

Phipps Conservatory and Botanical Gardens



Five Ways to Green Your Own Garden

1. Replace some of your lawn with shrubs or perennials.
2. Replace plants that require a lot of water and pesticides with sustainable plants that don't.
3. Use organic fertilizers. Leave grass clippings on the lawn to reduce fertilizer needs.
4. Compost your kitchen waste, leaves and garden debris and use it to enrich your soil.
5. Eliminate your use of insecticides and herbicides.



Welcome Center

The Welcome Center features an 11,000-square-foot reception area including a café, a gift shop and an art gallery. Opened in 2005, the Center's design saves up to 40% in energy costs, which is 22% above the required level for Silver LEED® certification*. Features contributing to this savings include:

- First LEED®-certified visitor center in a public garden
- Energy efficient
- Water efficient
- Locally-sourced construction material
- Low- or no-VOC (Volatile Organic Compounds) paints, adhesives, carpet and substrates
- Sustainable site development

The café features locally grown and organic foods and uses corn-based compostable drinking cups and recycled napkins. Items in the gift shop promote sustainable harvesting and fair trade in developing countries.

During the winter months, waste steam condensate is channeled under the sidewalks to warm them before the steam returns to the plant shared by neighboring institutions. This process significantly reduces the use of fossil-fueled snowplows and environmentally unsafe de-icing chemicals.



*Leadership in Energy and Environmental Design

The Green Heart of Pittsburgh



Tropical Forest Conservatory

The most energy efficient conservatory in the world.

Phipps' Tropical Forest Conservatory was approached as an opportunity to set a new standard in glasshouse design and construction. To accomplish this, Phipps combined new and existing technology with fresh thinking to produce comprehensive solutions.

The first of its kind in the country, the conservatory will exhibit a different tropical forest region every two years. Environmental issues and the culture of each region are interpreted through plant life throughout the conservatory, allowing visitors to better appreciate diversity in our world.

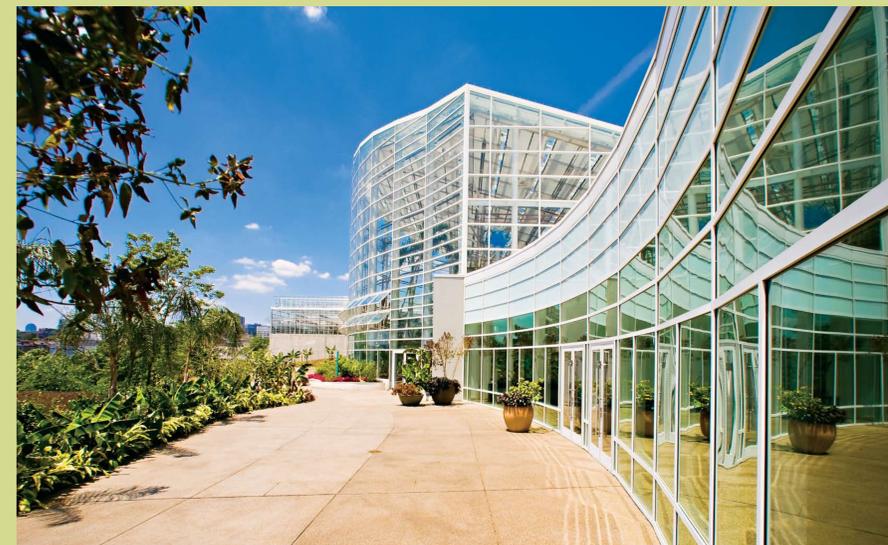
What's Next:

A Living Building, The Center for Sustainable Landscapes

Phipps Conservatory and Botanical Gardens recently accepted the Living Building Challenge issued by the Cascadia chapter of the U.S. Green Building Council and plans to build on the technologies used throughout the Conservatory to meet the challenge.

A ground breaking ceremony in the fall of 2008 will launch the Center for Sustainable Landscapes with a goal of being regenerative—a building that will sustain itself and give back water and energy resources to the rest of the Phipps property.

- **100% Passively Cooled:** A radical roof venting system is coupled with earth tubes, fogging and computer controlled thermal blankets.
- **First Fuel Cell in a Public Garden:** A solid oxide fuel cell converts natural gas into electricity with remarkable efficiency.
- **Super-Efficient Heating:** Double-pane insulated roof glass, root-zone heating and thermal massing in the surrounding walls amplify the energy savings.



New and existing technology make Phipps' new Tropical Forest Conservatory the most energy efficient in the world.



Roof Vents

A north-sloping roof allows for insulated double-pane glass. Half of the roof opens to eliminate the greenhouse effect, using vents controlled by an Argus computer system.



Earth Tubes

Six 24-inch diameter, 300-foot long concrete tubes are installed at 15 feet below grade, where the temperature is a steady 55 degrees year round. Hot outside air cools as it travels through the underground tubes and into the conservatory.



Fuel Cell

The fuel cell converts natural gas into electricity with remarkable efficiency, and is on display for visitors.



Energy Blankets

Computer controlled energy blankets prevent heat loss in the winter and provide shade in the summer.

