

Phipps' Center for Sustainable Landscapes Receives Prestigious International Award

American Institute of Architects' Committee on the Environment names Top Ten Green Projects of 2016



The [American Institute of Architects \(AIA\)](#) and its [Committee on the Environment \(COTE\)](#) recently announced the [Top Ten Green Projects of 2016](#), and the Center for Sustainable Landscapes at [Phipps Conservatory and Botanical Gardens](#) was selected. These projects are exemplary in their sustainable architecture and ecological design, and prove that manmade structures can protect and enhance the environment while also benefiting human health. The projects were honored on May 19 at the AIA 2016 National Convention and Design Exposition in Philadelphia.

Project Partners

Pittsburgh and Pennsylvania Based Design Team

- [The Design Alliance Architects](#); Architecture, Pittsburgh
- [Andropogon Associates](#); Landscape Architecture, Philadelphia
- [Atlantic Engineering Services](#); Structural Engineering, Pittsburgh
- [Civil & Environmental Consultants](#); Civil Engineering and Water Engineering, Pittsburgh
- [CJL Engineering](#); MEP Engineering, Pittsburgh
- [evolveEA](#); LEED® and Living Building Challenge Management, Pittsburgh
- [H.F. Lenz](#); Commissioning, Johnstown
- [Kolano Design](#); Interpretation, Pittsburgh
- [Massaro Corporation](#); Pre-Construction Management, Pittsburgh
- [Pitchford Diversified](#); Enhanced Commissioning, Butler, Pennsylvania
- [7group, LLC](#); Integrative Design Facilitation, Energy Modeling, Daylighting Analysis and Materials Consulting, Kutztown, Pennsylvania
- Sundrive; Water Treatment, Ottsville, Pennsylvania

Other Organizations

- [Carnegie Mellon University—Center for Building Performance and Diagnostics](#)
- [Chatham University](#)
- [Duquesne University](#)
- [Green Building Alliance](#)
- Indevco; Owner's Representative, Pittsburgh
- [International Living Future InstituteSM](#)
- [National Energy Technology Laboratory](#)
- [Penn State University—Center for Green Roof Research](#)
- [The Sustainable Sites InitiativeTM](#)
- [University of Pittsburgh—Mascaro Center for Sustainable Innovation](#)
- [Vermuelens – Toronto, Canada](#)

The [Center for Sustainable Landscapes \(CSL\)](#) is an education, research and administration facility. Designed to be the greenest building in the world, it generates all of its own energy and treats all storm and sanitary water captured on-site. The CSL is the first and only building to meet four of the highest green certifications: the Living Building Challenge, LEED Platinum, WELL Building Platinum, and Four-Stars Sustainable SITES. As an integral part of the Phipps visitor experience, the CSL focuses attention on the important intersection between the built and natural environments, demonstrating that human and environmental health are inextricably connected.

Nationally lauded for being one of the greenest buildings in the world because of its impressive performance and groundbreaking sustainable design features, the CSL has also won awards from such organizations as the [Sustainable Buildings Industry Council](#), [United States Environmental Protection Agency](#), [Urban Green Council](#) and [more](#). Richard Piacentini, executive director of Phipps says, "It took an integrative design process with great partners and a talented design team led by The Design Alliance Architects, to create a place that would meet the highest standards related to health, buildings, people and the environment."

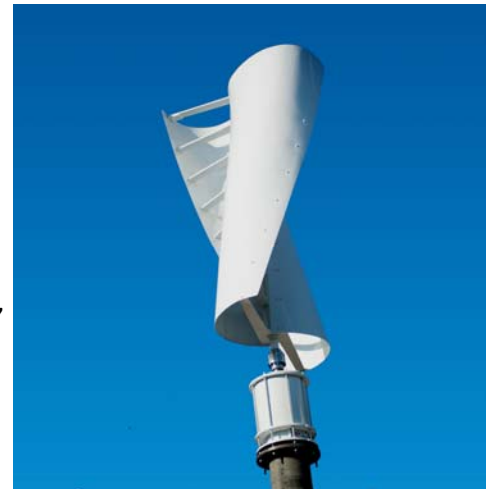
Entries for the AIA COTE Top Ten Green Projects are evaluated for their design and innovation techniques, integration with their community, land use and effect on site ecology, bioclimatic design, energy and water use, approach to light and air, materials construction, long-life considerations and feedback loops. The project partners (see list on left) that worked to make the Center for Sustainable Landscapes a center of excellence in sustainable buildings.

