2 x 4 x 10

WINTER 2018

Sharing Ideas, Building Connections with Division 10

Message from the Chair

INSIDE:

Greetings! This edition of 2 x 4 x 10 is our third edition as a reorganized Division 10. Division 10 remains committed to providing education, resources and a forum to discuss legal issues which arise on transportation and energy projects nation-wide. We will continue to provide a forum to discuss environmental legislation and programs which affect the construction industry, and will focus our environmental education on how legislation and programs impact transportation and energy projects.

This edition of 2x4x10 will provide our membership with discussions on risk mitigation of Trump's Tariffs, a Contractor's professional liability for design issues (verses the design professional's risk), Public-Private Partnerships (P3s), cyber security and the energy industry, China's One Belt One Road project, and off-site construction.

If you are interested in getting involved with Division 10's publication efforts please contact Asha Echeverria, Division 10's Publication Chair at aecheverria@bernsteinshur.com. We look forward to seeing many of you at the Forum's Mid-Winter Meeting in Los Angeles, California on January 30 through February 1, 2019.

Allen W. Estes III, Division 10 Chair

Grid Electrification: Addressing Cybersecurity Threats and Mitigating Risk in the Renewable Energy Era

Erin J. Illman

Monica W. Dozier

By: Erin J. Illman, Esq. and Monica W. Dozier, Esq.

Technology and the critical infrastructure that support our personal pursuits and business operations are ripe targets for cyberattacks. In particular, the electrical grid that transmits electricity from its point of production to end consumers – and the critical systems that monitor and control the grid – are vulnerable to large scale, disruptive attacks. In the last quarter century, technological advances in the energy industry have revolutionized grid management. From smart meters to emerging battery storage technologies for intermittent energy sources, technology has allowed utilities to substantially improve grid reliability and resilience. But as the grid continues to electrify with increasing shares of renewable output, cybersecurity risks continue to increase.

The energy industry has become increasingly reliant on big data: utilities and plant operators continually harness an ever-expanding volume of data from a variety of sophisticated meters and plant equipment. For example, smart inverters allow installers and operators to quickly diagnose operations and maintenance issues and even adjust to improve grid functionality by minimizing voltage fluctuations. Supervisory control and data acquisition (SCADA) systems and industrial control systems (ICS) continue to become more and more connected, allowing improved real-time management of power plants. While grid modernization and its associated connectivity provide substantial improvements to grid management capabilities, it also exposes the grid to new risks.

Advances in Technology Bring Cybersecurity Risks

As the industry capitalizes on technologies that allow for real-time data collection, interpretation, active control, and management of both renewable and traditional resources, there is even more opportunity for hackers to disrupt these systems. Specifically, in order to operationalize real-time data collection, devices and systems have to be connected to the internet, as well as to other devices. This is typically referred to as the internet of things (IOT). The IOT creates a network of data points and devices that have the ability to collect, analyze and share useful data, allowing everyday technologies, like thermostats, refrigerators, and washing machines, to become "smart," learning and adapting to our preferences.

As a result of this interconnectedness, cybersecurity must be addressed at the consumer and component level. Each control with a physical or cyber access point presents an opportunity for intrusion. Access to the components must be controlled and data integrity protected. Increasingly, power plant operators, independent system operators, and utilities are implementing cybersecurity programs and requiring their vendors to do the same to reduce the risk of vendor-based system breaches.

Renewable energy systems contain several layers of cybersecurity elements that companies should consider. First, companies must determine who will be authorized to access systems for remote, cyber, and physical control of the data. Access should be subject to multi-factor authentication and monitored carefully for intrusion and anomaly detection. Security protocols, applications, patches and maintenance should be regularly deployed and implemented. Operational policies and procedures should support and encourage human interaction with systems whenever reasonable. Additionally, periodic security assessments and robust emergency response plans should be regularly performed, updated, and understood by team members.

The U.S. power grid has long been considered a likely target for cyber-attacks. In March of 2018, CNN reported that the U.S. government accused Russia of remotely targeting the U.S. power grid. The Department of Homeland Security cited what it called a multi-stage effort by a foreign entity to target specific critical infrastructures within the U.S. Given the increase in sophistication of cyber-attacks coupled with spikes in global tensions between countries, the possibility of cyber-warfare on significant infrastructure is a real threat. The question is not whether there will be a significant cyber-attack on the Nation's power grid, but when it will happen and what can be done to mitigate the damage.

Vendors as Attack Vectors

Cyber criminals have become increasingly sophisticated and opportunistic. This has resulted in a targeted campaign on vendors as the 'weak link' in an attack against an enterprise organization or critical industry. The energy industry has taken several steps to secure systems from these types of attacks. For example, utilities and plant operators often establish separate internal-to-plant and external-to-plant-vendor internet networks to minimize the potential of a cyberattack on output-critical systems. They impose limitations on external devices used by vendors, including requiring vendors to develop data and systems security programs that provide intrusion detection and interception procedures in the event of a breach. Energy companies often require vendors to use national standards and best practices, particularly relating to coding practices that seek to avoid key coding and programming errors. Some standards are developed in connection with government agencies or research universities. For example, many companies are now required to use encryption algorithms endorsed by the National Institute of Standards and Technology (NIST) to protect sensitive and proprietary data.

The industry is largely moving towards including these types of requirements, along with specific requirements regarding data security standards, data governance, and data incident response (such as increasingly shorter times to notify contractual parties of a data breach), and identifying specific damages provisions in the event of a cyber-attack. Contractual provisions are often accompanied by a stipulation that data breaches and system hacks may cause immediate and irreparable harm, allowing the counterparty to seek injunctive and other equitable relief. Counsel for vendors should carefully review these contractual provisions to ensure their clients are aware of the significance of such clauses. Similarly, counsel for enterprise companies should consider not only which contractual provisions to include, but also the mechanisms and oversight provisions to be built into the agreement to ensure vendor compliance.

Practical Steps to Mitigate Risk

Counsel should advise clients involved in the energy industry to assess cybersecurity risk and consider implementing the following key preparations to help prevent these attacks and/or mitigate the fall-out from an attack:

• Develop a cybersecurity program and procedures that identify risks and implement protections. This includes a thorough assessment of possible threats, analysis of potential vulnerabilities, and investigation of the potential consequences of action or inaction in normal business operations. At a minimum, companies should identify which individuals will have remote, cyber, or physical control of data or system access – limiting that control and access, and subjecting it to multi-factor authentication.

• Continually monitor systems for intrusion and anomaly detection.

• Regularly deploy and implement applications, patches and maintenance to company systems – which requires ongoing monitoring of emerging cybersecurity threats.

• Conduct periodic security assessments and enact robust emergency response plans.

• Implement operational policies that support and encourage human interaction with systems whenever possible. Every individual with system access should be trained in security protocols and should be familiar with the emergency response plan including, but not limited to, shutdown procedures in the event of a breach.

