



Application Form

2007 System Showcase

Radiant Panel Association
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Response ID Z1704

Date Posted 5/8/07

Step 1 CATEGORY

1-5 Radiant Zones, new residential

Step 2 SUBMITTED BY

[Empty box for submitted by information]

Step 3 PROJECT INFORMATION

PROJECT NAME: Harris/Scott Residence LOCATION: Worthington, MA
YEAR COMPLETED: 2006 SQ FT LIVING AREA: 3300

STRUCTURE AGE: New SPACE HEATED/COOLED BY RADIANT: 3700 sq ft
LEVELS/STORIES: 2

STRUCTURE CONSTRUCTION: wood frame

STRUCTURE USE: residence

PROJECT TYPE: _____

- Heating Cooling Snow Melting Other Type

RADIANT PANEL LOCATION: _____
 Floor wall Ceiling Other Location _____

Radiant Zones: # _____

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 DESCRIPTON

Floor Panels

TUBE OR ELEMENT:

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

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: 1/2-5/16 inch **Cable Size:** _____ watts/ft

Spacing: 6 to 8 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 2 Secondary loop temp controls

PANEL TEMPERATURE CONTROL:

<u> </u> 3-way mixing valves	<u> </u> 4-way mixing valves	<u> </u> Injection valves
<u>2</u> Injection Pumps	<u> </u> Heat exchangers	<u> </u> On-off valves
<u> </u> On-off pumps	<u> </u> On-off heat source	<u> </u>

ROOM CONTROL:

<u> </u> Zone valves	<u>5</u> Manifold telestats	<u>1</u> Pumping zones
<u> </u> Thermostatic valves	<u> </u> Relays (electric system)	<u> </u>

Step 6 ADDITIONAL DESCRIPTION

The Harris/Scott residence provided a fantastic canvas for a great New England radiant design. The home features a very tight envelope using Icynene insulation. This demands the use of a ventilation system to provide an air exchange as the home is too tight for natural air movement. This feature was blended into a Trane 4 zone hydro-air system that provides the 2nd stage of heating/cooling/and air quality control for the home. The homeowners were very well educated in radiant heating and know exactly what they wanted as a focal point of their new home--warm floors.

The home's central heating plant is a Weil McLain Ultra 155 modulating gas boiler. It serves the air system, domestic hot water, and 2 injection mixed temperature loops (radiant and wall panels). Both injection mixed systems are served by the new Tekmar TN4 system. The radiant using TN4 thermostats to trigger the operation of the circulators and the panel heaters using an outdoor set point control that turns the pumps on below a pre-set outside temperature. Each of the 5 panels uses a non-electric control head to control the individual room temperatures. The home's radiant system features Viega climate panels, slab on grade (garage), and a small staple up system for the 2nd floor bath. The system provided a great winter of warmth and another installation for a neighbor's new home!



Step 8 SUPPORTING PHOTOGRAPHS

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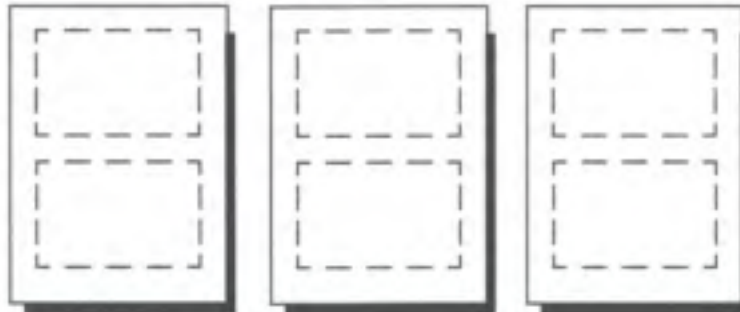
Attach photos to standard letter size paper (8 1/2 x 11") as shown below. You may include a maximum of three sheets of paper (six photos) for this section.

