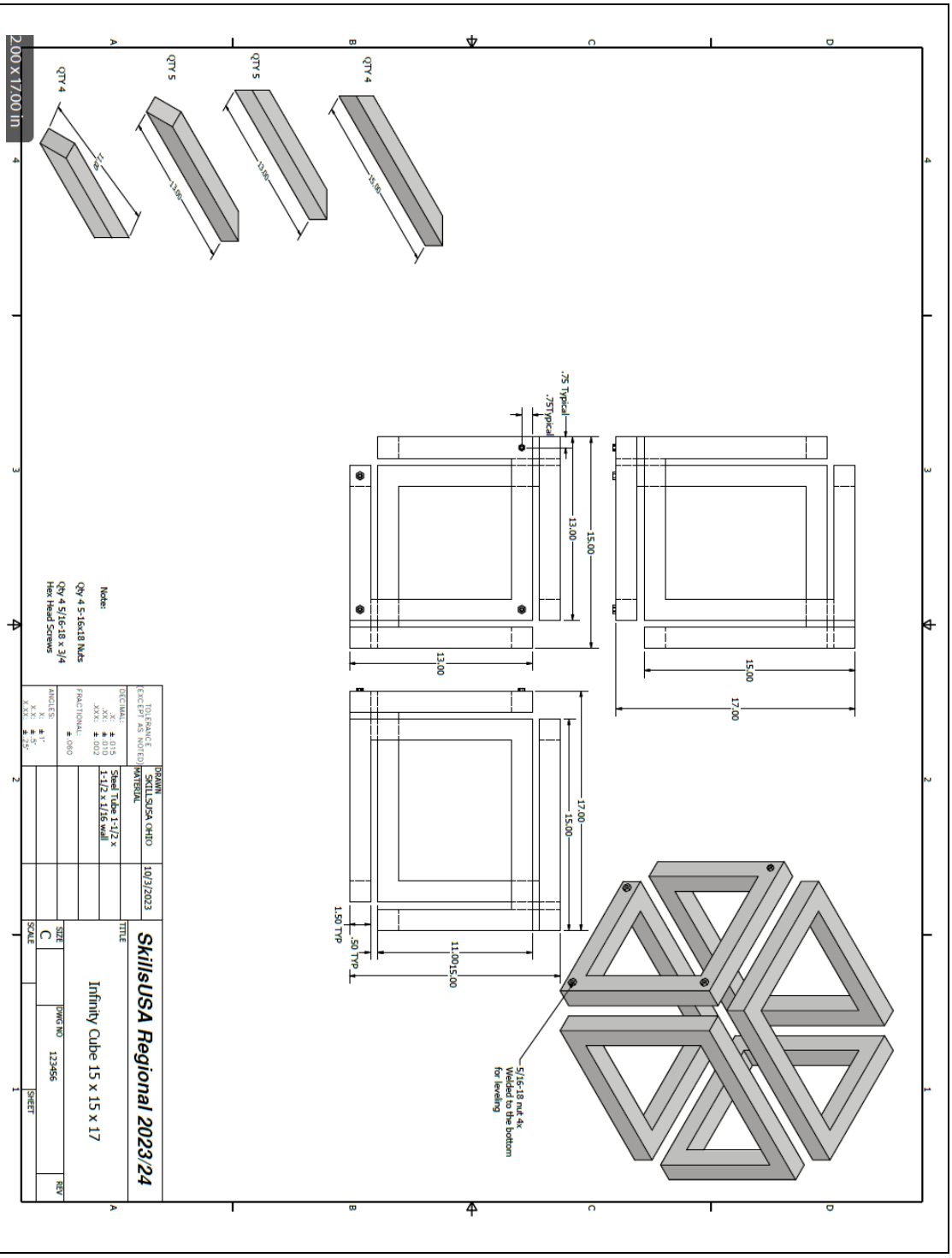
Welding Fabrication

Date	March 1, 2024	**Orientation Time**	8:00 a.m. (CLOSED to instructors)
Location	Delaware Area Career Center 4565 Columbus Pike Delaware, OH 43035	**Contest Time**	Immediately following orientation (CLOSED contest)
Scope of Contest	The skill performance assessment includes the completion of a metal project according to a provided technical drawing. Please see Exhibits A, B, and C Below. **Procedures for building the project:** • Only the three students participating in the competition are to work on the project. • Students should complete a portfolio of their planning and production of the project with photos of work along the way. • The finished project is to be brought to the location of the Regional Welding Competition. • All three team members must be present at the Regional Welding Competition and be prepared to display their finished project and participate in an interview with the judges. • The projects will be graded based on their accuracy and quality in relation to the blueprints. • The portfolio will be used to validate the process and work completed in the project. • Schools will be able to keep the projects. **Rules and Requirements for Project:** • Project is to be assembled/welded as show in the drawings. • NO post-weld grinding. Points will be deducted for any post-weld grinding. • Students may cut materials with any cutting process desired (I.e. Metal shear, plasma, oxy-fuel, CNC etc.) • SMAW/FCAW/GMAW/GTAW are the only processes to be used in fabrication and assembly of the project. • Project can be welded with just one or any combination of the processes listed above. • No paint or clearcoat is to be used on the project. • Student will decide type/size/location of welds on fabricated parts and be able to explain those decisions during the interview. • Student will add weld symbols to drawing that were used during fabrication of the project and the weld symbols may be drawn in ink. **At the regional contest your team will need to:** • Provide the completed project. • **Provide a portfolio with elements listed on scoring rubric.** • Participate in an interview presentation.		
Testing	NO		
Eligibility	1 team for every 50 members enrolled in program		

