

2011-2012

A Habitat for Humanity Student Design Competition



Brought to you by the Association of Collegiate Schools of Architecture  
Sponsored by: National Endowment for the Art and Vinyl Institute  
Promotions by: American Institute of Architecture Students

## INTRODUCTION

The Association of Collegiate Schools of Architecture (ACSA) is pleased to announce The Sustainable Home: Habitat for Humanity Student Design Competition for the 2011-2012 academic year. Administered by the Association of Collegiate Schools of Architecture (ACSA) and sponsored by the National Endowment for the Arts (NEA) and The Vinyl Institute (VI), the program is to engage young professionals in Habitat for Humanity's effort to eliminate poverty housing by advancing the design of simple, decent, healthy, and affordable homes. Participants are strongly encouraged to work in teams on the project. A separate prize for the best use of vinyl building materials will be awarded and vinyl building products and systems should be used in the design of The Sustainable Home whenever possible (required for the Vinyl Award).

# THE OPPORTUNITY

One of Habitat's priorities is to improve the sustainability of the communities in which it works by supporting the development and delivery of innovative, sustainable building solutions. These efforts will minimize the negative impact of residential sector construction on the environment, reduce the energy and resource consumption of neighborhoods, and increase the economic sustainability of low-income families.

## VISION

To improve the sustainability of communities by supporting the development and delivery of innovative, building solutions.

## STRATEGY

To engage young professionals in the pursuit of affordable sustainable housing.

## OUTPUTS

Four competition-derived sustainable case studies that will be made available to North American Habitat affiliates.

## OUTCOMES

A reduction in the impact of residential sector construction on the environment and an increase in the economic sustainability of low-income households.

## SCHEDULE

February 15, 2012

May 30, 2012

July 2012

Fall 2012

Registration Deadline (free registration)

Submission Deadline

Prize winners chosen by the design jury

Competition Summary Publication

# COMPETITION PROGRAM

The Sustainable Home Competition offers architecture students the opportunity to design a modularly constructed three bedroom, one and half bath home that does not exceed 1,070 square feet and \$100,000 in material cost. The competition will have 2 primary areas of focus:

- The inclusion of passive solar energy design techniques that can be affordably implemented. Whenever possible, these passive solutions should be adaptable depending on the home's orientation.
- The inclusion of flexible interior layouts, exterior elevations, and modular construction components that allow for limited homeowner customization while maintaining the home's affordability. (Consider different family dynamics and regional design characteristics)

In addition, the home must meet accessibility and universal design requirements and comply with "Design to meet Energy Star" standards (at minimum). Homes should be designed for optimal functionality in the student's local climate zone. Four regional finalist designs (East, Midwest, South, West) will be selected.

What are Habitat houses like?

Simple, decent and affordable.

Habitat for Humanity houses around the world are built according to the same guiding principles:

- Simple. Habitat houses are modestly-sized. They are large enough for the homeowner family's needs, but small enough to keep construction and maintenance costs to a minimum.
- Decent. Habitat for Humanity uses quality, locally-available building materials. Habitat house designs reflect the local climate and culture.
- Affordable. The labor of volunteers and partner families, efficient building methods, modest house sizes and no-profit loans make it affordable for low-income families to purchase Habitat houses.

Habitat houses in North America

U.S. and Canadian Habitat houses are modestly-sized by North American standards. Habitat's guidelines dictate that a 3-bedroom Habitat house may have no more than 1,070 square feet of living space.

Habitat for Humanity's commitment to build with people in need readily extends to those with disabilities. When possible, Habitat houses incorporate basic accessible design features, such as a zero-step entrance and wide passage doors and hallways. Houses built in partnership with families with disabilities include additional accessibility features.

# THE CHALLENGE

Competition participants will design a Habitat house that is appropriate for their locale (East, South, Midwest, West). In doing so, the designers will face the stated criteria for a Habitat house: Simple, Decent, and Affordable.

Designs should focus on innovative and sustainable building solutions. Competitors are encouraged to use creativity and innovation in designing their sustainable home. The home must include the following spatial elements: Living Area, Dining Area, Kitchen, 3-Bedrooms, 1 ½ Bath; all within 1,070 square feet.