• Develop an education protocol for key personnel. Some of the greatest challenges to preventing cyber-attacks are a lack of knowledge or strategy to mitigate new risks that emerge as a result of increased complexity and interconnectedness of modern electrical systems. Counsel should advise energy clients to educate themselves about the risks, threat actors, attack vectors and prior incidents involving power grid attacks. Preventing an attack will require not only improving the security of the power grid, but understanding the vulnerabilities from both a human and a technical perspective. For example, attackers can use social engineering techniques to gain information about systems, networks, and controls relating to power generation, transmission or distribution. Social engineering is the process of using deception to manipulate individuals into divulging confidential or personal information to be used for fraudulent purposes. Another example of social engineering is spear phishing, where a would-be cyber-attacker sends a legitimate-looking email containing malicious software to infiltrate a network and directly access controls within a system or gather information that can be transmitted back to the attacker. Many of these initial threat vectors can be prevented simply by educating companies about the potential threats and how to deal with them.

The electrical grid continues to evolve and is becoming more advanced and fluid. Although originally designed as a one-way transmitter of

energy to the end consumer, it is now more agile and required to accept energy from multiple sources such as excess energy produced by consumers via distributed solar PV installations. With technological advances such as the interconnection of distributed energy resources (DERs) such as battery and storage systems, the Nation's power grid will continue to become a more interactive system. This allows for unprecedented opportunity in the adoption of increased volume of renewable energy sources – but also presents ever-increasing cybersecurity risks.

What We Can Expect Next

Each October, the U.S. Department of Homeland Security, in partnership with the National Cyber Security Alliance, observes National Cybersecurity Awareness Month (NCAM). 2018's theme was "Cybersecurity is our shared responsibility and we all must work together to improve our Nation's cybersecurity."

NCAM's focus on resources and critical infrastructure coincided with the U.S. Department of Energy (DOE) announcement of $28 million to support the research, development, and demonstration of next-generation tools and technologies to improve cybersecurity and resilience of the Nation's critical energy infrastructure. This infusion of funds may help jumpstart the operationalization of this year's theme of "shar[ing] responsibility" for technical improvements and ensuring cybersecurity is a top priority for critical infrastructure industries.

Utilities often find it difficult to find the funds to keep up with the latest developments in cybersecurity technology. As a result, we may see government-enabled incentives to help bridge this gap in the form of grants or low-interest loans for cybersecurity upgrades.

Many U.S. utilities have identified areas where the federal government can help to protect the electrical grid from cyber-attacks. Information sharing is a key component for combating cyber-attacks to critical infrastructure systems. The confidentiality of threat intelligence information is critical for all parties involved. As a result of the need to share information, we may see additional federal legislation to provide greater safeguards for information sharing between utilities and the federal government.

Many industry experts believe that the federal government should take a more pro-active role in defining what constitutes a cyber-attack and clearly defining the government response against threat actors. Utilities, vendors, and other electric sector participants are seeking clear and defined processes, supported by law, identifying how the government will punish and dissuade would-be attackers.

More than ever, it is critical that private companies, government agencies, and cyber-experts collaborate to identify cybersecurity risks and develop programs, processes, and procedures to mitigate these risks. Companies who demonstrate a working knowledge of cybersecurity issues – and who implement appropriate protocols to mitigate cybersecurity risks – will find themselves well-positioned to succeed in our rapidly-transforming energy economy.

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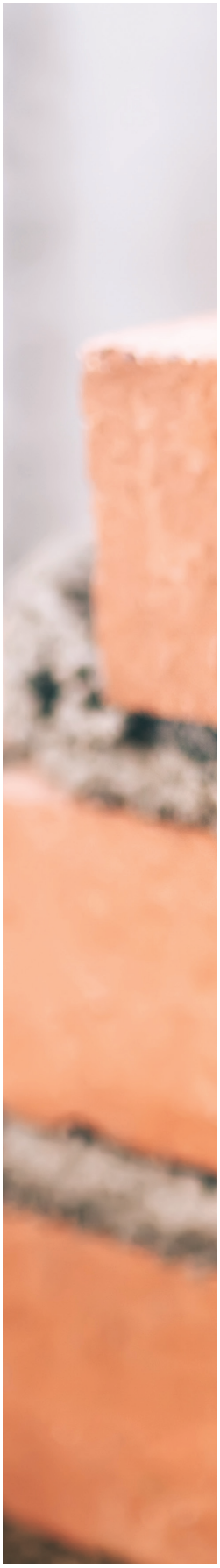


The Next Decade of P3 Projects: Winners, Losers, Opportunities, and Impacts

Ben Patrick

By: Ben Patrick, Esq.

That the market for public-private-partnership (P3) projects has exploded in the United States over the last 20 years is not news to anyone involved in the construction industry. Similarly, nearly universal consensus exists that the trend towards P3 projects in the U.S. will continue unabated in the medium-term future. Numerous papers have addressed why this is so, and have described the advantages P3 projects offer public owners versus traditional project delivery methods. The purpose of this article is not to retread these already well-worn paths. Rather, the question addressed here is: what impacts will the continuing trend of P3 projects have on the construction industry? Every change in any market has winners and losers, and growth in P3 projects will similarly benefit some industry participants and harm others. The last two decades of P3 projects in the U.S. give us ample information to forecast what will happen as the P3 trendline continues to climb.

P3 Project Size Favors Incumbents

The U.S. Department of Transportation (USDOT) lists a chart of in-progress or recently-complete transportation P3 projects *(see Figures 1 and 2 at the end of this article).* Taken as a whole, these projects paint a clear picture of the likely medium-term future of P3 projects: large-value contracts for significant scopes of work. With the exception of Pennsylvania's (comparatively) tiny $37.5 million Northampton County Bridge Renewal project, the smallest active USDOT P3 project has a disclosed contract value of $560 million. These 12 projects have an average disclosed contract value of $1.556 billion.

These projects illustrate something already well-known about P3 projects: they tend to be among the largest public projects in terms of contract value. However, as P3 projects become more popular and more common, the average contract value of a P3 project should decrease. The Northampton County Bridge Renewal Program in Pennsylvania is indiciative of this—ten years ago, few would have predicted a P3 project with a $37 million total price tag. And while this project will probably be an outlier for the near future, an overall trend towards smaller project sizes (smaller being relative, as the next-smallest P3 project tracked by USDOT has a price tag of $560 million) should be expected. Somewhat counterintuitively, this trend will likely be most beneficial for the largest contractors, and most problematic for regional contractors. Several factors drive this result.

Captive Concessionaires Cut Capital Costs

Many major P3 industry players now have related entities who specialize in concessionaire financing. Access to in-house financing expertise and relationships lowers the cost of raising capital inherent in most P3 projects. Whereas smaller contractors will need to find and team with a financier (who will expect to take their own profit and overhead cut from any contract ultimately awarded), major contractors will be able to turn to a known and experienced team, whose profit and overhead expectations should be lower than an outside financier, given the role the captive concessionaire is intended to play. Put differently, the captive concessionaire should be satisfied with breaking even, provided that their work enables the related contractor entity to win the project.

Selective Sureties Limit Viable Players

Most P3 projects continue to require bonding by the contractor. Sureties learned some hard underwriting lessons during the 2008 crash, and bond program size restrictions, project size restrictions, and project-level underwriting are still rigorous among the major surety companies. The result is that even global contractors find it necessary to form joint ventures to pursue P3 projects, so that the bonding and indemnity obligation is spread among the carrying capacity of several different contractors. The restrictions are necessary from the sureties' point of view—they expect indemnity opportunities that equal or exceed the quantum of the bond they are posting, and few contractors of any size can comfortably guarantee an indemnity recover of $1 billion or more.

