AIA COTE® Top Ten

2020 Call for entries

AIA

BuildingGreen

The American Institute of Architects Committee on the Environment is currently accepting submissions for the 2020 AIA COTE® Top Ten Awards.

2020 AIA COTE TOP TEN AWARDS

The AIA COTE Top Ten Awards recognize ten projects each year that exemplify the integration of design excellence and sustainable performance. Using AIA's Framework for Design Excellence as the standard against which projects are evaluated, COTE Top Ten awards demonstrate a holistic vision of architecture across all 10 of the framework's dimensions. In 2018, The Committee on the Environment published two tools to help architects achieve consistent high-performance on every project: the Toolkit and the Super Spreadsheet. Project teams submitting for the 2020 awards are encouraged to use the Framework to assist with project narratives and can use the Super Spreadsheet to ensure accurate calculations of the metrics. The last page of the Super Spreadsheet generates a color-coded graphic that displays performance across all metrics. Submitting teams are encouraged to upload this graphic as part one of their images. Beyond streamlining the AIA COTE Top Ten submission process, these tools can easily integrate into an architectural practice, providing support and guidance for design excellence for all projects.

A goal of the AIA COTE Top Ten awards program is to recognize performance over intentions. Newly completed projects can be submitted, project teams are also strongly encouraged to submit projects for which performance and occupant satisfaction data are available for a period of 12 months or more with at least 75% occupancy. There is no time limit for submission after project completion, the more evidence of a project contributing to real-world solutions the better.

Finally, honesty is a fundamental element of sustainable design. Unlike other pursuits where competition leads to a zero-sum game, sustainability is different - success in this arena is essential to everyone. These awards programs exist so that architects can learn from the successes of the very best projects and move the entire profession forward. In order to jointly improve our work and realize our shared vision of a zero-carbon, equitable future, all submissions are expected to be honest, straightforward, and transparent in the metrics, narrative, and images that are submitted for this awards program. A misinterpretation of a measure or metric can be avoided by using the Super Spreadsheet to calculate building performance metrics.

Until 2017, the COTE Top Ten award recognized ten projects based largely on predicted performance, while award recipients from previous years were eligible to submit post-occupancy data and narratives to be recognized with a single COTE Top Ten Plus award. In 2017, these separate tracks were merged: The 'Plus' designation will denotes projects with exemplary actual performance and post-occupancy lessons. There will be only ten award recipients total, but any number of the ten may receive the COTE Top Ten Plus designation. This designation is bestowed (or not) at the discretion of the jury, if they feel that a project stands out as extraordinary in these aspects. Previous COTE Top Ten award recipients are ineligible to submit.

DEADLINE

All submissions must be received by 5pm EDT on January 15, 2020. The submission deadline date will be strictly observed; no exceptions will be made.

ELIGIBILITY

All architects licensed in the U.S. can submit their completed built projects, regardless of project size, budget, style, building type, or location. Entries are

Recognition

Recognized projects will receive significant recognition, including acknowledgement in AIA publications, electronic media, and at AIA Conference on Architecture 2020 in Los Angeles.

Recipients may be asked by the AIA Communications department, or by various media representatives, for additional information about their projects. All submitted materials will become property of The American Institute of Architects.

Acknowledgements

The AIA Committee on the Environment wishes to thank Building Green/Environmental Building News for their generous support of this program.

Requirements

Please review each category for information about the deadline, eligibility, judging criteria, and submission requirements.

Questions?

aia.org/COTE

COTETopTen@aia.org

encouraged from both established and new practitioners and designers, and from small and large firms.

