Legal Issues with Building Information Modeling

Building Information Modeling is sweeping the architecture, engineering and construction industries. An increasing number of public and private owners alike are requiring the use of BIM on their projects. Because of the rising demand, firms that are capable and experienced in the use of BIM technology are beginning to enjoy a significant competitive advantage in the marketplace.

BIM utilizes cutting edge digital technology to establish a computable representation of all the physical and functional characteristics of a building and its related project/life-cycle information. BIM is intended to be a repository of information that the owner/operator may use and maintain throughout the life cycle of the building.

Many AEC firms have been slow to embrace BIM – possibly because of the construction industry’s resistance to depart from traditional norms. However, BIM is definitely here to stay - raising unique legal issues, most of which have not yet been addressed by the courts. It is so new that there are few, if any, reported cases involving BIM-related issues. Until recently, standard industry contracts did not address BIM issues at all. Where BIM is used, contracts do not usually address BIM. As a result, if BIM-related disputes or disagreements develop, there are no contract provisions to aid in sorting them out.

Some of the issues with BIM that must be understood and delineated in the contract involve the scope of the BIM modeling work on the project. Many owners require the use of BIM or Revit on projects without really understanding what it entails or what to expect. Designers and contractors often commit to use BIM without understanding what is expected and how those expectations will be carried out among the project team members. The owner’s expectations need to be addressed up front so that all parties understand and are prepared to carry out the requirements.

Responsibilities for each BIM model must be indicated, and each participant’s degree of participation should be spelled out. Schedules for BIM deliverable’s should be included. The permissible uses of the BIM model should be addressed in the contract to prevent project participants from using models on other projects or unauthorized purposes.

BIM is intended to be a highly collaborative process in which contractors and designers meld their abilities from the very early stages of the project. This heavy involvement by the contractor in the design process will reduce the contractor’s ability to disclaim responsibility for design errors because it will have had a prominent role in the design process. Some firms on the forefront of BIM technology have developed contract language that transfers a disproportionate risk to other collaborators. AEC firms must be able to spot this language during contract negotiations.

In 2008, the American Institute of Architects (AIA) attempted to address some of the complicated issues raised by this unique process. It released the E202 form – BIM Modeling Protocol Exhibit. The BIM exhibit is intended to be used as an exhibit to any contract. Specifically, the E202:

• specifies responsibility for the preparation of each element of the model at each phase to ensure that no major design elements are missed or left unaddressed;
• defines the extent to which downstream model users, such as contractors and fabricators, can use and rely on the model for scheduling, pricing, fabricating and construction;
• assigns management of the model to a specific party by project phase to avoid confusion about who is managing the model at any time;
• clarifies who owns the model and who has the right to use;
• creates a mechanism to add or delete model elements and to revise the required levels of development on a project-by-project basis; and
• provides definitions for terms to eliminate/avoid confusion.

BIM is quickly becoming a preferred application among the construction industry. Firms taking advantage of this technology will flourish. However, like any new trend or delivery system, it presents unique legal issues. It fundamentally alters the traditional roles and responsibilities of the designer and contractor. Firms using or getting acquainted with this new technology should consult experienced construction counsel to address the unique risks that this technology presents so that appropriate contract language can be drafted to address the individual risks that companies will face.