

WHAT'S THE COMMOTION ABOUT?

Ground Source Heat Pump Installation at the Children's Library

WHAT IS A GROUND SOURCE HEAT PUMP?

A ground source heat pump (GSHP) is an electrically powered system that uses the stored energy in the earth to provide heating, cooling and hot water very efficiently for homes and commercial buildings.

GSHP AT THE CHILDREN'S LIBRARY

The GSHP system chosen for the library is a closed loop of water which circulates through a network of pipes that descends approximately 400 feet under the ground. In winter, the circulating water collects heat from the earth and carries it into the building for heating. In summer, the system reverses itself by pulling heat from the building and transferring it into the ground for cooling. The equipment is underground or inside the building with no visible moving parts.

BENEFITS OF A GSHP

- One of the most efficient heating and cooling systems available
- Quiet operation will not disturb the library patrons or performances in the Secret Garden
- Operational efficiencies 50% to 70% higher than other heating systems
- Energy efficiencies 20% to 40% higher than other cooling systems
- Fewer mechanical parts
- Safe operation with no open flames, flammable fuels or combustible gases to vent
- Fifty-year warranty on the underground pipe
- Durable and highly reliable system

PROTECTING THE ENVIRONMENT

GSHP systems conserve natural resources by providing cooling and heating very efficiently. There is less energy waste and fewer greenhouse gas emissions. This project eliminated the need for a gas fired boiler in this building.

For more information about GSHP Systems, visit the International Ground Source Heat Pump Association (a nonprofit educational organization) website at:

www.igshpa.okstate.edu

