



DESIGN DRAFTING

2023-2024

The Design Drafting Competition is a contest designed to **expose High School and College undergraduate students to design drawing and the construction industry**. The contest provides recognition to students for creative design, successful problem solving and craftsmanship in preparing **architectural drawings**. Entries are evaluated for detail, accuracy and originality of work. Objectives of the contest are to introduce the student to the construction industry in a positive and challenging manner, while fostering a sense of self-worth and building confidence. Mentoring programs between students and educators are also encouraged.

Design Problem and Project Description:

USA Gymnastics has recently purchased a site located on the corner of Illinois Street and Vermont Street in downtown Indianapolis, Indiana. The enterprise is looking to not only have their headquarter office located downtown but also to expand to include a living and training center for their athletes. USA Gymnastics is planning to invest in developing a mixed-use building that will include apartments for their athletes to live in, a development gym and supporting program for them to train, and retail space to enhance the experience. Due to the extensive demand and stress these athletes traditionally endure, USA Gymnastics is attempting to provide a home that aids in their athletes' mental and physical health.

USA Gymnastics is interested in this location at Illinois Street and Vermont Street because of the site's access to downtown amenities and the athletic tradition that Indianapolis has to offer. This block is currently a surface-only parking lot with a historic building in the northwest corner in a prime downtown location. This design is an opportunity to increase the useability of this space and enrich the area.

This proposed mixed-use building should be 5-7 stories to accommodate the ground-level retail spaces, the training facilities, and two hundred (200) apartments that include a combination of studio, one- and two-bedroom apartments. There is a desire to have an active roof deck that includes a pool and other amenities. The design will also include incorporating the parking need of 400 parking spaces.

USA Gymnastics would like their facility to be both environmentally responsible and cost efficient where possible.

Location: 107W W Michigan St, Indianapolis, IN 46204



Sustainability: The proposed building should make reasonable efforts to demonstrate environmental responsibility. This may come in the form of energy-efficient design strategies, on-site renewable energy production, the use of recycled and/or local materials, and design features that keep the indoor air clean, allows daylight, and encourages activity.

433 N Capitol Ave - Historic building:

"Gibson Co. Building (Willys-Overland Factory), 433 N. Capitol Ave., 1916-1917

From 1916, the Gibson Company sold and distributed automotive parts and accessories to dealerships and service stations in Indiana. The Capitol Motors Division of the Gibson Company sold automobiles here from 1930 to 1963." - [Indiana Landmarks](#)

[HI Mailbag: Indianapolis' "Automobile Row"](#)

From USA Gymnastics:

"Based in Indianapolis, USA Gymnastics is the national governing body for gymnastics in the United States, overseeing six disciplines: acrobatic, artistic, gymnastics for all, parkour, rhythmic, and trampoline and tumbling. A member of the U.S. Olympic and Paralympic Committee and International Gymnastics Federation, the organization serves nearly 200,000 members, including athletes from the beginner to elite levels, parents, coaches, clubs and club owners, and supports the U.S. teams for the Olympic Games, World Championships, and other top-tier international events. USA Gymnastics is committed to delivering top-quality education, actively growing the sport across all levels and disciplines, and providing safe, positive and empowering experiences for all participants."

Basic Egress Information:

- Dead-End Corridors should not exceed 20'
- There should be a clear and unobstructed path from any location in the building to an exit.
- For any room or space with only one exit, the maximum occupant load should not exceed 50 people.
- For any room or space with only two exits, the maximum occupant load should not exceed 500 people.
- For any room or space with only three exits, the maximum occupant load should not exceed 1000 people.
- For rooms with more than 50 occupants, doors must swing in the direction of egress (i.e. the doors must swing out of the room).
- In buildings without automatic sprinkler protection, the doors must be separated by at least a 1/2 the diagonal dimension of the room.

Site Considerations:

- Existing building on block to remain.
- Building height to be between 5-7 stories.
- Must include a 4-story parking garage that is 275' x 120' and has a capacity of 400 parking spaces.
- Must include retail space on the first floor facing Illinois St. And Vermont St.
- Minimum 200 apartment units.
- Stair and elevator accommodations according to IN building codes. Reference resources for link.

