



## Florida Department of Transportation

JEB BUSH  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

DENVER J. STUTLER, JR.  
SECRETARY

May 25, 2006

Mr. Greg Williams  
Program Operations Engineer  
Federal Highway Administration  
545 John Knox Road, Suite 200  
Tallahassee, Florida 32303

Re: Office of Design, Specifications  
Section 943  
Proposed Specification: 9430100 – Corrugated Steel Pipe and Pipe Arch (including Underdrain).

Dear Mr. Williams:

We are submitting, for your approval, two copies of a proposed Supplemental Specification for Corrugated Steel Pipe and Pipe Arch (including Underdrain).

This change was proposed by Linda Seigle of the State Drainage Office to resolve conflict between Department documents and for clarification.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via Email to SP965DB or [duane.brautigam@dot.state.fl.us](mailto:duane.brautigam@dot.state.fl.us).

If you have any questions relating to this specification change, please call Duane F. Brautigam, State Specifications Engineer at 414-4110.

Sincerely,

Signature on File

Duane F. Brautigam, P.E.  
State Specifications Engineer

DFB/ft

Attachment

cc: General Counsel  
Florida Transportation Builders' Assoc.  
State Construction Engineer

**CORRUGATED STEEL PIPE AND PIPE ARCH (INCLUDING UNDERDRAIN)  
(REV 1-255-12-06-06)**

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,~~ one side of the pipe to a 5% reduction in internal diameter using the parallel plate testing methodology of ASTM D 2412. Load the deflected pipe to within ½ the actual pipe diameter from the centerline of the gasket or just beyond the end of the hugger band, whichever is greater. Ensure that the loading mechanism does not contact the hugger band or associated hardware. 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.

**CORRUGATED STEEL PIPE AND PIPE ARCH (INCLUDING UNDERDRAIN)  
(REV 5-12-06)**

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. 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.

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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 one side of the pipe to a 5% reduction in internal diameter using the parallel plate testing methodology of ASTM D 2412. Load the deflected pipe to within  $\frac{1}{2}$  the actual pipe diameter from the centerline of the gasket or just beyond the end of the hugger band, whichever is greater. Ensure that the loading mechanism does not contact the hugger band or associated hardware. Testing must be witnessed by the State Materials Office.