

2011 ASC Region 3

National Open Category

Virtual Design and Construction

Pre-Problem Statement and Information  
Package

Presented by:



## **INTRODUCTION**

Mortenson Construction Company is proud to sponsor the new 2011 ASC National Virtual Design and Construction problem for the ASC Region 3 – Great Lakes Region.

This competition is designed to challenge a team of Construction Management and/or Engineering/Architecture students in the use of Building Information Modeling as it relates to the use in a construction project. Teams will be expected to go beyond just the applications of BIM design, and will be expected to not only produce a design using a BIM model but also how to use these tools to estimate, schedule, manage the logistics of site layout and control, as well as quality control and crash detection.

*\*Note teams may consist of students from two different institutions if they wish to pair Architecture/Engineering Students from one school with Construction Management students from another institution.*

## **PROBLEM PREMISE**

Your team is a Design/Build and/or IPD firm that have been asked to submit a proposal for the virtual design and construction services for their project. The judges are the “owners” of the project and will review the proposal as well as conduct a formal interview for the award of this project.

The project for this year’s competition will be a Laboratory/Data Center building. The building will be located in the Midwest region of the United States, and more detailed information about the project will be given out to your team at the beginning of the competition.

The scoring for the competition will be as follows:

Written Proposal and Model – 60%

Oral Presentation – 40%

## **COMPETITION RULES**

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

- All posted ASC Region 3 rules governing the competition rule
- Other rules will be reviewed at the problem issuance on the morning of the competition.
- Students for this competition will be granted internet access during the competition, but students will not be permitted to contact outside individuals for help during the competition
- All submissions for this competition will be done electronically

## **SCORING**

The selection process consists of two steps, evaluation of the proposal and the oral presentation. The grading will be done by a panel of judges from Mortenson Construction Company, several of whom may have been involved with the actual project. The grading scale will be based on a 100-point scale, with a maximum of 60 points coming from the written submission and a maximum of 40 points coming from the oral presentation.

Please remember that the combination score of both phases will determine the overall team placement. Teams who do not submit a proposal on time will still be judged, but will be assessed a 15-point penalty for being late. Each team will receive a summary of their scoring after the competition date.

The first, second and third place teams will be recognized with a trophy and a nominal cash prize at the Awards Ceremony.

## **PHASE I – WRITTEN SUBMISSION**

The formal RFP will be distributed and discussed at the mandatory Pre-Proposal Conference. All teams attending the meeting are then invited to submit proposals that will include, but not limited to the following:

- **Executive Summary**
- **The BIM Model of the Project**
- **Site Logistics Plan using BIM**
- **A 4D Estimate of the Project**
- **A 5D Schedule of the Project**
- **Quality Assurance/Quality Control Plan**
- **Crash Detection Analysis and Solutions**
- **Project Turnover Proposal**

Because of the various types of software packages available, the following are the guidelines for the electronic submission:

- Solution models will be in .RVT format (Revit Preferred, contact judges prior to competition to inquire about compatibility of other programs)
- Estimates should be in .xls format
- Schedules should be in PDF format as well as Native Format (P6, etc...)
- All 4D sequencing videos will be in avi and native format. Be sure to provide codecs if necessary.
- All Navisworks files should be included if used(NWF, or NWD, or NWC)

No Hard Copies of the Submission will be required. The judges will provide a flash drive to all teams and the submissions will be done on this drive.

RFI's will be done electronically. There will be an initial round of RFI's that will conclude at noon, all teams will submit RFI's electronically thru email. The judges will answer all RFI's via email by 2PM. A second round of RFI's will begin at 1PM and conclude at 4PM, and the judges will answer these via email by 6PM. All teams will be sent a copy of all RFI questions and answers. No RFI's will be accepted after 4PM.

The Pre-Proposal Conference will begin at 7AM sharp. Once completed the teams will be able to work on the project until 10PM. Judges will be performing random visits to the team to ensure compliance with the rules. The exact location of the submission will be given in the RFP.

## **PHASE II – ORAL PRESENTATION**

The owner will conduct interviews of the teams who have responded to the Phase I Proposal request. These presentations will be conducted on Friday the judges will post a schedule outside the meeting room with the order of teams by 10PM on Thursday evening.

Presentation Parameters:

- A projector and screen will be provided to all teams by the hotel. Teams are expected to bring their own laptops for their presentation.
- Each team will provide 5 hard copies and one electronic copy of their presentation by 8AM Friday morning. Teams will not be allowed to change their presentation slides after this.
- All presentations are limited to 30 minutes in length, with a 15-minute question and answer period to follow. All presentations will end promptly 45 minutes from the start of the presentation.
- Each member of the project team must have a speaking role during the presentation, questions may be directed at specific individuals, or be general in nature.

## **CONTACT INFORMATION**

Any questions prior to the contest date can be directed to the Mortenson representative below:

Contact: Ben Goetter

Email: [Ben.Goetter@Mortenson.com](mailto:Ben.Goetter@Mortenson.com)