Habitat for Humanity house design criteria are defined by the following points:

- The living space provided—excluding stairwells (except to a basement) and exterior storage—should not exceed 1,070 square feet for a three-bedroom house.
- A three-bedroom house should have one full bathroom (i.e., sink separated from toilet and shower) and may have an additional half-bath.
- Families should have the opportunity to choose decorative finishes for the house whenever possible.
- A budget may be established with a predetermined limit (e.g., \$1,000) to allow the family to personalize their home with features such as appliances, fencing, a shed, etc.
- Each house should have a covered primary entrance.
- When feasible, at least one entrance to the house should be accessible to people with limited mobility.
- All passage doors, including bathroom doors, should be at least three feet (3') wide.
- Hallways should be at least three feet, four inches (3'-4") wide from rough frame to rough frame. If there is a door at the end of the hallway, the minimum width increases to three feet, seven inches (3'-7"). These standards allow for access by people with disabilities.
- Further adaptations may be needed if a family member is disabled.
- Houses should not have garages or carports.

Adhering to these design criteria supports Habitat for Humanity's mission to build simple, decent, affordable houses in partnership with families in need of shelter. Adhering to these criteria also guards against inconsistency in construction and budget overruns.

## SITE

Students should choose a site based on a city lot in their region (East, West, South, or Central) shown in the map below. North American participants are required to site their projects in their school's city. The criteria for site selection include the following:

- Size: the site should be no larger than a typical single city lot
- Context: the site should be located in an easily accessible area of the city
- Access: the site should have access to public transportation such as light rail, commuter rail, subway, or bus

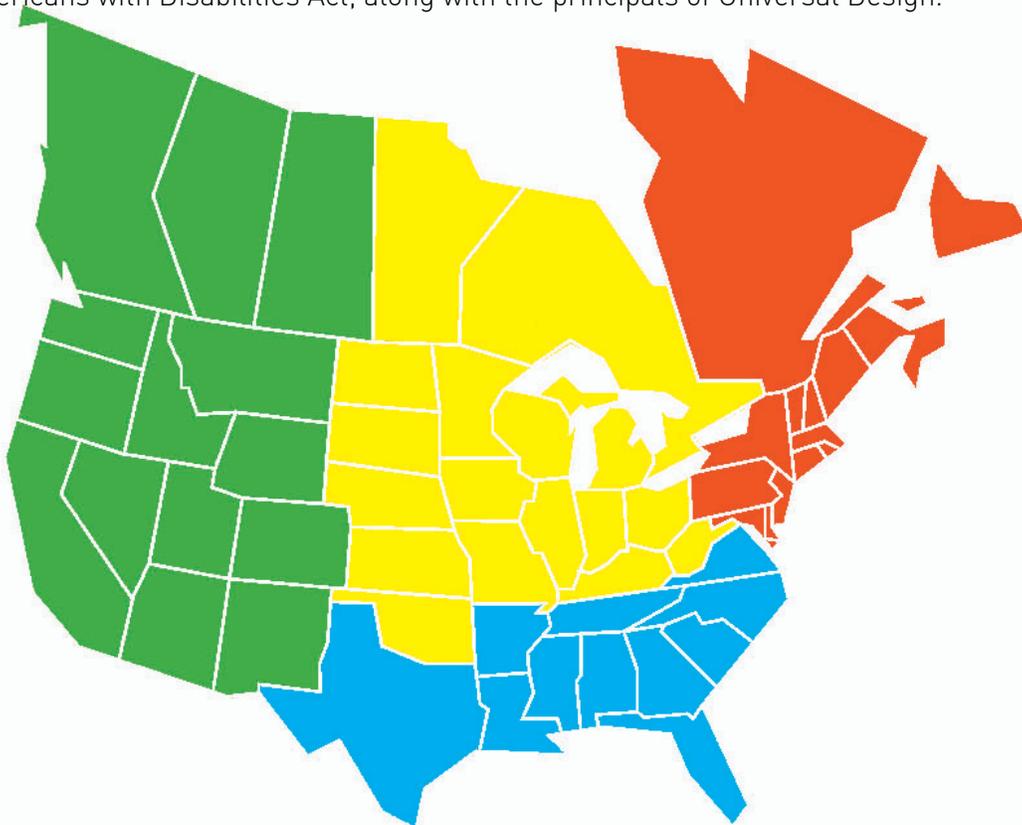
## SITE DEVELOPMENT

Site Development includes site selection and planning, building orientation, landscaping, storm water management to preserve natural resources.

