STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

MEMORANDUM TO: Hydraulics Unit Project Managers
Roadway Design Unit Project Engineers

FROM: David S. Chang, Ph.D., PE
State Hydraulics Engineer

Jay A. Bennett, PE
State Roadway Design Engineer

DATE: September 6, 2013

SUBJECT: Automated Drainage Summary Sheet

The Hydraulics Unit, Roadway Design Unit, and Information Technology (CADD Services) have developed an application that will create an Automated Drainage Summary Sheet by running Geopak Drainage and several Visual Basic Applications that append data to elements in the Microstation Drainage (drn) file. After the data has been appended to the elements, the final application will create a drainage summary sheet that captures the majority of the Standard Drainage Pay Items. The remaining Non-Standard Drainage Pay Items will require modification by Roadway Design Staff.

Based on the information above, the following plan of action shall be implemented immediately on all future projects submitted to the Hydraulics Unit for Drainage Recommendations. All projects for which Drainage Recommendations have already been received, or those that are currently being designed by the Hydraulics Unit, are not subject to this plan of action.

Hydraulics and Hydraulic Unit Consultant Firms

- Follow the process outlined in the referenced document
  - https://connect.ncdot.gov/resources/hydro/Geopak%20Applications%20Documents/Drainage%20Summary%20Sheet%20-%20Steps%20for%20Hydraulics%20Users.pdf

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- The Hydraulics User will need to select Statewide Tier or Regional/Sub-Regional Tier when they launch the Drainage Summary Sheet Application.
- It is critical to review the "Dump" Column on the far right side of the Drainage Summary Sheet to insure standard items are not missed.

Roadway Design Unit

- Enter data on the "Home Page" Screen to customize sheet numbers and column headings based on Project Tier.
- Items that should be on the "54 inch" & Over" Sheet of the Drainage Summary will need to be moved to the appropriate place.
- Items from the "Dump" Column will need to be moved to columns customized by Roadway Design.
- Hide unused columns by using custom tools provided in the spreadsheet to achieve a printable width.
- Review all data for completeness and accuracy.

The Help Tab on the Drainage Summary Excel Spreadsheet also offers additional guidance for Roadway Design Staff. If you have any further questions, please contact Bill Elam at 919-707-6718, Steve Brown at 919-707-7032 or Allison White at 919-707-6341.

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