Minimum requirements:

- Mix of studio, 1-bedroom, and 2-bedroom apartment units
 - Studio – 500-600 sf
 - 1-bed – 700-850 sf
 - 2-bed – 1100-1500 sf
- Gymnastic Specific
 - Training Gymnasium – 2500 sf
 - Weight Room – 3000 sf
 - Locker Rooms (2 min.) - 200-300 sf each
 - Physical Therapy Center - 2500–3500 sf
- Retail (Yoga Studio, Spin Studio, Spa, Food, Merchandise, etc.) – 5000 sf
- Parking Garage – approx. 275' x 120', 4 floors
- Resident Amenities
 - Mail Room – 150 sf
 - Manager Offices – 500-100 sf
 - Lobby – 36-120 sf
 - Fitness Center – 3000-4000 sf
 - Business Center – 300 sf
 - Roof deck with Pool - 450 sf

Required items for Submission:

Design Drawing General Requirements (must include in each drawing):

- Titleblock matching the format provided in the contest guidelines. All information in the titleblock must be complete.
- Standard scale will be $\frac{1}{4}'' = 1'-0''$ unless otherwise noted. Both a written and graphic scale are required.
- Orientation (North/South/East/West) of the building should be noted on all necessary drawings. North arrow to be included in all plan drawings.
- Include the Entry Code number as assigned by your administrator. Do not list your name on the drawings. All units shall be in English system – no Metric system.

Itemized Points from Judging Form (Total of 225 Points)

Points are distributed as follows:

Design Concept Narrative: 20 points

Sheets: A Series: Total of 115 points

- Sheet A-1: 20 points
- Sheet A-2: 20 points

- Sheet A-3: 30 points
- Sheet A-4: 25 points
- Sheet A-5: 20 points

Sheets: B-Series: Total of 50 points

- Sheet B-1: 25 points
- Sheet B-2: 25 points

Sheets: C-Series: Total of 40 points

- Sheet C-1: 20 points
- Sheet C-2: 20 points

Design Concept Narrative (20 Points)

Describe your design, including but not limited to geographical and site considerations, distinctive design features, innovative construction, sustainable materials or reuse practices, historic precedence references that go beyond the basic project requirements and/or aid in learning about multi-family buildings. The narrative shall be 400-500 words, typed and submitted in 8.5 x 11 format with the code number as assigned by your administrator. Do not include your name. Staple multiple sheets together. Remember that spelling and grammar will be considered when awarding points.

Sheet A-1 Cover Sheet (20 points)

- Title and Location map
- Drawing Index
- Square footage
- Number of stories (floors)
- Project Image

Sheet A-2 Site Plan (20 points)

- Show the building footprint and list the overall square footage of the building footprint.
- Note overall building dimensions
- Show landscaping and access to roadways/parking/public transportation. Include walkway to main entrance
- Locate emergency means of egress.

Sheet A-3 Block Floor Plan Diagrams (30 points)

- One plan per page, see attached example (Image A-E).
- Draft a ground-level (retail) block floor plan diagram.
- Draft a typical residential level block floor plan diagram.
- Indicate total square footage of units & space(s).
- Include legend to identify the different spaces of the program. (i.e. one-bedroom, two-bedroom, gymnasium...)

- Show stairs and elevators.

Sheet A-4 Two Bedroom Unit Floor Plan (25 points)

- Include the name of each room and include all relevant dimensions and section cut marks
- Shows walls, windows, front entry, door swings, and all other openings.
- Show cabinetry, plumbing fixtures, appliances, and furniture (desks, chairs etc.).

Sheet A-5: Two Bedroom Unit Reflected Ceiling Plan / Electrical Plan (20 points):

- Show switches, electrical outlets, data outlets, interior and exterior lighting fixtures, custom or salvaged light fixtures, and wireless access points. If your design calls for custom or salvaged/retrofitted light fixture(s), please note this on your Electrical Symbol Legend. Show circuit connections between light fixtures and switches.
- Label Ceiling Heights

Sheet B-1 Exterior Elevation of Illinois St. (25 points)

- One (1) elevation is the required minimum.
- Each elevation must be labeled as North, South, East, or West.
- Show all exterior features including doors, windows, roof, roof pitches and overhangs.
- Include a "Material Legend" for all materials used and denoted by hatches. Call out and annotate all materials that are not indicated by hatches.

Sheet B-2 Building Section (25 points)

- Include the name of each room and include all relevant dimensions and section cut marks
- Show foundation, framing, insulation, floor and roof construction, etc.
- Sections should include interior elevations.

Sheet C-1 (20 points) (Choose one only)

- **C-1A:** Provide a 3D axonometric rendered section
- **C-1B:** Roof Design Drawing (Design the roof top to include amenity options such as a pool, pickle ball courts, garden spaces, gathering space....)
- **C-1C:** Additional section/elevation drawings
- **C-1D:** Image of streetscape design, including courtyards, public transportation, etc.
- **C-1E:** Draw a typical wall section at 1" = 1'-0" scale.