These same restrictions will create very difficult barriers to entry for regional contractors. It's one thing for 3 global contractors to JV together to pursue

a $1 billion project—there should be sufficient money to cover each partner's overhead expenses and profit expectations. If six regional contractors have to JV together to pursue the same project, the odds of each of them getting sufficient profit and overhead recovery to justify the effort is significantly smaller. Every time you cut the pie, you lose some crumbs. The more times you have to cut the pie, the more you lose. Because of this, surety underwriting restrictions will continue to benefit large, global contractors at the expense of regional contractors.

Design-Build Delivery Presents Barriers to Entry

Most P3 projects are delivered via design-build, with varying degrees of involvement/restriction by the owner and its consulting designer. While the design-build delivery mechanism is a natural fit for P3 projects, its use has at least two predictable results.

First, design-build delivery for projects of typical P3 size can only be designed by a handful of design firms. With prime design contract values exceeding (often far exceeding) $50 million for designs to be delivered within a narrow time window (often 18 months or less), even major national design firms find it necessary to partner with competitors to deliver designs on-time and on-budget. Based purely on available manpower, even significant regional design firms will find themselves unable to muster the resources necessary to serve as the prime designer.

The issue of risk raises an even thornier problem. Contractors teaming with designers pre-bid often expect designers to assume some risk arising from their preliminary, pre-bid design development. Depending on what the parties actually agree to, this risk can easily run into the tens of millions, a result that would bankrupt all but the top tier of designers nationally, and which makes these projects unpalatable many companies who would otherwise be qualified and capable of executing them.

Second, the perils of bidding on a design-build P3 justifiably scare away many contractors who would otherwise be able to perform the work. The owner and financier/concessionaire aggressively (and often successfully) downstream virtually all the risk associated with the execution of the project. Since many P3 projects continue to be primarily heavy civil, horizontal work, project-side risk is formidable, hard to precisely quantify, and opportunities for mitigation are frequently minimal. Those firms who have built expertise in the past 20 years are well-positioned to leverage that experience to maintain places of prominence even as the market expands.

The P3 Bidding Process Allows Owners to Pick Favorites

P3 projects, in contrast to traditional sealed, lump-sum, design-bid-build projects, need not be awarded to the lowest responsible bidder. Rather, P3 projects are usually awarded on an RFP basis, in which price is only one of the factors considered. While the award must still be made based on an objective evaluation of known criteria, the owner is left with a great deal of discretion in its decision. Once again, incumbency and experience means that the rich are likely to get richer. In an RFP competition between a national contractor who has executed a dozen prior P3 projects and a regional contractor who has never executed a P3 project before, the owner can scarcely be faulted for awarding to the more experienced contractor.

Conclusion

The last 20 years of construction in the U.S. have been marked by consolidation in both the contractor and designer industries, and the entry into the U.S. by foreign contractors with substantial P3 and design-build experience. Regional contractors and designers have been under constant pressure. As the use of P3 deliveries increases, these trends are going to continue. It remains to be seen whether market pressure will lead to a series of regional-level consolidations aimed at creating new entities capable of competing for major P3 projects, or whether regional firms will react by adapting either to other market sectors (like non-public work) or new project roles (like subcontractors). It also remains to be seen whether state and local governments will take more aggressive action to mandate the use of local contractors in the execution of major projects. What can be said with certainty is that, in the absence of major market changes, the next decade of P3 work should look a lot like the last decade—involving the same players, competing for the same projects, and maintaining (and likely growing) their market share even as the overall size of the market expands.

Ben Patrick is a partner with the firm of Gordon & Rees, and advises construction industry clients on transactions and litigations across the country.