- Completed new buildings, renovations, restorations, interior architecture and urban/regional plans are eligible.
- COTE Top Ten projects must be completed at least three months prior to the submission deadline. "Completion" is synonymous with "substantial completion" as defined in the standard AIA documents governing construction.
- The entry is to be submitted by the architect.
- Submitting firms are required to be signatory to the AIA 2030 Commitment. Firms that are not currently a signatory firm are required to join the 2030 Commitment to be considered for an award.
- The submitting architect may qualify as a member of a design team, but is not required to be the projects lead. When one architect is not the sole author, all other participants contributing substantially to the design of the project must be given credit as part of the submission, regardless of professional discipline.
- Throughout the entire application, please provide the full name of the project without revealing the name of the architect or firm. Inclusion of firm name in any materials submitted (including narrative text, supporting documents, or file names) will cause your submission to be removed from the projects reviewed by the jury.
- A project that credits any 2020 AIA COTE Top Ten Awards jury member or his/her firm as architect, associate architect, consultant, or client is ineligible and will be disqualified if submitted.
- AIA will coordinate the promotion of award recipients with Architect Magazine. Certain photos will be held for exclusive use in a sustainability issue of Architect Magazine.

JUDGING CRITERIA

Each entry will be judged on how successful the project was in meeting its individual requirements, with particular emphasis on design excellence. Projects will be evaluated on a broad and inclusive definition of design quality that includes performance, aesthetics, community connection and resilience, and stewardship of the natural environment. The COTE Top Ten program was founded on the idea that sustainability is essential to design excellence, and vice versa. Therefore, a key criterion for judging projects is the integration of compelling design and sustainable performance.

SUBMISSION REQUIREMENTS

Registration

Online registration is required for each project. Full instructions and a summary of the project data required can be found later in this document.

Entry fee

An architect or firm may submit more than one project, but each project requires payment of a separate non-refundable registration fee.
$500 (AIA members) | $850 (nonmembers)

Digital images and drawings

Each project should be illustrated by at least 13 and no more than 18 digital images. Please include a minimum one image per measure, as well as a site plan, a typical floor plan, and a rendering. 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 while not mentioning the architect or firm. Ideal images should be in JPEG format, minimum dimensions 2400x1350px and a maximum file size of 6000kb per image.

Top Ten Awards Jury

Bob Berkebile
BNIM
Kansas City, MO

Roy Decker, FAIA
Duval Decker
Jackson, MS

William Horgan, Intl. Assoc. AIA
Grimshaw
New York, NY

Andrea Love, AIA
Payette
Boston, MA

Vivian Loftness, FAIA
Carnegie Mellon University
Pittsburgh, PA

Cover image credit

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COTE® Top Ten Measures graphics

courtesy Alexandra Alepohoritis

Submission requirements in detail

PROJECT ATTRIBUTES

Throughout the entire application, please provide the full name of the project without revealing the name of the architect or firm. Inclusion of firm name will cause your submission to be removed from the projects reviewed by the jury.

- project location
- year of design completion
- date of substantial completion
- gross conditioned floor area
- number of stories
- building program(s) (CBECS category if applicable)
- project climate zone (ASHRAE, Title24, or other [specify])
- annual hours of operation (#)
- site area
- choose one: brownfield/not previously developed/previously developed site
- choose one: urban/suburban/rural
- cost of construction, excluding furnishing
- total annual users and include all types (residents, occupants, and visitors) to reflect the scale of the project
- Is the submitting firm a signatory to the AIA 2030 Commitment? (Y/N)
  Submitting firms are required to be signatories to the AIA 2030 Commitment.
  If a signatory for more than one year, was the firm portfolio data uploaded to the AIA DDx tool in the most recent year? (Y/N)

Jurors will NOT see the credit field, so firm names there are acceptable.

THIRD-PARTY RATING SYSTEMS

List any performance-based rating systems pursued or achieved and upload the scorecard and/or summary of results.

	Registered	**Certified**
LEED: v4 / v2009 / earlier (choose)	Y / N	Y / N Certified Silver Gold Platinum
Living Building Challenge	Y / N	Y / N
WELL	Y / N	Y / N
Other: _____		

Contents

M1 Design for Integration (<300 words)

What is the big idea behind this project–and how did the approach towards sustainability inform the design concept? Describe the project, program, and any unique challenges and opportunities. Specifically explain how the design is shaped around the project's goals and performance criteria, providing both utility, beauty, and delight. How does the project engage all the senses for all its users, and connect people to place? What makes this building one that people will fight to preserve? Give examples of how individual design strategies provide multiple benefits across the full triple bottom line of social, economic, and environmental value.

