

## **BID DIVISION HFH – 23B: HEATING**

SUBMIT PROPOSAL TO: HFH of Douglas County, Minnesota, Inc.  
1211 N Nokomis NE, Alexandria, MN 56308

FOR: **Construction of Habitat for Humanity Homes**

**EXCLUDED:**

1. Electrical and controls wiring – boiler

INCLUDED: Furnish and install complete residential in-floor heating system to include, but not restricted to:

Provide all labor, materials, equipment, delivery, fuel surcharges and site supervision to complete the in-floor heating system installation as shown and specified, including but not limited to the following technical specification sections: 23 21 13

**ALSO INCLUDED:**

1. Required permits, inspections, and certifications
2. Functioning systems upon the completion of construction
3. Compliance with all applicable Building Codes
4. All penetrations or core drilling required
5. Layout of all work
6. All labor and equipment to unload material
7. Cutting and patching required for all openings
8. Verify existing site conditions
9. Coordination with other trades
10. This project is managed by Habitat. All contractors on this project are considered prime contractors. Coordination between trades and volunteers is to be considered part of this work scope.

### **SECTION 23 21 13**

#### **SCOPE OF WORK**

Furnish and install a complete residential in-floor heating system to include, but not restricted to:

All materials and labor for in-floor heating system installation, including but not limited to:

- Appropriately sized boiler as per Manual J, to be operated off-peak
- Install tubing on insulating foam in coordination with other subs
- Separate loops for: bedrooms, bathroom, living room, kitchen/dining room on single thermostat
- Manifold shall be copper with manual flow adjusting valve
- Piping from boiler to manifold shall be copper
- System to be filled with 50% propylene glycol solution
- Air eliminator to be Spiro Vent or approved equivalent that removes micro bubbles without spitting water
- Provide all fittings and controls, pumps, and items needed for complete installation, including a name brand thermostat