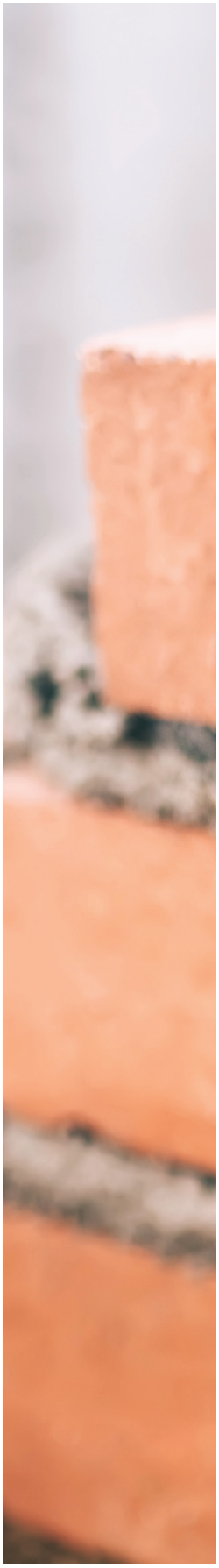


Figure 1

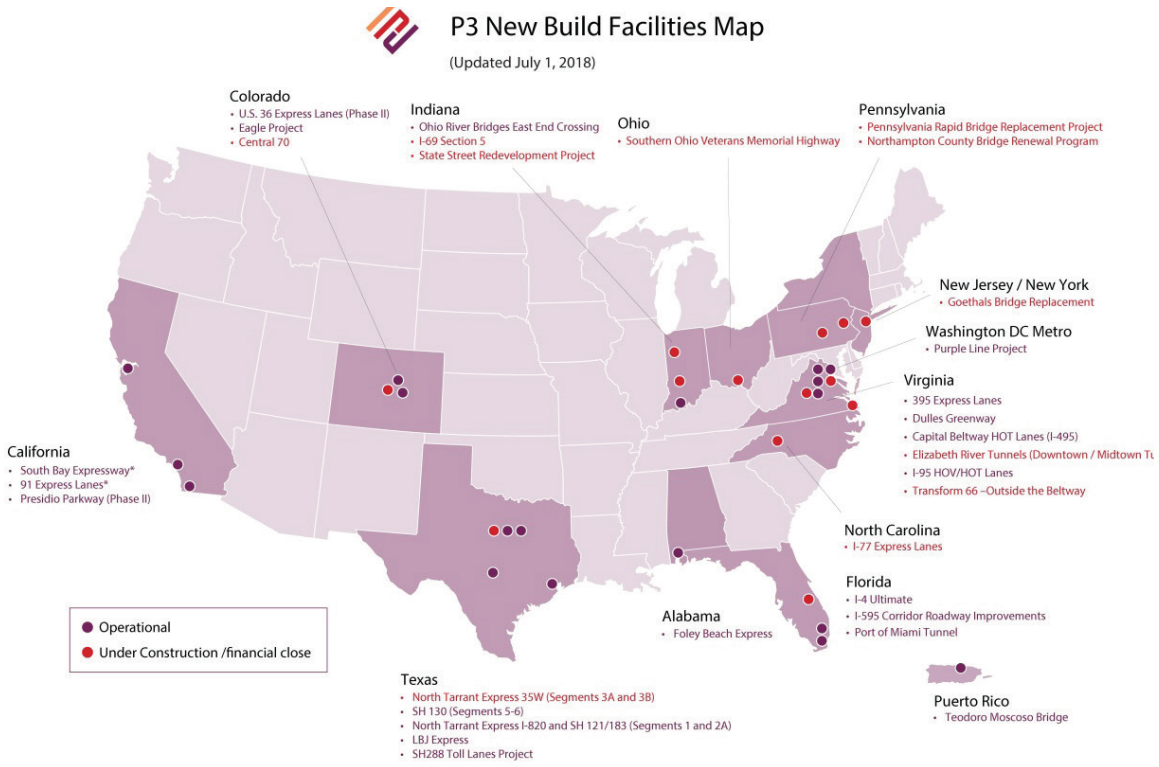


Figure 2

State	Project	Contract Value
Colorado	Central 70	$1.271B
Florida	I-4 Ultimate	$2.877B
Indiana	State Street Redevelopment	$2.645B
	I-69 Section 5	$560M
New Jersey	Goethals Bridge Replacement	$1.436B
North Carolina	I-77 Express Lanes	$636M
Ohio	Southern Ohio Veterans Memorial Highway	$646M
Pennsylvania	Pennsylvania Rapid Bridge Replacement Program	$1.118B
	Northampton County Bridge Renewal Program	$37.5M
Texas	North Tarrant Express 35W (Segments 3A and 3B)	$1.638B
Virginia	Elizabeth River Tunnels	$2.089B
	Transform 66	$3.724B

Managing Contractor's Professional Liability Risk through Insurance

Wendy Estela

By: Wendy Estela, Esq.

In construction, professional liability risks have traditionally been considered to be risks associated only with design professionals. As project delivery methods evolve, lines have been blurred and contractors are assuming new risks, and professional liability insurance coverage is available to contractors to manage these risks. This article will discuss the sources of contractor's professional liability, provide coverage options available to contractors, and briefly discuss common coverage issues from recent case law.

Evolving responsibilities of Contractors

As project delivery methods have evolved, prime contractors have taken on responsibility and risk related to design, management of subcontractors and oversight of their work, scheduling, cost estimating and compliance with laws, all of which are considered professional services. In the past, these responsibilities may have fallen squarely within the purview of the design professional. However, through various design-build relationships, contractors have become the single point of responsibility for an owner, taking on responsibility for project design and related professional services in addition to construction. Errors and omissions in providing these professional services can lead to cost overruns, time delays, remedial work, property damage, and bodily injury. These risks can be mitigated through well drafted contracts and the right combination of general liability and professional liability policies.

Commercial General Liability v. Professional Liability Coverage

A standard Commercial General Liability (CGL) policy provides indemnity to the insured for bodily injury and property damage caused by ordinary construction means and methods. CGL generally does not provide indemnity for economic damages, which include project acceleration costs, lost profits, cost of rework, and other similar damages. A professional liability policy provides coverage for a broader category of damages, including economic damages, arising from professional negligence in the rendering or failure to render professional services.

A contractor may be able to secure limited coverage for professional liability risks by endorsement to its CGL policy, however this alone will not insulate the contractor from all professional liability risk.

Risks and available coverage should be carefully evaluated. The policies available to contractors can come in several forms:

Endorsement to CGL policy

- Higher limits - $1,000,0000 to $50,000,000
- Lower cost/more restrictive than stand-alone policy
- Occurrence based
- No limit on defense costs
- Responds only to bodily injury and property damage claims

Common Contractors Professional Liability (CPrL) Policy

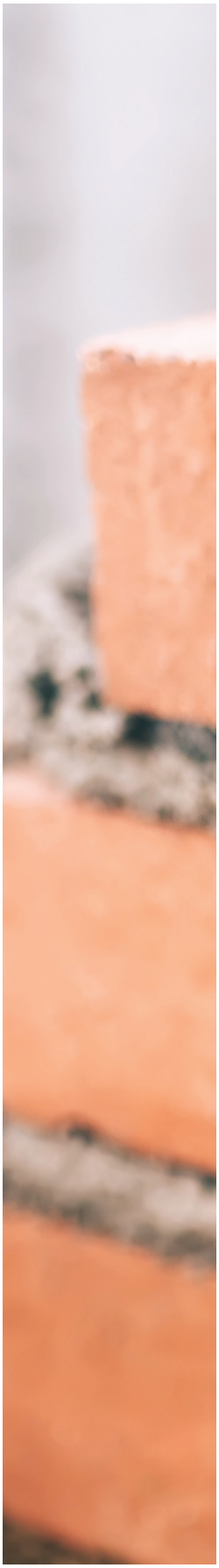
- Lower limits ($5,000,000 to $15,000,000)
- Higher deductible
- Claims made policy
- Limit on total payment, including defense, to the policy limit
- Responds to broader form of damages, including monetary, economic, compensatory and punitive damages to the extent insurable under applicable law

Contractor's Professional Liability Policy

- Claims made basis
- Coverage for professional services, as defined (and limited) in policy language
- Includes coverage for in-house design staff, design delegation, and subcontractors
- At-risk construction management
- Often pollution coverage for job site activities is included

Contractor's Professional Liability Policy plus Indemnity Cover

- Same coverage as Contractor's Professional Liability Policy, but for additional premium, contractor may add first party coverage for contractor claims against its architect/engineer; which serves as an excess policy over the subcontracted architect/engineer's professional liability policy
- Coverage for claims brought against contractor
- Limited number of insurance companies offer



this coverage

Project Professional

- Usually available only for larger, more complex projects
- Limits of insurance are dedicated to project, cannot be depleted by other claims on unrelated projects
- Single source of recovery for professional liability losses on a project
- Replaces all other individual policies
- Written for term of policy plus period of completed operations, for combined period of 10 years
- Higher deductible
- Joint defense provisions for all insureds, eliminating disputes among insureds
- Currently not as popular as other options

As with any insurance policy, contractor professional liability policies contain exclusions, which vary by policy form but can be modified to suit the insured's needs. The most common exclusions are as follows:

- Claims prior to the policy period that insured was aware of but failed to report to the carrier
- Dishonest, fraudulent, or criminal acts
- Fines and penalties
- Liability assumed in a contract
- Faulty workmanship
- Express warranties or guarantees
- Claims reported under prior policies
- Return or reduction of professional fees
- Failure to complete a project on time or perform professional services on time
- Liquidated or consequential damages

Other Risk Transfer Mechanisms

Aside from insurance, contractors can opt for other risk management mechanisms such as absorbing the risk as a business decision or relying on the subcontracted design professional's insurance. While these are low cost options, they present the highest risk. By relying solely on a subcontractor's insurance, a risk exists that other claims may deplete available limits. Also, the contractor is tasked with managing the subcontractor and reviewing its annual policy and renewal, otherwise the contractor is faced with uncertainty of terms over multi-year projects. Finally, a savvy design professional subcontractor may negotiate superior contract terms, putting the contractor in a riskier position.

Coverage Issues

Coverage issues exist with Contractor Professional Liability policies as with any other policy. Below is a summary of two cases dealing with typical coverage issues.

In *Bayley Construction v. Great American Insurance Company*, the federal court held that the definition of "professional services" covered by Bayley's professional liability policy included its obligation to track subcontractors' wage payments, and liability for a subcontractor's illegal wage payments and penalties was therefore covered by the policy.

Bayley Construction was awarded a contract for a renovation project at Saddleback College. Bayley hired Central Tech Air to provide the heating, ventilation, and air conditioning work for the project. An investigation revealed that Central Tech Air was illegally paying its workers less than the California prevailing wage, in violation of the terms of its subcontract and requirements of the project. The project owner notified Bayley that it was withholding payment in the amount of the unpaid wages and penalties. After receipt of this notice, Bayley sued Central Tech, and shortly thereafter Central Tech dissolved its business and both principals declared bankruptcy.