- Orient the home on site to capture the benefits of passive solar heating and cooling and to take advantage of natural ventilation.
- Utilize methods of landscaping that emphasize water conservation and the use of native, drought resistant plant materials. Make an intentional effort to conserve green space and trees on the site. Practice proper fencing of tree root zones to lessen construction damage.
- Develop landscapes that are resource efficient and require less maintenance, minimizing use of turf grasses.
- Plant shade trees to help cool the home during summer months and allow for natural heat gain in the winter thereby lowering costs and improving comfort while providing an attractive and valuable landscape.
- Protect topsoil and minimize disruption of existing trees and plants.
- Follow low impact development practices. Create and follow a site management plan that outlines proper erosion control, conservation, and storm water management procedures. Following such a plan is critical for good neighbor relations, reducing silt into waterways (streams, creeks, lakes, rivers).

## CODE INFORMATION

Refer to the International Building Code and local zoning ordinances, height restrictions, set backs, easements, flood plain requirements, emergency egress, and fire containment. Accessibility guidelines must be followed; refer to the Americans with Disabilities Act, along with the principals of Universal Design.



# VINYL AWARD

The competition is co-sponsored by The Vinyl Institute (VI) and the Vinyl Award challenges students to learn about building materials, specifically vinyl building products and systems in the design of The Sustainable Home. By utilizing vinyl products in the design of The Sustainable Home, designers will ensure the structure is not only cost-effective, but also energy efficient, durable, sustainable and resistant to weather exposure, among the many benefits offered by vinyl. Total prize money for the best use of vinyl is \$2,350.

The objectives of the Vinyl Award are:

- To encourage and reward design excellence at a small scale, which integrates function, aesthetics, structure, details.
- To research, respond to and highlight the unique aspects of designing a home that serves the selected site and inhabitants.
- To build knowledge about materials, products and assembly of primarily vinyl building products contributing to sustainable and safe design.
- To investigate new building materials, systems, and methodologies.
- To encourage designers to employ sustainable and universal design principles in all design work.
- To develop awareness of the importance of comprehensive life cycle assessment thinking in the selection of all building materials, including recyclability, durability, low maintenance and other factors.
- To understand the impacts of material selection on ease of use and installation by largely volunteer labor resources, function and aesthetics.

The Vinyl Award submission requirements are to clearly show and explain the use vinyl building materials in your designs. The submission boards should visibly show a knowledge and use of vinyl materials and the design essay should describing the most important vinyl concepts of the design project.

# CRITERIA FOR JUDGING

Criteria for the judging of submissions will include:

- Demonstration of compliance with all objectives.
- Degree to which knowledge about materials, products, and installation contributes to a sustainable and successful housing solution.
- Creativity and uniqueness of the design solution, with a strong emphasis on feasibility, affordability and constructability.
- Demonstration of a successful response to economic sustainability, to basic architectural concepts such as human activity needs, pride of ownership, structural integrity, and coherence of architectural vocabulary in a regional and local context.

# RESOURCES

Students are encouraged to research references that are related to the topics of the competition and precedent projects that demonstrate innovative use of materials and solutions. An intention of all ACSA competitions is to make students aware that research is a fundamental element of any design solution.

