

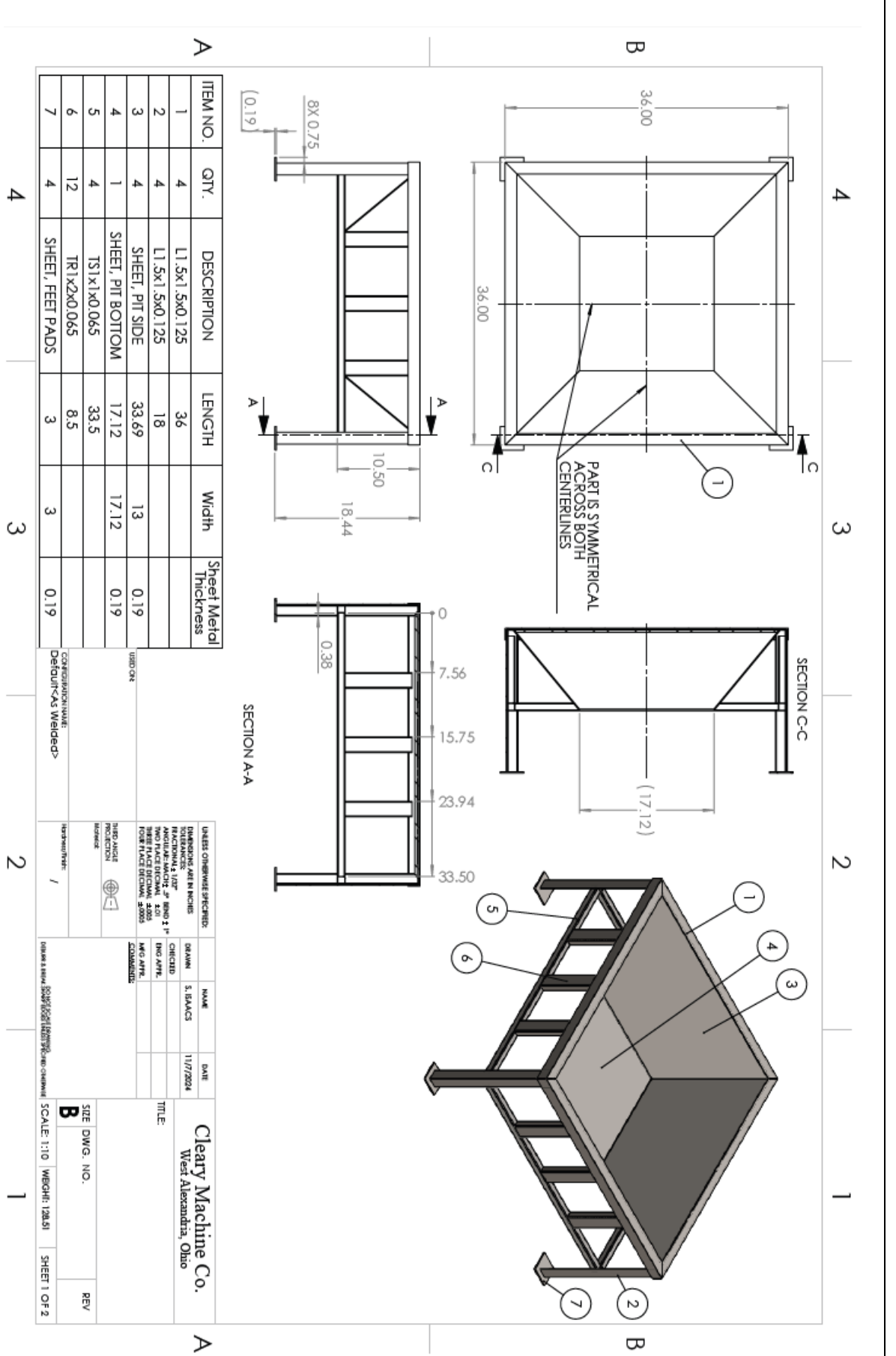


# Welding Fabrication



<b>Date</b>	February 1, 2025 SNOW DATE: February 8, 2025	<b>Orientation Time</b>	8:00 a.m. (OPEN to instructors)
<b>Location</b>	Hobart Institute of Welding Technology 400 Trade Square East Troy, Ohio 45373	<b>Contest Time</b>	Immediately following orientation (OPEN contest)
<b>Scope of Contest</b>	<p>The skill performance assessment includes the completion of a metal project according to a provided technical drawing. Please see Exhibits A and B below.</p> <p><b>Procedures for building the project:</b></p> <ul style="list-style-type: none"> <li>• Only the three students participating in the competition are to work on the project.</li> <li>• Students should complete a portfolio of their planning and production of the project with photos of work along the way.</li> <li>• The finished project is to be brought to the location of the Regional Welding Competition.</li> <li>• 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.</li> <li>• The projects will be graded based on their accuracy and quality in relation to the blueprints.</li> <li>• The portfolio will be used to validate the process and work completed in the project.</li> <li>• Schools will be able to keep the projects.</li> </ul> <p><b>Rules and Requirements for Project:</b></p> <ul style="list-style-type: none"> <li>• Project is to be assembled/welded as show in the drawings.</li> <li>• NO post-weld grinding. Points will be deducted for any post-weld grinding.</li> <li>• Students may cut materials with any cutting process desired (I.e. Metal shear, plasma, oxy-fuel, CNC etc.)</li> <li>• SMAW/FCAW/GMAW/GTAW are the only processes to be used in fabrication and assembly of the project.</li> <li>• Project can be welded with just one or any combination of the processes listed above.</li> <li>• No paint or clearcoat is to be used on the project.</li> <li>• Student will decide type/size/location of welds on fabricated parts and be able to explain those decisions during the interview.</li> <li>• Student will add weld symbols to drawing that were used during fabrication of the project and the weld symbols may be drawn in ink.</li> </ul> <p><b>At the regional contest your team will need to:</b></p> <ul style="list-style-type: none"> <li>• Provide the completed project.</li> <li>• <b>Provide a portfolio with elements listed on scoring rubric.</b></li> <li>• Participate in an interview presentation.</li> </ul>		
<b>Testing</b>	NO		
<b>Eligibility</b>	1 team for every 50 members enrolled in program		
<b>Clothing</b>	Clothing Classification Guide: CLASS D		

