2012 Open Mechanical Competition

Introduction

Kinetics and the NCMCA-Northern California Mechanical Contractors Association (a Joint Committee of Mechanical Professionals) welcome competitors to the 25th Annual Association Schools of Construction (ASC) competition. Since 1973, Kinetics has earned a solid reputation as a leading provider of High-purity piping, process system, and mechanical systems in the United States. Along with the partnership of the NCMCA 2012 Joint Committee which brings in many other professional mechanical contractors and their experience in all areas of plumbing and mechanical project delivery throughout the United States, will serve to enhance this year's ASC competition and ensure quality competitions for years to come.

Once your School has signed up for the competition and you have determined your final team, please forward a copy of your individual resumes and a team photo that identifies each participant to **Northern California Mechanical Contractors Association, P.O. Box 159, Benicia CA, 94510. Attn: Bill Whitney.** General Questions to the2012 Joint Committee can be directed via e-mail to both Mike Lescure at mlescure@lescurecompany.com and Bill Whitney at wwhitney4952@aol.com .

Problem Description

This year's project consists of a new **"Cathedral Building"** which is located in a large urban city located in an earthquake fault zone in Northern California. The building is a state of the art religious and business center incorporating the latest facility amenities to teach and support the surrounding communities, practice religion, business conference center, and support local community programs, including community food distribution to the needy.

The project consists of a three story ground-up to finish build-out of the Cathedral Building for a turn-key commissioning turnover to the owner. Including state of the art: worship center, large food service kitchen, Large dining facility, Baptismal Font (Pool), Large Plumbing and HVAC mechanical rooms, Business offices, Residential living area (separate out building), laundry service area, large locker rooms with showers, large public bathrooms and two levels of parking garage on the bottom two levels, everything required to support large regional community.

The building will require some special considerations in design, construction and pricing as this new building sits on a major Northern California earthquake fault. The structural engineer requires the building to be built on seismic inertia support pads, allowing the building to move three feet in any direction during a seismic event. This would require plumbing and mechanical systems to perform in the same manner. The worship center architectural structure is an ellipse, meaning exterior walls and structure are curved from floor to roof, requiring all plumbing and mechanical to follow the same structural contour.

The RFP-Request for Pricing, request pricing for the installation of all Mechanical and Plumbing systems in the building to support such state of the art environment the owner intends. The purchase of some equipment may be included in the RFP as well. The owner has requested that 3D-BIM Building Information Modeling and MEPS coordination be incorporated and utilized on this project.

Judging Criteria

The proposed problem will require the compilation of quantity take-offs, cost estimating, subcontractor bid evaluation, labor productivity, RFI's, safety, scheduling and contract evaluation. Teams are to estimate footages using P&ID's (process and instrumentation diagrams) and architectural drawings. In addition, team participant's oral presentation skills will be utilized during the presentation and estimate proposal interview. Each team will be required to turn over all documentation and back-up material for requested items in an organized binder.

The successful team solution will be based on the overall project budget, realistic construction schedule, presentation and overall understanding of the scope of work.

Each team will be **"Scored"** on the following items:

20% Plan and Specifications lump sum estimate for the mechanical and plumbing piping systems including: accuracy of bid, subcontractor selection, value engineering items and presentation of estimate.

20% Team oral presentation and Proposal Review including: Team participation, eye contact, public speaking ability and information presented.

15% construction Schedule including: scheduled activities, logic of schedule, coordination between trades and general contractor and presentation of schedule.

15% bid Form including: Correct bid form, organization chart logic, proposal letter and contract clarifications and exclusions.

10% Turnover Package including: Back-up information for estimate and schedule and organization of documentation.

10% Construction Safety practices.

5% Drawings and Specification Questionnaire.

5% Ethics and professionalism.

Mechanical Rules

The Kinetics/NCMCA Joint Committee will be enforcing the following rules: If any team should be cited for breaking any of the rules, the Joint Committee reserves the right to deduct points based on the 5% ethics or disqualify the said team. The Joint Committee also follows the Competition Rules as stated on the ASC website: www.asc67.org.

1. Once the competition begins, the six students are not allowed the use of any outside information.

2. No person besides the stated six student participants shall be allowed beyond the threshold of the door of the designated work room at any time during the competition. The competition begins when the problem statement is handed out until the teams presentation is over.

3. Once a presentation has begun, no person shall be allowed to enter the presentation room.

4. The Joint Committee discourages the use of "canned" or fluff materials in both proposals and presentations.

On behalf of the ASC, the Kinetics/NCMCA Joint Committee expects the best of all our Student Team Competitors. Ethics, Creativity and Professionalism are the extremely important to our mechanical industry and the future recovery and success of the nation's mechanical industry as a whole. We are looking for future industry leaders through this competition.

Sincerely
The 2012 Kinetics/NCMCA Joint Committee