Sheet C-2 (20 points) (Choose one only)

- **C-2A:** Construct & photograph physical scale model
- **C-2B:** Aerial render of project in site context
- **C-2C:** Callout of fully detailed gymnasium
- **C-2D:** Write a short narrative on how you would make this project sustainable (solar power, solar shading, passive systems, carbon neutral materials...). Create an appropriate drawing to show strategy. (For example: Solar panels arranged upon roof plan)
- **C-2E:** Foundation plan at 1/4" = 1'-0"

Resources:

1. Students can submit questions to the Design Drafting Competition via the RFI tool in the 2023-2024 Design Drafting Project if a sponsor or educator cannot assist locally. (RFI is an acronym for "Request for Information" which is a formal Q&A process). Allow 2-3 days for NEF to respond and post an answer to the website.
 - a. Check the website regularly for updates or special announcements. Review the RFI section often to see if your question has been covered before submitting duplicate questions.
2. U.S. Green Building Council: [USGBC | U.S. Green Building Council](#)
3. The 2030 Challenge - https://architecture2030.org/2030_challenges/2030-challenge/
4. Americans with Disabilities Act Resources: [Guidance & Resource Materials | ADA.gov](#)
5. Get to know Indianapolis:
 - a. [Indianapolis, IN Tourism | Hotels, Restaurants & Events \(visitindy.com\)](#)
 - b. [Explore Historic Indianapolis - Historic Indianapolis | All Things Indianapolis History](#)
 - c. [About Downtown Indianapolis](#)
6. [USA Gymnastics](#)
7. [Indiana Building Codes | UpCodes](#)
8. <https://maps.indy.gov/>

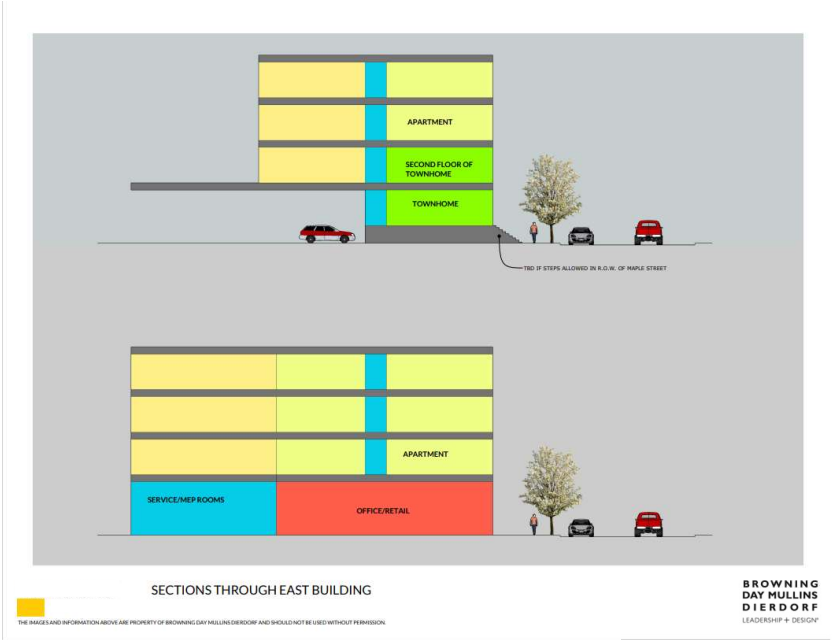
Examples:

Image A: Concept/Block Diagram Example



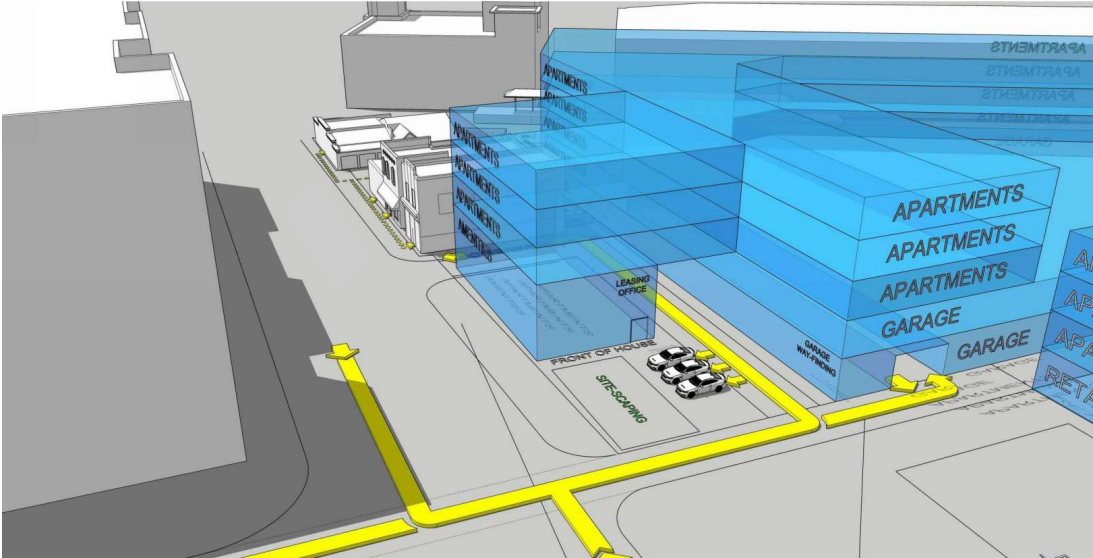
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Image B: Concept/Block Section Diagram Example



