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Using an Integrated Process to Meet an Accelerated Timeline Business Information Modeling Helps Save Costs and Expedite the Building Process

Imagine designing, constructing and completing a 4,800-square-foot project in exactly one year's time. Now imagine doing it both on time and on budget. Sound like dream? Not with the combination of the right team and the use of Business Information Modeling (BIM) technology.

BIM, enabled through Revit® software, affords architects the opportunity to integrate the entire design, development and construction process all in to one software program that

allows all members of a project to view, utilize and revise plans simultaneously and in real time. This software is a live, interactive database that saves both time and money. Additionally, the software can facilitate three-dimensional renderings, providing a comprehensive view of what is being built. The three-dimensional renderings assist not only the architects, but also the client for which the project is being developed, as it provides an all-inclusive view of the project, eliminating hand drawings

which can be difficult for clients to decipher.

The Southern Baptist Theological Seminary located in Louisville, Kentucky was in great need of a building where visitors and new students alike could arrive, obtain information about the school and its programs and orient themselves with Southern Baptist beliefs and ideals. Translating this need, SHP Leading Design proposed restructuring the architecture of the front of the main building,





in effect, turning it in to a welcome center.

Once the architectural design was agreed upon, Southern Baptist added one other very important criterion: the project must be completed within 12 months to honor the 150th anniversary of The Southern Baptist Theological Seminary. Typically, a project of this size and scope would take 18 to 24 months to complete.

To meet the accelerated time frame, SHP incorporated an integrated design and construction methodology, in conjunction with AutoDesk's Revit software for the project. The integrated offering of design and construction services reduced the amount of time and money spent on the project through increased efficiencies in the design and construction sequence. Adding to the integration efficiencies, the Revit software allowed the structural and MEP engineer to successively model

the building, increasing efficiency. With the structural engineer having the ability to establish the size and weight at the onset of the project, a critical component when ordering steel, the team was able to beat market escalations on the price of steel, saving approximately 20-25 percent on cost. Not only did this save money, but it also saved time as the steel was prepared for the site within three to four months of initial approval. When working under such a tight timeframe, the shipment of steel is a critical element to staying on schedule.

Further showcasing the ability of SHP and Revit, approximately six months in to the project, the footprint of the new welcome center changed, removing approximately 1,200 square feet, or 20 percent, of the building. Under a traditional architecture model this would have set the project back months due

to the many people involved that would need to manually change their independent plans. However, since all of the disciplines were working together, and in the same software, Revit, this change was conceived, executed and completed in only three days.

According to Dick Thomas, AIA, LEED-AP, vice president of SHP, "the timeline for this project was one of the most challenging undertakings we've faced. Revit's live, interactive database permitted all those involved to look at the same information simultaneously and make changes in real time. It was the combination of the team and the software that allowed us to do this in one-third to one-half less time than the traditional model allowed. We pushed our capabilities on this project and will keep pushing with the use of SHP and Revit."

