

# AIA/COTE 2014 Top Ten Green Projects

# **PROJECT REQUIREMENTS**

NOTE: This PDF form is for information and planning purposes only. It is not a substitute for the online submittal.

• The following information is the list of requirements requested on the online submittal forms. It is provided here in PDF format to enable entrants to compose project descriptions and select images prior to submitting them online.

# PROJECT OVERVIEW INFORMATION

Project name: Project owner (company name): Project location (street address, city, state/country, and postal code): Submitting architect (company name): Joint venture or associate architect, if applicable:
Project completion date (must be after 2003 and before October 2012): Month/Year
Project category (select one from the following list): [] Interior Architecture [] New Construction [] Adaptive Reuse [] Urban / Regional Plan
Project site (select one from the following list):  [] Previously undeveloped land  [] Previously developed land  [] Brownfield site  [] Historic structure or district  [] 2030 District
Project type (choose all that apply):  [] Bank/Financial Institution [] Courthouse [] Education – College/University (campus-level) [] Education – General [] Education – K-12 School [] Food Sales – Convenience Store (w/ or w/o gas station ) [] Food Sales – General [] Food Sales – Supermarket/Grocery [] Food Service – Fast Food [] Food Service General [] Food Service Restaurant/Cafeteria [] Health Care – Clinic [] Health Care – Hospital Inpatient [] Health Care – Medical Office [] Health Care – Nursing/Assisted Living [] Health Care – Outpatient – General [] Laboratory [] Lodging – General [] Lodging – Hotel/Motel [] Lodging – Residence Hall/Dormitory [] Mixed – Use

[] Office - 10,000sf

[] Office — 10,001 to 100,000sf [] Office — 100,001 or greater [] Public Assembly — Entertainment/Culture [] Public Assembly — General [] Public Assembly — Library [] Public Assembly — Recreation [] Public Assembly — Social/Meeting [] Public Safety — Fire/Police Station [] Public Safety — General [] Religious Worship [] Residential — Mobile Homes [] Residential — Multi-Family 2-4 units [] Residential — Multi-Family 5 or more units [] Residential — Single-Family attached [] Residential — Single-Family detached [] Retail — Mall [] Retail — Non-mall, Vehicle Dealerships, misc. [] Retail Store [] Service (vehicle repair/service, postal service) [] Storage — Distribution/Shipping Center [] Storage — General [] Storage — Refrigerated warehouse [] Storage — Refrigerated warehouse [] Warehouse — Self-storage [] Other:
Project Site Context/Setting (select one from the following list): [] Urban [] Suburban [] Rural
Other Building description (select one from the following list): [] New [] Renovation [] Both (If both, list% new and% renovation)
Lot size: Units (ft2/m2/acres/ha):
Building or project gross floor area: square feet BOMA floor area method used? [] Yes [] No Hours of operation:
Total project cost at time of completion, land excluded:

**General Description:** Succinctly describe the project program and function, building type, and context. Describe any special or unusual problems or constraints, and how they were addressed. Do not describe environmental features—those come later. (<200 words)

# The AIA Committee on the Environment's Measures of Sustainable Design and Performance Metrics

The Top Ten Green Projects Program recognizes projects that demonstrate the highest accomplishment in environmentally sustainable architecture, integrating inspired architectural design, rigorous resource efficiency, reduced carbon emissions, healthy indoor environments, and resilience in a rapidly changing world.

The measures and metrics describe ten criteria for selection. Top Ten entrants are asked to provide narratives responding to the measures, with quantifying metrics where possible. The narrative format allows entrants to describe briefly how the project's goals were achieved, along with lessons learned that can inform and improve future designs.

While emphasis will be placed on measurable results when available, the narrative format recognizes that qualitative goals are often subjective and therefore cannot always be evaluated quantitatively. Narrative and metrics should refer only to the final built project and not include design measures that were not implemented.

# The COTE definition of sustainability and sustainable design:

Sustainability envisions the enduring prosperity of all living things.