Required photos:

- tube or cable rough in
- finished installation of radiant heated area

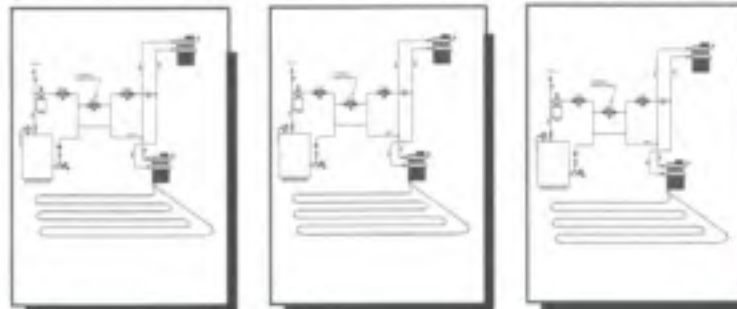
Suggested photos:

- building exterior
- panel installation
- mechanical room
- controls
- unique features



Step 9 SCHEMATICS or DRAWINGS (maximum 3 - 8 1/2 X 11)

Attach up to three sheets of letter size paper (8 1/2 x 11") containing drawings or schematics depicting the mechanical/electrical details of the system. These may be hand sketches, professional drawings or computer generated.





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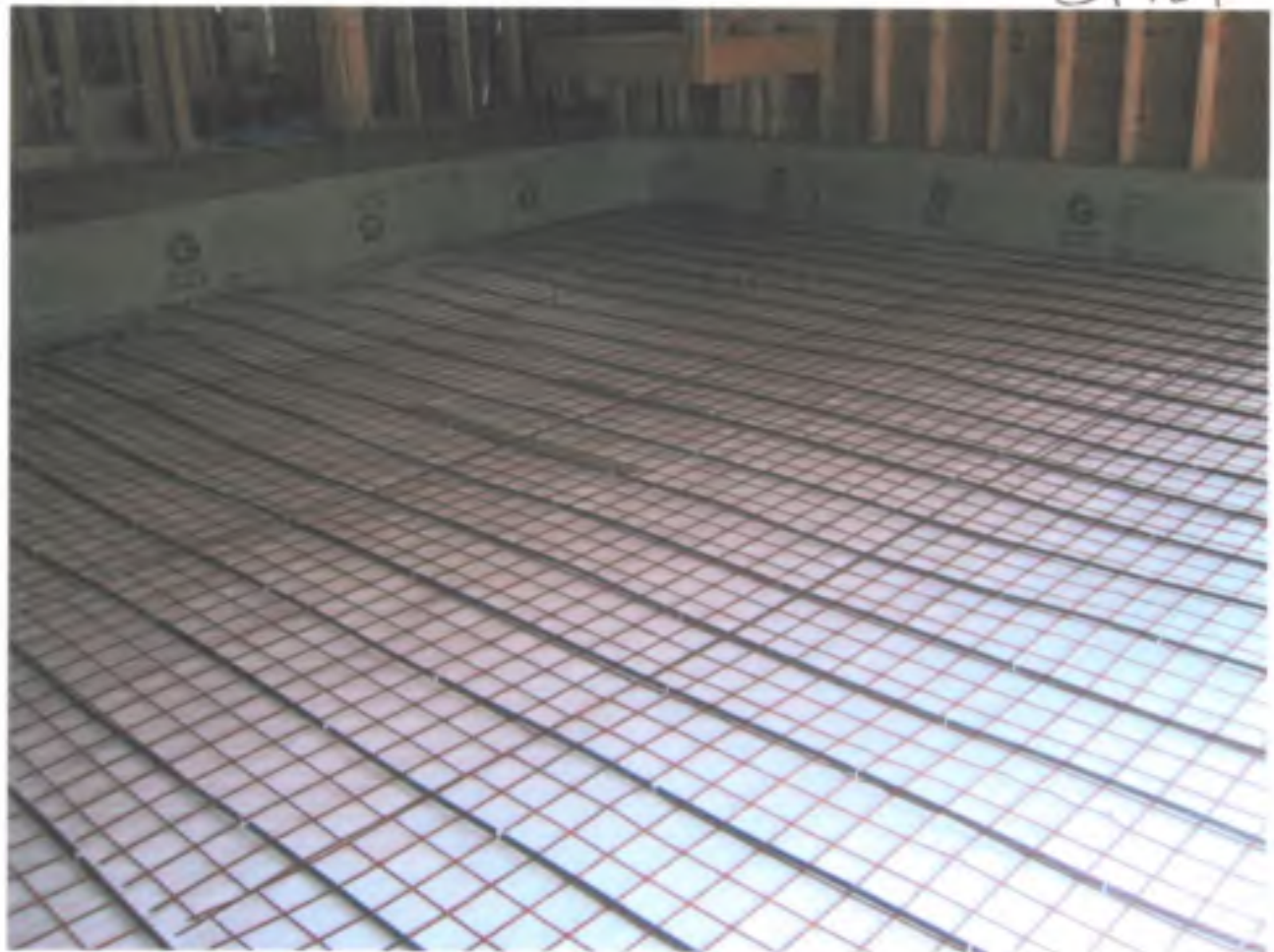


