

PRECONSTRUCTION ADVISORY MEMORANDUM

NUMBER: 5

SUBJECT: Exceptions to SCDOT Hydraulic Design Criteria

TO: E. S. Eargle, Preconstruction Support Engineer
Matt Lifsey, Lowcountry Regional Production Engineer
Mike Barbee, Pee Dee Regional Production Engineer
Randall Young, Midlands Regional Production Engineer
Mark Lester, Upstate Regional Production Engineer
Steve Ikerd, FHWA

FROM: Mitchell D. Metts, P.E., Director of Preconstruction – Original Signature on File

DATE: December 1, 2009

This memorandum clarifies the Department's requirements for obtaining a design exception to hydraulic design criteria. A Hydraulic Design Exception Request must be completed when a designer proposes a design element that does not meet the criteria or policies of the SCDOT "Requirements for Hydraulic Design Studies."

Department Intent

The general intent of the South Carolina Department of Transportation is that all of its hydraulic design criteria shall be met. However, recognizing that this may not always be possible, the Department has established a process to evaluate and approve exceptions to its hydraulic design criteria.

Procedures

Hydraulic Design Exception Requests are only required where criteria or policies in the "*Requirements for Hydraulic Design Studies*" are not met in the following areas:

1. Non-Regulated Floodway & Floodplain Requirements – Section 1.1.2
2. Freeboard for Bridges – Section 1.1.5.1 and 1.1.5.3
3. Spread Criteria for Pavement Drainage – Section 2.2.4
4. Pressure Flow for Drainage Facilities – Section 2.2.9

When a design exception is identified, the designer will first seek to eliminate the exception to design. If the design exception cannot be eliminated, the Regional Production Group Design Manager (for In-House Designed Projects) or the Engineer of Record (for Consultant Designed Projects) will prepare a Hydraulic Design Exception Request and submit it to the Program/Project Manager. The request shall include the attached request form and any supporting data needed for justification. The justification may include items such as site constraints, construction costs, construction considerations, environmental impacts, and/or right-of-way impacts.

The Program/Project Manager will present the Hydraulic Design Exception Request to the Regional Production Engineer. If the Regional Production Engineer recommends approval, the request will be forwarded to the Hydraulic Design Support Engineer. The Hydraulic Design Support Engineer will perform an objective review, from a statewide perspective, and may attach comments to the request. The request will then be returned to the Regional Production Engineer, who will submit the request to the Director of Preconstruction for consideration of approval. For projects where the Federal Highway Administration has full oversight, the Director of Preconstruction will submit approved requests to the Federal Highway Administration for concurrence.

MDM:cks

Attachment

File:HDSO/CKS

HYDRAULIC DESIGN EXCEPTION REQUEST

Submitted to: _____
Program/Project Manager

Submitted by: _____
RPG Design Manager or Engineer of Record

Date: _____

PROJECT INFORMATION

PCN: _____
County: _____
Route: _____
Crossing: _____
Project Type (Replacement, Rehabilitation, etc.): _____
Traffic Data: _____
Project Cost Estimate: _____

BASIS OF DESIGN EXCEPTION

Request for Approval of Design Exception to “*Requirements for Hydraulic Design Studies.*”

- Non-Regulated Floodway & Floodplain Requirements – Section 1.1.2
- Freeboard for Bridges – Section 1.1.5.1 and 1.1.5.3
- Spread Criteria for Pavement Drainage – Section 2.2.4
- Pressure Flow for Drainage Facilities – Section 2.2.9

***DESCRIPTION OF DESIGN EXCEPTION**

***JUSTIFICATION FOR DESIGN EXCEPTION**

***DESCRIPTION OF NECESSARY ACTIONS AND ASSOCIATED COSTS TO ELIMINATE DESIGN EXCEPTION**

***DESCRIPTION OF HOW DESIGN EXCEPTION MAY IMPACT FUTURE CONSTRUCTION**

*Attach additional pages if needed.

RECOMMENDED:

_____ Date: _____
Regional Production Engineer

REVIEWED: No Comments Comments Attached

_____ Date: _____
Hydraulic Design Support Engineer

APPROVED:

_____ Date: _____
Director of Preconstruction

FHWA CONCURRENCE: (For Full Oversight Projects)

_____ Date: _____
Federal Highway Administration