



Application Form

2007 System Showcase

Radiant Panel Association
1399 S. Garfield Ave., Loveland, CO 80537

Phone: (970) 613-0100
Fax: (970) 613-0098

Response ID RE701

Date Posted 5/9/07

Step 1 CATEGORY

Retrofit - Adapting radiant to an existing system or structure

Step 2 SUBMITTED BY

Step 3 PROJECT INFORMATION

PROJECT NAME: More Residence LOCATION: Kalispell, MT
YEAR COMPLETED: 2007 SQ FT LIVING AREA: 2,000

STRUCTURE AGE: 35 yrs SPACE HEATED/COOLED BY RADIANT: 1809 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: # 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 DESCRIPTON

Floor Panels

TUBE OR ELEMENT:

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

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 ENGINEERED BAMBOO

OTHER PANEL DETAILS:

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

Spacing: 9 to 12 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:

4 Air sensing thermostats 3 Panel sensors Other _____

OUTDOOR SENSING:

Reset heat source high limits Secondary loop temp controls _____

1 Boiler equipped outdoor reset _____

PANEL TEMPERATURE CONTROL:

1 3-way mixing valves 4-way mixing valves Injection valves

Injection Pumps Heat exchangers On-off valves

On-off pumps On-off heat source 1 Mon Con Boiler

ROOM CONTROL:

3 Zone valves Manifold telestats 1 Pumping zones

Thermostatic valves Relays (electric system) _____

Step 6 ADDITIONAL DESCRIPTION

This installation is a radiant retrofit, the former heat source being a cast iron boiler with fin tube convectors. The only way to fit radiant to this existing structure was to go with an above floor tube and plate with an over pour in the basement. The main floor subfloor was channeled to accommodate the plate and tubing, then engineered bamboo was nailed down directly over the top. Basement install consists of an 1 1/2" over pour, there's 1" H.D. foam insulation then the pex. Basement thin slab is bare, its' been polished and sealed.

We installed a 105 Weil McLain Ultra with basic on/off zone controls and Tekmar 509 thermostats. System is setup for medium and low temp, medium for main floor @ 140 degree flow for the basement @ 105 degree. Mixing down for the low temp is accomplished using a basic 3-way thermostatic mixing valve. Boiler is installed using the Boiler equipped outdoor reset.

To take care of the hot Domestic water demand we installed a Ultra 40 DHW by Weil McLain.

All manifolds are in boiler room except for basements zone #4, its located in closet adjacent to Family Room.

Step 7 DESCRIPTIVE PROJECT PHOTO



Step 8 SUPPORTING PHOTOGRAPHS

R270

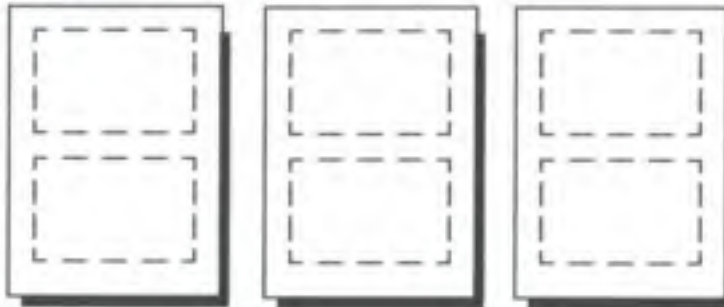
Attach photos to standard letter size paper (8 1/2 x 11") as shown below. You may include a maximum of three sheets of paper (six photos) for this section.

Required photos:

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

Suggested photos:

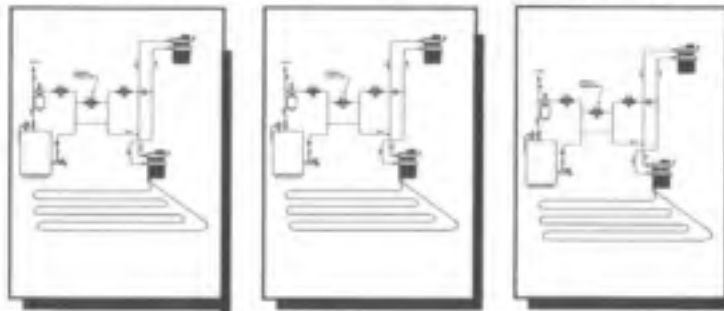
- building exterior
- panel installation
- mechanical room
- controls
- unique features



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.



BEFORE:



