

Michael G. Meyers Competition 2020 Design Competition

“The 2030 Challenge”

The 2030 Challenge was set in 2006 asking the global architecture and building community to adopt several targets to reduce greenhouse gas emissions and be carbon neutral by 2030. The urban built environment is responsible for 75% of annual greenhouse gas emissions: buildings alone account for 39%. Through innovative sustainable design strategies and generating on-site renewable energy, the goal to be carbon neutral by 2030 can be met.

This year marks 10 years until the 2030 Challenge goal. To gain and share the sustainable knowledge, the MGMC is seeking to design a *new education center that focuses on educating the public about sustainable efforts and practices.* The programmatic elements of the education center will primarily be education spaces for the public as well as a permanent research component for employees.

This new education center will be located at the crux of Buffalo Bayou at the Second Ward as it transitions into East Downtown. The project location is at the corner of Nagle St and Freund St., with the bayou as the north edge and street to the east. It will be up to you to look at these unique conditions and decide which path to take with your design strategies. Be sure to consider the neighborhood, context and surrounding landmarks in the area. Don't forget this is foremost an ideas competition!

PROJECT REQUIREMENTS:

The design for "The 2030 Challenge"

1. Include a comprehensive description of your building explaining the concepts behind your interior and exterior design. See essay requirements. Give your design a name.
2. Develop a distinctive solution that considers the established urban and natural surroundings. Your design solution should integrate and accomplish **at least (4) sustainable strategies** (see the last page of this document for suggested topics*). Your solution should be pedestrian friendly.
3. Develop interior and exterior spaces that show an understanding of how these spaces are created within the required program elements. Consider the use and relationships of the programmed elements, as well as the relationship between the indoor and outdoor spaces, and the overall flow through the space.
4. You are encouraged to explore the use of interesting materials, structural components and environmental strategies. Your drawings should clearly illustrate these components. Consider the context of surrounding building context and natural landmarks.

*Sustainable strategies are not limited to the suggested topics on the last page of this document

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PROGRAM REQUIREMENTS:

SITE ELEMENTS

Consider how you will approach the site as a pedestrian, on a bike, or in a vehicle. How does one enter the building? What views of your building do you want to emphasize? What does the landscaping look like? What other elements accent your design and contribute to the experience of visiting the space? What special features will enhance the visitor experience? Does your design blend into the context of the surroundings or stand out?

The bayou network is a condition unique to the City of Houston. How will this new education center relate to the adjacent Buffalo Bayou? How will the public experience the bayou as they learn about sustainable efforts? How will the bayou network guide Houston's sustainable efforts?

Your site is approximately 150 feet by 250 feet (37,500 sqft). Maintain a 10 ft set back on all sides of your building and a 30' setback from the bayou. Your building footprint may **not** occupy more than 75% of this area. The remaining area must be dedicated to outdoor public space. However, the outdoor public space should still be considered in your design.

Exterior Space Incorporate/ Develop 2 Ideas (min)

- Façade Development
- Urban Green Space
- Natural Daylighting
- Energy Efficiency
- Green Roof
- Rain Water Harvesting
- Other innovative sustainable concepts/practices

BUILDING ELEMENTS

20,000 – 40,000 SQFT APPROX.

When designing your building, there are some critical issues to keep in mind. Sustainability should be an integral part of your design of the education center. What makes your building stand out from or integrate with the mission of **Architecture 2030** for a more sustainable approach to architecture and design? What is the relationship between your **chosen program elements**? How does your building cater **to the surrounding neighborhood and the City of Houston as a whole**?

Keep in mind that you may include additional programmatic elements if it is necessary for the function of your building or eliminate a programmatic element if it is unnecessary for the function.

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Main Anchor:

Sustainability Education Center	~ 20,000 – 30,000 sqft
<i>Includes:</i>	
Lobby	
Education spaces (at least 2 smaller spaces and 1 or 2 larger spaces) (such as museum, gallery, interactive, and/or presentation spaces)	~ 1,500 – 5,000 sq ft. (each)
Classrooms (4) for 25 occupants each	~ 750 sqft (each)
Research Laboratories (2)	~ 800 – 1,200 sqft(each)
Circulation	~25% of total sqft

Support Spaces:

Open workspace to accommodate 5 employees	~ 500– 1,000 sqft (total)
Restrooms	~ 2,500 sqft
Circulation	~25% of total sqft

Public Spaces

Outdoor Gathering spaces	~ 3000 - 5000 sqft
Café with seating	~ 1,000 – 3,000 sqft
Pedestrian/Vehicular Street Access/Public Transportation	

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REVISED PRESENTATION REQUIREMENTS:

As our daily circumstances are changing constantly, we understand the need to adjust the requirements for the Michael G. Meyers Design Competition to allow as many students to participate under the different situations they might be facing.

