

05-12

**SAN ANTONIO WATER SYSTEM  
SAN ANTONIO, TEXAS**

**SPECIFICATIONS SEWER DUCTILE IRON PIPE AND FITTINGS  
WITH CALCIUM ALUMINATE MORTAR LINING**

APRIL 1999

**DESCRIPTION**

This item shall consist of Ductile Iron Pipe and fittings with calcium aluminate mortar lining sewer installation in accordance with these specifications and as directed by the Engineer.

**MATERIAL**

1. Pipe: The pipe shall ductile iron in accordance with AWWA C151 for forced main applications. The pipe shall be ductile iron in accordance with ASTM A 746 for gravity main applications.

2. Joints and Fittings:

2.1 Joints: Joints shall push-on joints or mechanical joints in accordance with AWWA C111.

2.2 Fittings: Fittings shall be ductile iron at least Class 54 thickness and in accordance with the requirements of AWWA C110. Joints for fittings shall be mechanical joints and shall conform to AWWA C111. Fittings shall be SewperCoat lined and coated with bituminous paint.

3. Thickness: The thickness of ductile iron pipe shall be determined by considering the trench load and internal pressure separately in accordance with AWWA C150.

4. Approved Manufacture Linings:

4.1 All pipe and fittings shall be lined with SewperCoat as manufactured by Lafarge Calcium Aluminates or approved equal. SewperCoat is a calcium aluminate mortar made of fused calcium aluminate cement and fused calcium aluminate aggregates. The thickness of the lining shall be as a minimum, double the thickness of the standard thickness as identified on AWWA C104, Sec. 4.7, paragraph 4.7.1. The lining thickness may taper to less than the specified minimum at the ends of the pipe. Cracks, other than closed hairline cracks and/or fine crazing, shall not be acceptable. Loose areas of cement lining are not allowable. A seal coat shall be applied to the lining as identified on AWWA C104, Sec. 4.11.

5. Coating: All pipe and fittings shall be coated as identified below:

5.1 Outside Coating: The outside coating shall be a minimum of 1 mil bituminous paint according to AWWA C151, Sec. 4.3. Prior to lining, the exterior and interior of the spigot end, including the spigot face, shall be coated with a minimum of 8 mils of epoxy.

5.2 Inside Coating: Before lining, the inside of the socket, including a portion of the gasket cavity and a portion of the pipe barrel, shall be coated with a minimum of 8 mils of epoxy.

**APPROVED MANUFACTURES LIST**

Griffin Pipe