2017 ASC Region 1
Commercial BIM Problem Statement

Kiewit

Teams will prepare their answers as a general contractor project team. Judging will be conducted by Kiewit. Teams will need to provide a single email address to the judges as the team's contact and a cell phone number for text messages.

Teams will be evaluated on their demonstrated understanding of Building information Modeling (BIM) in these main areas: planning, cost estimate, design coordination, construction, operate and maintain, and communication (written, verbal and presentation)

1. Planning
    a. Demonstrate the ability to read construction documents (2D &3D), understand site conditions, use construction knowledge to plan the job and visually communicate it.
    b. Develop a BIM Project Implementation Plan
        i. Develop a plan on implementing BIM to leverage the capabilities of the process and technology on the project.
2. Cost Estimate
    a. Develop a project estimate for direct cost of work, by quantifying specified scope and applying unit rates for quantities extracted from the BIM model
    b. Determine alternate cost saving solutions
3. Design Coordination & Constructability
    a. Demonstrate ability to 3D model specific areas of project
    b. Spatial Coordination/Clash Detection/Collision Detection
        i. Develop a federation of different sub-models
        ii. Coordination and elimination of conflicts and/overlaps (utilizing BIM clash detection) provide reports
        iii. Resolve clashes
    c. File Organization
    d. Plan to update BIM model during construction operations including design & field changes & as-built information.
4. Construction
    a. Establish protocols for using the BIM model during construction (specific 3D work planning drawings and sequences)
    b. Utilize 4D Modeling
        i. Identify work activities out of sequence, flow of trade work and relationships between construction equipment
        ii. Analyze construction scenarios and determine the most efficient sequence of work
5. Operate & Maintain
    a. Plan to turn over as-built model with relevant component information – closeout & final deliverables
6. Presentation
    a. Written Proposal
    b. Presentation (10 minutes)
    c. Interview (10 Minutes)

Category	% Weight
Planning	15%
Cost Estimate	30%
Design Coordination & Constructability	20%
Construction	15%
Operate & Maintain	5%
Presentation & Interview	15%

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Software Requirements

- Revit 2017
- AutoCad 2017
- Navisworks Manage 2017
- Scheduling Software
- 4D Scheduling Software (Navisworks, Synchro or software of choice)
- Microsoft Office
- .pdf reader (Acrobat, Bluebeam, etc)
- Cost estimating system of choice