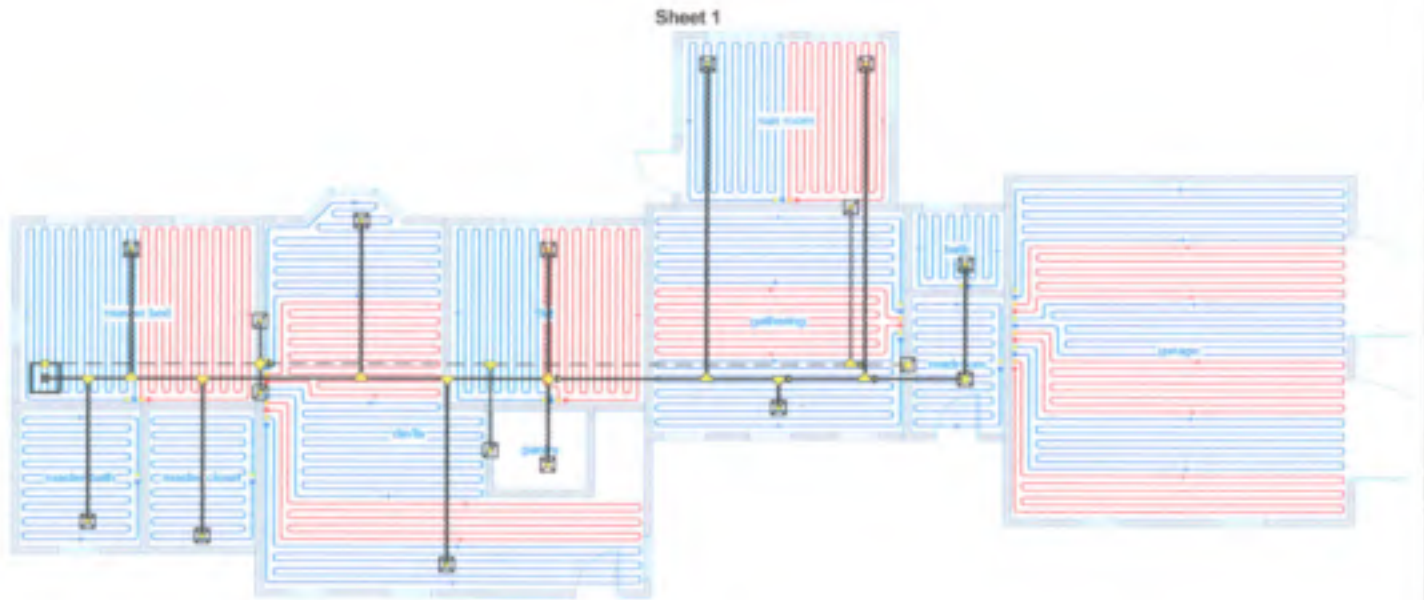
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2nd floor



Job #: Harris / Scott
 Performed by Jim P for:

