

Delaware Bridge Design Competition Design Drawings Guidelines



Refer to the Bridge Design Competition Website for Important Dates

Design Drawings Received after the Deadline will not be Accepted

Design Drawings are **Extra Credit (Middle School) 20% (High School)** of the Total Score

Design Drawing Specifications: Computer-Aided Drafting (CAD) is essential for communicating an engineer's plans to stakeholders, ensuring projects are safe, efficient, and cost-effective. Participants in the competition are encouraged to use Autodesk AutoCAD, which is available for free download. For installation instructions, please visit the competition website. For tutorial videos on how to use the software, check Autodesk's website. All required design drawings must be created using Autodesk AutoCAD or similar CAD software. Note that drawings should be submitted separately from the proposal; refer to the competition website for submission deadlines. The CAD drawings of the bridge will demonstrate the team's proficiency with the software and will be evaluated with a maximum score of 100 points. Please consult the Design Drawings Scoring Rubric included for a detailed scoring guide as you prepare your drawings.

1. **Drawing Format:** The information below provides a detailed explanation of the Design Drawings Rubric included later. This rubric will be used by the judges to evaluate and score each team's drawings.
 - a) **Three (3) views must be provided**
 - I. Plan (top view looking down on bridge)
 - II. Section (vertical slice through center of the bridge)
 - III. Elevation (side view of bridge)
 - b) **Technical content**
 - I. Title of view. Each view must be properly identified and labeled.
 - II. Dimensions and text. Any important dimensions or key information should be labeled and clearly shown on plans. Dimensions may include the length of the structure, the length of an individual member, angles between members etc. Information may include members laminated, types and location of splices used, etc.
 - III. Units (inches, degrees, etc.) should be included for all dimensions and be consistent throughout details.

- c) **Detail formatting**
 - I. Sheet should be plotted to a PDF using the proper size of 11 inches x 17 inches.
 - II. Drawing sheet should include a border. Refer to the modeling guidance on the competition website for reference.
 - III. Sheet should include a title block including the following information:
 - i. Team name
 - ii. Team members
 - iii. Date drawing was completed
 - iv. Scale of details (e.g., 1/4" = 1'-0") Please note, drawings may all be at different scales, in which case, include a scale under each detail with the detail title.
- 2. **Submission:** Each team is required to submit an electronic copy of their design drawings to Nicholas Dean at Nicholas.Dean@delaware.gov. Paper copies may be submitted if needed, please contact Nicholas well in advance of the deadline to coordinate delivery. All entries become the property of the Delaware Department of Transportation and will not be returned.