M2 Design for Equitable Communities (<200 words)

Sustainability is inextricably tied to the wellness of communities. Describe specifically how community members, inside and outside the building, benefit from the project. How does this project contribute to creating a walkable, human-scaled community inside and outside the property lines? How were community members engaged during the design and development process? How does the project promote social equity at local, regional, and global scales? Because transportation-related emissions negatively affect public health, and because CO_2 emissions associated how with how these reach a building are frequently comparable to the CO_2 emissions associated with operating the building, describe how the project, by its siting and operations, helps reduce transportation-related emissions.

RESOURCES

Check out the Framework for Design Excellence

Mandatory

Community Engagement: Indicate the overall character of the community engagement in the design process:

- No community engagement practices were applied for this project.
- Potential stakeholders were informed about the project.
- Stakeholders were provided with opportunities to provide input at pre-designed points in the process.
- Stakeholders were involved throughout most of the process.
- A partnership was formed with stakeholders to share in the decision-making process including development of alternatives and identification of the preferred solution.
- Walk Score (a metric of the walkability of the neighborhood surrounding the site, which correlates with both greater occupant health and lower transportation emissions.)
- Bike Score
- Transit Score

Encouraged

- From a survey of building users or other method, estimate percentage of building occupants who commute via alternative transportation (biking, walking, mass transit, etc.)
- Is there covered bike storage? (Y/N)
  - If so, for how many bikes?
- How many showers per occupant?
- How many number of parking spaces?
- How many number of parking spaces required by local zoning code?

Please explain if a mandatory metric is unavailable or a metric requires additional interpretive information.

M3 Design for Ecology (<200 words)

Sustainable design protects and benefits natural ecosystems and habitat in the presence of human development. Describe the larger or regional ecosystem (climate, soils, plant and animal systems) in which the project is sited. In what ways does the design respond to the ecology of this place? How does the design help users become more aware or connected with this place and their regional ecosystems? How does the design minimize negative impacts on birds or other animals (e.g., design to prevent bird collisions, dark-sky complaint lighting). How does the project contribute to biodiversity and the preservation or restoration of habitats and ecosystem services?

METRICS

Mandatory

- percentage of the site area designed to support vegetation (landscape or green roof) _____%
- percentage of site area supporting vegetation before project began _____%
- percentage of landscaped areas covered by native or climate-appropriate plants supporting native or migratory animals _____%

Encouraged

- In 75 words or less, identify other design responses that protected or benefited natural ecosystems (such as dark skies, bird friendly design, etc.)

Please explain if a mandatory metric is unavailable or a metric requires additional interpretive information.

M4 Design for Water (<200 words)

Sustainable design conserves and improves the quality of water as a precious resource. Illustrate how various water streams flow through the building and site, including major water conservation and stormwater management strategies. How does the project relate to the regional watershed? Describe strategies to reduce reliance on municipal water sources. Does the project recapture or re-use water?

METRICS

Mandatory

- Predicted annual consumption of potable water (gal) [per resident, per visitor, per FTE, as appropriate], for all uses, excluding process water (such as cooling towers). Downloadable tools are available to estimate indoor and outdoor water consumption. Express predicted indoor water use as a % reduction compared with federal standards.
- Is potable water used for irrigation (after initial plant establishment period)? (Y/N)
  - Typical values to expect depend on building type, with values in the range 10–15 gallons per square foot per year being common for commercial buildings, and 70 gallons per person per day being common for indoor uses in US residences.
- Was potable water usage consumption measured after occupancy? (Y/N) If so, record actual annual consumption of potable water (gal) [per resident, per visitor, per FTE, as appropriate], for all uses.
- Is rainwater captured for use by the project? (Y/N) If so, what percentage of water consumed onsite comes from rainwater capture? _____%
- Were strategies employed to manage stormwater on site? (Y/N) Percent of rainwater (from maximum anticipated 24-hour, 2-year storm event) _____%
- Did you calculate the percentage of Total Suspended Solids (TSS)? (Y/N) If so, what is the percentage of TSS removed from stormwater runoff? _____% Refer to the EPA's Guidance Specifying Management Measures for Sources of Non-Point Pollution in Coastal Waters (Chapter 4, table 4–7).

