CONSTRUCTION LAW & PRACTICE

INTERNATIONAL SERIES

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FOREWORD

Clive Lovatt and Edward Banyard Smith | Farrer & Co LLP
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In the four years since the publication of the first edition of this book, the global economy has significantly improved and the outlook has been more positive. The general uplift in the global economy has led to an increase in confidence and investment in the construction sector. From Asia to Europe, and from Africa to the Americas, there has been a large increase in infrastructural, commercial and residential development in many jurisdictions, contributing to increased levels of employment and economic growth.

In the last few days, the United Kingdom has voted to leave the European Union. In the short term at least, there will be market uncertainty worldwide. The impact on the construction industry will become clear in the coming months.

Notwithstanding this, construction is a very important, if not vital, industry in most countries, both developed and developing. It is the vehicle for providing the infrastructure of modern life and underpins almost everything we do. It is also a source of prosperity in its own right, often making up a significant proportion of the GDP and employing a large part of the working population, either directly or in associated industries which supply construction businesses. Construction is also responsible, through its designers and builders, for iconic structures throughout the world; buildings which often epitomise a nation.

While each jurisdiction will inevitably present its own complications and its own legal requirements, we have been struck by the common themes emerging from many of the chapters. This suggests that commercial practice may be converging in what is an increasingly global marketplace. The similarities in key themes arising across different jurisdictions is all the more interesting given that our contributors come from both common law jurisdictions and civil law jurisdictions, where both the approach to law and the detailed laws themselves may be quite different. It will be interesting to see whether the coming years see a continuation of this convergence in construction practices.

As with the previous edition, we are extremely grateful to all our contributors – for their commitment to this project and their clear distillation of a complex topic. We are also extremely grateful to all at the Thompson Reuters, Sweet & Maxwell International Series, firstly for providing us with the opportunity to edit this book and secondly for their great assistance in bringing the project to fruition.

We hope this book is of assistance to construction businesses seeking to expand their horizons and understand new jurisdictions. All thoughts and suggestions as to the contents of this work would be gratefully received.

As with the previous edition, a work of this nature will not allow for in-depth analysis or provide for every possible situation. The book is rather intended to provide a first port of call to assist readers in understanding the construction sector in the jurisdiction(s) in which they operate.

UNITED STATES

Michael S Zicherman and Peter E Moran | Peckar & Abramson, PC

1. CONSTRUCTION INDUSTRY OVERVIEW

1.1 Please comment on the size and importance of your construction industry

Construction plays a significant role in the overall US economy and is viewed as one of the country's key economic indicators. According to the US Department of Labor's Bureau of Labor Statistics, in 2015 the US construction industry employed nearly 10 million people, approximately 7% of the total US employment. Likewise, the Commerce Department reported that in 2015 construction spending in the US rose to almost $1.1 trillion, the highest level since the 2008 recession, representing nearly 6% of the US gross domestic product. The private sector, which includes residential and private non-residential projects, accounted for more than 70% of the overall construction spending, with public construction accounting for the other 30%. Both public and private construction spending increased in 2015 – private construction by 12.3% and public construction by 5.6%.

1.2 Is it a local domestic industry? Does it have international reach? Do overseas contractors and professional consultants operate in the jurisdiction?

The US construction market is quite varied. There are many domestic contractors and design professionals that focus their businesses on specific states or geographical regions within the US, while other contractors perform construction works on a national level throughout the US, and/or the Americas and abroad. There are also many foreign-based contractors and design professionals that have entered the US construction market.

1.3 What are the challenges to/difficulties experienced by construction clients seeking to undertake works in the jurisdiction?

The primary challenge facing foreign contractors and design professionals seeking to enter the US market is that the construction industry in the US is highly regulated. The extent of those regulations varies in each of the 50 states, and nationally. The regulations also vary depending upon whether the construction is for private works or for public improvements. Thus, it is imperative for foreign contractors to obtain guidance from competent construction attorneys on the various regulations that would affect their ability to perform construction works in the US, from licensing requirements for contractors and design professionals to local labour laws and prompt payment obligations, as well as their rights with respect to pursuing claims and disputes. If claims and disputes are not pursued in the proper manner, or if timely notice of claims is not furnished, the right to pursue the claim or dispute may be waived or forfeited.

1.4 What are the current trends in the industry?

The year 2016 is forecasted to be another good one for construction in the US. Dodge Data & Analytics Construction Outlook forecasts a 6% growth in construction, with the value of construction starts reaching an estimated $712 billion. Specific trends in the industry include governmental moves towards privatisation of construction and operational activities, as more states and local governments continue to enact enabling legislation for public–private partnerships and become increasingly more comfortable with this form of project delivery to expedite much needed infrastructure projects. Other general industry trends include a continued focus on sustainable construction methods and smart building designed to automatically control various systems to deliver significant energy savings.

1.5 Do competition laws affect the industry? How are they enforced and is regulation effective?

Competition is one of the fundamental principles underlying the award of contracts for public construction projects in the US. The purpose is to provide the best value to the public and avoid corruption and favouritism. For the most part, all states and the federal government award contracts to the contractor whose bid is the lowest price, who is responsive to the solicitation and is deemed to be a responsible bidder (that is, it is capable of fulflling its contract). In certain instances, some public contracts may be awarded on a best value basis or other competitive proposal basis. If a competing contractor believes that the solicitation was unfair or that the bid by the apparent lowest bidder was defective, there are procedural and legal mechanisms to protest the award of the contract to that bidder to ensure that the bid is properly awarded.

In addition to the competitive bidding statutes, there are other anti-bid-rigging and anti-collusion laws that are designed to prevent contractors from working in concert with one another to ensure that one of them obtains the award, as well as anti-kickback statutes intended to prevent contractors from receiving kickbacks from sub-contractors or labourers, and pay-to-play laws that are designed to prevent undue influence on government officials to award contracts based on political contributions by contractors and design professionals. Violation of such laws can result in criminal sanctions and imprisonment, as well as debarment from the right to bid on other governmental projects.

1.6 Does bribery, the making of "facilitation payments" or other corruption exist in the industry? What bribery/anti-corruption laws apply? How are those laws policed? Is this effective?