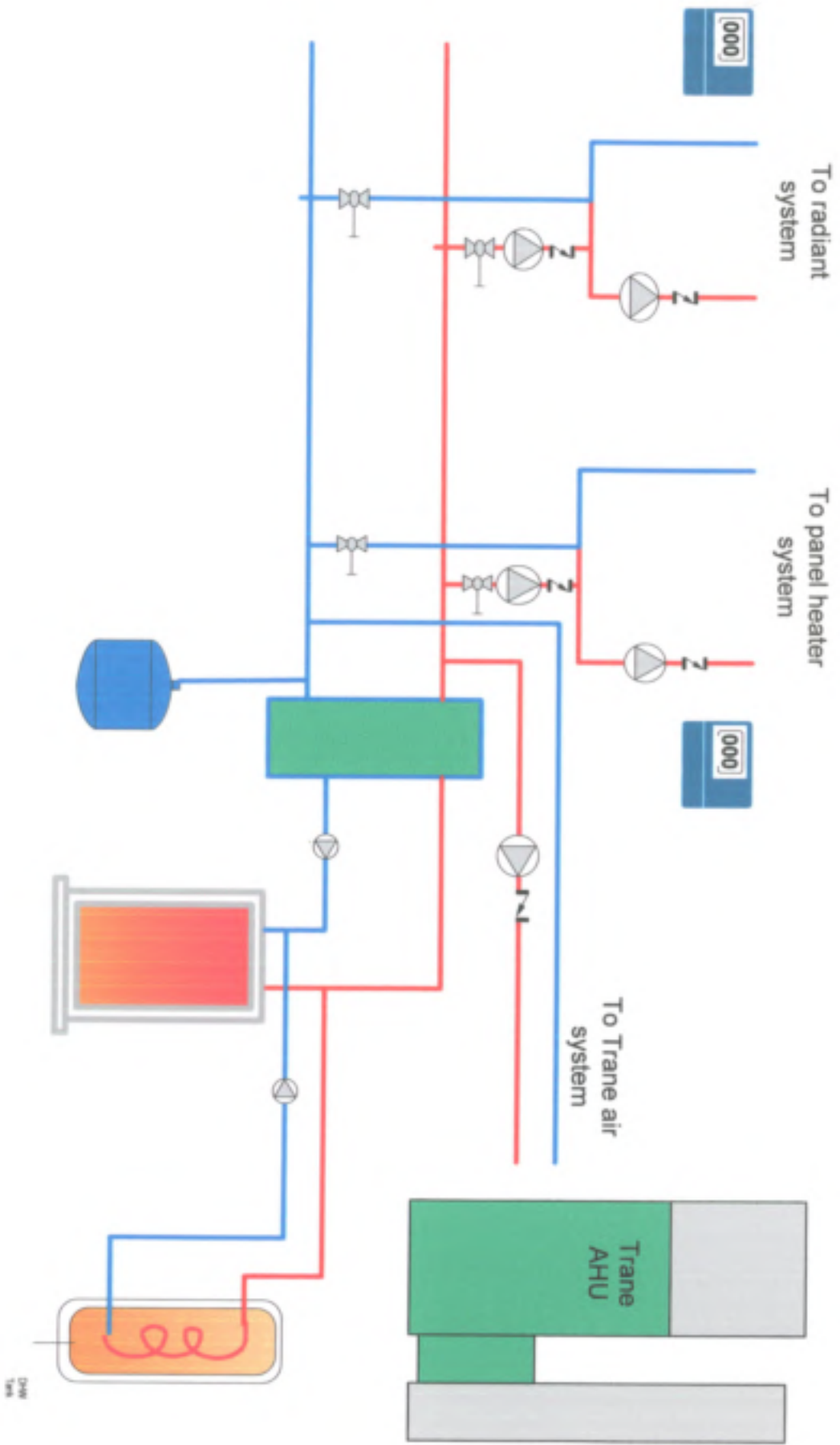
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 Harris / Scott residence

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Harris residence hydronic design
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