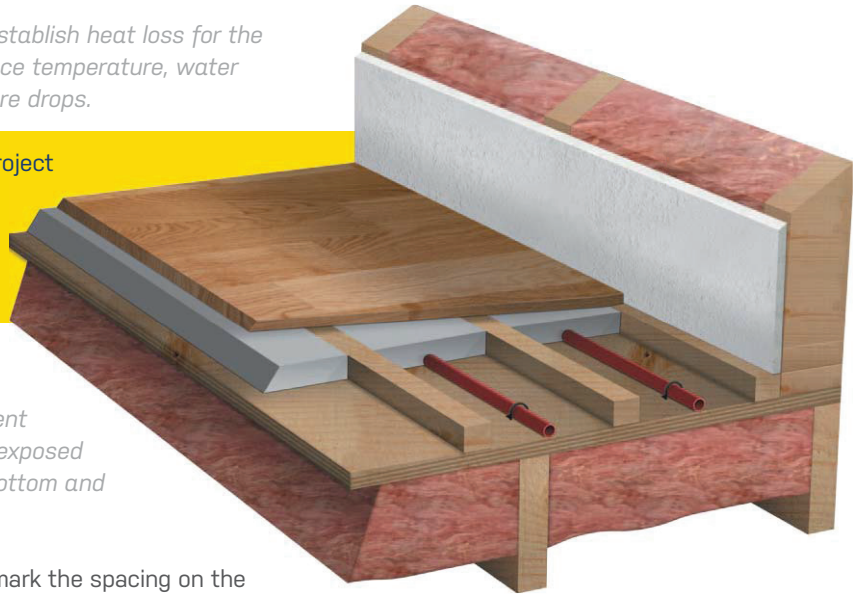


## SUSPENDED FLOORS WITH POURED UNDERLAYMENT

*NOTE: Use MrPEX® Design Software to establish heat loss for the structure, and to calculate output, surface temperature, water temperature and tubing/manifold pressure drops.*

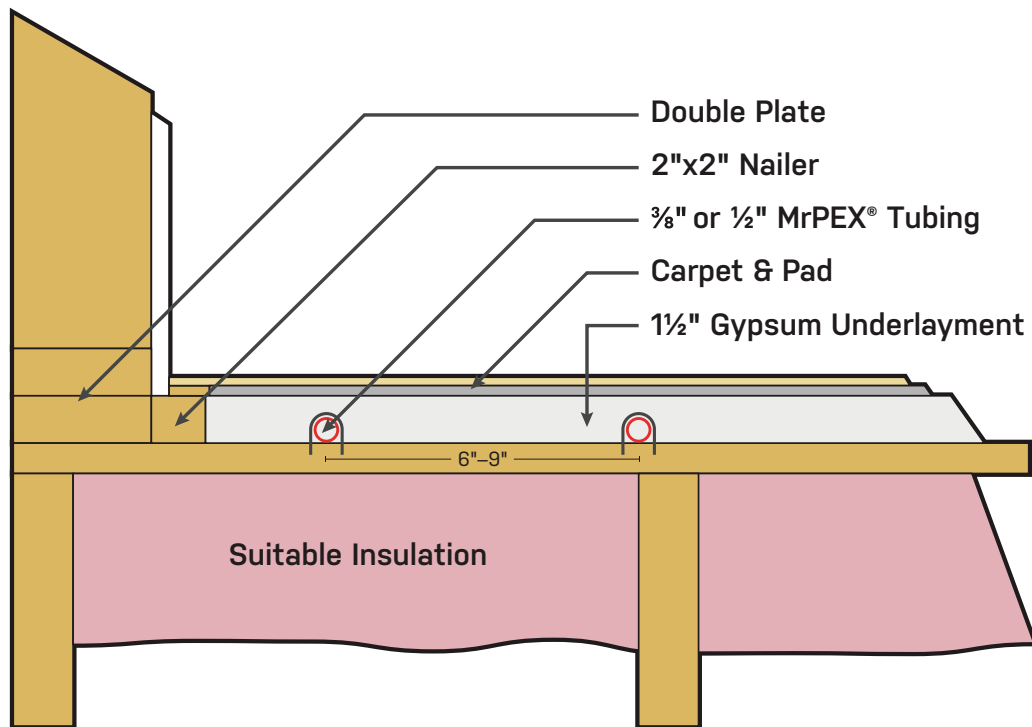
**STRUCTURAL NOTE:** Project Engineer, Project Architect or System Designer need to verify and approve the structural impact of the radiant system on the building prior to installation.