Bribery and corruption are not prevalent or widespread in the US, likely due to the extensive state and federal anti-corruption laws. There are many anti-corruption laws, both at the federal level and at the state and local levels, which are strictly enforced and provide a forceful deterrent. At the federal level (that is, for projects with the US government and its agencies), some of the principal anti-corruption laws include: the Anti-Kickback Act, the Federal Election Campaign Act (anti-"pay to play" laws), the False Claims Act, the Forfeiture of Fraudulent Claims Act (also called the Special Plea in Fraud Act) and the anti-fraud provisions of the Contract Disputes Act. The Anti-Kickback Act prohibits any party in the construction contract scheme (that is, the prime contractor, a sub-contractor or sub-sub-contractor) from offering, providing or accepting any money, gift or "thing of value" to improperly obtain favourable treatment with respect to a contract with the US government. It is equally impermissible to pass along the amount of the kickback in any of the contract prices charged. Among other sanctions, the government can recover double the amount of the kickback from the culpable party and impose fines or imprisonment. Similarly, the anti-"pay to play" provisions of the Federal Election Campaign Act seek to avoid fraud stemming from the reward of government contracts in exchange for political endorsement. This act restricts a government contractor from making or promising to make a political contribution to a candidate while the government contract is being negotiated and/or during the pendency of the performance of the contract. Many states and local governments have adopted similar anti-kickback and anti-"pay to play" acts. In many states, contractors who make violative contributions are prohibited from bidding on or being awarded public contracts.

Other weapons in the government's arsenal to prevent fraud are a trio of Acts: the False Claims Act, the Forfeiture of Fraudulent Claims Act and the anti-fraud provisions of the Contract Disputes Act. These Acts penalise a contractor which knowingly presents or conspires to present a false payment claim to the US government or knowingly fails to deliver the full value of money or property owed to the government. The scope of the False Claims Act is quite broad, as it has penalised: over billing, false billing, "front-end" loading of bids, the hidden substitution of materials, collusive bidding/bid-rigging, concealment of non-conforming work and the bribery of public officials. The government can investigate and bring a False Claims Act claim itself or, in certain circumstances, a private citizen with knowledge of the fraud (that is, a whistleblower) can also commence a suit. Remedies for a violation of the False Claims Act are severe and include: an award of compensatory damages to the government, treble damages, a forfeiture of the contractor's payment claim, criminal fines, and/or suspension and debarment of the contractor of its right to seek future federal contracts. Relatedly, the Forfeiture of Fraudulent Claims Act is a potent tool because it has been expansively interpreted to cause not only the forfeiture of the fraudulent claim submitted by the government contractor but also any other non-fraudulent claims the contractor possesses under that same contract. Similarly, if a government contractor is unable to support any part of its claim on account of fraud or misrepresentation, the anti-fraud provisions of the Contract Disputes Act state that the contractor is liable to the US government in an amount equal to the unsupported part of the claim, plus all costs incurred by the government in reviewing that unsupported claim.

There is also the Foreign Corrupt Practices Act, which criminalises bribes or "facilitation payments" made in order to gain the award of foreign business. The Act applies not only to US companies and citizens seeking international business, but also to foreign persons operating within the territory of the United States who engage in illicit behaviour. It is unlawful for foreign persons to utilise the US mail system or other instruments of interstate commerce in furtherance of making or promising to make a bribe to a foreign official, political party or candidate to induce that official to direct business or bestow some advantage to a party seeking the foreign contract.

2. OVERVIEW OF THE LAW

2.1 Is yours a common law jurisdiction or is the law codified?

The United States is regarded as a common law system, stemming from the influence of the English common law system during the American colonial period and due to the importance placed upon judicial precedent. However, the US legal system combines common law decisions and codified laws, and most states, with the notable exceptions of the State of Louisiana and the Commonwealth of Puerto Rico (civil law-based jurisdictions), are also common law jurisdictions. With respect to judge-made decisions, the long-cherished principle of *stare decisis* states that, where a point of law has been previously decided by a court of competent jurisdiction, particularly by a superior court (such as a court of appeals or a supreme court), the lower court is bound to apply the precedent previously established, absent exceptional circumstances or compelling equitable considerations. This principle is generally viewed as a stabilising force in US law, allowing for a greater degree of predictability. The trial lawyer is typically engaged in locating such binding or analogous legal precedent that determines or influences the issue at hand or is otherwise attempting to distinguish the current dispute from prior precedent. Despite the prominent role of judicial precedent, the importance of codified laws upon the US legal system cannot be understated. The principle of *stare decisis* is counterbalanced with principles of statutory construction: where a statute is clear and unambiguous, it is

to be enforced as written, and the courts are not to engage in an interpretation that is unsupported by the express language of the statute and are bound to effectuate the legislature's intent.

2.2 Are there any specific construction laws or codes relating to the standards of design and work?

Yes, but the source of those legal standards varies depending on the jurisdiction that has authority over the project or contract at issue. The United States is a federal system of government, meaning that there are multiple layers of government having different responsibilities and separate sets of laws. The federal system is further explained in *Section 2.5* below. There are at least three different sets of laws and regulations providing design and construction standards:

- National laws and regulations.
- State laws and regulations.
- local/municipal laws and regulations.

The types of regulations are numerous, but they generally include:

- Building and housing codes.
- Minimum design standards.
- Construction-permitting processes, which include the review of proposed designs and the inspection of work in place.
- Fire safety codes.
- Occupational safety and workplace health standards.
- Licensing and registration requirements for design professionals, contractors and certain trade sub-contractors.
- Insurance requirements.
- Minimum wage and/or prevailing wage and hours laws.
- Laws requiring the securing of performance bonds and/or payment bonds from a reputable surety to guarantee the completion of the project and the prompt payment of sub-contractors.
- Pre-qualification procedures for certain public construction work.

2.3 What is the inter-relationship of statute/code and case law?

As noted above, under both federal and most states' laws, there is a mutual respect for statutory law and judge-made law (common law legal precedent). In interpreting a statute, courts are bound to effectuate the legislature's intent, and the legislature is generally presumed to have been aware of the common law decisions existing at the time the legislation is enacted. There are also generally recognised principles of statutory construction, such as those that state that where a statute is clear and unambiguous, it is to be enforced as written and the courts are not to engage in an interpretation that is unsupported by the express language of the statute or which renders a

statute meaningless or irrational. Where the language of the statute itself is ambiguous or is subject to multiple interpretations, the courts will look to extrinsic aids to divine the legislature's likely intent, which include the legislative history of the statute, the statutory purpose and/or the history of how the act or similar wording in other statutes has been construed by the legislature, government agencies and/or the courts in prior determinations.

2.4 Is the national law subject to or influenced by any supervening authority (such as the European Union)?

The United States Constitution is the supreme law of the land and is not subject to any supervening authority outside of Congress or, in the rarest of instances, a constitutional convention. Congress enacts the laws that are set forth in the United States Code. That said, the US is a party to various treaties and international compacts, which become part of US law once ratified by Congress (for example, the United Nations' New York Arbitration Convention on the Recognition and Enforcement of Foreign Arbitral Awards).