Encouraged

- Does the project have substantial process water loads (cooling towers)? (Y/N)
- Is greywater or blackwater captured for re-use? (Y/N) If so, what percentage of water consumed onsite comes from greywater/blackwater capture and treatment? _____%

Please explain if a mandatory metric is unavailable or a metric requires additional interpretive information.

M5 Design for Economy (<200 words)

Providing abundance while living within our means is a fundamental challenge of sustainability. How does the project provide "more with less"? Possibilities include "right sizing" the program, cost-effective design decisions, economic performance analysis, economic equity strategies, notable return-on-investment outcomes, contributing to local and disadvantaged economies, etc. Provide examples of how first cost and life-cycle cost information influenced design choices. Identify any additional first-cost investments and how they are anticipated to improve life-cycle costs and longer-term economic performance.

METRICS

Mandatory

- What was the construction cost per square foot?
- Explain how building size was managed to comply with budget and meet operating requirements.
- Did you project estimated operating cost reduction? (Y/N) If so, what was the reduction by percentage? _____% What was the identify baseline?_____

Encouraged

- Comparable cost per square foot for other, similar buildings in the region. List source.
- Alternate unit cost measures: cost per employee [for a workplace], cost per resident [residential projects]), etc.
- How did design choices minimize materials usage allowing for lower cost and more efficiently designed systems/structure?
- Life Cycle Analysis of the costs associated with measures taken to improve performance (e.g., energy cost payback, water savings, measured productivity gains).
- Identify ways where design choices minimized materials used allowing for lower costs and more efficiently designed systems/structure.

Please explain if a mandatory metric is unavailable or a metric requires additional interpretive information.

M6 Design for Energy (<200 words)

The burning of fossil fuels to provide energy for buildings is a major component of global greenhouse gas emissions, driving climate change. Sustainable design conserves energy while improving building performance, function, comfort, and enjoyment. How did analysis of local climate inform the design challenges and opportunities? Describe any energy challenges associated with the building type, intensity of use, or hours of operation, and how the design responds to these challenges. Describe energy-efficient design intent, including passive design strategies and active systems and technologies. How are these strategies evident in the design, not just the systems?

METRICS

Use AIA's 2030 Commitment Reporting Tool, or the Architecture 2030 Challenge reference materials to provide comparison baselines for energy use and to convert utility-provided energy consumed into equivalent carbon emission impact.

Mandatory

- **Predicted Consumed Energy Use Intensity (Site EUI): kBtu/sf/yr**
  Total energy use by the facility including energy purchased from utilities and provided by on-site renewable sources. If available, provide a breakdown by energy end use (e.g., lighting, heating…) via attachment. (identify which simulation tool was used)
- **Predicted Net EUI** (kBtu/sf/yr) **and Carbon emissions** (lb/sf/yr)
  Net purchased energy use (total energy use, less any energy generated on-site from renewable resources).
- **Predicted Percent Reduction from National Average EUI for Building Type** _____%
- **Predicted Lighting Power Density** (W/sf)

Strongly Encouraged

- **Actual Consumed Energy Use Intensity (Site EUI): kBtu/sf/yr**
  Total energy use by the facility including energy purchased from utilities and provided by on-site renewable sources. If available via sub-metering, provide a breakdown by energy end use (e.g., lighting, heating…) via attachment.
- **Actual Net EUI** (kBtu/sf/yr) **and Carbon emissions** (lb/sf/yr)
  Net purchased energy use (total energy use, less any energy generated on-site from renewable resources).
- **Actual Percent Reduction from National Average EUI for Building Type** _____%

Site EUI values for buildings depend on building type, climate, and occupancy, with typical values for single-family homes in the range of 30-60kBtu/sf/yr, offices 50-80, hospitals 150-300, and laboratories 200-600 kBtu/sf/yr.

