



Design Criteria

Plumbing – 22

Design Criteria Applies to:	<input checked="" type="checkbox"/> Building System	<input type="checkbox"/> Building Exteriors	<input checked="" type="checkbox"/> Building Interiors
	<input checked="" type="checkbox"/> Planning & Development	<input type="checkbox"/> Site Improvement	<input checked="" type="checkbox"/> New Construction

22 11 00 Piping Materials

This section addresses the design requirements for Plumbing Piping materials.

Sanitary Piping 15150

Exterior Underground House Sewer

Size	Material Requirement
<= 15"	Service Weight hub and spigot pattern Cast Iron soil pipe in accordance with ASTM A-74 and ANSI A-40-1 with positive double seal compression type rubber gaskets conforming to ASTM C-564
> 15"	Pre-cast reinforced concrete pipe, hub and spigot pattern in accordance with ASTM C-76 with ring rubber gaskets

Ductile Iron Pipe Class 56 with push-on joint can be used for piping 4" diameter and above. Ductile Iron Pipe Class 52 with push-on joint can be used for piping under 4" diameter.

Manufacturer AB&I Foundry, Tyler Pipe, Charlotte Pipe, and Husky, Mission, MG piping products.

Interior

Underground

All Sizes	Service Weight hub and spigot pattern Cast Iron soil pipe in accordance with ASTM A-74 and ANSI A-40-1 with positive double seal compression type rubber gaskets conforming to ASTM C-564
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Above ground

All Sizes	Service Weight Cast Iron soil pipe or no-hub Cast Iron soil pipe conforming to ASTM A-74 or to CISPI 301-90. No Hub to be with heavy duty couplings
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Interior Pump Discharge

All Sizes	Galvanized steel pipe schedule 40, with threaded drainage fittings
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Storm Piping 15160

Exterior Underground

Size	Material Requirement
<= 15"	Service Weight hub and spigot pattern Cast Iron soil pipe in accordance with ASTM A-74 and ANSI A-40-1 with positive double seal compression type rubber gaskets conforming to ASTM C-564
> 15"	Pre-cast reinforced concrete pipe, hub and spigot pattern in accordance with ASTM C-76 with ring rubber gaskets

Ductile Iron Pipe Class 56 with push-on joint can be used for piping 4" diameter and above. Ductile Iron Pipe Class 52 with push-on joint can be used for piping under 4" diameter.

Interior

Underground

All Sizes Service Weight hub and spigot pattern Cast Iron soil pipe in accordance with ASTM A-74 and ANSI A-40-1 with positive double seal compression type rubber gaskets conforming to ASTM C-564

Above ground

All Sizes Service Weight Cast Iron soil pipe or no-hub Cast Iron soil pipe conforming to ASTM A-74 or to CISPI 301-90

Domestic Water 15140**Exterior Underground Service**

Size Material Requirement

< 3" Copper pipe shall be hard temper type "K" in accordance with ASTM B-88 or Brass-Standard weight iron pipe size seamless pipe with a minimum copper content of 85 percent, in accordance with ANSI H-27.1

3" & 4" Ductile Iron pipe ANSI/AWWA C151/A21.51 Class 52, tar coated, cement lined. Joints shall be mechanical joints meeting ANSI A-21.11.1980 (AWWA CIII-80), with set screw retainer glands, or push-on joints with field-lock gaskets.

>=4" Ductile Iron pipe ANSI/AWWA C151/A21.51 Class 56, tar coated, cement lined. Joints shall be mechanical joints meeting ANSI A-21.11.1980 (AWWA CIII-80), with set screw retainer glands, or push-on joints with field-lock gaskets.

Manufacturer Griffin, Tyler, US Pipe

Interior**Underground**

Size Material Requirement

< 3" Copper pipe shall be hard temper type "K" in accordance with ASTM B-88 or Brass-Standard weight iron pipe size seamless pipe with a minimum copper content of 85 percent, in accordance with ANSI H-27.1

>= 3" Ductile Iron pipe Class 52, tar coated, cement lined. Joints shall be mechanical joints meeting ANSI A-21.11.1980 (AWWA CIII-80)

Above Ground

All Sizes Copper pipe shall be hard temper type "K" in accordance with ASTM B-88 or Brass-Standard weight iron pipe size seamless pipe with a minimum copper content of 85 percent, in accordance with ANSI H-27.1

or
2" – 8" CTS Copper Tubing grooved system as manufactured by Victaulic Company is also allowed.

Manufacturer Mueller, NIBCO, Revere

Fire Line**Exterior Underground Service**

Size Material Requirement

< 3" Copper pipe shall be hard temper type "K" in accordance with ASTM B-88 or Brass-Standard weight iron pipe size seamless pipe with a minimum copper content of 85 percent, in accordance with ANSI H-27.1

3" & 4" Ductile Iron pipe ANSI/AWWA C151/A21.51 Class 52, tar coated, cement lined. Joints shall be mechanical joints meeting ANSI A-21.11.1980 (AWWA CIII-80), with set screw retainer glands, or push-on joints with field-lock gaskets.

>= 4" Ductile Iron pipe ANSI/AWWA C151/A21.51 Class 56, tar coated, cement lined. Joints shall be mechanical joints meeting ANSI A-21.11.1980 (AWWA CIII-80), with set screw retainer glands glands, or push-on joints with field-lock gaskets.

Fire Standpipe

Interior

Size Material Requirement

All Sizes Piping of fire protection systems with operating pressure up to 300 psi shall be Black steel pipe schedule 40 with 350 PSI threaded malleable cast iron fire line fitting. Style 07 Zero-Flex rigid couplings and fittings for fire standpipe system as manufactured by Victaulic Company is also allowed.

Manufacturer Wheatland Tube, US Pipe, Youngstown, Republic

Gas Piping

Exterior Underground Service

All Sizes Extra heavy steel pipe – Schedule 80 with Extruded Polyolefin Coating manufactured in accordance with Con Edison Spec. G-8062-7 dated July 18, 1988. All underground piping sections shall be welded. All joints shall be coated and taped with Tapecoat H35 Gray by Tapecoat Company or equal in accordance with Con Ed specification G-8209 dated 12/2/98. **Damaged pipe or pipe with damaged coating is not acceptable.** Changes in direction of piping shall be made with 90 degree elbows having coupling-compression type ends.

Interior

<= 4" Standard Weight Black Steel pipe-Schedule 40, seamless or welded mild steel for piping systems operating at ½ psig or less in accordance with Building Department requirements and ANSI Z223.1-1974, National Fuel Code.
 Joints-Screwed fitting, malleable iron Pipe joint compound shall only be used at pipe joints. The use of Teflon tape or compounds, pipe dope or lampwick will not be permitted.

> 4" Standard Weight Black Steel pipe-Schedule 40, seamless or welded mild steel for piping systems operating at ½ psig or less in accordance with Building Department requirements and ANSI Z223.1-1974, National Fuel Code.
 Joints-Welded