Bayley submitted a claim to Great American Insurance Company ("GAIC"), its professional liability carrier. The GAIC policy declarations provided coverage for "professional services," defined as "Construction Management, Pre-Construction Consulting Services and Design Services." GAIC denied the claim based on its interpretation of the term "professional services, which it defined as services that "require the exercise of professional skill and judgment." Bayley brought an action against GAIC for breach of duty to defend and investigate, denial of claim in bad faith, and violation of Washington's Insurance Fair Conduct Act.

The court found that the claimed loss was due to an act, error or omission by Bayley in conducting "construction management" of the project, which was included in the definition of "professional services." The court reasoned that the policy declarations explicitly defined professional services to include "Construction Management, Pre-Construction Consulting Services and Design Services." The court went on to note that GAIC's interpretation conflicted with basic tenets of policy interpretation, which favor liberal construction of inclusionary clauses in insurance contracts. The court concluded that a liberal and reasonable construction of the facts would be that ensuring compliance by a subcontractor with prevailing wage

laws on a complex project required professional skill and judgment.

In *General Casualty Co. of Wisconsin v. Rainbow Insulators, Inc.*, a state court found that the breach of contract exclusion in an errors and omissions policy bars coverage for a dispute between a contractor and subcontractor for the contractor's performance of remedial work after the subcontractor refused to perform the work.

KBS was the general contractor for a condominium project. KBS hired E&A Enterprises, Inc., a drywall and metal stud framing subcontractor whose scope of work included installation of metal resilient channels that acted as sound barriers. An inspector hired by the owner found that E&A's errors, such as using screws that were too long, were the cause of the noise problems. KSB demanded that E&A correct this faulty workmanship, but E&A refused. KSB stepped in and made the corrections, which involved demolishing most of the ceilings to remove and reinstall resilient channels using the appropriate screws.

KBS alleged that E&A's faulty installation caused the loss of use and enjoyment of the condominiums by residents and physical destruction of ceilings required to fix the noise problem. The insurer sought summary judgment on the issue that there was no duty to indemnify and no coverage afforded to E&A under its policy. The court granted the motion. The appellate court affirmed this judgment, citing exclusions to the policy language.

The court found that there was initial coverage under the E&O policy. The next step was to determine whether such coverage was precluded under the contract exclusion. The contract exclusion in the E&O policy excluded coverage for "damages arising out of any delay or failure by you or anyone acting on your behalf to perform a contract or agreement in accordance with its terms." Simply put, this exclusion bars coverage for the insured's failure to perform a contract. The appellate court found that this exclusion applied, because KBS' allegations are based on E&A's failure to perform according to the terms of the contract.

The court went on to state that although the specific allegations pled by KBS fit within the contract exclusion and thus coverage is precluded, this does not mean that the E&O policy is rendered meaningless. The court made it clear that tort claims arising from the contract are not automatically barred by the exclusion.

The evolution of project delivery methods such as design-build and engineering, procurement and construction (EPC) has created new professional liability risks for contractors. Therefore, contractors also need to evolve, using strong contracts, the right insurance policies, and careful examination of policy language, exclusions and coverage to manage these new risks.

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UPCOMING FORUM EVENTS

2019 Mid-Winter Meeting

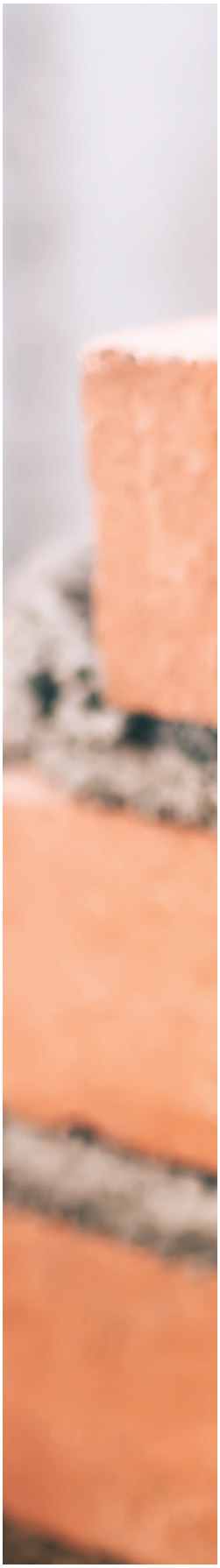
January 31- February 1, 2019

Los Angeles, CA

2019 Annual Meeting

April 24-27, 2019

Hollywood, Florida



China's Belt and Road Initiative Is Changing the World

Stephen K. Pudner

By: Stephen K. Pudner, Esq.

In 2013, China announced its plan to fund and construct a global transportation and infrastructure network known as the Belt and Road Initiative ("BRI"). Since that time, BRI projects have helped China to become a rival to the United States and European Union on the geo-political scene. These initiatives have also allowed Chinese companies to close the gap with their western counterparts in the global construction, engineering, advanced manufacturing, and logistics sectors. Western companies and governments need to take notice or risk being left behind.

What is the Belt and Road Initiative?

China started BRI to replicate and expand the old Silk Road trading route, and to expand global markets for Chinese goods and China's global influence. While the name is a bit confusing, the "belt" refers to rail, road, and other land transportation projects, and the "road" refers to sea transportation projects, the scope and pace of BRI projects are simply amazing. BRI now includes 71 countries and half of the world's population, and is expected to cost between $1 trillion USD and $8 trillion USD. The projects span much of Asia, Eastern Europe, Africa, and Latin America, and include billion-dollar infrastructure projects in Kenya, Ethiopia, Laos, Argentina, Iran, and Montenegro. Western companies in the construction industry and western governments are just now starting to give BRI the attention it deserves.

How is the BRI Helping Chinese Construction Companies Compete?

BRI projects have allowed China to greatly expand the sophistication and global reach of its construction and engineering companies. Chinese state owned companies receive nearly all of the construction contracts for BRI projects (more than $340 billion USD in contracts to date). Largely as a result, in 2017 each of the five construction companies with the largest revenue outside of their home country were Chinese, and the top eight Chinese construction companies each had more international revenue than the first U.S. based contractor listed.

Similarly, BRI has spurred advancement of China's domestic advanced manufacturing companies and Chinese companies have narrowed the gap with western companies on perceived quality in these areas (e.g., new massive Chinese designed and manufactured tunnel boring machinery and railroad construction equipment used on BRI projects).