To estimate the emissions associated with the energy used by the buildings, it is acceptable to assume national average values of 1.2 lb CO_2/kWh (electricity) and 12 lb CO_2/therm (natural gas). Typical values in the range of 10-20 lbs CO_2/sf/yr are not uncommon for residential and office buildings.

Please explain if a mandatory metric is unavailable or a metric requires additional interpretive information.

M7 Design for Wellness (<200 words)

Sustainable design supports comfort, health, and wellness for the people who inhabit or visit buildings. Describe strategies for optimizing daylight, indoor air quality, connections to the outdoors, and thermal, visual, and acoustical comfort for occupants and others inside and outside the building. How does the design promote the health of the occupants? Describe design elements intended to promote activity or exercise, access to healthy food choices, etc. Outline any material health strategies, including any materials selection criteria based on third-party frameworks such as Health Product Declarations (HPDs), Living Building Challenge Red List, EPA chemicals of concern, etc. Include key results on occupant comfort from occupant satisfaction surveys.

METRICS

Mandatory

- Percentage of floor area or percentage of occupant work stations with direct views of the outdoors _____%
- Percentage of floor area or percentage of occupant work stations within 30' of operable windows _____%
- Percentage of floor area or percentage of occupant work stations achieving adequate light levels without the use of artificial lighting, by simulation or by direct measurement of the finished building, at a typical single point in time (>300 lux at 3pm March 21) _____%
- How easily can occupants control their own thermal comfort and lighting?
  - How many occupants per thermal zone or thermostat? _____
  - Percentage of occupants who can control their own light levels _____%
  - Material ingredient disclosure: were material ingredient disclosure documents collected? (Y/N) If so, identify which documents were collected (e.g. Declare, HPD, C2C) and summarize results with total documents and/or percentage of total materials.

Encouraged

- Peak measured CO_2 levels during full occupancy (ppm). For reference, outdoor air CO_2 levels typically fall in the range of 400-450ppm; standard levels of ventilation typically result in steady-state CO_2 levels in the range of 800-1200ppm. Test subjects in environments below 600 ppm score significantly higher in measures of cognitive function.
- Peak measured VOC levels during full occupancy (micrograms/m3). Standard offices typically report VOC levels in the range of 500-700 micrograms/m3. Test subjects in environments with VOC levels below 50 micrograms/m3 score significantly higher in measures of cognitive function.
- Annual daylighting performance (Spatial Daylight Autonomy: % of regularly occupied area achieving at least 300 lux at least 50% of the annual occupied hours.)
- Were chemicals of concern tracked? (Y/N) If so, identify each of these chemicals or classes of chemicals that were tracked and the standard that was used as a guide.

Please explain if a mandatory metric is unavailable or a metric requires additional interpretive information.

M8 Design for Resources (<200 words)

Sustainable design includes the informed selection of materials and products to reduce product-cycle environmental impacts while enhancing building performance. Describe efforts to optimize the amount of material used on the project. Outline materials selection criteria and considerations, such as enhancing durability and maintenance and reducing the environmental impacts of extraction, manufacturing, and transportation. Identify any special steps taken during design to make disassembly or re-use easier at the building's end of life. What other factors helped drive decision-making around material selection on this project?

METRICS

Mandatory

- **CO_2 intensity:** Estimated carbon emissions associated with building construction, including the extraction and manufacturing of materials used in construction (lbs CO_2/sf). Specify tool used (simple 1-page tools such as The Construction Carbon Calculator or more

comprehensive tools such as Athena, Tally, or other). Expect values in the range of 50-200 lbs CO_2/sf.