*NOTE: In this method, walls should be framed with double plate on the bottom to accommodate the underlayment thickness. This leaves the second plate exposed to be screwed to the sheetrock at the bottom and accommodates normal door heights.*

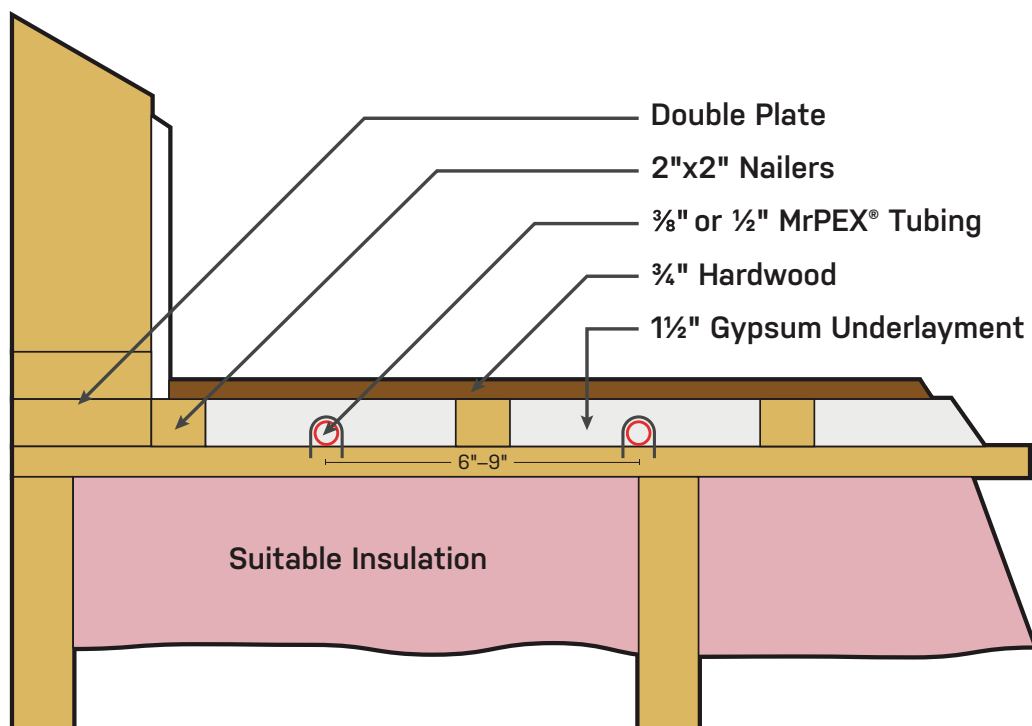


- › Use a tape measure or story pole to mark the spacing on the subfloor at certain intervals to aid the routing of the tubing and to keep the correct spacing. It is especially helpful around the manifold and where closer spacing is needed.
- › Place the uncoiler in an out of the way area, still close enough to easily feed the tubing to the area you are working on. Place the tubing coil on uncoiler and remove tape/straps. To keep uncoiler from tipping over, you can fasten it to a piece of plywood.
- › Pull the loose end of the coil over to the manifold and record the footage mark on tubing. Cut the end of the tubing with a suitable tubing cutter making sure the end is square and clean. If PEX-AL-PEX is used, also ream the end of the tubing using the Mr PEX® Reaming tool. Attach a bend support to the tube. Connect to the supply of the first loop on the manifold using the correct fitting assemblies as outlined in "Connecting the Loops to the Manifold" beginning on page 49.
- › Start routing the tubing along the supply path (typically along the outside wall) attaching it with a suitable staple gun every 2–3 feet or so on the straights as necessary and every 1 foot on the bends. It is important to secure the tubing enough so that it does not float up to the surface during the underlayment pour.
- › Tube embedded in gypsum or lightweight concrete should have a minimum of 3/4" underlayment material over the highest point of the tube
- › Complete the loop following the design. Once back at the manifold record the footage mark on tubing. Attach another bend support to the tube. Cut the end of the tubing with a suitable tubing cutter making sure the end is square and clean. If PEX-AL-PEX is used, also ream the end of the tubing using the Mr PEX® Reaming tool. Connect to the return of the first loop on the manifold using the correct fitting assemblies as outlined in "Connecting the Loops to the Manifold" beginning on page 49.
- › Repeat the same process for remaining loops.

