

## **BIM Use Increases Professional Liability Exposures**

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*Building Information Modeling, or BIM as it is commonly known, provides a digitized representation of the building process from the ground up. It is used by the design team and contractors before construction actually begins, typically on design-build projects. However, when designers and builders do not use BIM correctly, liability issues can crop up. Mitch Cohen, P.E. Assistant Vice President at New Day Underwriting Managers, explores this topic in our 4th Quarter Newsletter. New Day Underwriting Managers is a "specialist insurance intermediary" focused on risk management and insurance issues for contractors, specifically professional and pollution liability. Cavnac & Associates is the exclusive representative for New Day Underwriting Managers in San Diego County.*

In this tough economic environment, project owners are continually seeking the best methods for leveraging technologies, decreasing costs, expediting schedules, and minimizing conflicts.

As a result, building information modeling has become the leading tool to assist designers and the

construction industry in demonstrating the entire cycle of a building's life, including the construction process.

In fact, integrated systems that include both computer-aided drafting and design and building information modeling are becoming increasingly important catalysts for managing the time and cost efficiencies of projects in nearly every phase of construction.

Years ago, there was really only one project delivery methodology: design, bid, build.

However, as the use of computer technologies such as computer-aided drafting and design continually increased, design/build became a preferred method for speeding schedules and reducing costs, since the construction process could actually begin before the design plans were even completed.

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Consequently, if mistakes were made, they were normally discovered once construction was well under way, which often resulted in extended downtime to rectify problems and economic damage claims issued by owners against the general contractor.

However, building information modeling has presented contractors with a unique method for producing digitized representations of the building process from the ground up. As a result, designers and contractors have been able to better coordinate their efforts in addition to the various design and construction phases of a project before a shovel ever hits the ground.

This process begins with the design team and the general contractor directly collaborating on building information modeling virtual imagery that highlights numerous construction details, ranging from procurement and development plans to materials and specifications.

After inputting all this data into the system, the program models and displays the wide-ranging stages of construction including actual structure geometry, spatial relationships, building material quantities, and even vendors and manufacturer product information.

In addition, it can also be programmed to differentiate processes involved in the scope of work, which can be isolated and analyzed according to various construction, scheduling, and sequencing details.

For example, let's consider the actions of a project manager involved in the construction of a 12-story commercial building on a lot that was previously undeveloped.

Using building information modeling before the start of any field work, the design team and general contractor can then "virtually" work in unison to build a structure from start to finish before the physical building process ever begins in the field, while identifying any inherent or even unexpected challenges.

Subsequently, this process includes utilizing the expertise and technical consulting skills of the general

## **Collaborative Processes Increase Professional Liability Exposures**

**By Jeffrey Cavnac, CPCU, ARM, RPLU, CRIS**

Both Integrated Project Delivery (IPD) and Building Information Modeling (BIM) are collaborative techniques designed to improve the design and construction process. IPD requires all stakeholders to a project to work together and essentially put the project first. There is a greater degree of risk management on the front end which is intended to speed project delivery, manage costs, and reduce the number of mistakes. BIM involves computer-generated 3D models of a construction project. This allows the design professionals and contractors to determine if certain systems will work with others, and in general determine if there is a problem before construction begins. The contractors' involvement in both IPD and BIM has its challenges as well. Primary among them is the increase in exposure caused by involvement in the pre-construction process. Litigation arising out of "design issues" is not covered by general liability insurance. This underscores the importance of a well written Contractors Professional Liability Policy. ✨

contractor, who is likely to have years of field experience.

Recommendations also will likely cite methods for the best clearing of land, excavating foundations, pouring footings or driving piles, staging concrete pump trucks, stockpiling/lifting/erecting steel structural members, as well as installing mechanical, electrical, shell, window, and door systems.

Imagine how this technology can then effectively identify, eliminate and rectify numerous issues and challenges, before a blade of grass is cut or the land is cleared.

However, such interaction between the owner, design team and the general contractor can present higher professional liability exposure.

Since the general contractor is contributing to the virtual building process, which ultimately helps the design team, it also means that the general contractor is offering technical consulting.

There can be a liability scenario if building information modeling is not used correctly by the construction team of designers and contractors, as shown by a recent lawsuit over the related use of building information modeling.

In this example, the design team failed to properly inform the contractor that the installation of a mechanical system was to result in a very tight fit. While it worked in the model, it did not work in reality. As a result of the technical nature of design, challenging construction means and methods, and the use of building information modeling, the insurer chose to negotiate a settlement, realizing that a jury would have difficulty comprehending the design issues.

There are a variety of ways that contractors can manage the professional liability risk associated with the use of building information modeling on projects. Among these are:

- Tighter contracts that clearly define what will and will not be offered as advice by the contractor.
- Working with owners who are proficient with the building model utilization on projects.
- The careful selection of experienced subcontractors and design professionals.