- Learn more about Habitat for Humanity at [www.habitat.org](http://www.habitat.org)
- Learn more about Habitat for Humanity Construction Technologies at <http://www.habitat.org/env>
- Check out the Innovative Uses for Vinyl at [www.vinylindesign.com](http://www.vinylindesign.com)
- Learn more about accessible design at [www.access-board.gov](http://www.access-board.gov)

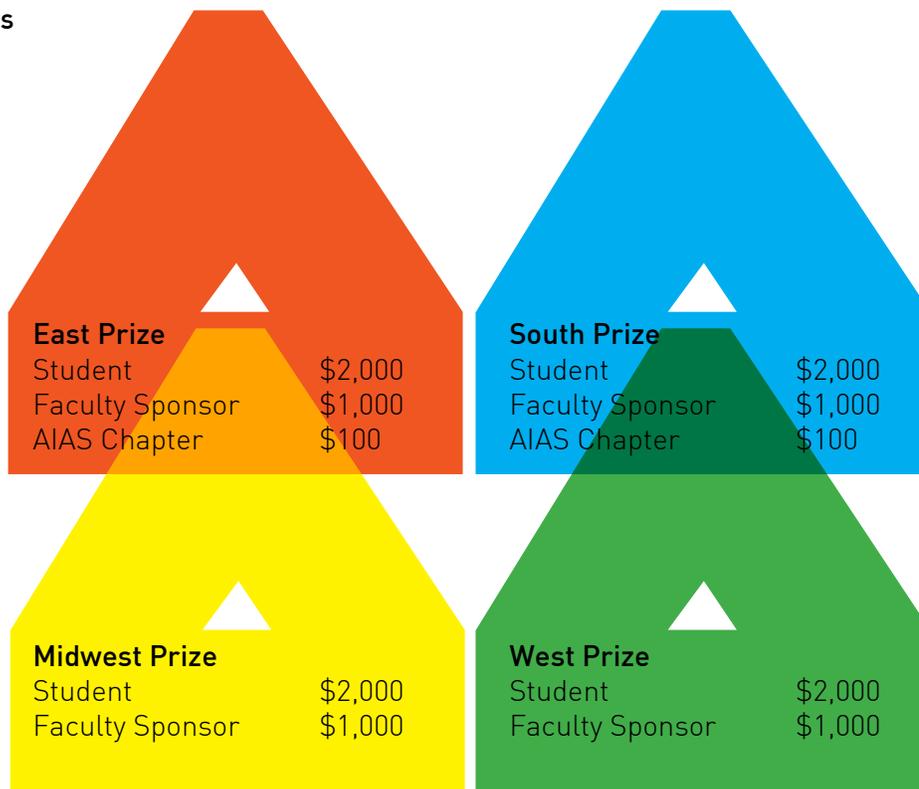
# COMPETITION GUIDELINES

## AWARDS

Winning students, their faculty sponsors, and their AIAS Chapter will receive cash prizes totaling \$15,550. The design jury will meet in July 2012 to select winning projects and honorable mentions. Winners and their faculty sponsors will be notified of the competition results directly. A list of winning projects will be posted on the ACSA web site at [www.acsa-arch.org](http://www.acsa-arch.org).

Top prizes (first prize to each region and a Vinyl Award) will be awarded, in addition to a selected number of honorable mentions, at the discretion of the jury. A total of \$15,550 will be distributed in the following manner:

### Regional Awards



**Vinyl Award**      Student - \$1,500      Faculty Sponsor - \$750      AIAS Chapter - \$100

A limited number of honorable mentions may also be awarded at the jury's discretion. ACSA reserves the right to alter prize categories and designate special awards per discretion of the competition jury. Prize winning submissions will be exhibited at the 2013 ACSA Annual Meeting and at the 2013 AIA National Convention and will be published in a competition summary publication.

## ELEGIBILITY

Students (from any ACSA member school) and emerging professionals (recently graduated students or interns, within 5 years of graduation) are eligible to participate in the competition. All student entrants are required to work under the direction of a faculty sponsor. Entries will be accepted for individual as well as team solutions. Teams must be limited to a maximum of five individuals.

## REGISTRATION

An online registration form must be completed for an entire team or for each individual participant. There is no registration fee to participate in the challenge. Each registered participant will receive a confirmation email that will include information for final online submission. Please add the email address [competitions@acsa-arch.org](mailto:competitions@acsa-arch.org) to your address book to ensure that you receive all emails regarding your submission.

