



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.  
GOVERNOR

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

E. NORRIS TOLSON  
SECRETARY

MEMO TO: Design Services Project Engineers & Squad Leaders  
Hydraulics Project Engineers & Squad Leaders  
Roadway Design Project Engineers & Squad Leaders

FROM: John Alford, PE *John Alford*  
Assistant State Roadway Design Engineer

DATE: July 17, 1998

SUBJECT: Masonry Drainage Structures

There is some inconsistency in the use of the pay item for "Linear Meters" of masonry drainage structures.

Attached is a copy of the February 13, 1996 letter from Bob Brown, Archie Hankins, and Tom Shearin pertaining to 48" (1.2m) and smaller Masonry Drainage Structures. This letter states we pay for masonry drainage structures on the linear meter basis when they exceed 1.55 linear meters. On page 412 of the Standard Specifications it is also stated we should pay for masonry drainage structures on the linear meter basis when they exceed 1.55 linear meters. However; on page 411 it is stated that we should pay for masonry drainage structures on the linear meter basis when they exceed 1.5 linear meters.

In discussions with Victor Barbour it has been determined that to avoid contractor claims we should use the lower specification book value of 1.5 meters as the break point between the "Per Each" and "Linear Meter" pay item. The CADD drainage summary sheets are being revised accordingly.

Please contact me if you have any questions.

JEA

attachment

cc: Bob Brown, PE  
Archie Hankins, PE  
Tom Shearin, PE  
Debbie Barbour, PE  
Charlie Casey, PE  
Gary Lee, PE  
Glenn Plott





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GARLAND B. GARRETT JR.  
SECRETARY

February 13, 1996

MEMORANDUM TO: Design Services Project Engineers & Squad Leaders  
Hydraulics Project Engineers & Squad Leaders  
Roadway Project Engineers & Squad Leaders

FROM: *WRB*  
W. R. Brown, P.E. - State Design Services Engineer  
*ALH*  
A. L. Hankins, P.E. - State Hydraulics Engineer  
*GTS*  
G. T. Shearin, P.E. - State Roadway Design Engineer

RE: Masonry Drainage Structures

Currently, there is some confusion in terminology used to describe masonry drainage structures constructed with pipes 48 inches or smaller and the associated pay items that should be used. The definitions of these terms or pay items are as follows:

1. "Standard" or "Minimum" depth is the depth of box in the Roadway Standard Drawings or Special Details that is needed for a particular pipe size.
2. "Extra Depth" is the depth specified by the plans that exceeds the depth of the standard or minimum depth Masonry Drainage Structure.
3. The pay item for "Linear Feet" or "Linear Meters" of Masonry Drainage Structure is that depth of Masonry Drainage Structure that exceeds 5 linear feet or 1.5 Linear Meters.

Please remember that it is possible to have an "extra depth" Masonry Drainage Structure but not have a pay item for linear foot or meter of Masonry Drainage Structure. Also it is possible to have a "standard" or "minimum" depth box which would require a pay item for linear foot or meter of Masonry Drainage Structure.

Please find attached an illustration which shows the application of these terms. if anyone has any questions please contact the Plan Review Section in Design Services and they will be happy to assist.

WRB/JVB/ra