

ASSOCIATED SCHOOLS OF CONSTRUCTION - REGIONS 6 & 7- MECHANICAL 2027

Pre-Problem Statement and Information Package

Presented By:



Introduction

Welcome Students!

The Northern California Mechanical Contractors Association (NCMCA) and Murray Company (MC) are proud to be the sponsors of the ASC Regions 6&7 Open Mechanical Problem in Sparks, NV.

This problem set is designed to give students a real-world glimpse into daily life in the mechanical industry. Students will work through a series of scenarios that mirror what a mechanical contractor's project team routinely encounters. Tasks will involve interpreting and applying documents such as the scope of work (SOW), drawings, and specifications. Students will be tasked with change order development, site logistics, scheduling, productivity analysis, quality control, and safety. Teams that succeed will show strong multi-tasking skills, sound prioritization, and the ability to deliver well-rounded, practical solutions.

During Saturday's Awards Ceremony, three teams are awarded and recognized along with an additional award for the Best Presenter. Regardless of final overall placement, throughout this event each student is gaining not only competition experience but more importantly, industry experience. This competition is an invaluable tool for career development, both inside and outside the mechanical industry. NCMCA/MC hopes every team will benefit from this 'real-life' experience.

All teams are required to provide actual resumes of each student along with a photograph to the contact listed below by January 22, 2027. All resumes shall be in the same format, font, organizational structure, etc. This effort will count towards your final score. Should any questions arise, please direct them to the NCMCA/MC representative below:

NCMCA/MC Representative: Ryan Schacherbauer
E-mail: rschacherbauer@murraycompany.com



Problem Premise & Deliverables

Your team works for Murray Company, a mechanical contractor based in California. You are working for a preferred client on a semi-conductor fabrication project.

You are assigned to a plan and spec project in which Murray Company is responsible for the Orbital Welded High Purity Nitrogen Scope. The current project has just started; you've fabricated a few spools already but have not started installation. The next weekly MEP check-in with the General Contractor is scheduled to take place on Friday, February 5, 2027.

During the MEP check-in Murray Company provides an update on the progress of the project, highlights any ongoing issues, and addresses any concerns. Your team will need to develop a plan (which may include cost, schedule, quality, and/or safety components) to present during the meeting.

Senior level executives from Murray Company will be checking in with your project team throughout the day on Thursday, February 4, 2027 to help ensure you are prepared to represent Murray Company at the MEP check-in meeting the following day.

Keys for Success

To help prepare for this year's competition, teams should familiarize themselves with the following:

- Document Review
 - Reading P&IDs, Isometric maps, Spool Drawings & how they relate to each other
- Project Scheduling
 - Familiarization with phase plans, modifications due to changes
- Constructability
 - Visualize future constraints and develop plans to mitigate
- Manpower Productivity
 - Understand labor factors and assign crews to activities to meet project deadlines
- Change Orders
 - Take-offs, material and equipment pricing & lead times, labor factors
- Quality Control
 - Understand the joining methods associated with piping systems in a semi-conductor facility (Orbital Weld, Hand Weld, Compression, Fusion, Mechanical Press-fit, etc)
- Safety
 - Be prepared to evaluate situations specific to the project and activity

Scoring

Scoring will be equally weighted between two main components - Team binder deliverables (electronic copy only, no hard copy deliverable is required) and Team presentation.

Extra Credit:

- Resumes w/ photographs provided by January 22, 2027 deadline

Competition Rules

Without exception, the rules for the competition will be governed by the following guidelines:

- Adhere to the approved and posted ASC Regions 6 & 7 2027 Competition Rules available at <https://www.asc67.org/rules.html>
- Additional competition rules will be reviewed at the Competition Kick-off held on the morning of Thursday, February 4th, 2027 at 6:00 AM in NCMCA/MC assigned competition room.
- Internet use is allowed however the hotel internet bandwidth is limited. As such, bringing an alternative source is recommended. E-mail will be used as a source of communication throughout the competition.
- The following software will be required for the competition: Bluebeam Revu eXtreme (or alternative PDF viewer), Navisworks 3D Viewer, Microsoft Project, Microsoft Excel, Microsoft Word and Microsoft PowerPoint.
- The use of “canned” or fluff materials in this competition is strongly discouraged.
- Artificial Intelligence. AI use is anticipated. Remember you're the experts, AI is the assistant. Your name goes on the work.

Timeline of Events

Thursday, February 4, 2027

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|----------------|---------------------------------------|
| 6:00 AM | Competition Kickoff |
| 8:00 PM | Deliverables Due (electronic via USB) |

Friday, February 5, 2027

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|----------------|--|
| 6:30 AM | Presentation Materials Due & Team Presentation Order Announced |
| 7:00 AM | First Team Presentation |
| 6:30 PM | Problem Recap (Orozko Lounge) |
| 7:00 PM | Student Mixer sponsored by Northern California MCA (Orozko Lounge) |

Saturday, February 6, 2027

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|---------------------------|-----------------|
| 8:00 AM – 12:00 PM | Job Fair |
| 12:15 PM | Awards Ceremony |

Conclusion

NCMCA/MC expects all teams to behave ethically, utilize problem solving skills, demonstrate professionalism, work as a team, and have fun throughout this competition. We are looking for future industry leaders and wish you the best of luck.

