

**THE WORLD'S FIRST HIGH RISE BUILDING TO BE HEATED
THROUGH THE WALLS. DESIGNED BY
ROSS SINCLAIRE**



SOUTHERN ALBERTA INSTITUTE OF TECHNOLOGY 700 BED RESIDENCE

This project went out to five Calgary mechanical contractors for design/build proposals. My company's price came in 40% below any of the rest. It utilised the concepts from my patented multi story water distribution system along with an entirely new concept of heating all the rooms with plastic pipe placed in the demising wall between two bedrooms in each resident unit. This is the same pipe they put in floor heating systems. The top floor was heated and cooled with a four pipe fan coil system. The government officials were so shocked by the cost savings and my claims of 30-40% energy savings as well that they decided to hire the Faculty of Environmental Design from the University of Calgary to study the heat output of a test wall before accepting my proposal. We passed the test with no problem and were awarded the contract.

TEST WALL FOR 23 STORY WALL HEATED BUILDING



This is the test wall we built with plastic pipe woven through the studs and enclosed with drywall on both sides. This is about \$20 worth of pipe to heat a two bedroom residence by putting it in the demising wall. It utilised 140 degree combination domestic/heating water which means there is only one boiler system required and one hot water piping system. There was a simple solenoid valve connected to the thermostat and a flow of one gallon per minute would satisfy the heating requirements on the coldest of days. We used a stud punch and grommets so as to centre the pipe in the wall. The University of Calgary test report came back positive and we successfully completed this project in 2007.