

HYDRAULICS UNIT NEWSLETTER

August 1, 2023

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CONTACT US

If you have any Questions, Comments or Ideas for the Hydraulics Unit just click [here](#) and share.

UPDATED QA/QC GOVERNANCE DOCUMENT

The *Hydraulics QA/QC Checklist Governance* has been updated. It has been replaced with a [Hydraulics Quality Management Program Governance](#) document that further describes applicability, roles, and responsibilities for the QA/QC process.

It is the expectation that all hydraulics deliverables will follow the Hydraulics Quality Management Program. Any deviations from the requirements listed in the document should be discussed during scope development and approved by the Project Manager and applicable Subject Matter Expert within the Hydraulics Unit, or the designated GESC. Further, as this document and associated checklists are used, it is anticipated that changes will be necessary to continue to improve the process.

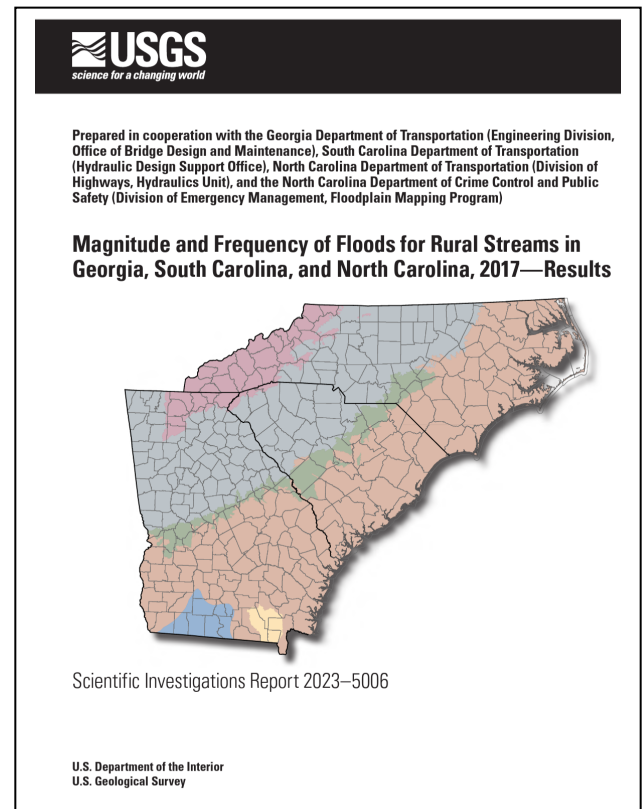
Please provide feedback and ideas for continued improvement at hydraulics_notify@ncdot.gov or by contacting Hydraulics Unit staff.

APPLICATION OF USGS SIR 2023-5006

USGS has announced the project to update flood-frequency (FF) statistics and techniques for rural streams in Georgia, South Carolina, and North Carolina has officially been completed with the formal release of USGS Scientific Investigations Report 2023-5006, a summary Fact Sheet, and two associated data releases. The new rural FF report and associated products were released on April 28, 2023, and can be accessed at the URL shown below:

[Magnitude and frequency of floods for rural streams in Georgia, South Carolina, and North Carolina, 2017—Results \(usgs.gov\)](#)

The Hydraulics Unit is analyzing the effect of these updated equations to hydraulic designs. Additional guidance may be forthcoming. In the interim, engineers should use best engineering judgement, especially when the updated equations show a decrease in flow when compared to SIR 2009-5158 equations. For additional guidance please contact the Hydraulics Unit.



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NEW STANDARD 840.55 DRAINAGE SUMMARY SHEETS REQUIREMENTS

This announcement is to inform all interested parties of revisions made for the [January 2024 edition of the NCDOT Roadway Standard Drawings](#). The release includes new Standard 840.55 (*Manhole Frame and Cover flush with slab for open throat catch basin*). This detail requires a new column to be shown on the Drainage Summary Sheet (DSS) to cover the pay item for Standard 840.55.

Please note the following actions required to update DDS:

- ORD Projects - No action is required; this new column will be added by default when it is released.
- V8 Projects – This column will have to be added manually when required.

ITEMS DRAINAGE STRUCTURES	E: IN. FT. PAY ITEM (SEE X B)	B	FRAME, GRATES, AND HOOD			CONCRETE TRANSITIONAL SECTION		D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.2	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.3	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAG	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M. H. FRAME AND COVER FOR O.T.C.B STD. 840.55			
			C.B. STD. 840.01 OR STD. 840.02	STD. 840.03	C.B. STD. 840.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05																													
FT. LIN. FT.			E	F	G																														

Figure 1: Example on how the Drainage Summary could be modified in V8

NOTE: ALL PROJECTS WITH A JANUARY 2024 OR LATER LET DATE SHALL BE PREPARED IN ACCORDANCE WITH THE 2024 STANDARD SPECIFICATIONS AND 2024 ROADWAY STANDARD DRAWINGS

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