



Application Form

2007 System Showcase

Radiant Panel Association
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Step 1 CATEGORY

1-5 Radiant Zones - new residential

Step 2 SUBMITTED BY

Step 3 PROJECT INFORMATION

PROJECT NAME: Nervegna Project LOCATION: Pleasant Valley, NY
YEAR COMPLETED: 2006 SQ FT LIVING AREA: 3800

STRUCTURE AGE: new SPACE HEATED/COOLED BY RADIANT: _____ sq ft
LEVELS/STORIES: 3

STRUCTURE CONSTRUCTION: [not selected] Log Home

STRUCTURE USE: residence

PROJECT TYPE: _____

Heating Cooling Snow Melting Other Type

RADIANT PANEL LOCATION: _____
 Floor wall Ceiling Other Location _____

Radiant Zones: # 4

ADDITIONAL FUNCTIONS:

Fan Coil Domestic HW Hot Tub Pool

Convector Other Functions

UTILITY: _____
 Electric Natural gas Propane Oil
 Solar Other Utility

HEAT SOURCE: _____
 Resistance Boiler Heat Pump Water Heater
 Furnace Other Heat Source

Step 4 PANEL DESCRIPTOR

Floor Panels

TUBE OR ELEMENT:

- Cable Film PEX tube PB tube Rubber PE/Metal
 PE Copper Other Tube/Element Pex-Al-Pex

PANEL CONSTRUCTION:

- Concrete slab on grade Concrete slab below grade Sand below concrete slab
 Gypsum on concrete Gypsum on wood subfloor Concrete/wood subfloor
 Wood sleepers Under wood subfloor Suspended in joist bay
 Aluminum plates Reflective barrier Premanufactured panels

Other Panel Construction

PANEL COVERING:

- Carpet glued Carpet & pad Hardwood Softwood
 Ceramic Tile Stone Brick Bare

Other Panel Covering

OTHER PANEL DETAILS:

Tube Size: 1/2 inch Cable Size: _____ watts/ft

Spacing: 8 to _____ in o/c (range) Other Panel Details:

Wall Panels

- Cast iron Welded steel Extruded aluminum
 Embedded tube/cable Premanufactured electric

Other Wall

Ceiling Panels

- Embedded tube/cable Premanufactured electric Premanufactured hydronic

Snow Melt Panels

SNOW MELT CONSTRUCTION:

- Embedded tube Embedded cable
 Asphalt Concrete Pavers

SNOW AND ICE MELTING:

- Always clear and dry Melt and run off Melt within an hour of snowfall

Step 5 CONTROLS

INDOOR SENSING:

5 Air sensing thermostats Panel sensors Other

OUTDOOR SENSING:

 Reset heat source high limits 3 Secondary loop temp controls

PANEL TEMPERATURE CONTROL:

3 3-way mixing valves 4-way mixing valves Injection valves

 Injection Pumps Heat exchangers On-off valves

6 On-off pumps 1 On-off heat source

ROOM CONTROL:

 Zone valves 6 Manifold telestats Pumping zones

 Thermostatic valves Relays (electric system)

Step 6 ADDITIONAL DESCRIPTION

The owner of this dream Log home was well informed about radiant heating systems. Most of the information he obtained was from the Radiant Panel Association's website. He also found us through the RPA's member listing link. After completing a heat loss analysis, we determined a method to install the heating system. Although the heat loss indicated that the entire heat load could be covered with the radiant panel, hot water coils were added for quicker response from setback and as a backup. The Wirsbo multicor tubing was installed above the subfloor and sandwiched between the finish floor. There are four types of floor finishes, hardwood, ceramic, carpet and concrete. Insulation was added beneath, in joist bays. Zoning was accomplished with individual circulators and manifold actuators. The system has a total of four radiant zones. Water temperature mixing was accomplished with motorized three-way mixing valves, these valves also reset based on outdoor temperatures. The heat source is the Buderus GB142 wall hung boiler, which is a fully modulating and condensing boiler, with efficiencies at 95%+ AFUE. Overall, the system works very well, it is efficient, and maintains comfortable surroundings in this cozy log home.







SINGH MECHANICAL CO. LLC.
 NERVEGNA PROJECT

