

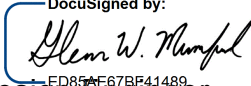


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

MEMO TO: Roadway Design Project Engineers

FROM: Glenn W. Mumford, PE 
Asst. State Roadway Design Engineer
DocuSigned by:
FD85AE67BF41489

DATE: June 12, 2014

SUBJECT: Final Plan Submittal Changes

In accordance with the April 30, 2014 Electronic Let Plan Submissions and e-Signatures memo from Mike Holder and Roger Rochelle, the following changes are applicable for all final TIP plan submittals to Contract Standards and Development effective with the November 2014 Letting (August turn-in).

Digital Signatures:

All plan sheets shall be electronically signed through DocuSign. Full size PDF's of all design files will be created for use in this new process. Full size hard copies of the plans shall be generated from the PDF's and submitted to the Contracts Office for review by Plan Checking. After their review is completed and corrections are made by Roadway Design, hard copies of the revised PDF plan sheet files shall be resubmitted to Contracts for preparation of the contract proposal. In addition, the electronic version of the PDF files shall be forwarded to the appropriate personnel for application of electronic signatures using DocuSign. It is essential that the listed formatting details are followed:

- PE seal (w/ engineers name and number) is included in the PDF.
- Each plan sheet is saved as a separate PDF.
- Ensure PDF's print at appropriate scale.
- Ensure PDF files are text searchable.
- Each PDF can be no larger than 22"x34" when plotted full size.
- Use landscape layout or 0 degree rotation.
- Conform to proper file naming format (ex. 100_001_TIP#_RDY_File name.pdf)

More detailed guidelines for creation of the PDF plan sheet files and further explanation of the e-signature process are available on the [Roadway Design Resource Guidelines website](#).

Index of Sheets:

Detail sheets provided by other Units are often generated and sealed in advance of the final compilation of the plan sheets. The adoption of electronic signatures requires these sheets to be pre-numbered at the time of sealing. To accommodate this requirement, a new sheet numbering scheme has been developed making each Unit responsible for the numbering of its own detail sheets - including the sheets generated by Contracts and Standards. Summary sheets will follow the same general numbering sequence. Attached are the new Index of Sheets format guidelines along with an example from a large-scale project. The [Contracts 1A Spreadsheet](#) has been updated to reflect these changes for creation of the 1A Index of Sheets. (Note: The new Drainage Summaries will use the prefix 3D in their sheet numbers. Automated Drainage Summaries created prior to June 2014 do not have the functionality to be able to change sheet numbers to use this prefix. In an effort to have all drainage summaries match the new numbering scheme, a copy/paste procedure from old to new is available in the Help section of the Drainage Summary Sheet.)

Earthwork Balance Sheet:

Also effective with the November letting, the Geotechnical Engineering Unit will no longer include the earthwork balance sheet with its Subsurface Inventory Plans; therefore Roadway Design will no longer need to provide a final hard copy of the balance sheet to the Geotechnical Unit prior to turning in final plans to Contracts Standards and Development. The Geotechnical Engineering Unit will be responsible for placing their PDF files in the Geotechnical DocuSign envelope. Once the balance sheet has been checked by the Plans and Standards Management Section, Roadway Design will place an electronic copy (Excel format required) of the earthwork balance sheet in the "PreLetStage\TIP#\Roadway\Earthwork Balance Sheet" folder to supplement the other electronic files already being placed in the PreLetStage folders for the contractor's use during advertisement. The [Electronic File Delivery for Project Advertisement Guidelines](#) have been updated to reflect this change.

If you have any questions regarding any of these changes, please contact Jim McMellon, PE, at 919-707-6282.

GWM/jm

Attachments

ec: Debbie Barbour, PE
 Kevin Lacy, PE
 Randy Garris, PE
 John Pilipchuck, LG, PE
 Dewayne Sykes, PE
 Ron Hancock, PE
 Barney Blackburn, PE
 Greg Fuller, PE
 Stuart Bourne, PE
 Drew Joyner, PE

 Rodger Rochelle, PE
 Don Lee
 Charlie Brown, PE, PLS
 David Chang, Ph.D., PE
 Judith Corely-Lay, Ph.D., PE
 David Harris, PE
 Bob Kopetsky, RLA
 Ron King, PE
 Greg Perfetti, PE

Index of Sheets

1	Title Sheet
1A	Index of Sheets, General Notes and Standard Drawings
1B	Conventional Symbol Sheet
1C Series	Survey Control Sheets
1D Series	Centerline Coordinate List
2A Series	Pavement Schedule and Typical Sections
2B Series	Roadway Details (produced by Roadway personnel)
2C Series	Details not Covered by Roadway (Special Details produced by Contracts)
2D Series	Drainage Details
2G Series	Geotechnical Details
2H Series	GeoEnvironmental Details
2N Series	Noise Wall Envelope Details
3B Series	Roadway Summaries (earthwork, guardrail, etc.)
3D Series	Drainage Summaries
3G Series	Geotechnical Summaries
3P Series	Parcel Index Sheets

Example of sheet numbering: 2A-1, 2A-2, 2A-3, etc.

Large Project Example

Number of sheets		Start	End
	TSH	1	
	Index	1A	
	Symbology	1B	
4	Survey Control	1C-1	1C-4
15	Typicals	2A-1	2A-15
1	Shld Berm Details	2A-16	
1	Shld Drain Details	2A-17	
1	Shld Drain Details w/Noise Wall	2A-18	
5	Structure Typical	2A-19	2A-23
1	Structure Sketches	2B-1	
3	Detour Detail	2B-2	2B-4
2	Shear Point	2B-5	2B-6
11	Gore Detail	2B-7	2B-17
16	Noise Wall Locations	2B-18	2B-33
1	Shld Const Detail	2C-1	
1	Rock Plating	2G-1	
4	Earthwork	3B-1	3B-4
1	Asphalt, other items	3B-5	
27	Drainage	3D-1	3D-27
2	Parcel Index	3P-1	3P-2