2.5 In federal jurisdictions, what is the inter-relationship between state and federal laws?

The United States is a federal system, with multiple layers of government having different responsibilities and separate sets of laws, and judicial decisions that apply within each discrete sphere of power. Congress passes laws at the national level to the extent "reasonable and necessary" for it to carry out its enumerated powers set forth in the US Constitution. While there are limits to Congress's ability to legislate, Congress's power is certainly broad, and could cover areas of law that one would not expect to affect the national interest. This is particularly so in areas which affect "interstate commerce", as Congress has been specifically empowered to regulate commerce among the states and with the Native American tribal nations. The case books are replete with judicial determinations throughout the centuries which sometimes recognise a broad or, at other times, a more restrictive view of whether a specific area of legislation has some tangential effect on interstate commerce so as to fall under Congress's legislative authority. By virtue of the Tenth Amendment of the US Constitution, all powers not delegated to the national government are reserved by the state governments, provided that the federal government has not pre-empted the state's ability to legislate in a particular field. Thus, each state has its own legislature to enact laws for the safety and welfare of its citizens, and a state court system to interpret its own laws and adjudge whether a law comports with that state's constitution. In instances where federal and state law conflict, the Supremacy Clause of the US Constitution generally provides that the state government or court will adhere to the federal law. As among the several states, with certain narrow exceptions, the Full Faith and Credit Clause of the US Constitution dictates that one state will honour the legislative acts and judicial determinations of a sister state. Special mention should be made of the Native American tribal nations within the United States, which, under federal law, are generally regarded as self-governing entities over recognised tribal lands, with sovereign power to establish their own legislative, executive and judicial branches. While federal law mandates certain minimum legal protections which must be afforded to litigants in tribal courts (which are closely akin to the Bill of Rights of the US Constitution, though not the same), any person or entity seeking to become involved in a construction project upon tribal land would be wise to engage local counsel familiar with the tribe's construction laws.

2.6 Are there registration or licence requirements for consultants or contractors carrying out business?

The majority of states regulate contractors in some capacity, and every state regulates design professionals (that is, architects and engineers) through registration and/or licensing requirements. The regulations vary among the several states, but each is concerned with protecting the public from unqualified persons designing and constructing buildings that are unsafe.

With respect to design professionals, the states generally define by statute what the practice of "architecture" or "engineering" is (and there is a wide disparity among the states as to how each is defined), and they prohibit persons not licensed from practising in those fields. Many states have special laws regulating the practice of landscape architecture and land surveying, and some regulate the practice of interior design. It is not uncommon for states to establish licensing boards that regulate the design professional fields, which will grant, renew, deny or revoke licences, or sanction those practitioners which violate laws and regulations or engage in professional misconduct. Legislation of design professionals commonly includes:

- Laws which mandate that licensed architects or engineers be the majority owners of the architectural or engineering firm.
- Record-keeping requirements to demonstrate that the professional was "in responsible charge" of its design services and exercised independent professional judgement.
- Laws that require the review, signing and "sealing" of a professional's design drawings.
- Regulations that require compliance with all laws and standards of practice governing the field.

Some states' licensing laws are very specific in that they impose duties upon the design professional to adequately supervise subordinates in their employ, the obligation to keep the client reasonably informed and to be available to respond to questions, and the manner in which the professional can advertise his/her services. The sanction for practising without a licence is usually quite harsh and includes civil or criminal penalties, and many states prohibit the design professional and/or his/her firm from utilising the court system to collect unpaid fees if he/she was not a licensed professional at the time the services were rendered or when the lawsuit was initiated.

With respect to contractors, particularly for those engaged in new home building or residential improvement projects, many states require a builder to register and obtain a licence. Applications for such licences typically require:

- Disclosure of who the principals of the contracting entity are.
- Proof and certification that the contractor has procured insurance meeting a minimum threshold.
- Access to a certain amount of bonding capacity from an approved surety.
- Disclosure of past crimes or offences involving fraud, deceit and/or professional negligence or misconduct within a set interval of years.
- Prior building experience.
- Whether any past licences were denied, suspended or revoked in any jurisdiction.

The disclosure of such information is also typically required in the pre-qualification or bidding process for public construction projects, and some jurisdictions have even more onerous requirements directing a contractor to disclose multiple years of financial statements in order to be qualified to bid on public work. Again, the penalties for unlicensed work can include civil or criminal penalties and a prohibition on the contractor from utilising the court system to collect on its construction contract.

State laws also vary greatly as to whether pure "construction managers" or "construction contract administrators" – which, generally speaking, are agents of the owner overseeing the construction of the project by the general contractor and its sub-contractors – must be separately licensed or whether they fall under the statutory definitions of "contractor", "architect" or "engineer."

2.7 Is there a specialist construction/civil engineering court and/or body of lawyers?

There is no specially designated court in the US federal court system to hear construction or civil engineering disputes. For disputes involving construction projects with the federal government and its agencies, the claimant has the option of presenting its claim before the various "contract appeals boards" established by certain federal agencies (such as the Civilian Board of Contract Appeals and the Armed Services Board of Contact Appeals) or bypassing the boards entirely and filing a complaint before the US Court of Federal Claims, a court specially created to hear claims for monetary damages against the US government (though not exclusively dedicated to construction cases). These contract appeals boards are not judicial courts, but many have a high degree of familiarity with construction disputes due to the quantum of federal construction contracts, and many offer streamlined approaches. Some contractors, however, fear the potential of institutional bias before the contract appeals boards and choose the court system instead. States certainly have the freedom to establish construction courts, though, at present, no states have. Some states have created commercial courts or commercial divisions within their systems to hear controversies involving commercial contracts usually exceeding a certain monetary threshold in dispute before judges who are designated as specialists in complex business disputes.

Attorneys who practice construction law can be found in every state. There is no special certification for construction attorneys at the federal court level, but at least one state (Florida) offers a specialised certification for construction law practitioners. As of 1 January 2016, the Texas Supreme Court has adopted standards for the certification of construction law attorneys in that state. These certification programmes typically require an attorney to have substantially practised in the area of construction law for a minimum number of years, to pass continuing legal education courses in the practice area and to successfully navigate a written examination.

2.8 Is there a limitation period (time limit) for claims arising from the design or construction of works?

Yes, all jurisdictions have statutes of limitations which set forth the latest date upon which a cause of action may be timely commenced. As discussed below, several of these jurisdictions also have "statutes of repose" which set an outermost limit upon when liability may be imposed upon a contractor/design professional for their work on a particular project.

The limitations periods vary by state and by the particular cause of action or form of relief sought. Even within a single jurisdiction, it is common to have different periods of limitations for claims sounding in breach of contract

or breach of warranty (for example, a construction defect claim against a contractor), as compared with claims for professional malpractice/negligence (for example, a design defect claim against a design professional) or those seeking to recover for personal injury, to enforce a mechanic's lien or to claim against a surety bond. Given the high degree of variation amongst jurisdictions, it is vitally important for a claimant to review all applicable statutes of limitations, lest it run the risk of having its claim time-barred by the court. A claimant should also remember to carefully read its contract (or, in the case of surety bond, the language of the instrument), as the agreement itself may prescribe a shorter limitations period within which to commence a lawsuit or it may establish a different start date from when a particular cause of action accrues than what is provided by statute.