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Image C: 3D Concept/Block Diagram Example



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Image D: Concept/Block Diagram Example



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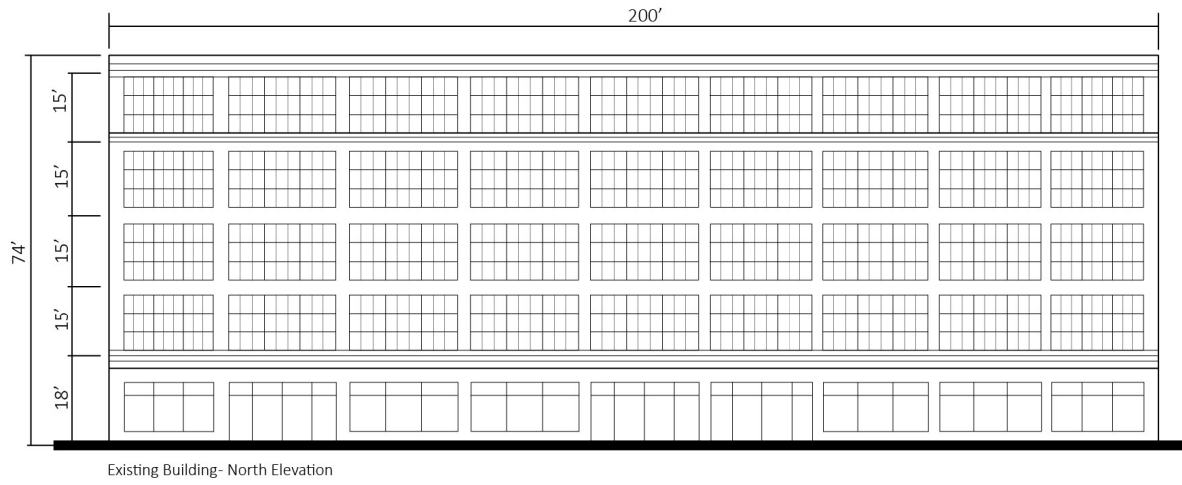
Image E: Concept/Block Diagram Example



Overall Aerial

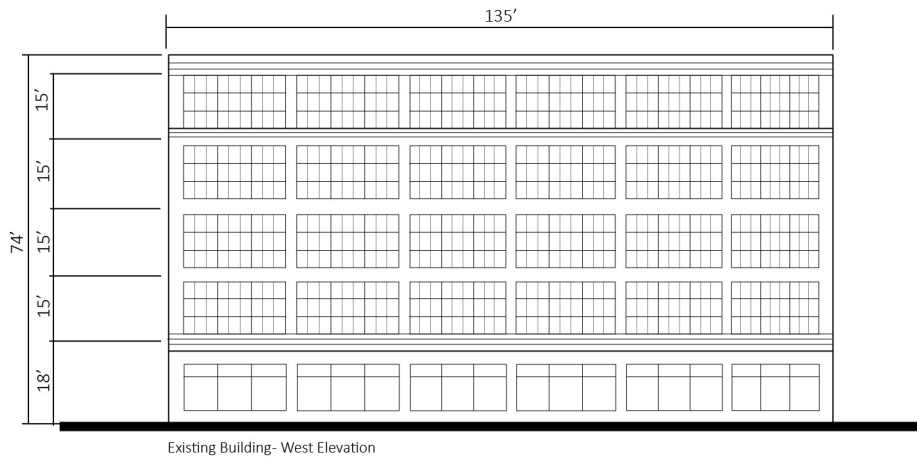
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Image F: Conceptual North Elevation of Existing Building



Conceptual Diagram - Not To Scale

Image G: Conceptual West Elevation of Existing Building



Conceptual Diagram - Not To Scale

Image H: Conceptual Site Plan