Sustainable design seeks to create communities, buildings, and products that contribute to this vision.

## Measure 1: Design & Innovation

Sustainable design is an inherent aspect of design excellence. Projects should express high performance concepts and intentions, and take advantage of innovative programming opportunities.

# Narrative (200 words maximum) may include:

- > Key environmental issues; how and why they became important priorities
- > <u>Key</u> ecological goals and concepts for your project and how they shaped your thinking. (Not a list of sustainable design measures.)
- > How these goals and concepts were expressed in the design
- > Sustainable design innovations.
- > How sustainability measures led to a better overall project design
- > Process of program analysis and any resource efficiencies realized by innovative programming
- > Efforts to "right size" the project and to reduce unnecessary square footage.

#### Illustrations (optional) may include:

- > Diagrams that illustrate sustainable design intent
- > Diagrams that illustrate sustainable design innovations

# Measure 2: Regional/Community Design

Sustainability is integrally tied to the social, political, cultural and economic health of our communities. Describe how these issues have informed the sustainable elements of this project and how this project has contributed to richness and resilience of its community.

## Narrative (200 words maximum) may include:

- > How the design relates to social, political, cultural and/or economic issues particular to the local context and larger region
- > How the design promotes regional and community connectivity and sense of place, public space and community interaction
- > Transportation policies, incentives, and other efforts to provide for those using transportation alternatives
- > How the project addresses stability and longevity within the contexts of major weather, seismic, or other events
- > Site selection criteria to reduce automobile use
- > How did the project team try to reduce the number of parking spaces per occupant?

Metrics: Indicate percentage of the building	occupants traveling to th	e site by public transit	(bus, subway,	light-rail or train)
bicycle or on foot.				

Estimate percent of	occupants	using public	transit, cycling,	or walking:	%
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Images (optional), with caption and credit. May include maps, diagrams, or photos showing community context.

# Measure 3: Land Use & Site Ecology

Sustainable design protects and benefits ecosystems, watersheds, and wildlife habitat in the presence of human development.

#### Narrative (200 words maximum) may include:

- > How the development of the project's site responds to its ecological context, including the watershed, and air and water quality at different scales from local to regional level
- > How the development of the immediate site and its buildings contribute to environmental quality
- > How the design accommodates wildlife habitat preservation and creation
- > How the landscape design protects or creates on-site ecosystems
- > How the design responds to local development density (rural to urban) or conditions (brownfield to greenfield)

**Images (optional)**, with caption and credit. May include site strategies and outcomes.

#### Measure 4: Bioclimatic Design

Sustainable design conserves resources and maximizes comfort through design adaptations to site-specific and regional climate conditions.

**Narrative (200 words maximum):** Describe how the building responds to local climate, sun path, prevailing breezes, and seasonal and daily cycles through passive design strategies.

Narrative may include:

- > Site and climatic analysis
- > Description of internal versus external building loads
- > Design strategies that reduce or eliminate the need for non-renewable energy resources
- > How these strategies specifically shaped the building plan, section, and massing
- > How these strategies specifically affected placement, orientation, and shading of the building

**Illustration:** Attach (or describe if not available) a psychrometric or bioclimatic chart profile of local climate (reference: www.aud.ucla.edu/energy-design-tools) that illustrates bioclimatic design strategies. Attach a building section (and/or other appropriate diagram) that demonstrates bioclimatic strategies used. (Use image fields in section 7.)

Images (optional), with caption and credit. May include:

- > Psychometric or bioclimatic chart profile of local climate (reference: www.aud.ucla.edu/energy-design-tools) that illustrates bioclimatic design strategies
- > Building section (and/or other appropriate diagram) that demonstrates bioclimatic strategies used.

#### Measure 5: Light & Air

Sustainable design creates comfortable interior environments that provide daylight, views, and fresh air.