Given the draconian nature of the time-barring of claims, some states have adopted "the discovery rule" or other equitable tolling measures to provide an extended time period within which to commence suit. The Discovery Rule, where applicable, generally provides that a cause of action (for example, with respect to latent construction or design defects) does not accrue until the claimant discovers or reasonably should have discovered that it has been damaged by the deficient work of the contractor/design professional. The Rule then provides the claimant with a set period of additional time within which to commence suit (for example, within two years of discovery). Thus, in a Discovery Rule jurisdiction in the example above, there could be an instance where the six-year statute of limitations applicable to breach of contract claims (accruing from the date of substantial completion or the owner's acceptance of the project) may have expired before the owner commenced suit, but the owner's action for latent defects is nonetheless timely since it was initiated within two years of the owner's discovery of the harm. Whether the Discovery Rule can be properly invoked to resuscitate a time-barred claim is usually a fact-sensitive matter requiring specialised proof hearings.

Many states, particularly those which ascribe to the Discovery Rule, also possess statutes of repose which act to definitively extinguish liability against a contractor or design professional by stripping the claimant of any cause of action after the passage of a certain amount of time following substantial completion of the project or completion of that contractor's/design professional's work. For example, in a state having a ten-year statute of repose, an owner would have no cause of action against a contractor or design professional for latent defects discovered in the 11th year after substantial completion of the project, **even if** that state followed the Discovery Rule and the owner promptly filed suit the day after discovery.

For those jurisdictions that adhere to a civil code system (that is, the State of Louisiana and the Commonwealth of Puerto Rico), contractors and design professionals face strict "decennial liability" for defective workmanship that results in the collapse of a building, in whole or in part, within a set period of time (usually five or ten years from the completion of the contract or the owner's acceptance of the building).

2.9 Are there any commonly used methods for contractors to manage risk?

As stated above, but for the few jurisdictions with a civil code heritage, the concept of strict decennial liability for design and construction defects generally does not apply in the United States, although some states, such as New York, have statutes providing for strict liability for those parties "in control of" unsafe worksites where personal injuries occur (the so-called Labor Laws, or Scaffolding Laws in New York). The contractor's "risk" is typically addressed and allocated in one of several ways:

- As a matter of contract (for example, calculating a contingency factor in one's contract price to account for unexpected occurrences or having a contingency fund established with the project owner, such as in the context of many guaranteed maximum price (GMP) contracts, indemnity and hold harmless provisions, waivers of consequential damages, and liquidated damages clauses).
- By procuring various types of insurance to protect against liability.
- In the global sense, by the proper management of the construction process.

Generally speaking, in most instances, a contractor's liability will either be determined by breach of contract/warranty standards or in negligence due to the alleged breach of the standard of care (the latter most especially in cases brought by third parties for personal injury or property damage caused by the contractor's work and/or in design defect claims). There is an array of typical insurance coverages available to contractors, which is discussed in *Section 5.7* below. The project owner is typically required to maintain first party property insurance to protect against injury and property damage claims, and owners will also typically procure business interruption, flood insurance and/or builder's risk insurance policies to cover the building from damages while under construction. Contractors will generally require their sub-contractors to obtain certain minimum coverages, and will require those sub-contractor insurance policies to name the contractor (and typically the owner as well) as an additional insured. One other type of insurance that is becoming more prevalent is sub-contractor default insurance (SDI), in which a contractor can "enrol" all sub-contractors under one programme to protect the contractor from the expenses associated with a sub-contractor's default on a project. Commonly, SDI coverage will reimburse the contractor for completion costs, costs to correct non-conforming work and legal costs resulting from the sub-contractor's default, amongst other things.

3. BUILDING AND CIVIL ENGINEERING PROCUREMENT STRATEGIES

3.1 What are the common methods of procurement?

There are numerous methods of procurement utilised in the US. Probably the most common method of procurement is design–bid–build, whereby the owner (public or private) retains the services of a design professional to develop a 100% design of the project, which is then put out to bid to general contractors or construction managers (at risk) on a fixed price, GMP or cost plus fee basis. The general contractors or construction managers will then retain various trade sub-contractors to perform the construction in accordance with the owner's designs. Less frequently utilised is design–build, in which the owner contracts with a design professional to partially design the project and develop design criteria or performance requirements, and then the owner retains a design–build firm to complete the design and construction in accordance with the owner's design criteria. There also are variations of these procurement methods, such as agency CM, whereby the owner retains a construction manager (CM) to act as the owner's agent in overseeing the work of the design professional and/or the contractors, as well as design–build, operate and maintain, in which the design–build firm is also contracted to operate and maintain the completed construction.

3.2 What are the legal and commercial advantages and disadvantages of each method of procurement?

The advantages of the design–bid–build approach are that:

- It is a linear procurement method, with defined responsibilities between the design professional and the contractor.
- It provides greater control to the owner over the project design.
- Because the design is 100% complete, the owner is able to obtain the lowest competitive bids to construct the project.

However, while there is more control over the design, there is less control over the total cost of the construction, as the owner cannot be sure that the project can be constructed within its budget until it has received bids from interested contractors. Also, while, in theory, the project is 100% designed, issues often arise during construction about design omissions or ambiguous or conflicting design details, which can lead to additional costs to complete, project delays and competing claims as to whether a particular project issue or defect is attributable to improper design or poor construction. Some of these issues can be mitigated by use of a construction manager as the owner's agent, whereby the CM can perform constructability reviews of the design before it is put out to bid, in order to minimise design discrepancies and ensure that the design can be constructed within the owner's budget. The CM will also serve as an intermediary between the contractor and the designer during construction, in order to avoid conflicts caused by the designer determining the adequacy of its own designs.

The primary advantages of a design–build project is that it enables the owner to have a single point of accountability for both the project design and the construction, and allows for the design to be developed in stages as the project is being constructed, which generally provides for a project that it completed quicker than the traditional design–bid–build project. This procurement method also allows the owner to develop the project under a GMP, enabling it to stay within its construction budget. Because there is a single entity responsible for the detailed design and construction, there is greater flexibility to modify the design to address construction issues created by field conditions, or to adjust the design details to stay within the GMP or to realise greater cost savings. However, what the owner gains in cost certainty it loses in design control, since the design–build firm is typically permitted to control the design as long as it adheres to the owner's design criteria and performance requirements. These projects are also not always the cheapest, since the contracts are not necessarily given to the contractor that provides the lowest bid for the project, and the owner only has certainty as to the maximum amount that the project will cost. Issues can also arise between the owner and the design–build firm as to whether the project is being developed and constructed in accordance with the design criteria.