The 2030 Challenge focuses on the energy efficiency of the built environment through innovative sustainable design strategies.

We encourage you to practice your own level of sustainability by rethinking and reframing how you use the resources around you to complete this year's Michael G. Meyer's Design Competition.

The design competition is first and foremost an *ideas* competition.

-The design narrative will play an important part of telling the story of the students' design.

-Technology is not a requirement for the production of the students' work, but if you have access you are more than welcome to use it. Students will still need to submit the required drawings (site plan, floor plan, elevations, sections, perspective and any other hand sketches to aide in the design process), but will not be required to submit them to the scale as indicated on the program. Drawings should be to a scale when drawn to appropriately represent and communicate the students' idea. Hand drawings on an 8.5x11 will suffice if that is what is accessible to the student. Judging does not depend on the amount of technology, software, or equipment used. Get creative with the resources available to you!

-Design narrative and drawings are to be submitted as scans or images in Powerpoint, PDF or JPG format – combined into PowerPoint Presentation of no more than 20 slides

1 - Narrative

Your descriptive narrative should include some detail to explain your design. Please limit your narrative to one 8 ½ x 11 sheet @ 12 point Arial font, approx. 500 words

Required descriptions in your essay:

- Describe your main concept and how this concept has influenced your design.
- Describe the community support. Who are they? What do they experience when engaging with the development? How does your development cater to the needs of the community?
- Describe the community/patrons. Who are they? What do they experience arriving to the development and entering the building?
- Describe how the surrounding context influences the design of your building.
- Describe the patron's experience in your building. What makes your building unique? What will make your users excited to spend time in your building?

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- Describe your sustainable strategies and how your proposed multi-use development will benefit the community.

2 - Drawings

Each of the following requirements should be presented on a 8.5 x 11 sheet of paper or digital file. **Drawings should be to a scale when drawn to appropriately represent and communicate the your idea. – Drawings should be photographed or scanned, labeled and included in a PowerPoint Presentation.** Judging does not depend on the amount of technology, software, or equipment used. Get creative with the resources available to you!

- **Site plan**, showing outdoor features and site improvements and the roof of the shelter (and other buildings if applicable).
- **Floor plan** of the building showing walls, doors, windows, furniture, countertops, plumbing fixtures, room names, and other descriptive information that defines the space.
- **Exterior building elevation(s)** showing façade, roof heights, building materials, windows, and other descriptive information.
- **Building section:**
 - o **Building section** of the building showing spaces and how they are connected or divided walls and exterior wall material
 - Or
 - o **Enlarged section** of a particular space of interest (I.E.: the entry from interior to exterior). Be sure to show materials.
- At least one accurate **perspective** drawings at any scale of an interior or exterior view of your project.
- Any **hand sketches** that document your design process.

3 – Model*

Model of the project (*building only, no site model*) is required for team projects

Models are not to exceed a 36" x 24" base.

Models are not required for individual entries, but are encouraged so get creative. Models are to be submitted through pictures digitally with the rest of the project documentation.

DEADLINE FOR SUBMISSIONS:

Project are due Friday, May 8 by 6pm. Projects are to be submitted digitally through the AIA Houston website.

AWARDS:

Design is a creative process, and this is an ideas competition. Engineering calculations are not required for mechanical, electrical, or structural systems. All participants will receive a certificate of recognition from the American Institute of Architects. There will be a balanced evaluation by jurors from architectural, academic, and other relevant fields of

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expertise. Awards include college scholarships and scholarships to the UofH Architectural Summer Discovery Program. While the quality of presentation is important, any contestant of any ability may receive an award based on the strength of a concept or inventiveness of an idea.

Sustainable design strategies

Site



Preserve green space or return developed land to more natural state
Be aware of drainage, minimize potential erosion
Be smart about transportation
Be aware of extent of impermeable surfaces, eg; roads and paving
Be aware of the effect of your site on adjacent properties

Water



Be smart about how much, and how you use and or reuse water.
Think about ways to conserve water.
(Use native and adaptive plants, and minimize use of potable water.
Adopt water technologies that reduce amount of water used.

Energy



Be smart about how much, and what type of energy is used.
Think about ways to conserve energy.

Materials



Consider the impact of products used in the construction of the Building;
this would include materials with recycled content, salvaged, rapidly renewable and local materials.

Indoor Environment



We spend the majority of our time indoors and we should optimize the quality of that environment.

Think about ways to bring lots of daylight into the building for visitors and workers
Think about the types of materials you use inside the building and how they could affect the health of the occupants