<b>Provided by Contestant</b>	Professional Resumé – typed hardcopy Emergency Medical Form (Contestants must have this to compete) All elements listed in Scope of Contest	
<b>Contest Standards</b>	<p><b>Contest Skilled Performance Standards</b></p> <p><b>WF 3.0</b> – Read and interpret blueprints</p> <p><b>WF 4.0</b> - Produce welds using a Shielded Metal Arc Welding (SMAW) process to AWS QC10 standards.</p> <p><b>WF 5.0</b> - Produce welds using a Gas Metal Arc Welding (GMAW) process to AWS QC10 standards.</p> <p><b>WF 6.0</b> - Produce welds using a Fluxed Cored Arc Welding (FCAW) process to AWS QC10 standards.</p> <p><b>WF 7.0</b> - Produce welds using a Gas Tungsten Arc Welding (GTAW) process to AWS QC10 standards.</p> <p><b>WF 8.0</b> - Produce cut materials using an Oxygen Fuel Cutting (OFC) process to AWS QC10 standards.</p>	<p><b>Aligned ODEW Manufacturing Career Field Technical Content Standard Outcomes</b></p> <p><b>Outcome 6.1</b> Measurement and Interpretation <b>Outcome 6.2</b> Layout and Planning</p> <p><b>Outcome 4.3</b> Arc Welding Process</p> <p><b>Outcome 4.3</b> Arc Welding Process</p> <p><b>Outcome 4.3</b> Arc Welding Process</p> <p><b>Outcome 4.3</b> Arc Welding Process</p> <p><b>Outcome 4.3</b> Arc Welding Process</p> <p><b>Outcome 4.6</b> Cutting Processes</p> <p>Above Outcomes can be found in the following ODEW courses: 176000 Gas Metal Arc Welding 176001 Shielded Metal Arc Welding 176002 Flux Cored Arc Welding 176003 Gas Tungsten Arc Welding 176015 Welding Fabrication</p>





<b>Category Evaluated</b> 3 team members present	<input type="checkbox"/> Yes <input type="checkbox"/> No (Cannot medal if less than 3)	<b>Possible Points</b>	<b>Point Breakdown</b>	<b>Points Awarded</b>
<b>Portfolio Folder</b> 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 <ol style="list-style-type: none"> <li>a. Initial material mark-ups and how you will cut it.</li> <li>b. Materials once cut into proper dimensions. Include waste in your photo.</li> <li>c. Fully assembled project.</li> </ol> 3. A copy of the plans for the project including weld symbols used (can be added by hand).	200 pts.	<ul style="list-style-type: none"> <li>• Cover page – 30</li> <li>• Layout photo – 30</li> <li>• Material photo – 30</li> <li>• Fully Assembled photo – 30</li> <li>• Welding plans – 40</li> <li>• Neatness - 40</li> </ul>		
<b>Interview Presentation:</b> <ul style="list-style-type: none"> <li>• Throughout Interview and Presentation all three students need to take a part in the presentation and demonstrate they were actively engaged in the project.</li> <li>• Students should have a professional presentation and appearance.</li> <li>• 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.</li> <li>• Students should explain how they constructed the project as a team</li> <li>• Students should explain any challenges faced and how they worked through.</li> </ul>	200 pts	<ul style="list-style-type: none"> <li>• All 3 team members participate in presentation – 40</li> <li>• Eye Contact and Professionalism – 40</li> <li>• Use of Portfolio in Presentation - 40</li> <li>• Decision-Making Process and weld selection - 40</li> <li>• Challenges – 40</li> </ul>		
<b>Welds and Measurements</b> <ul style="list-style-type: none"> <li>• Correct materials (any materials not on original Bill of Materials equals 0 points)</li> <li>• Weld process selection</li> <li>• Weld quality</li> </ul>	200 pts	<ul style="list-style-type: none"> <li>• Materials – 50</li> <li>• Weld selection – 50</li> <li>• Weld quality – 100</li> </ul>		
<b>Assembly Inspection</b> <ul style="list-style-type: none"> <li>• Demonstrate ability to use the project as intended.</li> <li>• Project is level and safe to handle.</li> <li>• Project is stable when loads are applied.</li> </ul>	200 pts	<ul style="list-style-type: none"> <li>• Ability to use the project as intended - 50</li> <li>• Level and safe to handle - 50</li> <li>• Stability – 100</li> </ul>		
<b>Quality and Craftsmanship</b> <ul style="list-style-type: none"> <li>• Final product meets minimum specifications of the customer.</li> <li>• Quality of work and pride demonstrated in this product.</li> <li>• This is a saleable item to a customer, excluding post weld grinds required (customer-ready)</li> <li>• Individuals demonstrated pride and craftsmanship in their work and presentation</li> </ul>	200 pts	<ul style="list-style-type: none"> <li>• Meets Specifications – 50</li> <li>• Quality – 50</li> <li>• Customer Ready – 50</li> <li>• Personal craftsmanship - 50</li> </ul>		
<b>TOTAL Score</b>	1000	Record Total Here →		

**Exhibit B:  
Contest Scoring Rubric**