#### Narrative (200 words maximum) may include:

- > Design strategies for daylighting, task lighting, ventilation, indoor air quality, views, and personal control systems
- > How the project's design enhances connections between indoors and outdoors
- > Design team approach to integration of natural systems and appropriate technology

**Images (optional) with caption and credit.** May include photos, drawings or diagrams of daylight and ventilation strategies and/or modeling.

**Metrics:** Identify the percentage of the total building area that uses daylight as the dominant light source during daylight hours (with electric lights off or dimmed below 20%). Include all areas of the building, including stairways, restrooms, and corridors. Identify the percentage of the total building area adequately served by natural ventilation (with all HVAC systems shutdown) for all or part of the year.

# Percent of regularly occupied spaces with:

- a) daylighting at levels that allow lights to be off during daylight hours
- b) views to the outdoors
- c) in 15 feet of an operable window.

#### Measure 6: Water Cycle

Sustainable design conserves water and protects and improves water quality.

# Narrative (200 words maximum) may include:

- > How building and site design strategies manage site water and drainage, and capitalize on renewable sources (such as precipitation) on the immediate site
- > Water-conserving landscape and building design strategies
- > Reuse strategies for water including use of rainwater, graywater, and wastewater

# Metrics:

- > Percent reduction of regulated potable water (Baseline per LEED for New Construction 2009): \_\_\_\_\_%
- > Is potable water used for irrigation? [YES/NO]
- > Percent of rainwater from maximum anticipated 24-hour, 2-year storm event that can be managed on site: \_\_\_\_\_%

## Measure 7: Energy Flows & Energy Future

Sustainable design conserves energy and resources and reduces the carbon footprint while improving building performance and comfort. Sustainable design anticipates future energy sources and needs.

# Narrative (200 words maximum) may include:

- > How the building design reduces energy loads for heating, cooling, lighting, and water heating
- > Does the project meet the energy target of the AIA's 2030 Commitment?
- > How the design and integration of building systems contributes to energy conservation and reduced use of fossil fuels, reduces green house gas emissions and other pollution, and improves building performance and comfort.
- > Techniques for systems integration, use of controls and technologies, efficient lighting strategies
- > Use of on-site renewable and alternative energy systems.
- > Anticipation of future and carbon neutral fuel sources
- > Strategies to reduce peak electrical demand.
- > Strategies to reduce the plug load
- > How the building or parts of the building provide "passive survivability," the ability to function in the event of power outages or interruptions in fuel supply
- > Describe how lighting controls help reduce lighting energy use

**Metrics:** In recognition of the AIA's commitment to reduce energy use in buildings by 60% by the year 2015, with the goal of carbon neutrality by 2030, please include the following information about your submittal:

# > Total EUI (kBtu/sf/yr)

Total energy use by the facility including energy purchased from utilities and provided by on-site renewable sources.

#### > Net EUI (kBtu/sf/yr)

Net purchased energy use (total energy use, less any energy generated on-site from renewable resources).

# > Percent Reduction from National Average EUI for Building Type

Use EPA's <u>Target Finder</u> to establish your baseline for percent reduction(window #3). If your building type isn't available in Target Finder, refer to AlA's 2030 Commitment Reporting Tool for national averages and alternate options.

>	Home Energy Rating (HERS) Index:
	For low-rise residential only.

# > Lighting Power Density in (watts/sf)

Describe impact of lighting controls to be described in narrative

# > Upload Energy Data Attachment.

Options include: LEED EA Prerequisite 2 submittal, Title 24 report, or summary of energy modeling results Remove all firm names from PDFs.

# Measure 8: Materials & Construction

Sustainable design includes the informed selection of materials and products to reduce product-cycle environmental impacts, improve performance, and optimize occupant health and comfort.

#### Narrative (200 words maximum) may include:

- > Efforts to reduce the amount of material used on the project.
- > Materials selection criteria, considerations, and constraints, such as optimizing health, durability, maintenance, and energy use, and/or reducing the impacts of extraction, manufacturing, and transportation.
- > How the building enclosure will perform in relationship to air, moisture, water and thermal characteristics
- Consideration given to impacts on the environment over the full life cycle and the results of life cycle assessment if available.
- > Description of any "green lease" program.
- > Construction waste reduction plans and any strategies to promote recycling during occupancy.

