

# Design Standards Letter

**Letter Number: S-2013-06**

**Letter Date: 06/17/2013**

**Effective Date: 08/01/2013**

**Section/Plan No.: 109, 610, 724, 725, 730, 732, 1007, 1028, 1041, 1047, 1052**

**Subject: Revised Supplement to the Standard Specifications**

## Body

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**TO:** All Central Office and District Offices

**FROM:** Joseph G. Jones  
Engineering Policy Administrator

**DATE:** June 17, 2013

**SUBJECT:** Engineering Policy  
Standard Specifications Letter No 06, 2013  
Revised Supplement to the Standard Specifications

The Supplemental Specifications to the *2011 Missouri Standard Specifications for Highway Construction*, effective August 1, 2013 are now available. These revisions will be in effect with the August 2013 bid opening.

Questions regarding the Supplemental Revisions to the Standard Specifications should be directed to Sam Niederhelm, Central Office, Engineering Policy Group, at 573-526-5645 or myself at 573-751-3813.

## MINOR REVISIONS:

### Sec 610

Sec 610.1 Corrected misspelled word.

Sec 610.4.2.2 Corrected section numbering

### Sec 725

Sec 725.4.2 Revised misspelled word.

### Sec 1052

*Sec 1052.30.9* Revised specification reference to Sec 1001.14.

## **MAJOR REVISIONS:**

### **Sec 109**

*Sec 109.11.2* Clarified calculating equipment cost as a result of a delay caused by MoDOT.

### **Sec 724**

*Sec 724.1* Clarified that, where appropriate this specification applies to pipe arches.

*Sec 724.1.1* Revised table to specify group and size of pipe ranges.

*Sec 724.1.3* Revised to allow helical rib (Type 1A) in accordance with FHWA HD-5.

*Sec 724.1.4* Added to allow contractor option for furnishing pipe one size larger than specified as long as minimum fill heights are met.

*Sec 724.3.1* Revised to clarify the type of performance inspection required.

*Sec 724.3.2* Revised frequency of inspection of Group C pipes to be at the discretion of the engineer.

*Sec 724.3.3* Revised to specify actual inside diameter shall be used to determine deflection.

*Sec 724.3.4* Added to specify contractors shall provide video recording of each inspection.

*Sec 724.3.5* Added to specify the minimum requirements for manual inspection.

*Sec 724.3.4.1* Deleted in its entirety.

*Sec 724.3.6* Renumbered accordingly.

*Sec 724.3.5.1* Deleted in its entirety.

*Sec 724.3.7* Renumbered and added heading 'Inspection Criteria' and revised table.

*Sec 724.3.8* -

*Sec 724.3.10* Renumbered accordingly.

### **Sec 725**

*Sec 725.1.3.2* Revised to require predominate soil type to have a pH in the range of 5 to 9 for metal pipe and a pH in the range of 4 to 9 for polymer coated pipe.

*Sec 725.1.3.3* Added to require bedding and backfill material that has greater than 35% passing #200 sieve, the resistivity of bedding or backfill shall be greater than 1500 ohm-cm for metal pipe and greater than 750 ohm-cm for polymer coated pipe.

*Sec 725.1.3.4* Added to require contractor to conduct pH and resistivity testing and reports 30 days prior to installation.

*Sec 725.4.1* Revised maximum particle size of 1.25 inches for bedding material. Specified that pipes with corrugated exterior, backfill gradations shall have maximum particle size that will permit filling of corrugations.

## **Sec 730**

*Sec 730.1.2* Clarified that when furnishing thermoplastic pipe, the pipe shall meet properties described in this specification and be installed in accordance with standard plans. Any properties exceeding this specification shall be specially designed and submitted with relevant engineering data and stamped by a professional engineer registered in the state of Missouri.

*Sec 730.2* Revised table for appropriate item callouts.

*Sec 730.3 -*

*Sec 730.3.3.1* Added ultraviolet protection requiring none of PVC pipe to be exposed sunlight after installation.

*Sec 730.4.1* Revised bedding and backfill material requirements to be in accordance with AASHTO M145, A-1a, A-1-6, A-2-4 or A-2-5.

*Sec 730.4.2* Clarified that when rock, soft, unstable, or unyielding material is present in the bottom of trench, a 6.0 inch minimum foundation be provided in addition to bedding.

## **Sec 732**

*Sec 732.1.3* Clarified that safety end sections may be used with thermoplastic pipe.

*Sec 732.1.4* Clarified that tapered sleeves may be required to join end sections with runs of pipe.

*Sec 732.1.5* Added to specify that a tapered sleeve can be used as an option to join thermoplastic pipe to flared end section, at no cost to the Commission, when not required by plans.

*Sec 732.1.6* Added to specify that a one size larger flared end section may be used joining to thermoplastic pipe to aid fitment, at no cost to the Commission.

*Sec 732.5* Clarified that payment for tapered sleeves will be included in contract unit price for pipe.

**Sec 1007**

*Sec 1007.2.1* Revised Type 1 aggregate for base to consist of crushed stone, sand and gravel or reclaimed asphalt or concrete. The fraction passing No. 40 sieve shall have a plasticity index of six.

*Sec 1007.3.1* Revised Type 5 aggregate for base to consist of crushed stone, sand and gravel or reclaimed asphalt or concrete.

**Sec 1028**

*Sec 1028.3.1* Revised table to show section property limits.

*Sec 1028.3.5* Deleted in its entirety.

**Sec 1041**

*Sec 1041.1* Removed the word “corrugated” to refer to polypropylene pipe.

*Sec 1041.3* Clarified that polypropylene pipe, fittings and couplers to be in accordance with ASTM F 2236, for double wall and ASTM F 2764, for triple wall.

*Sec 1041.3.1* Revised tables to show section property limits.

*Sec 1041.3.5* –

*Sec 1041.3.6* Deleted in its entirety.

**Sec 1047**

*Sec 1047.1* Clarified that this specification covers polyethylene pipe.

*Sec 1047.3* Clarified that polyethylene pipe, couplings and fittings shall be in accordance with AASHTO M 294 for corrugated or AASHTO MP 20 for steel reinforced pipe.

*Sec 1047.3.1* Revised tables to show property limits.

*Sec 1047.3.2* Clarified that pipe shall be Type S and be corrugated unless specified.

*Sec 104.3.5* Deleted in its entirety and renumbered subsequent sections accordingly.