3.3 Which methods of procurement are most commonly adopted?

See *Section 3.1* above.

3.4 Are early qualification or pre-qualification processes used in public and/or private construction projects? If so, describe how these work

Pre-qualification processes are employed by the federal government, by state and local governments and by governmental agencies to ensure that the pool of contractors submitting bids for the public works, regardless of the procurement method, have the necessary qualifications and physical and financial capacity to perform the works. The pre-qualification criteria may vary by the type of project, but are often focused (among other relevant factors) on:

- The contractor's experience with similar projects.
- Its licences and qualifications to perform certain types of construction works.
- Its satisfactory performance on other projects for that particular governmental unit or other governmental units, in terms of safety, timely completion, defective construction and claims/disputes.
- Its overall bonding capacity.
- Its liquidity, assets and capitalisation.
- The value of the construction remaining to be performed under its current contracts.

3.5 How do contractors work?

General contractors maintain their own labour force to perform various parts of the works, though most of the craft labour, such as electrical, plumbing and mechanical, are contracted out to speciality sub-contractors. Depending on the project, and whether it is public or private, the general contractor may be required to self-perform a certain percentage of the construction. Also, many public projects place requirements on general contractors to sub-contract a certain percentage of the works to various disadvantaged business enterprises, such as women-owned contractors, minority-owned contractors or veteran-owned contractors.

4. BUILDING AND CIVIL ENGINEERING CONTRACTS/FORMS OF APPOINTMENT

4.1 Are standard forms of building contract published? If so, by whom? What are they? How widely are they used?

Various construction industry groups in the US publish standard construction forms. Such groups include the American Institute of Architects (AIA), the Associated General Contractors of America (AGC) and the Engineers Joint Contract Documents Committee (EJCD). There is also a series of form construction documents called "ConsensusDOCS", which were developed jointly by 22 owner, contractor, designer and surety organisations.

The most widely used form contract documents are those developed by the AIA, whose forms cover the entire contracting spectrum and not just contracts with architects. Indeed, its A201 form of contracting general conditions for general construction contracts is one of the most commonly used documents in the industry.

The forms developed by these groups cover all aspects of construction and agreements between each of the standard project participants, as well as specialty contract addenda to cover special project requirements such as building information modelling or "green" building in accordance with Leadership in Energy and Environmental Design (LEED) certification criteria. Many large owners and developers, as well as governmental entities, also have their own standard form contracts. For example, many state departments of transportation have standard specifications, which set forth the general conditions for their construction contracts. A catalogue of the available forms of construction documents by the AIA can be found at *www.aia.org/contractdocs/referencematerial/aiab099118* and the ConsensusDOCS forms can be found at *www.consensusdocs.org/catalog*.

4.2 Are standard forms of sub-contract published? If so, by whom? What are they? How widely are they used?

The industry groups mentioned above also publish forms of sub-contracts, though most contractors utilise their own forms of sub-contracts or purchase orders. The AIA and ConsensusDOCS form of sub-contracts can be found at the websites listed above.

4.3 What other standard form building and civil engineering documents are published?

As mentioned in *Section 4.1* above, these industry organisations have developed forms for all aspects of construction. In addition to those previously discussed, they have also developed standardised security agreements, such as bid bonds, performance bonds, payment bonds and warranty bonds.

5. ANATOMY OF A BUILDING/CIVIL ENGINEERING CONTRACT

5.1 What are the common constituent parts of a building or civil engineering contract?

While the specific terms of a construction contract will vary from project to project, there are several key provisions to most construction contracts beyond the necessary identification of the contract price and time for completion. For example, most contracts contain general provisions that identify the owner, designer, contractor and so on, and their respective roles with respect to the completion of the project, as well as the documents that constitute the contract documents and various defined terms used throughout the contract documents for purposes of consistently interpreting the contract requirements. Other standard key terms to a construction contract include the scope of the works to be performed by the contractor, the contractual mechanisms and procedures for dealing with change orders, delays, submittals, requests for information, default and termination of the contract for cause or for the owner's convenience, and claims/disputes.

5.2 When and how does a contract become legally enforceable?

In general, consistent with the common law roots, construction contracts in the US are enforceable once there is an offer and an acceptance of that offer to perform construction works at a stated price. While it is possible to have an enforceable oral agreement for construction, oral construction agreements are rare, and some states have specifically enacted statutes that require all construction contracts to be in writing. There are, however, also instances where the parties intended to enter into a written contract but the contract is never signed because there is a disagreement over one or more terms or for any number of other reasons. In such cases, the contract will still be enforceable based on the parties' performance, and it will be left to the courts to determine what was agreed to by the parties if a dispute later arises. In the context of public construction, the bidding contractors are presented with the form of contract prior to submitting their bid for the works, and the winning contractor will generally be bound by the price it submits for the project once declared the lowest responsible bidder. The contractors' bids are usually secured by a bid bond, to protect the public owner in the event that the winning contractor backs out of its bid and the contract has to be awarded to another contractor at a higher price.

5.3 What are the principal obligations of the client under a building/civil engineering contract?

The client/owner is principally responsible for providing the contractor with:

- Such information as may be within its possession and control to enable it to perform the contracted works, such as surveys, environmental reports and subsurface condition reports.
- Access to the project site to perform the construction. Failure to do so could subject the client to claims for delays and additional costs by the contractor.
- Making prompt payment for the work performed. If the client fails to do so, the contractor may be entitled to suspend performance and place a lien against the project to secure payment.

There is no limit to the obligations that a client might agree to undertake, but any such obligations will certainly be identified in the contract. Such additional obligations may include securing various permits for the work, as well as furnishing an owner-controlled insurance programme (OCIP) or "wrap-up programme", which provides certain eligible project participants with general liability coverage under a single insurance package. The client may also agree to supply certain special or major equipment/materials for the project, instead of paying a premium to the contractor to secure them.

5.4 What are the principal obligations of the contractor under a building/civil engineering contract?

Similar to the obligations of the client, the contractor's obligations are strictly a function of the parties' agreement. Generally, though, all contractors agree to perform their work in a good and workmanlike manner in accordance with industry standards. The contractor further agrees to perform its work in accordance with the client's design documents and within the scheduled date for completion, and to timely pay its sub-contractors for the work they perform on the project. The contractor is also responsible for supervising, managing and coordinating the work of its sub-contractors, and indemnifying the client against the actions of its sub-contractors.