### Students

Currently enrolled students will require a faculty sponsor to enroll students by completing an online Registration Form (available at [www.acsa-arch.org](http://www.acsa-arch.org)) by February 15, 2012. Faculty sponsors must complete a form for the entire studio or for each individual student or team of students participating. Each student will receive a confirmation email that will include personal login information for final online submission. Students or teams wishing to enter the challenge on their own must have a faculty sponsor, who should complete the form.

During registration the faculty will have the ability to add students, add teams, assign students to teams, and add additional faculty. Registration is required by February 15, 2012, after which edits and additions can be made until a student starts a final submission, then the registration is not editable. Faculty may assign a "Faculty Representative" to a registered student, who will have access to change, edit, and make additions to the registration.

### Emerging Professionals

Recently graduated students, interns, or emerging professionals, within 5 years of graduation, are required to contact ACSA directly to receive personal ACSA credentials and complete an online Registration Form by February 15, 2012. To receive personal ACSA credentials contact Eric Ellis at [eellis@acsa-arch.org](mailto:eellis@acsa-arch.org).

## FACULTY RESPONSIBILITY

The administration of the competition at each institution is left to the discretion of the faculty within the guidelines set forth in this document. Work on the competition should be structured over the course of one semester during the 2011-2012 academic year.

## EVALUTATION CRITERIA

Each faculty sponsor is expected to develop a system to evaluate the students' work using the criteria set forth in this program. The evaluation process should be an integral part of the design process, encouraging students to scrutinize their work in a manner similar to that of the jury. The final result of the design process will be a submission of up to four presentation boards describing the design solution. In addressing the specific issues of the design challenge, submissions must clearly demonstrate the design solution's response to the following requirements:

- A mature awareness and innovative approach to environmental issues including but not limited to comprehensive building material life cycle assessment thinking;
- An elegant expressive understanding of the materials;
- A thorough appreciation of human needs, economic impacts and social responsibilities;
- A strength of the argument and the proposal's ability to support the concept for the design;
- An articulate mastery of formal concepts and aesthetic values;
- A capability to integrate functional aspects of the problem in an architectural manner, and
- A capacity to derive a design with the maximum innovation and possibility.

## REQUIRED DRAWINGS

Each presentation must directly address the criteria outlined in the Design Challenge and Criteria for Judging and must include (but are not limited to) the following required drawings: site plan showing the surrounding buildings, topography, and circulation patterns; floor plans; elevations and building sections sufficient to show site context and major program elements; large scale drawing(s), either orthographic or three dimensional; a three dimensional representation in the form of either an axonometric, perspective, or model photographs, one of which should illustrate the character of the project. Submission must include:

- 4 digital boards at 20" x 20";
- illustrate graphically or otherwise the use of vinyl building materials (required for the Vinyl Award);
- a design essay or abstract;

Incomplete or undocumented entries will be disqualified. All drawings should be presented at a scale appropriate to the design solution and include a graphic scale and north arrow. Submissions that do not adhere to the program criteria outlined must provide a program brief.

## DIGITAL PRESENTATION FORMAT

Submissions must be designed on no more than four 20" x 20" digital boards. The names of student participants, their schools, or faculty sponsors, must NOT appear on the boards.

All boards are required to be uploaded through the ACSA website in Portable Document Format (PDF) or image (JPEG) files. Participants should keep in mind that, due to the large number of entries, preliminary review does not allow for the hanging end-to-end display of presentation boards. Accordingly, participants should not use text or graphics that cross over from board to board. The names of student participants, their schools, or faculty sponsors, must NOT appear on any of the submitted material.

## DESIGN ESSAY or ABSTRACT

A brief essay, 500 words maximum, (in English) is required as part of the submission describing the most important concepts of the design project. Keep in mind that the presentation should graphically convey the design solution and context as much as possible, and not rely on the design essay to convey a basic understanding of the project. The names of student participants, their schools, or faculty sponsors, must NOT appear in the design essay. This abstract is included in the final online submission, completed by the student(s) in a simple copy/paste text box.

