1. GENERAL

1.01 SUBMITTALS

.1 Submit shop drawings/product data sheets for all equipment and associated hardware specified in this Section.

.2 Include pump motor product data sheets and pump performance curves with shop drawing/product data sheet submission.

1.02 CLOSEOUT SUBMITTALS

.1 Submit manufacturer/supplier installation certification letters as specified in Part 3 of this Section.

.2 Submit a copy of a letter from the domestic cold water booster pump set supplier certifying proper installation, and a copy of pump supplier's start-up report, all as specified in Part 3 of this Section.

.3 Submit, prior to Substantial Performance of the Work, start-up or test data specified in Part 3 of this Section.

2. PRODUCTS

2.01 DOMESTIC HOT WATER RECIRCULATING PUMPS

.1 All bronze construction centrifugal pumps in accordance with drawing schedule and complete with:

.1 lead free cast bronze casing with flanged pipe connections;

.2 alloy steel shaft with integral thrust collar, copper shaft sleeve, and oil lubricated bronze sleeve bearings;

.3 balanced lead free cast bronze impeller;

.4 motor conforming to requirements of Section 20 05 00 – Common Work Results for Mechanical, connected to motor by means of a 4-spring coupling with guard;

.5 mechanical seal.

.2 Manufactures:

.1 S.A. Armstrong Ltd.;

.2 ITT Bell & Gossett;

.3 Grundfos Canada Inc.;

.4 Patterson Pump Company.

.3 Domestic Hot Water Recirculating Pumps Automatic Controls

.1 Equal to ITT Bell & Gossett Model TC-1 115 volt, programmable, Automatic Timer Kit to control circulating pump on and off at pre-set minimum 15 minute intervals, and equipped with ON (continuous run), OFF (at all times), and TIMER (run at programmed times) modes.

.2 Equal to ITT Bell & Gossett AQS Series 115 volt Aquastat to automatically control pump on and off in response to domestic water temperature and equipped with a stainless steel pipe clip, bimetal sensing element, and insulated #18 AWG 450 mm (18") wire leads.

3. EXECUTION

3.01 INSTALLATION OF DOMESTIC HOT WATER RECIRCULATING PUMPS

.1 Provide horizontal in-line domestic hot water circulating pumps.

.2 Install pumps in place in vertical piping approximately 1.2 m (4') above floor in accordance with pump manufacturer's instructions.

.3 For equipment/system start-up requirements, refer to Section 20 05 00 – Common Work Results for Mechanical.

.4 Include for 2 hours of on-site training for 2 groups of 6 people. Training is to be a full review of all components including but not limited to a full operation and maintenance demonstration, with abnormal events.

3.02 INSTALLATION OF DOMESTIC HOT WATER RECIRCULATING PUMPS CONTROLS

End of Section