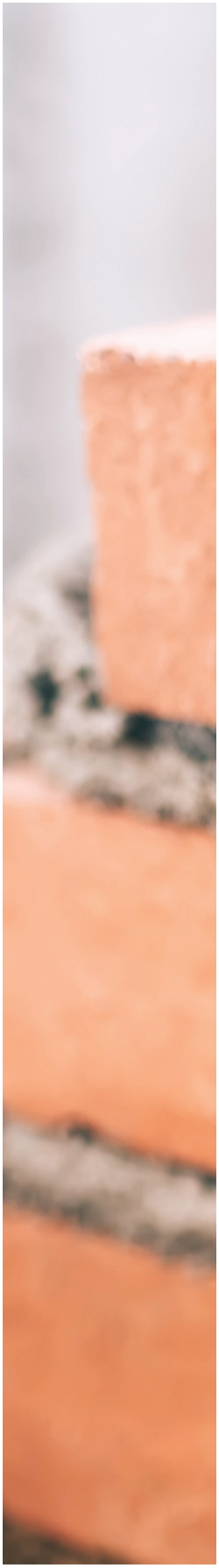
BRI projects are being completed at a break-neck speed and connecting previously isolated and poor parts of the world to the global economy. This is despite serious safety, quality, and other concerns associated with at least some of these projects. The Mombasa-Nairobi railway in Kenya, Africa has been called "the first railway outside China built to Chinese construction standards with Chinese machinery," but per a Chinese engineer working on this project, "On-site accidents are commonplace [and] 'When they happen, they are almost always severe and often fatal.'"

While such concerns may have slowed down or endangered similar infrastructure projects by western governments or construction companies, they do not seem to have had any effect on this project. Instead, this project was deemed a success because it was completed 18 months ahead of schedule and shortened certain rail journeys from 10 hours to 4. It is now seen as the first step of a much larger African rail network to be built through BRI. Lower safety and quality standard in the short term, and improving quality through experience on large infrastructure projects in the longer term make Chinese construction and engineering firms formidable challengers to more established western competitors.

How is the BRI Helping China's Geopolitical Power?

It is no secret that China is not content to be the manufacturer for the world's low-end consumer goods, but instead views itself as a geopolitical rival and equal to the U.S. and the EU on the world stage. China has used, and will continue to use BRI to close the gap with the U.S. and EU, and to challenge the global leadership of the western world.

BRI has also helped China greatly increase its



geopolitical reach (e.g., China's first overseas military base was recently established in Djibouti, Africa). China has also used BRI financing and other soft power to make inroads into the former Soviet bloc of Central and Eastern European nations, much to the EU's chagrin. Since 2012, China has fostered relationships and investment opportunities with 16 Eastern European nations (including 11 European Union members and 5 Balkan countries) through the China-Central and Eastern European (China-CEE) initiative (a/k/a "16+1"). The 16+1 initiative is aimed at intensifying and expanding cooperation between these countries and China in the areas of investments, transport, finance, science, education, and culture.

At the same time, many of these Eastern European nations have conflicted with and pushed back against the EU's austerity measures and condemnation of what it views as autocratic tendencies of some Eastern European governments, and China seems well-positioned to take advantage of any such discord to enhance its own influence in the region. Similarly, as the EU has imposed strict austerity measures on Greece since 2010 following its near economic collapse, Greece welcomed China's promise of cash to fund infrastructure projects. In recent years, China has funded or promised to fund numerous European infrastructure projects. Chinese state firms have also bought majority shares in a number of important shipping ports in Spain, Belgium, Italy, and Greece, and now control 1/10th of all European port capacity.

This development is particularly important because EU foreign policy decisions must be unanimous, and China can effectively insulate itself from adverse EU foreign policy decisions if it can convince any EU member nation to step in on its behalf. It has been reported that Greece (along with Hungary) recently stepped in to stop or weaken and/or prevent EU statements condemning China's human rights record or South China Sea claims, and impeded efforts to toughen rules on Chinese investments in the EU.

Concerns about BRI Indebtedness

One major concern of the BRI is the effect of the enormous debt being taken on by the countries in which BRI projects are performed, particularly because China often requires public assets to be pledged as collateral for the loans. This gives China incredible leverage over those countries in the event that they cannot repay the loans (e.g., Tajikistan reportedly gave up its claim to 447 square miles of disputed territory in exchange for China writing off a debt ; Sri Lanka recently gave control over a port constructed through BRI to a Chinese owned port operator).

The International Monetary Fund (IMF) has cited to Djibouti's $1.1 Billion in loans from the China EximBank from 2014-2016 to fund BRI projects (including the Adis Ababa, Ethiopia-Djibouti railway) as part of the reason Djibouti's debt-to-GDP ratio increased by 35% from 2014 to 2016, and reached 85% in 2016. As a result, the IMF found that Djibouti faced a "high risk of debt distress."

The concerns about excessive indebtedness to China through BRI projects also extends to Europe. China's EximBank is financing ~85% of the first phase of a ~$2 billion USD road infrastructure project intended to better link Montenegro to Serbia, and Chinese construction companies were chosen to perform the work. This project--since referred to as the "highway to nowhere"--was reportedly deemed not viable and rejected for financing before China stepped in to push the project go forward.

Another concern is whether the rest of world will be called upon to bail out countries that take on too much Chinese debt. Pakistan is one of the largest recipients of China BRI projects and loans (at least $60 billion USD worth by some estimates), but is apparently seeking a bailout from the IMF of prior IMF loans, leading to concerns that IMF bailout funds would be used to pay back unsustainable loans to China for BRI projects.

Conclusion

Largely as a result of BRI projects, over the past five years Chinese construction, engineering and advanced manufacturing companies have closed the gap with their western competitors on perception of quality, and the Chinese government has used its influence to close the gap regarding its global geopolitical power. Western companies and governments need to take note of, and prepare for, the new Chinese competition or risk being left behind.

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Strategies for Managing Tariffs and Tariff-Related Cost Impacts

James M. Doerfler

By: James M. Doerfler, Esq.

Following the Trump Administration's announcement on March 9, 2018 that it would impose tariffs of 25% on imported steel and 10% on aluminum under Section 232 of the 1962 Trade Expansion Act, construction industry executives and observers predicted cost impacts would be felt by an industry already operating near capacity. Consistent with these predictions, recent Producer Price Index data released on October 10, 2018 shows significant one year increases over the September 2017 to September 2018 period in multiple areas relevant to large-scale building and highway construction, including a 22.1% increase for steel pipe and tube, a 11.7% increase for fabricated structural metal along with energy-related cost increases of 11.2% in asphalt paving mixtures and a 29.3% increase for diesel fuel. A weighted average for all goods and services used in construction increased 6.2% during that same period. In certain "hot" markets the impacts have been acute. In Seattle, for example, the tariffs have reportedly resulted in a $460 million increase in the cost of the Federal Way Link Extension light rail project and a $100 million material cost increase in the Key Arena reconstruction project.

Given the significant cost risks associated with tariff impacts, executives and legal counsel for construction project owners, developers and contractors are well advised to develop risk-mitigation strategies for operating in this new, more uncertain environment. This article presents a "toolbox" of legal/project management risk mitigation strategies that might be considered at each major stage of a construction project: at the pre-construction bidding and contract negotiation stage; during procurement; and during the construction phase itself.

Pre-Construction Phase: Key Contractual Provisions and Planning

The preferred way to mitigate tariff-related risks is to plan for them by addressing and allocating the risks up front in the construction contract. Typically, the risk associated with the imposition of a tariff will be addressed in a change in law or in a force majeure clause. Such clauses are commonly incorporated into turnkey style engineering procurement and construction ("EPC") contracts but are not contained in most industry standard form building contracts. To the extent a construction contract does not contain a change in law or force majeure provision, construction contractors should certainly consider adding them as the absence of such a provision may preclude relief. However, owners cannot necessarily count on mere silence in a construction contract as affording sufficient protection; instead, owners on major projects should consider expressly allocating the contingent risk of tariffs on major projects to avoid the risk of contractor cost claims based on the assertion that such risks were not contemplated at the time of contract formation, and the invocation of the doctrines of mutual mistake and/or commercial impracticability to seek recovery of additional costs.