Clothing	Work Attire: Field specific work clothing required for the work environment or that matches the service conditions for the contest. This may include jeans if they are clean and professional looking and are accepted in the respective field (no holes or overly soiled pants). Work shoes or boots with a hard sole or anti-slip properties (steel toes may be required – refer to **Provided by Contestant** section below). Clothing should be as such that it will not get caught in moving equipment or power tools. School uniforms may be worn if they meet the above requirements with all identifiers covered.	
Provided by Contestant	Professional Resume – typed hardcopy Emergency Medical Form (Contestants must have this to compete) All elements listed in Scope of Contest	
Contest Standards	**Contest Skilled Performance Standards**	**Aligned ODE Manufacturing Career Field Technical Content Standard Outcomes**
	WF 3.0 – Read and interpret blueprints	**Outcome 6.1** Measurement and Interpretation **Outcome 6.2** Layout and Planning
	WF 4.0 - Produce welds using a Shielded Metal Arc Welding (SMAW) process to AWS QC10 standards.	**Outcome 4.3** Arc Welding Process
	WF 5.0 - Produce welds using a Gas Metal Arc Welding (GMAW) process to AWS QC10 standards.	**Outcome 4.3** Arc Welding Process
	WF 6.0 - Produce welds using a Fluxed Cored Arc Welding (FCAW) process to AWS QC10 standards.	**Outcome 4.3** Arc Welding Process
	WF 7.0 - Produce welds using a Gas Tungsten Arc Welding (GTAW) process to AWS QC10 standards.	**Outcome 4.3** Arc Welding Process
	WF 8.0 - Produce cut materials using an Oxygen Fuel Cutting (OFC) process to AWS QC10 standards.	**Outcome 4.6** Cutting Processes Above Outcomes can be found in the following ODE courses: 176000 Gas Metal Arc Welding 176001 Shielded Metal Arc Welding 176002 Flux Cored Arc Welding 176003 Gas Tungsten Arc Welding 176015 Welding Fabrication
Exhibit A:		

Contest Blueprint



Category Evaluated 3 team members present [ ] Yes [ ] No (Cannot medal if less than 3)	Possible Points	Point Breakdown	Points Awarded
Portfolio Folder Portfolio must contain the following items: 1. Cover sheet with a blank to write the contestant number (Number will be provided the day of the event) 2. Provide at least 3 photos a. Initial material mark-ups and how you will cut it. b. Materials once cut into proper dimensions. Include waste in your photo. c. Fully assembled project. 3. A copy of the plans for the project including weld symbols used (can be added by hand).	200 pts.	• Cover page – 30 • Layout photo – 30 • Material photo – 30 • Fully Assembled photo – 30 • Welding plans – 40 • Neatness - 40	
Interview Presentation: • Throughout Interview and Presentation all three students need to take a part in the presentation and demonstrate they were actively engaged in the project. • Students should have a professional presentation and appearance. • Students should use the portfolio as a reference and be able to show correlation of welds on the project to the welds on the plans. • Students should explain how they constructed the project as a team • Students should explain any challenges faced and how they worked through.	200 pts	• All 3 team members participate in presentation – 40 • Eye Contact and Professionalism – 40 • Use of Portfolio in Presentation - 40 • Decision-Making Process and weld selection - 40 • Challenges – 40	
Welds and Measurements • Correct materials (any materials not on original Bill of Materials equals 0 points) • Weld process selection • Weld quality	200 pts	• Materials – 50 • Weld selection – 50 • Weld quality – 100	
Assembly Inspection • Demonstrate ability to use the project as intended. • Project is level and safe to handle. • Project is stable when loads are applied.	200 pts	• Ability to use the project as intended - 50 • Level and safe to handle - 50 • Stability – 100	
Quality and Craftsmanship • Final product meets minimum specifications of the customer. • Quality of work and pride demonstrated in this product. • This is a saleable item to a customer, excluding post weld grinds required (customer-ready) • Individuals demonstrated pride and craftsmanship in their work and presentation	200 pts	• Meets Specifications – 50 • Quality – 50 • Customer Ready – 50 • Personal craftsmanship - 50	
TOTAL Score	1000	Record Total Here →	

Exhibit B: Contest Scoring Rubric

Exhibit B: **Exhibit C:** **Project Example**