7group is honored to have been a part of such an inspired team led by The Design Alliance Architects, whose efforts resulted in earning these rigorous certifications. This feat was made possible by engaging an integrative design process led by 7group through bi-monthly charrettes during the entire two-year design and planning process involving a wide-range of project team and owner representatives. This allowed for an all-inclusive evaluation of functionality, operational needs, site, and architectural and engineering systems, which informed the site and building design.



Using the ATHENA[®] Impact Estimator for Buildings, 7group prepared models to assess different options for all major building assemblies and optimized materials choices. These models together with a vigorous vetting process resulted in the CSL using only materials compliant with the Living Building Challenge Red List, 10% of materials used (by cost) were salvaged, 30% were recycled and 82% were regionally sourced. Additionally, 96.74% of construction waste was diverted from landfills through efficient site design, recycling and reuse.

Energy modeling and daylighting analysis provided by 7group helped inform systems design and the selection of technologies and strategies to reduce energy usage by 68.7% and reduced capacity requirements for HVAC systems and associated infrastructure (power, pipes, ductwork, pumps, etc.) by 30-40%. Some of the strategies employed include strategic window placement, light shelves and reflective ceiling materials direct the sun's rays to naturally illuminate the interior 80% of the time reducing the need for artificial lighting, high performance insulation, low-e windows, photovoltaic solar panels, a vertical axis wind turbine (the first to be commissioned in the City of Pittsburgh), geothermal heating and cooling, and a rooftop energy recovery unit. All of these strategies led to the CSL being certified as a net zero energy building under the Living Building Challenge. Additionally, 7group helped develop and implement a measurement and verification plan to verify the building's energy consumption was performing as modeled.



This project clearly demonstrates the inseparable connection between human and environmental health, and evidences that we can develop our built environment in a way that contributes to the health of place rather than take from it. For these efforts, the CSL has earned a host of honors and awards:

International

- 2015 International Landscape Design Award, Association of Professional Landscape Designers
- 2015 Living Building Challenge certification for the Center for Sustainable Landscapes
- 2014 Platinum WELL Building certification for the Center for Sustainable Landscapes
- 2014 Net-Zero Energy certification for the Center for Sustainable Landscapes
- 2014 4 Stars Sustainable SITES certification for the Center for Sustainable Landscapes
- 2014 Global Best Project, Engineering News Record
- 2014 Honorable Mention, Public Building, Rethinking the Future
- 2013 Platinum LEED certification for the Center for Sustainable Landscapes
- 2013 Green Good Design™ Award, Nonprofit Category, The European Center for Architecture Art Design and Urban Studies; The Chicago Athenaeum: Museum Of Architecture and Design
- 2013 Long List, Sustainable Building of the Year, World Architecture News
- 2012 International Green Awards, Bronze Winner, NGO Category, London, Great Britain
- 2012 Living Building Hero Leadership Award, International Living Future Institute (ILFI)

- 2009 President Obama selected Phipps as the host site for the official welcome, opening reception and world leaders dinner for the G20 conference in Pittsburgh
- 2008 Sustainable Building Challenge Finalist, International Initiative for a Sustainable Built Environment, Melbourne, Australia; Tropical Forest Conservatory

