

ORIGINATION FORM

THE INFORMATION BELOW IS TO BE PROVIDED BY THE ORIGINATOR

Modify Specification _____943_____

Section/File number

New Section _____.

Section number

Subject: Requirements For Pipe Joints When Rubber Gaskets Are To Be Used.

Origination date: December 28, 2005

Originator: Rick Renna
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Problem statement: (1) Pipe joint pressure ratings are lower than pressures foreseen in field conditions,
(2) Infiltration of water through constructed pipe joints are sometimes justified illicitly by citing the soil-tight criteria,
(3) Eliminate repetitious references to pipe joint testing, combining all references to a single location in 430-4.1
(4) Update pipe sizes in 948-2.3 to conform to AASHTO M294

Information source: Comments from the PAG have been incorporated into the new language

Background data: All pipe manufacturers currently have FDOT-approved water-tight joints

Desired implementation date: Beginning with the January 2007 letting.



Florida Department of Transportation

JEB BUSH
GOVERNOR

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DENVER J. STUTLER, JR.
SECRETARY

MEMORANDUM

DATE: March 13, 2006
TO: Specification Review Distribution List
FROM: Duane F. Brautigam, P.E., State Specifications Engineer
SUBJECT: PROPOSED SPECIFICATIONS CHANGE: 9430100 –CORRUGATED STEEL PIPE AND PIPE ARCH (INCLUDING UNDERDRAIN)

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification for Corrugated Steel Pipe and Pipe Arch (Including Underdrain).

This change was proposed by Linda Seigle of the Drainage Office to resolve conflicts between Department documents and to provide clarification.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or to my attention via e-mail at SP965DB or duane.brautigam@dot.state.fl.us. Comments received after April 10, 2006 may not be considered. Your input is encouraged.

DFB/ft

Attachment

COMMENTS:

Submitted by:

Phone #:

CORRUGATED STEEL PIPE AND PIPE ARCH (INCLUDING UNDERDRAIN)
(REV 1-252-28-06)

ARTICLE 943-1 (pages 849 and 850) is deleted and the following substituted:

943-1 General Requirements.

Corrugated steel pipe, including round culvert pipe, pipe arch and underdrain and coupling bands for each type shall conform to AASHTO M 36 ~~[AASHTO M 36M]~~. Provide certification of the actual mean diameter of pipe shipped to the project. Include in the certification the minimum and maximum diameters used to certify the actual mean diameter. The certification shall be attested to by a person having legal authority to bind the manufacturing company.

In addition, except for underdrain corrugated steel pipe including pipe arch shall be fabricated with helical corrugations with a minimum of two annular corrugations formed on each end of each pipe to accommodate a coupling band. Annular fabrication is not permitted unless specifically called for in the plans or specifications.

Ensure that the pipe joints have been tested at the plant hydrostatically at the specified pressure using test methods in ASTM D 3212 with the exceptions of section 7.3 and 7.4. In lieu of section 7.4, deflect the entire pipe length, including the joint, to a 5% reduction in internal diameter using the parallel plate testing methodology of ASTM D 2412. Testing must be witnessed by the State Materials Office. ~~When rubber gaskets are to be installed in the pipe joint, the gasket shall be the sole element relied on to maintain a tight joint. Test pipe joints at the plant hydrostatically using test methods in ASTM D 3212 [ASTM D 3212M]. Soil tight joints must be watertight to 2 psi [13.8 kPa]. Watertight joints must be watertight to 5 psi [34.5 kPa] unless a higher pressure rating is required in the plans.~~