## ONLINE PROJECT SUBMISSION

The student is required to submit the final entries that must be uploaded through the ACSA Competition website at [www.acsa-arch.org](http://www.acsa-arch.org) by 5:00 pm, Eastern Time, on May 30, 2012. If the Submission is from a team of students all student team members will have the ability to upload the digital files. Once the final submit button is pressed no additional edits, uploads, or changes can be made. Once the final Submission is uploaded and submitted each student will receive a confirmation email notification. You may "save" your submission and return to complete. Please note, the submission is not complete until the "complete this submission" button has been pressed. For team projects: each member of team projects may submit the final project.

A final Submission upload must contain the following:

- Completed online registration including all team members and faculty sponsors;
- Each of the four 20"x20" boards uploaded individually as a high resolution Portable Document Format (PDF) or image (JPEG) files;
- A design essay or abstract (simple copy/paste text box completed during submission);

Winning projects will be required to submit high-resolution original files/images for use in competition publications and exhibit materials.

**Habitat for Humanity International** is a nonprofit, Christian ministry founded on the conviction that every

# COMPETITION ORGANIZERS

man, woman and child should have a decent, safe and affordable place to live. We build with people in need regardless of race or religion. We welcome volunteers and supporters from all backgrounds. Our houses are simple, decent, and affordable to low-income families around the world. Whenever possible, we build sustainable, energy-efficient and healthy housing.

## ADMINISTRATIVE ORGANIZATION

The **Association of Collegiate Schools of Architecture** is a nonprofit, membership association founded in 1912 to advance the quality of architectural education. The school membership in ACSA has grown from 10 charter members to over 250 schools in several membership categories. These include full membership for all accredited programs in the United States and government-sanctioned schools in Canada, candidate membership for schools seeking accreditation, and affiliate membership for schools for two-year and international programs. Through these schools, over 5,000 architecture faculty are represented. In addition, over 500 supporting members composed of architecture firms, product associations and individuals add to the breadth of interest and support of ACSA goals. ACSA provides a major forum for ideas on the leading edge of architectural thought. Issues that will affect the architectural profession in the future are being examined today in ACSA member schools.

## SPONSORS

The **National Endowment for the Arts** (NEA) was established by Congress in 1965 as an independent agency of the federal government. To date, the NEA has awarded more than \$4 billion to support artistic excellence, creativity, and innovation for the benefit of individuals and communities. The NEA extends its work through partnerships with state arts agencies, local leaders, other federal agencies, and the philanthropic sector.

The **Vinyl Institute** (VI), founded in 1982, is a U.S. trade association representing the leading manufacturers of vinyl, vinyl chloride monomer, vinyl additives and modifiers, and vinyl packaging materials. The Vinyl Institute mission is to advocate the responsible manufacture of vinyl resins; life cycle management of vinyl products; and promotion of the value of vinyl to society.

## PROMOTIONAL PARTNERS

The **American Institute of Architecture Students** (AIAS) is an independent, nonprofit, student-run organization dedicated to providing unmatched programs, information, and resources on issues critical to architectural education. The mission of the AIAS is to promote excellence in architectural education, training, and practice; to foster an appreciation of architecture and related disciplines; to enrich communities in a spirit of collaboration; and to organize students and combine their efforts to advance the art and science of architecture.

## FOR MORE INFORMATION

# CONTACTS

Program updates, including information on jury members as they are confirmed, may be found on the ACSA web site at [www.acsa-arch.org](http://www.acsa-arch.org).

Additional questions on the competition program and submissions should be addressed to:

Eric W. Ellis, Director of Operations and Programs  
Association of Collegiate Schools of Architecture  
1735 New York Avenue NW  
Washington, DC 20006  
Tel: 202.785.2324  
email: [eellis@acsa-arch.org](mailto:eellis@acsa-arch.org)

Portions of this competition program are from the Habitat for Humanity's, U.S. Sustainable Construction Standards and [www.habitat.org](http://www.habitat.org).