When drafting such provisions in a construction agreement, careful consideration must be given to whether tariffs fall within the definition of "laws" in a change in law provision and whether the tariffs constitute a "force majeure event." Drafters need to be careful about both the specific and general language used. For example, because the Trump steel tariffs were enacted by an executive order, a definition of "laws" which does not specifically include tariffs, treaties or executive orders or proclamations may be insufficient to cover increased costs incurred by contractors caused by changes in tariff structures. By contrast, owners who unthinkingly agree to a definition of "force majeure event" that includes broad "catch-all" language such as "any other event outside the reasonable control of contractor" may be unwittingly exposing themselves to potential additional cost claims.

Assuming that the definitions included in a change in law or a force majeure provision are appropriately drafted to address tariffs, the next issue to address is what relief will be available in response to tariffs: will the remedy for the "change in law" or "force majeure event" be limited to additional time for performance or will it result in an increase in the contract price? If it is the latter, then quantification of such price increases and the extent to which such price increases will be compensable need to be addressed. Use of cost indices and material escalation clauses, such as "Day One," "Threshold" or "Delay" clauses might be considered, along with

whether one party bears the entire risk or some risk-sharing scheme exists between parties.

Many commercial building contracts are constructed using a cost-plus methodology, which is typically subject to a Guaranteed Maximum Price ("GMP"), and which includes an allocation of some level of financial contingency for unforeseen project impacts. On projects using this approach, the parties will normally enumerate unforeseen market price increases as an item of permissible contingency usage. Other contracts may classify materials subject to price volatility as contractual allowances, with negotiations then occurring over whether such items should be included in or should remain outside the GMP and/or any shared savings provisions. Contractors should be wary of any unit price provisions which would lock in amounts allowed for increased costs resulting from tariffs. Finally, the parties should carefully consider the termination and suspension provisions of the contract. For example, the parties might consider whether a termination provision would allow a contractor to terminate an agreement because of materially changed conditions brought about by tariffs.

The Procurement Phase

Once the construction contract has been signed, there are additional steps the parties can take during the procurement phase to further minimize the risk of potential price impacts flowing from the Trump tariffs. For big ticket items, such as structural steel, both contractors and owners should work collaboratively to mitigate risk. For example, to reduce the risk of volatile pricing for structural steel and long lead times from domestic fabricators, the prime contractor should seek to obtain advanced commitments from fabricators as soon as possible, and the owner will need to plan for and agree to pay deposits associated with securing a place in line with those long-lead fabricators. Owners and prime contractors generally will want to secure as many fixed price subcontracts as possible to reduce the risk of tariff-related pricing impacts eroding profit or construction contingency levels. While such procurement measures should be employed, they may be only partially successful in mitigating truly significant tariff-related price impacts.

During the Construction Phase

If tariff-related impacts have not been allocated in the construction contract itself or have not been adequately mitigated during the procurement phase, then those impacts will typically manifest themselves during the construction phase in the form of contractor requests for change orders and/or claims for equitable adjustment. In contracts that incorporate some level of contingency allowance, the first level response from owners and developers will typically be to push for use of any available contingency funds in order to prevent any increase in the contract sum or GMP. In cases where recourse to contingency is not available or is insufficient, claim disputes will inevitably arise. In such claims, where contractual remedies are not readily available, common law theories of mutual mistake or commercial impracticability are often invoked. Recourse to these theories involves considerations of foreseeability and fault by the party seeking relief, and whether the parties contractually allocated the risk in question.

Finally, in addition to these legal requirements, technical allocation issues will need to be addressed, such as proof of the impact and quantum of material prices, impact to the critical path of the project, and the like. At that point, it may be difficult for the project participants to resolve the claims without a long and expensive dispute resolution process – which only underscores the need for contracting parties to proactively anticipate and plan for the risk of tariff-induced impacts during the pre-construction and planning phases.

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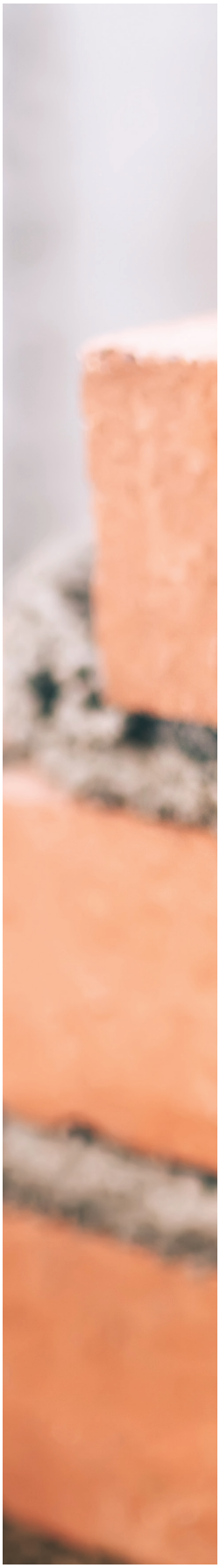

DIVISION 10 CONFERENCE CALL

January 10th, 2019

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Call in: 866-646-6488

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Offsite Construction #Trending

Aaron R. Klein

By Aaron R. Klein, Esq.

Offsite construction is trending in the U.S. All one needs to do is perform a quick Google search to see that offsite projects are impacting US markets from coast to coast. For example, in May of 2018, New York City issued its first modular specific RFP asking developers to propose affordable housing using modular construction as the project delivery method. Denver and Los Angeles are also looking to offsite construction methods to help meet their growing infrastructure needs. Offsite construction is tailor made for many public construction needs including affordable housing, health care, and school facilities. The speed, waste reduction, cost, quality, safety, and environmental benefits of offsite construction are undeniable in the public space.

The surge in demand for offsite building methods is also impacting private construction. According to the Modular Building Institute ("MBI"), modular construction is expected to make up approximately 5% of all new commercial construction in North America by 2021. Companies like Marriott have committed to using modular and prefabricated construction in a number of their projects; in 2017, Marriott estimated that it would use modular guest rooms and bathrooms in approximately 13% of its new hotel builds. In China, a 57-story skyscraper ("Mini Sky City") was erected using modular construction in 19 working days. The Mini Sky City apartment building was constructed at a rate of three floors per day, using modules built in a nearby factory. Admittedly, Mini Sky City is more of an outlier than the norm, but it provides a glimpse of what offsite construction can achieve in the private construction context.

Offsite construction makes sense for owners and contractors for a variety of reasons. Chief amongst those is the skilled labor shortage plaguing the construction industry today. Owners and contractors operate in a modern environment where increasing demand has stretched their operating margins to the brink. Limited skilled labor, tariffs, and unpredictable regulatory schemes have many traditional stick build contractors losing sleep and looking for answers. Offsite construction, whether modular build or prefabrication, is the answer for many owners and contractors. By performing most of the construction in a factory type setting, offsite construction can automate traditional building processes, limiting the need for skilled labor, increasing quality control, and providing unparalleled levels of efficiency.