5.5 Is it possible for the client to vary the works being undertaken? If so, how?

The client is typically free to vary the works within the general scope of the contract. As previously mentioned, one of the typical provisions of construction contracts is the change orders provision, which reserves the right of the client to make changes to the works. If the client wishes to make a change, it will ordinarily request a proposal from the contractor and the contractor will furnish the additional cost to perform the changed work, as well as any additional time necessary to perform the work. If the client agrees, the client and the contractor will execute a written change order that modifies the contract to encompass the time and cost necessary to perform the additional work. If there is no agreement on price or time, some typical contracts permit the owner to direct the contractor to perform the changed work and to be paid a reasonable price for that work, subject to adjustment pursuant to the contract's dispute provisions. However, if the proposed variation to the works is extreme, and is significantly beyond the scope of the original project, on a private construction project, the variation could constitute an abandonment of the contract and relieve the contractor from any further obligation to complete the construction. On a public construction contract, a proposed variation that is significantly beyond the scope of the works originally bid is

prohibited and would be a violation of the public procurement laws, as it would effectively be deemed a separate project that must be subject to competitive bidding.

5.6 What health and safety matters are addressed by the contract?

All contractors having supervisory control of the worksite are responsible for the health and safety of all workers on the site. There are extensive federal and state laws and regulations governing construction worksite safety and standards that must be adhered to during the course of construction, such as for proper construction techniques and equipment, safety gear and warning signs. On the federal level, the primary health and safety statute is the Occupational Safety and Health Act (the OSH Act), which is administered by the Occupational Safety and Health Administration (OSHA). The OSHA is responsible for:

- Setting and enforcing worker health and safety standards.
- Providing training, outreach and education.
- Establishing partnerships.
- Encouraging continual improvement in workplace safety and health.

Violating these state and federal laws and regulations may lead to civil penalties, fines or criminal liability, as well as civil liability to workers injured due to the failure to adhere to these standards. Sanctions may also be imposed against a contractor for its sub-contractors' violations. OSHA's website has a page dedicated to the construction industry, and sets forth its construction standards and agency policies, as well as other useful publications and compliance information, at *www.osha.gov/doc/index.html*.

In addition to worker safety, contractors also are responsible for adhering to the extensive federal and state environmental laws and regulations affecting construction projects for the protection of public health. These laws generally govern the impact of construction on waters (storm water run-off into streams or rivers, or disturbance of wetlands), soil (handling, storing, transporting and disposing of hazardous and non-hazardous solid waste) and air (generation of particulate and ozone precursor emissions, such as dust, vehicle emissions, burning debris and release of chlorofluorocarbons or other ozone-depleting substances). On the federal level, there are numerous environmental statutes, many of which have corresponding state counterparts. The primary environmental statutes in the US are the Clean Water Act, the Resource Conservation and Recovery Act and the Clean Air Act, all of which are administered by the US Environmental Protection Agency.

5.7 What insurances are required by law? Are any other insurances commonly required by the terms of building and civil engineering contracts?

Like most all other aspects of construction, the types and amounts of insurance required on any given project are generally subject to the terms of the particular construction contract, though certain insurance (like worker's compensation insurance) is required by statute. Notwithstanding, there are various types of insurance policies typically procured on US construction projects to cover most types of liability exposure. These include:

- Employer liability insurance.
- Errors and omissions insurance.

- Comprehensive general liability insurance.
- Pollution liability insurance.
- Property insurance.
- Builder's risk insurance.
- Owners and contractors protective liability insurance.
- Umbrella or excess liability insurance.
- Worker's compensation insurance.
- SDI.

Often, depending on the project or the owner or general contractor involved, the project insurance for the project participants might be included as part of an OCIP or a contractor-controlled insurance programme to control costs, and to provide other administrative advantages.

5.8 How does a building/civil engineering contract address the interests of third parties (such as banks providing funds for a project and occupiers of the completed project)?

Often, the interests of third parties, such as lenders providing construction financing or sub-contractors, are protected in the contracts between the project owner and the general contractor. One method of protecting these interests is by the owner requiring the contractor to furnish a payment and performance bond from a licensed surety. The performance bond will protect the interests of the lender by ensuring the completion of the contract in the event that the contractor defaults and fails to complete the project. Similarly, a payment bond protects sub-contractors by ensuring payment for the work they perform in the event that the contractor defaults on its payment obligations. Another contractual provision affording protection to lenders is the "step-in" right, which protects the lender against an owner default on the construction contract by permitting the lender to step into the owner's position to rectify the default and take over the construction to complete it and sell it to pay off the debt. A lender may also be given rights to review and approve contractor payment requisitions to ensure that the payments being requested, and which it is ultimately paying, were actually earned by the contractor.

5.9 Can a building/civil engineering contract be terminated before completion? If so, how?

Construction contracts can be terminated prior to completion of the project for cause (that is, an owner or contractor default) or for convenience. Regardless, the contract will often specify when either of these forms of termination is available to the parties. If the contract fails to specify when a party is in default and subject to termination for cause, the contract may still be terminated if either party breaches a material term of the contract – though what is material may be in dispute and have to be determined by a court. Typically, though, an owner will have the right to terminate the contract for cause if the contractor:

- Fails to prosecute the work in accordance with the project schedule.
- Fails to perform the construction in accordance with the contract documents or pursuant to applicable laws and standards.

- Fails to pay sub-contractors.
- Abandons the construction or fails to supply sufficient labour to timely prosecute the works.
- Files for bankruptcy or becomes insolvent.

Unlike owners, a contractor's right to terminate a contract for cause is often restricted to just the owner's failure to make payment. Other than non-payment, it is generally presumed that the contractor can be adequately compensated for any other owner breach of the contract.

Contracts may also be terminated by either side for convenience. A "for convenience" termination may be considered a no fault termination of the contract due to circumstances beyond the reasonable control of the parties. Most typically, a termination for convenience will arise as a result of a *force majeure* event, or where the owner loses funding for the project or where the project is no longer economically viable to the owner. Some contracts provide that a contractor may also terminate the contract for convenience if the owner suspends performance of the project for a specified period of time. When a contract is terminated for convenience, the contractor typically is paid the uncompensated costs of the work actually performed, plus overheads and profit on the completed work (without the right to any lost profits on the unperformed work), plus any costs incurred in closing out its sub-contracts. In addition, due to the significant financial consequences and damages that could arise when an owner improperly terminates a contract with a contractor for cause, or when a contractor improperly terminates a contract with a sub-contractor for cause, some construction contracts provide that if the contract was improperly terminated for cause, the termination shall convert to a termination for convenience, thereby limiting the costs that the wrongfully terminated party would otherwise be entitled to by operation of law.

