



### **River Forest Women's Club, River Forest, Illinois**

Architectural Consulting Engineers (ACE) was the mechanical engineering consultant for the renovation of the River Forest Women's Club. Helping to prevent the building from falling victim to a redevelopment teardown, new buyers stepped forward when the building became available, with the intent to turn the building into a private residence. The owners left the main floor auditorium intact and the lower level and spaces off the auditorium were converted into residential spaces. The new owners of the iconic structure, designed by William Drummond, Frank Lloyd Wright's chief draftsman, donated a preservation easement on the property to protect it from further risk of demolition. As part of the easement, the owners retained the right to place solar thermal panels on the roof.

With a commitment to make the building as green as possible without destroying the very features that help define the building, the owners decided to invest in a geothermal HVAC system. A water-to-water system was selected to provide hot and chilled water to distributed air handling units which serve the spaces throughout the building. The lower level living spaces was also fitted with a radiant floor heating system to take the chill off these below grade surfaces. The water-to-water geothermal was selected as a compliment to the solar thermal panels on the roof. By integrating the two systems, the owners can take advantage of solar heat when available and the extremely efficient geothermal heating and cooling system during the balance of the time.

In order to connect the lower level living spaces to the exterior spaces, a new sunken patio area was created on the back of the building with direct access to the lower level. This wonderful feature makes it a challenge to place an exterior condensing unit without compromising the peaceful integrity of this new outdoor space. The geothermal system compliments this new outdoor living space perfectly with the elimination of all exterior equipment leaving the peaceful and serene backyard and patio space quiet and free from system noise.

This project received the prestigious Richard H. Driehaus Preservation Award – **Preservation Project of the Year** – 2008.