>RPO Staff</i>	<i>11/4/2013 to 12/2/2013</i>
• <b>MPO Areas – Review current FC &amp; submit recommended revisions</b>	<b>MPO Coordinators^ &amp; MPO Staff</b>	<b>8/30/2013 to 12/2/2013</b>
• All Areas – Review recommended revisions & accept as appropriate; finalize Revised FC in GIS	TPB	11/30/2013 to 12/31/2013
• All Areas – Review final Revised FC with Branch Manager and Unit Heads	TPB	Deadline: 1/15/2014
• Notify MPOs/RPOs of final Revised FC & request final MPO approval letter/resolution	TPB	Deadline: 1/17/2014
• Submit Revised FC to FHWA for approval	TPB	Deadline: 2/15/2014
• Incorporate Revised FC into ARID at quarterly update	GIS	Deadline: 3/31/2014