National

- 2015 Beyond Green Award, Sustainable Building Industry Council
- 2015 Green Power Leadership Award, EPA
- 2015 Finalist, National Medal for Museum and Library Services, Institute of Museum and Library Sciences
- 2015 Green Power Leadership Club, Environmental Protection Agency
- 2015 Finalist for Place by Design, SXSW eco, Austin, TX
- 2015 University of Rhode Island Distinguished Alumni Achievement Award
- 2015 EBie Award, Urban Green Council, NYC
- 2015 Finalist, Celebration of Champions Award
- 2014 Innovative Star of Energy Efficiency, Alliance to Save Energy
- 2014 Sustainability Excellence Award, American Alliance for Museums
- 2014 Finalist, National Medal for Museum and Library Services, Institute of Museum and Library Sciences
- 2014 Buidly Award, Mid-Atlantic Association of Museums
- 2014 Best Museums Restaurant, Food & Wine Magazine
- 2014 Green Power Leadership Club, Environmental Protection Agency
- 2013 Excellence in Design Award, EDC Magazine
- 2013 Design and Build with FSC Award, Forest Stewardship Council
- 2013 Finalist, Best of the Year Awards, Interior Design Magazine
- 2013 Green Design Award, USGlass Magazine
- 2013 Honorable Mention, Inspirations Awards, Contract Magazine
- 2013 Museums Connect Award, American Alliance of Museums
- 2013 Finalist, National Medal for Museum and Library Services, Institute of Museum and Library Sciences
- 2013 Green Power Leadership Club, Environmental Protection Agency
- 2013 Who's Who in Energy, Pittsburgh Business Times
- 2013 Energy Leadership Award, Pittsburgh Business Times
- 2013 Media Partner of the Year Award, VisitPITTSBURGH
- 2013 Distinguished Alumni of the Year Award, University of Connecticut
- 2012 Sustainability Award, Hobart Center for Foodservice Sustainability
- 2012 Buidly Award, Mid-Atlantic Museum Association
- 2012 Green Power Leadership Club, Environmental Protection Agency
- 2011 Service Award, American Public Gardens Association (APGA)
- 2011 Green Power Leadership Club, Environmental Protection Agency
- 2011 Great American Gardener Award, American Horticultural Society (AHS)
- 2011 First LEED-Certified Welcome Center, Green Building Alliance GreenSCENE Celebration
- 2010 Individual Leadership Award in an NGO, US Green Building Council (USGBC)
- 2010 Green Power Leadership Club, Environmental Protection Agency
- 2009 Green Power Leadership Club, Environmental Protection Agency
- 2009 Sustainable Champion Award, American Society of Interior Designers, W. PA
- 2009 Fred E. Obley Award for Business Leadership and Excellence
- 2009 Environmental Hero Award, GASP
- 2008 Evergreen Award, First Place Commercial Category, Eco-Structure Magazine; Tropical Forest Conservatory
- 2008 Sustainable Buildings Challenge, U.S. Green Building Council
- 2007 Beyond Green High Performance Building Award, Sustainable Buildings Industry Council; Tropical Forest Conservatory

State, Regional and Local

- 2015 Leadership in Sustainability, Pennsylvania Regional Council
- 2015 Water Star Award, Alcosan
- 2015 Sustainability Champion Award, Duquesne University Center for Green Industries and Sustainable Business Growth
- 2014 Legacy Award, Green Building Alliance
- 2014 Catalyst Award, 18th Annual Carnegie Science Awards
- 2014 Who's Who in Energy, Pittsburgh Business Times
- 2014 Trustee Award, Audubon Society of Western Pennsylvania
- 2014 Sustainable Award, Engineers Society of Western Pennsylvania
- 2014 Civil Engineering Sustainability Award, American Society of Civil Engineers, Pittsburgh Section
- 2014 Community Development Award, Pittsburgh Community Reinvestment Group
- 2013 Green Design Citation, American Institute of Architects, Pittsburgh Chapter
- 2013 Energy Leadership Award, Pittsburgh Business Times
- 2013 Hall of Fame Inductee, American Marketing Association, Pittsburgh Chapter
- 2013 Marketer of the Year, Nonprofits Category, American Marketing Association, Pittsburgh Chapter
- 2012 Enviro-Star Award, Allegheny County Health Department
- 2012 Award of Merit, Carnegie Mellon Steinbrenner Institute
- 2009 Finalist, Investing in Nature Award for Innovative New Environmental Technologies, The Nature Conservancy
- 2009 Leading Pittsburgh Award, KDKA Radio
- 2008 Environmental Award, 12th Annual Carnegie Science Awards
- 2008 Diamond Award, CEO of the Year Nonprofit Category, Pittsburgh Business Times
- 2008 Travel & Tourism Advocate of the Year, VisitPittsburgh
- 2007 Project of the Year Award, Engineers' Society of Western PA; Welcome Center, Tropical Forest Conservatory, and production Greenhouses
- 2007 Green Power: Turn it on! Award, Citizens for Pennsylvania's Future; wind-powered Welcome Center
- 2007 Green Design Citation, American Institute of Architects, Pittsburgh Chapter; Tropical Forest Conservatory
- 2007 Marketer of the Year, American Marketing Association, Pittsburgh Chapter
- 2007 Best Art Exhibit of the Year, Pittsburgh Post-Gazette
- 2007 Award of Merit, Environment, Engineering and Science Media Fellowship, Steinbrenner Institute, Carnegie Mellon University
- 2006 Shades of Green Leadership Award, Green Building Alliance



Images courtesy of Paul G. Wiegman