

Software Solution Builds Project Consensus

Gather 25 people from three campuses at a weekly design development meeting — and good luck reaching consensus. Add the right piece of software, though, and this joint residence hall project comes together smoothly.

by David Graue

Because of high enrollments and Chicago's South Loop neighborhood's growing popularity, students attending colleges in downtown Chicago have to either compete for scarce apartments nearby or commute from the suburbs.

In 2001, DePaul University, Columbia College and

Roosevelt University joined forces to create a not-for-profit corporation, the Educational Advancement Fund (EAF), to develop the largest student residence hall in the United States: the University Center of Chicago. The members knew it would require extensive coordination during the design phase.

Each group had specific building program needs. And, at \$150 million, the 700,000-sq.-ft. University Center of Chicago is no small project. It will provide 1,720 beds in suites and apartment-style units, plus 35,000 sq. ft. of retail space in Chicago's South Loop at State Street and Congress Parkway.

Building Consensus During Design Development

Speed was essential — the goal was to open the building in time for the 2004 fall semester.

Everyone knew that coordinating three clients on such



Rendering courtesy of Murneich

As building components were added and taken away, unit configurations were automatically revised and the number of beds was adjusted.

a massive project would be highly complicated. “There were a lot of concerns early on about taking on a project requiring multiple reviews by multiple parties,” says Bob Janis, vice president for Facility Operations at DePaul. “We were all concerned about the potential for delays. So all three schools committed up-front to work together and expedite the review process.”

To speed the process of reviewing design and reaching consensus, we suggested using Autodesk Revit, a building design and documentation system.

Autodesk Revit is a building information modeling solution — it stores and manages building information as databases. As a result, it captures, manages and presents data in a variety of ways. To save time and increase accuracy during the planning process, we used Autodesk Revit to generate massing studies, which we refined using a variety of perspective and elevation views. Revit’s change management capabilities proved useful as building components were added and taken away, unit configurations were revised and the number of beds was adjusted.

Weekly design development meetings typically involved up to 25 people — two to four representatives from each university, as well as designers and consultants. To these meetings, we brought 3-D model images, plans, interior elevations, perspectives and/or sections, all generated using Revit. We would pin these on the walls and lay them on the table so everyone could understand and discuss the design. We developed ideas and suggestions directly on top of the printouts and then, when we returned to our office, entered the changes.

Since Revit manages the relationships between building components, it automatically identifies where those changes affect other aspects and areas of the building. As a result, we could swiftly generate new design options to show at the next meeting.

“Revit helped Antunovich Associates prepare a set of drawings that were detailed in a much more thorough way than in the past,” says Janis. “Every step of the way they’ve provided us with better drawings, more quickly, than we’ve seen before.”

Not all client representatives had as much experience with large construction projects. Having three-dimensional models generated in Revit helped everyone interpret the design intent the same way and understand the design options available.

For instance, the entrance lobby area was a key element of the project, since it required a challenging


circulation pattern. The south side of the building has apartments with kitchens and living rooms. The north side features more traditional residence hall-style suites. Each side is served by its own elevator bank. Understanding how people would flow in and out of the space was complicated, especially when you threw in a security desk and conference space.

“Antunovich Associates came in with displays that quickly and clearly showed the design intent for the entrance lobby,” Janis says.

Speeding Design and Construction

Numerous consulting engineers and an associate architect played crucial roles in the development of this project. We shared information by exporting plans, sections and elevations as DWG files. We would then import their revisions as a base to ensure our building model was coordinated.

Different wall types had different fire rating and sound insulation requirements. We used Revit to tag all the wall types, change them as needed and develop schedules accurately. When changes were made, all the consequences were automatically coordinated.

Revit also enabled us to have an accurate pricing set, which helped keep the project on budget. 

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