

## DIVISION 2 – SITEWORK

### Section 02610 - Site Chilled Water and Heating Water Utilities

#### Introduction

Piping of site utilities

CHILLED WATER, HEATING WATER

#### Part 1 - General

- Refer to Section 15050 common piping materials and methods.
- Refer to Section 15250 for insulation requirements.
- Refer to Section 15980 for meter requirements.

#### Part 2 - Products

- Pipe Schedule:

<u>Service</u>	<u>Size</u>	<u>Pipe</u>	<u>Fittings</u>	<u>Joints</u>
Chilled Water	4" and larger	Ductile iron, lined	Ductile iron, lined	Bell & spigot or mechanical joint
	16" and over	May Use Concrete cylinder	Concrete cylinder	bell & spigot
	Below 4"	Type K copper seamless Hard drawn	wrought copper	15% silver solder
Heating Water Pre-insulated Pipe System	All sizes	Copper - Type "K" Seamless Hard Drawn	Wrought Copper	15% Silver Brazed
		<u>Or</u>  Schedule 40 Steel	<u>Or</u>  Forged carbon steel	<u>Or</u>  Bevel welded

- Pipe & fittings
  - Ductile iron pipe and fittings to be cement lined and coated with bituminous material per AWWA.
  - Concrete cylinder pipe and fittings to be cement or cement-mortar lined and coated per AWWA.
  - Pre-insulated pipe system, Terra-Gard System by Perma-Pipe or approved equal
    - Copper carrier tube, ASTM B88, Type K, seamless, hard temper

- Steel carrier pipe to be ASTM A53, seamless, carbon steel, Schedule 40
- Polyurethane, closed cell insulation
- PVC jacket per ASTM D1784
- Valves – Buried
  - Chilled Water
    - Resilient seated gate valves for pipe up to 12”.
    - Butterfly valve for pipe over 12” conforming to AWWA C504 and Tucson Water Specification No. 1411
  - Heating Water
    - Butterfly valve conforming to AWWA C504 and Tucson Water Specification No. 1411
- Joint Restraint Devices
  - Ductile iron mechanical joints – Megalug joint restraint
  - Ductile iron flange connection –Megaflange joint restraint flange adapter
  - Integral ductile iron joint – TR Flex restrained joint
  - Concrete cylinder pipe - welded
- Valve Boxes – cast iron box and cover
- Air Relief Valve Vaults – cast in place concrete with 30” diameter cover
- Air Relief Valves – APCO Series 140C, cast iron body, SS float, SS lever, Buna –N seat

### **Part 3 - Execution**

- Chilled water piping
  - Ductile iron pipe to be installed per AWWA C600 and Tucson Water Standard Specification No. 1401.
  - Concrete cylinder pipe to be installed per AWWA M9 and manufacturer’s recommendations.
- Hot water piping
  - Installed per pre-insulated piping system manufacturer’s instructions
- Testing: Hydrostatic, no leakage permitted@100 psig, witnessed by UA Inspector before joints are concealed.

### **End of Section 02610**