- **LCA:** Were other life-cycle assessments (LCAs) conducted? (Y/N) If so, identify tools used and summarize results.
- **EPD:** Were environmental product declarations (EPDs) collected? (Y/N) If so, summarize results.
- **Construction waste:** Was this metric tracked on this project? (Y/N) If so, summarize results.
- **Material re-use:** Was this metric tracked on this project? (Y/N) If so, summarize results.
- Was recycled content tracked on this project? (Y/N) If so, summarize results by cost.
- Was the percentage of project materials extracted and manufactured regionally tracked on this project? (Y/N) If so, what is the percentage (by cost) _____%

Encouraged

- Material ingredient disclosure: were material ingredient disclosure documents collected? (Y/N) If so, identify which documents were collected (e.g. Declare, HPD, C2C) and summarize results with total documents and/or percentage of total materials.
- What methods were used to improve material selection beyond mandatory measures listed? Examples might include tracking specific chemicals of concern, tracking and meeting other certification requirements, meeting Red List Free requirements, etc.

Please explain if a mandatory metric is unavailable or a metric requires additional interpretive information.

M9 Design for Change (<200 words)

Reuse, adaptability, and resilience are essential to sustainable design, which seeks to maintain and enhance usability, functionality, and value over time. Describe how the project is designed to facilitate adaptation for other uses and/or how an existing building was repurposed. What other uses could this building easily accommodate in 50-100 years? In what ways did the design process take into account climate change over the life of the building? Describe the project's resilience measures: How does the design anticipate restoring or adapting function in the face of stress or shock, such as natural disasters, blackouts, etc.? How does the project address passive survivability (providing habitable conditions in case of loss of utility power)?

METRICS

Mandatory

- Percentage of project floor area, if any, that represents adapting existing buildings _____%
- Can the project maintain function without utility power? (select one)
  - not habitable without power _____
  - passive survivability _____
  - partial backup power _____
  - full backup power _____
- What type of backup power does the project primarily have? (select one)
  - renewable/battery _____
  - grid/battery _____
  - fossil fuel generator _____

Encouraged

- Percentage of power needs supportable by onsite power generation
- Identify ways that material selections added to building lifespan. Include measures such as durability of materials, replaceability and reuse, and other relevant topics.

Please explain if a mandatory metric is unavailable or a metric requires additional interpretive information.

M10 Design for Discovery (<200 words)

Sustainable design strategies and best practices evolve over time through documented performance and shared knowledge of lessons learned. What lessons for better design have been learned through the process of project design, construction, and occupancy, and how have these been incorporated in subsequent projects? Describe ways the lessons have been shared with a larger audience (publications, lectures, etc.) and any ways the project may have influenced industry practices. Describe the processes used to maintain a long-term relationship between the design team and those occupying and operating the building and identify how both the users and designers benefited.

Projects with exemplary actual performance and post-occupancy information will be highlighted among the award recipients.

METRICS

Mandatory

- Has a post-occupancy evaluation, including surveys of occupant comfort, been performed? (Y/N)
- Which of the following post-occupancy steps were taken? (select all that apply)
  - contact the owner/occupant to see how things are going _____
  - obtain utility bill to determine actual performance _____
  - survey building occupants on satisfaction _____
  - formal onsite daylight measurements _____
  - share collected data with building occupants _____
  - formal post occupancy air quality testing _____
  - data logging of indoor environmental measurements _____
  - post occupancy energy analysis _____
  - develop and share strategies to improve the building's performance _____
  - teach occupants and operators how to improve building performance _____
- Which of the following building performance transparency steps were taken? (select all that apply)
  - present the design of the project to the office _____
  - present the design of the project to the public _____
  - present outcomes and lessons learned to the office _____
  - present outcomes and lessons learned to the public _____
  - publish post occupancy data from the building _____
  - publish any lessons learned from design, construction, or occupancy _____
- Were lessons learned through post-occupancy used to improve subsequent projects? (Y/N) If so, give an example.
- Summarize overall results.

Please explain if a mandatory metric is unavailable or a metric requires additional interpretive information.