Radiant In-Floor Heating
Requirements for Permit and Inspection

Scope
In-Floor Heating Systems that are designed as the primary heat source in a building or as a secondary heat source (i.e. a house heated with a forced-air furnace that has in-floor radiant under floor tube in the basement). This applies to both radiant and forced air in-floor heating and does not include electric.

Design Requirements
1. A professional engineer licensed to practice in the province of Ontario, or
2. An individual who holds one of the following qualifications:
   a) HVAC House (part 9 only); or
   b) Building Services; or
   c) HRAI certified
3. Installation completed by an HRAI certified installer and a licensed plumber
4. Installation shall be in accordance with CAN/CSA-B214 or as per 6.2.1.1 for the appropriate circumstance

Submission Requirements
The plans and specifications submitted shall include, but not be limited to, the following information:
1. The schematic arrangement of the system and the equipment specifications including, but not limited to, boilers, pumps, expansion tanks, zone controls, mixing valves and other system components.
2. Piping specifications, spacing, sizes, maximum loop lengths, and support details.
3. Floor plans showing a general layout of the piping loops required for each room or space and the location of the main headers, if applicable. (this can be provided by the contractor with a reference note on architectural plans)
4. Cross-sections through typical floor assemblies to show piping loop locations and the type of insulation to be provided.
5. System operating parameters including supply and return water temperatures, design flow rates and heat output coefficient of individual piping loops.
6. Room by room heat loss calculations
7. Schedule 1 designer information
8. Licensed Plumber verification form
9. Part 9 buildings Energy efficiency design as per SB-12:
   a) Performance model for Primary Heat Source; or
   b) Prescriptive when installed as an additional heat source
10. Part 3 buildings Energy efficiency design as per SB-10

Inspection Requirements
1. Inspection must be requested and approved before covering
2. An Air/Pressure test will be required at the time of inspection on all in-floor systems.
3. All radiant under-floor systems shall have insulation installed on the underside of the tubing
4. Each zone or radiant loop must have a method of system balancing

Final Requirements
1. Part 9 Building - Final HVAC
2. Part 3 Building – Peng Final