5.10 Is the law relating to sub-contracts different from that for the principal or head contract? If so, how?

The laws relating to sub-contracts are generally the same as those applicable to the principal contract. However, the issue that sometimes arises is which state's laws apply to the principal contract and which state's laws apply to the sub-contract or to specific purchase orders. Many construction participants try to draft their contracts to designate the laws of the state in which they are headquartered as the applicable law for the interpretation and enforcement of its contract, irrespective of where the project is located. In doing so, there can be a disparity between the substantive laws affecting the principal contract and those affecting the sub-contracts. This can provide inconsistencies in the rights of the various parties. Some states have enacted laws that proscribe parties from designating in their construction contracts the applicability of another state's laws for projects performed within that state.

5.11 Are contractors fully responsible for the works and products of their sub-contractors and suppliers? Do clients have direct rights against sub-contractors and suppliers? Do sub-contractors and suppliers have direct rights against clients?

The general contractor is responsible to the owner for the work performed by all its sub-contractors, and its sub-contractors' sub-contractors and suppliers. This is standard in most construction contracts and is a general principle of US construction law, as the general contractor is contractually responsible for the completion for the entire works under its contract regardless of whether it self-performs the entire work or retains sub-contractors to complete various elements of the works. Ordinarily, an owner will not have a direct right of action against a sub-contractor on

the project, as most states adhere to strict principles of privity of contract. However, there are exceptions whereby an owner can pursue a claim based on a tort theory for negligence or if it can be established that the owner was an intended third party beneficiary of the work performed by the sub-contractor, such that there exists the functional equivalent of privity between the owner and the sub-contractor, as well as for claims for indemnification and contribution against the sub-contractor arising from third party claims for personal injury or property damage. If warranties from the sub-contractors or suppliers were assigned to the owner, then the owner would have direct rights against the sub-contractor or supplier that issued the warranty.

Due to the principles of privity, sub-contractors and suppliers, likewise, do not generally have any direct rights against the owner. For example, if the contractor fails to pay a sub-contractor for work performed, the sub-contractor does not have any direct right of action against the owner to recover payment for the benefit its work conferred upon the owner. However, if the owner bridged the privity gap by directly assuring the sub-contractor that it will pay it if the contractor fails to make payment in order to induce the sub-contractor's continued performance, the sub-contractor would then be able to assert direct rights against the owner for the work performed in reliance on the owner's assurances. Also, a sub-contractor would possess direct rights against an owner if it files a mechanic's lien or construction lien against a private improvement, pursuant to a state's lien laws. If such a lien is filed, it is enforced by commencing a lawsuit against the project owner to foreclose the lien.

6. ANATOMY OF AN APPOINTMENT OF A PROFESSIONAL CONSULTANT

6.1 What are the common constituent parts of a consultant's appointment?

In most projects, the owner contracts with the architect/engineer to develop the project design. However, in a design–build delivery system, the contractor will typically procure the designer's services or joint venture with the designer. In either scenario, unless the contract states otherwise, an architect or engineer may delegate work via sub-consultancy agreements, so long as the architect or engineer maintains a reasonable degree of oversight and coordination over the sub-consultant's work. Regardless of the contractual scheme, negotiated professional services agreements typically consist of:

- Recitals identifying the project, the relevant parties and their authorised representatives.
- The contract price and payment provisions.
- A description of the scope of work (for example, conceptual design phase; schematic design phase; design development phase; construction document development phase; virtual design & modelling services; value engineering services; the issuance of signed and sealed drawings and specifications for construction; contract award services; construction administration; review and determination of contractor payment applications and claims).
- A design delivery schedule.
- Insurance requirements and indemnity/hold harmless provisions.
- Limitations of liability/disclaimers of warranty.
- Suspension/termination provisions.

- Intellectual property provisions.
- Exhibits, legal boilerplate and other miscellaneous bargained-for provisions.

6.2 What are the principal obligations of the client under a consultant's appointment?

The principal obligations of the client are generally set forth in the parties' agreement. The client's obligations typically include:

- Designating an authorised representative to make binding decisions.
- Timely providing necessary information and approvals to the designer to permit the work to be accomplished according to the design schedule.
- Providing access to the project site.
- Rendering timely payment.

6.3 What are the principal obligations of the consultant under a consultant's appointment?

The obligations of the consultant are set forth in the parties' written agreement. That agreement will typically include reference to the standard of care under which the professional services are to be performed. The minimum standard of care is generally that taken from tort law, as found in the common law decisions of many jurisdictions, namely that the designer will perform his/her duties with that degree of reasonable skill, competency and care ordinarily exercised by others in his/her profession at that same time and in that same locality. It is not uncommon for the standard of care to also be found in statutes and regulations, particularly those establishing professional licensing requirements. Building codes and design industry publications are also another source, to the extent that they set forth minimum design standards. Should the designer be sued in court for a breach of the standard of care (whether the theory sounds in breach of contract, negligence or professional malpractice), the standard of care is usually a matter of testimony from a qualified expert witness in the profession or sub-specialty.

6.4 Who owns the intellectual property in the work of a designer?

The terms of the contract govern which party retains the intellectual property rights in the designer's work. If the contract denominates the design as a "work for hire" or states that all intellectual property rights will be assigned to the owner, then the project owner will hold those rights. Typically, however, absent such language, the majority rule is that the design firm, as the author, retains the intellectual property rights to the design. This default rule is reflected in the standard language which appears in the form contract between owner and architect issued by the AIA. Similarly, the AIA's standard form "General Conditions of the Contract for Construction" reiterates this point and sets forth that the contractor may only retain one set of the design documents for record purposes.

6.5 What health and safety matters are addressed by a consultant's appointment?

The professional designer must perform its work in accordance with the standard of care, applicable laws, buildings codes, regulations and industry standards, which together ensure that the designer will not perform in an unsafe manner. Liability can be imposed for a breach of the standard of care that results in personal injury or death, and this prospect is certainly a reason why the appointment will generally contain a provision where the designer agrees to

indemnify the client for any damages (including personal injury) resulting from its errors or omissions (or intentional acts). It is common for a consultant's appointment to exclude any responsibility for the work of the contractor (that is, for the means and methods employed in the construction of the project), which construction work must conform to safety codes and norms, such as the federal workplace safety regulations published in furtherance of the OSH Act and other regulations found at the state and local levels. However, case law exists which has held a designer liable under the OSH Act for workplace injuries, particularly where engineering may be needed in order to make an aspect of the work safe or where the designer exercises a great deal of control over the work or the site. Also, when the scope of the designer's services includes construction administration (such as periodic site visits to observe ongoing construction), state court decisions vary as to what degree the designer will be held responsible for ensuring that the contractor's work conforms to the design plans and specifications, which may result in potential liability when that construction deviates and causes injury.

6.6 What insurances are required by law? Are any other insurances commonly required by the terms of a consultant's appointment?