**Images (optional)** with caption and credit. May include up to three images that illustrate concepts or finished details of the building envelope design.

## Measure 9: Long Life, Loose Fit

Sustainable design seeks to enhance and increase ecological, social, and economic values over time.

# Narrative (200 words maximum) may include:

- > How the project was designed to promote long-term flexibility and adaptability.
- > Anticipated service life of the project, and description of any components designed for disassembly.
- > Materials, systems, and design solutions developed to enhance versatility, durability, and adaptive reuse potential.

Images (optional) with caption and credit. May include photos, drawings, or diagrams of the project illustrating its flexibility and adaptability.

# Measure 10: Collective Wisdom and Feedback Loops

Sustainable design strategies and best practices evolve over time through documented performance and shared knowledge of lessons learned.

#### Narrative (200 words maximum) may include:

- > How you modeled and evaluated the design during the programming and design phases.
- > How you evaluated the performance of the built results.
- > Collaborative efforts between the design team, consultants, client, and community.
- > How the process enhanced the performance and success of the building.
- > Lessons learned during the design, construction, and occupation of the building.
- > How these lessons would change your approach to this project if starting over, or to future projects.
- > Commissioning and any on-going monitoring of building performance and occupant satisfaction.

Images (optional) with caption and credit. May include photos, drawings, or diagrams of lessons learned.

#### **Project Economics**

Cost and Payback Analysis: Describe atypical project cost issues and provide estimated payback of any investment in green measures. (<200 words)

#### Process and Results

Describe any notable aspects of the process of designing and building this project, especially as they relate to its environmental performance. Information is required for only the first two phases; the rest are optional. (<300 words total)

PreDesign:

Design:

Construction process:

Operations/maintenance:

Commissioning:

Measurement & verification/post-occupancy evaluation:

#### Rating System(s) Results:

Rating systems results are not required. However, if the project has been officially rated under LEED<sup>®</sup>, BREEAM, or other green building programs, please list:

Rating system:

Rating date: (MM-DD-YYYY)

Score or rating level:

#### ADDITIONAL IMAGES

Provide additional images so that you have uploaded a total, including those uploaded on other screens, of at least 10 (and at most 18) digital images illustrating the project. Emphasis should be placed on graphics that best inform the jurors about the innovative sustainable design solutions that have been developed. Include the appropriate credit and caption for each. *Jurors will NOT see the credit field, so firm names there are acceptable.* 

Minimum Informational Requirements:

- > Context Plan (the place, region, neighborhood); must include North arrow
- > Site Plan; must include North arrow
- > Floor Plans; must include North arrow
- > Elevations
- Sections and Details; include at least one section that illustrates daylighting, natural ventilation, or other sustainable design strategies.
- > Photographs of completed project, interior and exterior

Accepted file formats: jpg, jpeg, gif, png. File size limit: 5 MB file per image.

Note: The low-resolution images you upload via the submission forms are for online use only. Top Ten winners will be asked to submit high-resolution images to AIA/COTE.

#### PROJECT TEAM AND CONTACT INFORMATION

At least one person must be identified as the "Primary Information Contact," and a phone number and email address must be provided for that person.

For all project team members, identify role on the team, and list name, company name, city and state. Additional contact information is optional.

#### **LEGAL FORMS**

Download, complete, and upload the legal forms contained in this document to complete your submission process.

You can complete this form by inserting scanned signatures, or by printing it, signing it, and scanning the document. The accuracy of these forms is of critical importance in providing information that the AIA will use in publicizing the winning projects. All credits on the award citations and in publications will be based on this form. Any errors or omissions will be the responsibility

of the entrant. The forms will not be viewed by the jury. Please note that when crediting Award recipients in publications and citations, it is the policy of the American Institute of Architects to list only the architecture firms associated with the project, not individuals.

**END OF FORM**