



Florida Department of Transportation

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GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

STEPHANIE KOPELOUSOS
SECRETARY

January 30, 2008

Dr. Leslie McCarthy, PhD, P.E.
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 Dr. McCarthy:

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 Rick Renna of the State Drainage Design Office to eliminate incorrect references to chapters of the Materials Manual.

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.

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: Gregory Jones, General Counsel
Florida Transportation Builders' Assoc.
State Construction Engineer

943 CORRUGATED STEEL PIPE AND PIPE ARCH (INCLUDING UNDERDRAIN).
(REV ~~4-24-07/1-18-08~~) (~~FA 7-16-07~~) (~~1-08~~)

ARTICLE 943-1 (Page 838) 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.

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 and shown to meet the requirements of Section 6.2 of the Materials Manual, which is available at the following URL:~~

~~www.dot.state.fl.us/specificationsoffice/materialsmanual/section62.pdf.~~

— 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 Sections 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 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 shall be witnessed by the Engineer.

ARTICLE 943-5 (Page 839) is deleted and the following substituted:

943-5 Bituminous Coating and Paved Invert.

When bituminous coating is specified, the pipe, or pipe arch, shall be coated in accordance with the requirements of AASHTO M 190, for Type A (Fully Bituminous Coated).

When bituminous coated and paved invert are specified the pipe or pipe arch shall be coated and paved in accordance with AASHTO M 190, for Type C (Fully Bituminous Coated and Paved). The temperature of the asphalt at the time of coating and the duration of the pipe submerged time shall be optimized such that excess coating does not adhere to the pipe.

**943 CORRUGATED STEEL PIPE AND PIPE ARCH (INCLUDING UNDERDRAIN).
(REV 1-18-08)**

ARTICLE 943-1 (Page 838) is deleted and the following substituted:

943-1 General Requirements.

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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 Sections 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 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 shall be witnessed by the Engineer.

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943-5 Bituminous Coating and Paved Invert.

When bituminous coating is specified, the pipe, or pipe arch, shall be coated in accordance with the requirements of AASHTO M 190, for Type A (Fully Bituminous Coated).

When bituminous coated and paved invert are specified the pipe or pipe arch shall be coated and paved in accordance with AASHTO M 190, for Type C (Fully Bituminous Coated and Paved). The temperature of the asphalt at the time of coating and the duration of the pipe submerged time shall be optimized such that excess coating does not adhere to the pipe.