RE701





RE701

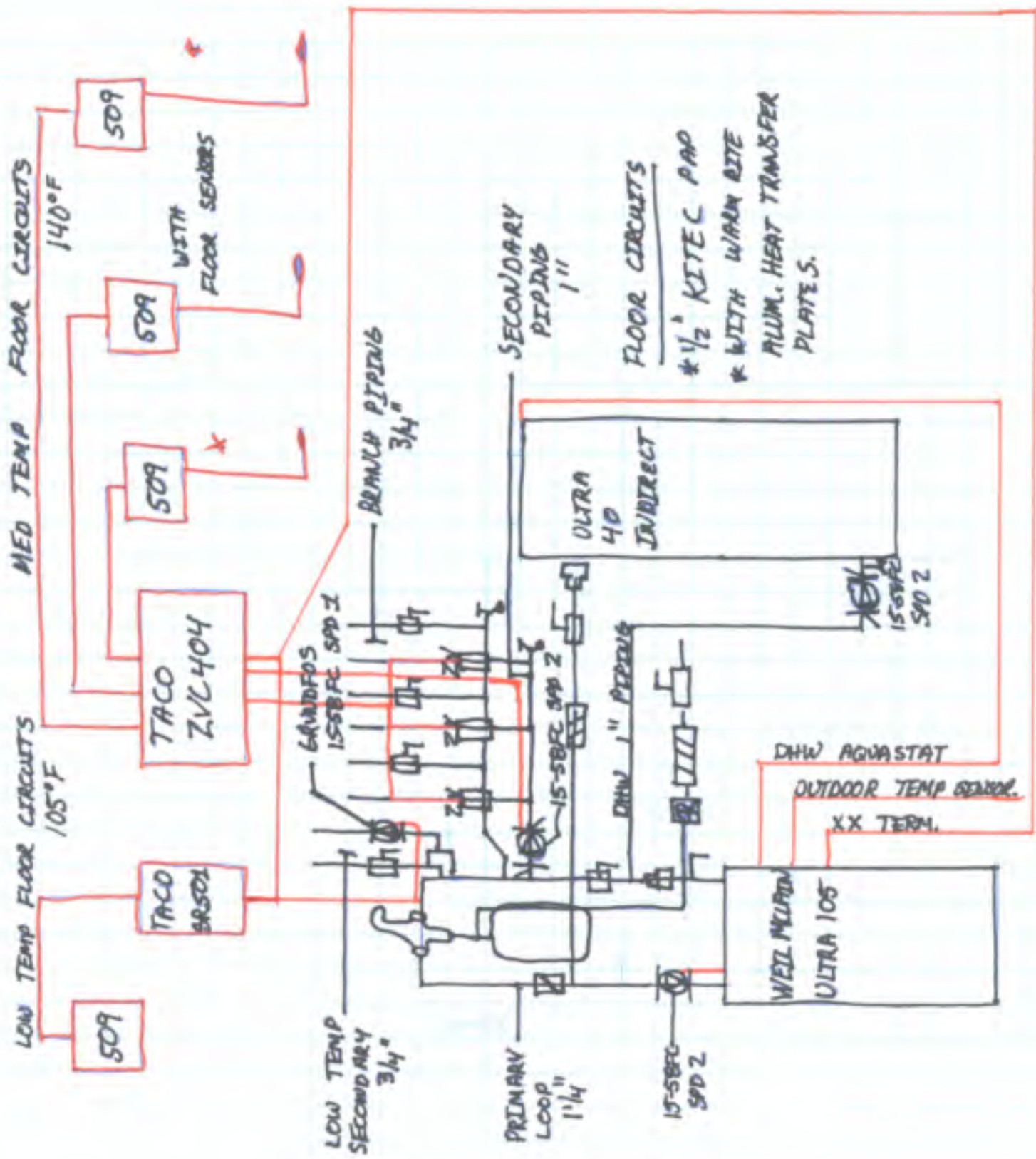




RE701



MLCRORIE HEATING AND COOLING - TOM MORE
RE 701



FLOOR CIRCUITS
 * 1/2" KITEC PIP
 * WITH WARM RITE
 ALUM. HEAT TRANSFER
 PLATES.

ULTRA
 40
 INDIRECT
 15-58FC
 SPD 2

DHW AQUASTAT
 OUTDOOR TEMP SENSOR.
 XX TERM.

LOW TEMP
 SECONDARY
 3/4"

PRIMARY
 LOOP
 1 1/4"

15-58FC
 SPD 2

MED TEMP FLOOR CIRCUITS
 140°F

LOW TEMP FLOOR CIRCUITS
 105°F

509

509

509

TACO
 ZVL404

TACO
 BR501

509

6 AND FOS
 15-58FC SPD 1

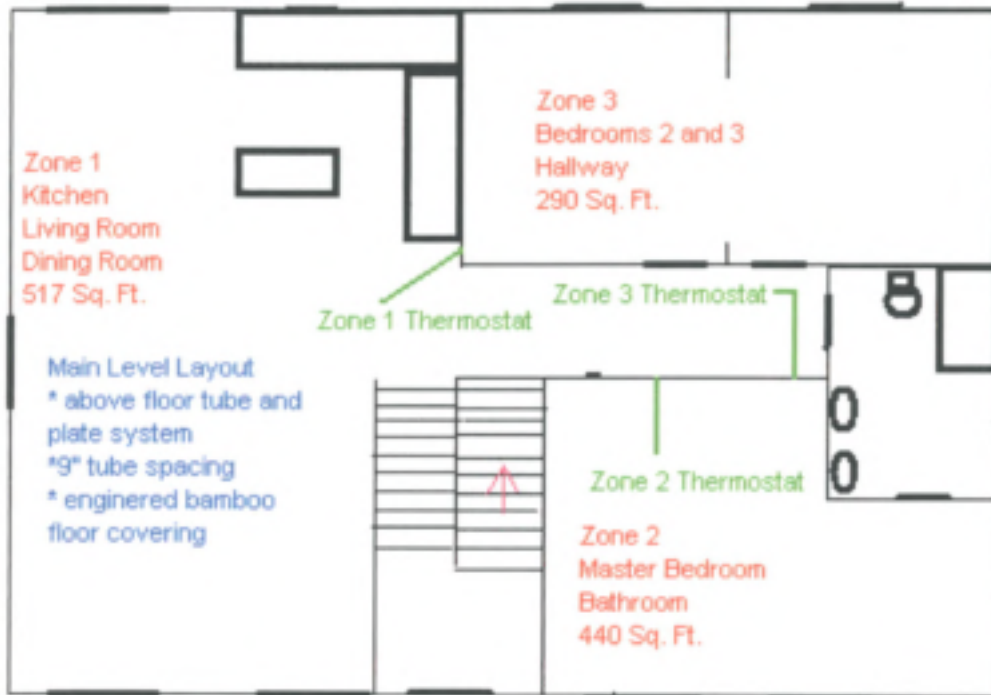
BRANCH PIPING
 3/4"

SECONDARY
 PIPING
 1"

WEIL MCLAIN
 ULTRA 105

Main Floor

RE701



Basement

RE701