Prefab vs. Modular

Before jumping into the legal issues, it is important to recognize the distinction between modular construction and prefabrication ("prefab"). While modular construction can be considered prefab, certain types of prefab construction are not considered "modular." For example, panelization, which involves taking the major elements of a structure (roofs, walls, floors) and dividing them into repetitive flat panels is prefab construction but is not modular. A second example of prefabrication is pre-stressed concrete. Prestressed concrete involves casting concrete in a reusable mold which is then cured in a controlled environment, transported to the project site and placed.

Modular construction can be divided into two main categories:

• *Permanent Modular Construction* (PMC) is a construction delivery method utilizing offsite, lean manufacturing techniques to prefabricate single or multi-story whole building solutions in deliverable module sections. PMC is a popular modular construction method for construction projects that have repeated elements, such as hotels or hospitals.

• *Relocatable Buildings* (RB) are partially or completely assembled buildings that comply with applicable codes or state regulations and are constructed in a building manufacturing facility using a modular construction process.

As will be discussed in further detail below, understanding the offsite construction method utilized is critical when evaluating project risk and drafting contract language to help mitigate this risk.

Offsite Construction Legal & Insurance Issues

Transportation

Offsite construction has its own set of challenges

distinct from traditional construction project delivery methods. One of the more prominent challenges relates to the liability for damage or delay during the transportation of prefabricated modules or structural elements from factory to the project site. Issues with transportation using an offsite project delivery method can lead to delays that quickly destroy a project's bottom line. Unlike traditional stick build construction, when a built module is delayed or damaged in transportation it cannot be quickly re-ordered or shipped from another supplier. Instead, the entire project is forced to wait on delivery of the module which, if damaged, will likely have to be re-fabricated. Detailed analysis of transportation issues is critical on large scale projects using offsite project delivery. Smaller scale projects often require basic tractor trailer transport of manageable modules. However, large projects often demand transport of over-sized modules across state lines. In so doing, issues related to transportation permitting and planning come into play. To ensure success, construction lawyers must carefully examine the potential liabilities during transport and properly allocate risk based on their client's needs. It is important to consider when not only title to the modules passes, but when risk of loss passes from the offsite constructor to a general contractor or from a general contractor to an owner. The risk of loss distinction is critical when determining the insurance scheme necessary to protect the module and your client. It is also worth noting that counsel for contractors should direct extra attention to delay damages arising from offsite transportation issues.

Product or Work

Construction attorneys must also examine whether the modules or pieces produced offsite are considered "goods" under the Uniform Commercial Code ("UCC"). Construction inherently involves both goods and services and therefore construction contracts are often considered mixed contracts; offsite construction further blurs the line between goods and services, requiring legal analysis under the UCC and common law. In the event of a claim related to the modules, a determination as to whether a module constitutes a "goods" or "services" must be made. Traditionally, courts have used the "predominant purpose test" to examine mixed contracts for goods and services. Under this test, mixed contracts are subject to the UCC if the sale of goods aspect predominates, and are subject to the common law if the service aspect predominates. In modular construction, the question is: was the loss precipitated by a failure/deficiency of the manufactured product or by the installation/construction operations? In most cases, installation/construction operations are to blame, thus triggering application of the common law. In an attempt to control this issue, owners, insurers, and contractors should clearly define work vs. product in their offsite construction contracts, even though such contract language may not bind the finding of a court.

The list of key legal and insurance considerations surrounding offsite construction is ever changing. Organizations, such as the AIA and ConsensusDocs, are working to develop standard contracts specific to offsite construction to guide lawyers and their clients through this new frontier. For now, construction counsel must engage in the due diligence required to effectively advise their clients in this arena.

The Lawyer's Role

Offsite construction is a brave new world for lawyers and clients alike. Accordingly, immense pressure is placed on counsel to formulate an effective strategy without trusted guidance. Yet, while there is no magic formula, there are important steps that construction attorneys must take in advising clients engaging in offsite construction.

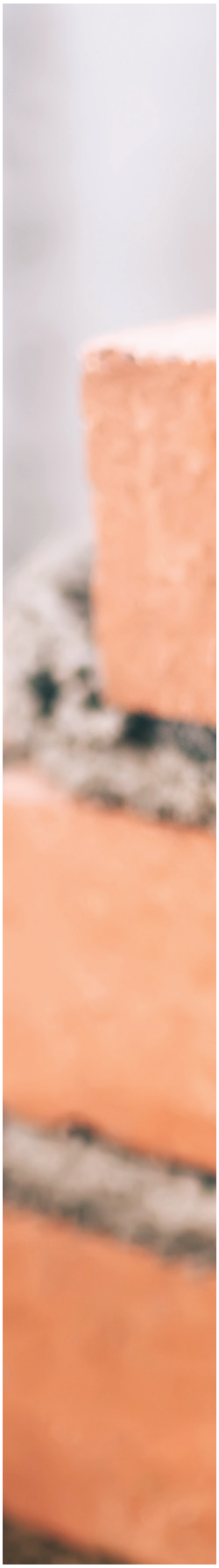
Identify the Offsite Method

Construction lawyers should identify the offsite project delivery method. As noted in our discussion of modular construction and prefabrication, not all offsite methods are created equal. In this way, proper identification of the offsite method sets the stage for owners and contractors alike and synchs the parties' expectations prior to moving dirt.

Also of note, more and more, we see hybrid models involving elements of offsite construction working in concert with traditional stick-build methods on the same project. In these situations, it is invaluable to sit down with the parties and identify the controlling project delivery method. Once the controlling project delivery method is identified the parties are better suited to key needs and can engage in collaborative contract development.

Draft Offsite Specific Contracts

Your client's favorite standard construction contract is not likely to contemplate offsite project delivery methods; currently the AIA and ConsensusDocs standard contracts do not readily consider offsite project delivery needs. Accordingly, the traditional tactics of starting with an A101/A201 standard owner-contractor agreement and providing



modifications favorable to your client will not adequately serve your client engaged in offsite construction. Attorneys must be careful not to "plug and play" by adding offsite specific provisions to industry standard contracts. If construction counsel engages in "plug and play" drafting, it is likely that confusion and conflict will arise between the desired offsite delivery model and stick-build concepts contained in the documents. Put simply, offsite project delivery and stick-build construction are fundamentally different. Effective offsite contract drafting is not a matter of simply shifting risks. Instead, it is shifting an entire vision and perspective on project delivery. This requires counsel to engage in the often tedious, challenging, and risky tasks of creating an original manuscript contract.

Use Available Resources

Valuable resources for offsite construction are available. Organizations like the Modular Building Institute provide members with valuable training from industry professionals, excellent scholarly resources, and opportunities to engage with professionals in the field. The Off-Site Construction Council of the National Institute of Building Sciences serves as a great information source for all things offsite construction. Lawyers engaged in offsite construction should use the knowledge and experience provided by these organizations to better advise their clients. In truth, as offsite construction grows, all construction attorneys should develop a base knowledge of the subject.

Embrace the Opportunity

It is clear that construction lawyers have a unique opportunity to bring offsite construction further into the mainstream. This project delivery method is still considered theoretical to many owners and contractors. However it is here, and the potential value is great. The construction industry needs construction attorneys to step up and dive into this new exciting area. Like it or not, offsite construction is here. Will you embrace the opportunity? Your clients will be glad you did.

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