### WITH CARPET & PAD



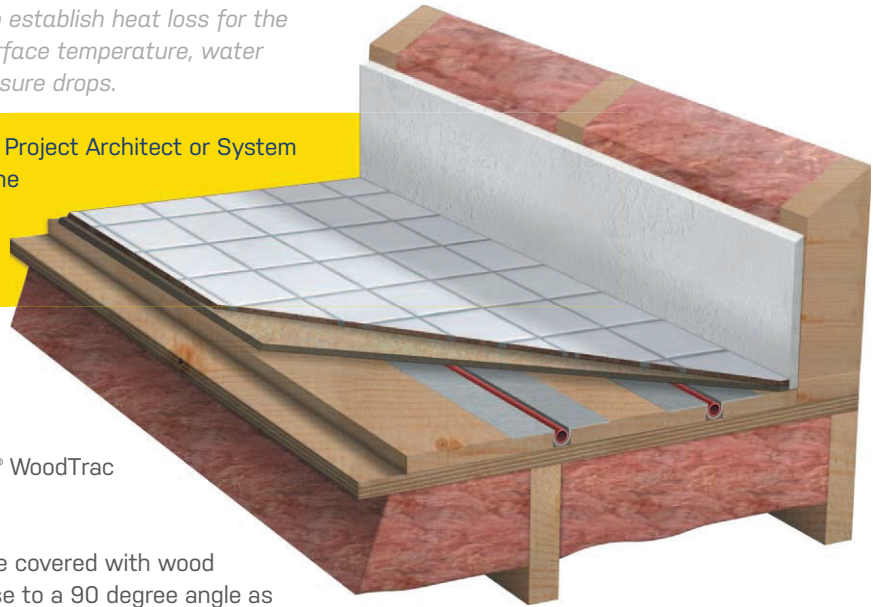
### WITH HARDWOOD FLOORING



## SUSPENDED FLOORS WITH ALUMINUM HEAT EMISSION PLATES ON TOP OF THE SUBFLOOR

*NOTE: Use MrPEX® Design Software to establish heat loss for the structure, and to calculate output, surface temperature, water temperature and tubing/manifold pressure drops.*

**STRUCTURAL NOTE:** Project Engineer, Project Architect or System Designer need to verify and approve the structural impact of the radiant system on the building prior to installation.



- › Make sure subfloor is clean and free of nails/screws etc..
- › For this application use either 1 x 4 sleepers, ripped plywood, or MrPEX® WoodTrac Panels.
- › Frame-in two walls of the area to be covered with wood sleepers. Make sure to keep as close to a 90 degree angle as possible. Glue and screw the sleepers to the sub-floor.
- › Following the first sleeper, leave a 1" gap and then continue to fasten two 1 x 4 sleepers next to each other to the subfloor covering the rest of the area, or one piece of ripped plywood. Stagger the sleepers at the end at least 8"-12" at the end of each run to leave ample room for tube turn. Accommodate for the return tube run back to the manifold.
- › Place omega plates in the 1" grooves. Leave ¼" - ½" space between plates. Using a pneumatic stapler, staple only one side of the omega plate to the sleeper.
- › Start laying the tube snapping it into the omega plates as you go along. Connect the tubing to the manifold and repeat process for next loop.
- › Once tubing is installed, perform a pressure test of 40 – 60 psi for 24 hrs to ensure that the tubing has not been damaged during installation.
- › Install adequate underlayment for planned floor covering. For carpeting and tile it is recommended to use ¼" hardy backer board or similar. Pay close attention to where the tubes are located before gluing and screwing down the backer board. For hard wood floor, follow wood floor manufacturers recommendations. Leave system under pressure on to notice any damage during installation.

**WITH HARDWOOD OR HARDY BACKER BOARD FLOORING**