Another method that has helped contractors manage financial risks over the past several years has been contractor's professional liability policies.

In general, contractor's professional liability coverage is offered by many insurance companies, with some offering broader coverage than others. In many cases, these policies can include, but are not limited to pollution liability, in-house design support services for design/build projects as well as construction management.

Furthermore, since most forms of this coverage are not standard and are manuscripted by the insurance companies, they can often be modified and/or tailored to meet specific contractor risks.

In addition, the building information modeling coverage afforded under the contractor's professional liability policy typically provides coverage for erroneous or flawed technical consulting and advice services offered to the design team. Such coverage will normally extend to the vicarious liabilities imposed by either subcontractors or sub-design professionals offering design or advice on building information modeling.

Furthermore, it must be noted in these instances the contractor may be subject to liability for the technical consulting services provided in the virtual design/build phase of the structure.

Consequently, if a problem should occur in relation to constructability issues, scheduling, staging and sequencing, and it is therefore determined that the issue was a result of the advice offered by the general contractor during the early stages of modeling use, then that contractor may possibly be found legally responsible for any potential professional liability exposure.

In such cases, a general contractor would not only benefit through the general terms stipulated in a contractor's professional liability policy, but also through the coverage for defense costs incurred during the defense of lawsuits.

As a result, this coverage alone can typically be worth the cost of the policy since claims can either end in favor of the contractor or with the payment of significant amounts of money, depending on the settlement or court decision.

Building information modeling is an extremely valuable tool, which can greatly facilitate design-build projects, while helping to minimize field challenges. However, professional liability exposures related to the use of modeling do exist for the general contractor and must be managed like all other business-related risks.

As a result, contractors professional liability policies offer an extremely effective method for helping general contractors to focus on building projects, while providing financial protection against costly claims that can potentially devastate their bottom lines. ✨

Disclaimer: This article is written from an insurance perspective and is meant to be used for informational purposes only. It is not the intent of this article to provide legal advice, or advice for any specific fact, situation or circumstance. Contact legal counsel for specific advice.



Articles courtesy of Cavignac & Associates Employee Benefits Department

## LIVE WELL, WORK WELL

### Banish Holiday Weight Gain

The holidays are full of hearty meals, sweet treats and fat-laden snacks – which quickly add up to extra pounds. Navigate holiday eating with these tips:

- Enjoy your favorite foods, just be mindful of your portion sizes. Depriving yourself just makes you more likely to binge later.
- When possible, choose a smaller plate to help control portions.
- Wait 20 minutes before getting seconds, to give your body time to signal if you are full.
- Don't feel obligated to eat everything offered to you, or to clean your plate.
- If you have leftovers, freeze them for another time rather than indulging again for breakfast.
- Eat plenty of vegetables throughout the season to help you feel fuller and control your appetite.
- Eat a small, healthy snack before each get-together. If you starve yourself all day, you'll eat even more of the unhealthy food.
- When going to a party, bring a nutritious dish with you, such as nuts, veggies or even a healthier dessert alternative.
- Eat slower and take time to enjoy your food. Try eating with your non-dominant hand or setting your fork down between bites.
- Go easy on gravy, sauce and dressing.
- Reduce or eliminate your alcohol intake to save a lot of calories.
- Focus on the people and activities at the party, rather than the food.
- When baking, use low- or non-fat dairy. Swap sour cream for plain yogurt, for example, and always choose fat-free milk.

- Buy lean cuts of meat whenever possible. When eating poultry, opt for white meat over dark meat.
- Don't forget to be active! Try to fit some extra activity in to counteract the extra calories this time of year.✂



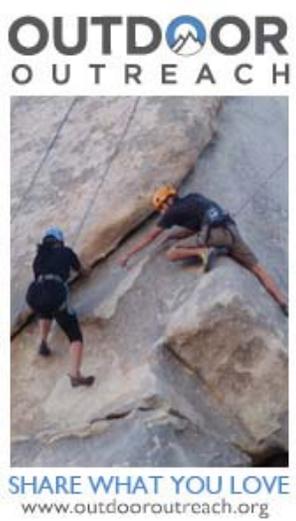
### Outsmart the Flu

Looking forward to your annual bout of feeling miserable and being forced to miss work? This year, avoid the flu:

- Get the flu vaccine and encourage others to do the same. It's the most important step to prevent the flu.
- Try to avoid touching your face – germs are easily spread this way.
- Wash your hands thoroughly and often.
- Avoid contact with sick people when possible. Encourage those with the flu to cover their nose and mouth when coughing or sneezing.
- Teach your kids these good habits.✂

#### DID YOU KNOW

The Centers for Disease Control and Prevention recommends that everyone over the age of 6 months get a flu vaccine each year, even if you got vaccinated last year. It's not too late in the season to get vaccinated! The small discomfort and/or inconvenience of a flu vaccine will be worth avoiding several days stuck in bed with the flu.



***Women Give San Diego***

