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BIM technology grows with building industry's demands

Building Information Modeling, or BIM, as it's commonly referred to, means little to those not working in the development arena. But today, most contractors will tell you, anyone trying to build out a project without BIM software is in for a rough road.

AutoCAD (Computer Aided Design) took the pencil out of architects' hands in the 1980s, replacing it with a computer program. From there, AutoCAD evolved into BIM, which took AutoCAD's two-dimensional construction drawings and brought in 3-D drawings, then added fourth and fifth dimensions, such as the integration of job scheduling, cost control and other features. This technological evolution took on the BIM acronym in the mid-'90s.

Today, BIM has been used heavily in the design-build process, in which architects, contractors and site owners work together from the design phase of a project all the way through to the project's completion. And now BIM is being used even in traditional design-bid-build developments as well. It's ability to make one change on multiple drawings in a few key strokes is one big selling point.

"All the information and data is linked. That way, if I move a door in the floor plan (document), it'll be moved

in the elevation (drawing)," said John Darin, an architect with the Korte Co. "It also keeps track of supply changes and costs, as well, whenever you make those changes."

Darin personally has worked with BIM as it has evolved through the years, seeing firsthand the days of hand drawings going by the wayside, while 2- and 3-D drawings took over. Today, he added, BIM allows building owners and contractors to take a virtual tour of a project before ground is broken. But he also emphasizes that the virtual tour's ability to see what's happening behind building walls is one of the biggest assets BIM brings to the development equation.

"BIM will tell you where colliding happens. You can see where two things are hitting each other," he said. "You can look at, say, a drain line that's running at a 12-inch slope and realize, at some point, it may be going through a piece of mechanical duct. This way, contractors can come together and talk through a solution."

But while BIM has come a long way from its 2- and 3-D simplicity, local BIM professionals say there is a new wave in the product's evolution occurring.

Cliff Cole, a project engineer with Penta Building Group, said BIM operators are now working more and more with building suppliers to use actual di-

mensions of specific fixtures or building products — toilets, furnaces or other fixtures — in a drawing.

"It helps to know the shape or size of that particular supplier's product when you're designing a building," he said. But Cole also said he doesn't see closer working relationships with suppliers influencing the choosing of one supplier over another. He also said using specific suppliers' products in designs allows architects and engineers to factor in product availability and delivery times, a key piece in a successful project's puzzle.

"It helps us make those decisions early, so that we don't have to worry in the middle of a project if something's going to be here when you need it," he added.

Both Darin and Cole agree, above all, BIM technology has become a channel for communication between all parties involved in a job.

"The biggest thing it has helped is with the collaboration of the multiple stakeholders in the project to help the job run smoother," Cole said. "There's really no ceiling on what you can do with BIM, in my opinion. It's really a case of where your imagination can take it. <

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