While some jurisdictions establish minimum insurance requirements by statute, it is far more customary for the required insurances and their limits to be set forth in the parties' agreements. The most vital coverage would be a professional liability policy to indemnify the designer against damages resulting from his/her breach of the standard of care (error and omissions coverage). It is also common for the client to require the design professional to carry commercial general liability coverage (CGL), automobile liability, completed operations coverage and worker's compensation coverage.

6.7 How does a consultant's appointment address the interests of third parties?

The consultant's agreement will typically set forth the rights of any third parties. However, it is customary for the agreement to specifically limit the liability of the designer to the client and to disclaim any obligations owed to third parties outside the privity chain. In fact, a common provision usually sets forth that there are no other intended third party beneficiaries to the consultant's agreement (save for those otherwise expressed therein) in order to prevent a third party from suing the designer for breach of contract. Such contractual language, however, is no impediment to a third party suing a designer for personal injuries or property damages resulting from the designer's errors and omissions under typical principles of tort/negligence law.

6.8 Can a consultant's appointment be terminated before completion? If so, how?

Yes, the consultant's contract typically includes such provisions. There are generally two categories of termination set forth in the agreement – terminations "for cause" and terminations "for convenience". A "for cause" termination clause generally allows the client to terminate the contract when the designer has breached or is in default of his/her obligations, in addition to any other conditions which may trigger the clause (that is, insolvency, bankruptcy, and so on). Commonly, the designer is also permitted to terminate for cause when the client fails to render payment or if the work has been suspended for a given period of time. Within this category of "for cause" terminations, sometimes the parties include notice provisions which grant the offending party a set amount of time to cure the default before the termination will take effect. The other category, a "termination for convenience", is a right generally afforded only to the client. This clause permits the client to terminate the contract for any reason (or no reason at all) and sets forth what the designer's compensation will be (such as the actual costs of all work performed to date). Some

contracts also have safe harbour provisions which state that if an "erroneous termination for cause" is found to have occurred, then the improper termination will automatically convert to a termination "for convenience" and the parties' rights will be adjusted accordingly.

7. DISPUTES

7.1 How are disputes resolved? Are the principal dispute resolution methods effective (in terms of cost, time and providing access to justice)? Is there a system specifically for resolving construction disputes?

Disputes may be resolved in any number of ways, depending upon the nature of the project and the parties involved. In private construction projects, disputes are often resolved either by commencing a lawsuit in court or by a specified form of alternative dispute resolution (ADR), such as arbitration or mediation, or both. Due to the high cost of litigating construction disputes, construction contracts will often contain conditions precedent to a party's right to commence a lawsuit or proceed to arbitration, such as requiring the parties to engage in a series of meetings between high-level executives to take the dispute out of the project level, or by engaging in mediation. For public construction projects, there may be a variety of mechanisms used to resolve disputes. For example, on large infrastructure projects, the parties may choose to convene a dispute resolution board to resolve disputes as they arise during the course of construction, in order to expedite their resolution and keep the project moving, instead of disputes accumulating until the end of the project, where they may have a deleterious effect on the relationship between the parties and affect the timely completion of the works. While public bodies do not generally engage in ADR as a means of final dispute resolution, some states have enacted legislation requiring the parties to engage in ADR as a condition precedent to commencing in-court litigation. Some public bodies, such as the Port Authority of New York and New Jersey, require disputes to be presented to the entity's Chief Engineer for determination, whose decision may be binding upon the parties. Otherwise, most disputes arising out of public construction projects are typically resolved by way of litigation in the state or federal courts, or, in the case of contracts with the federal government, before the United States Court of Federal Claims or one of the three Boards of Contract Appeals.

As regards arbitration and litigation in US courts, both have advantages and disadvantages. Some of the advantages of arbitration are that the parties have the ability to select arbitrators who have specialised knowledge about construction that may be relevant to the issues in dispute, and arbitrations typically result in quicker decisions, often within one year or less, depending upon the complexity of the case. Arbitration also provides an element of finality in that there generally is little recourse to challenge the decision of an arbitrator. In court litigation, it is unlikely that the parties will have a judge well versed in construction law or knowledgeable about construction. Court litigation typically takes longer to resolve (sometimes years) and, as a result, can be more expensive than arbitration, especially given the rights to conduct paper discovery and take depositions (oral testimony of potential witnesses in advance of trial), and because the decision of the trial judge is subject to appeal. However, arbitration can also be quite expensive in that the parties may be paying the cost of the time for up to three arbitrators to preside over their dispute, whereas there is no cost to the parties for a judge in court.

7.2 Is alternative dispute resolution (ADR) used? If so, identify any industry bodies promoting the use of ADR

ADR is widely used in the US to resolve construction disputes. The most common forms of ADR utilised in the US are arbitration and mediation. While arbitration is an effective alternative to in-court litigation to obtain a final disposition on the merits of the parties' dispute, mediation has proven to be a very cost-effective and expeditious means of resolving construction disputes. Mediation essentially is a form of facilitated negotiations through a neutral mediator who helps guide the parties in reaching an amicable settlement of their dispute. Though there is no guarantee that a dispute will be resolved in mediation, approximately 85% of all disputes that are mediated are settled during mediation. And, of those disputes that are not settled during mediation but at some future date, the mediation is often credited with facilitating that later settlement. There are numerous organisations that provide arbitration and mediation services. The largest of these is probably the American Arbitration Association, which administers arbitrations and mediations, and provides the parties with rosters of eligible, qualified and trained arbitrators and mediators to assist them in the resolution of their disputes.

8. SECURITY DOCUMENTS

8.1 Please identify the security documents which are common to construction and civil engineering projects. In relation to each form of security identify the party giving the security, the party receiving the benefit of the security and the purpose of the security

Bonds are the most predominant form of security in the US construction industry, with completion guarantees from a corporate parent sometimes being employed. The most common bonds seen are bid bonds, performance bonds and payment bonds.

Most public projects to be awarded by bid require that the contractor's bid be accompanied by a bid bond from a surety (or other form of designated security) in favour of the owner to offset any damages the owner may incur should the bidder refuse to enter into a contract after being awarded the contract. Some bid invitations state that the bid bond will be forfeited as liquidated damages should the successful bidder refuse to honour its bid. The penal sum of the bid bond is usually 5% of the total bid price.

Performance bonds are another instrument typically required by statute on public construction projects, and are also occasionally required by owners on private construction projects. A performance bond is given by the contractor to the owner as security to ensure that the contractor will complete its obligations under its contract with the owner. Should the contractor default on its obligations and/or breach the contract and thereby cause the contract to be terminated, the owner's rights (and/or the owner's lender's rights) to look to the surety to complete the balance of the defaulted contractor's work is triggered. The contractor, for its part, has usually entered into various indemnity agreements with the surety, wherein it has pledged money or other collateral against which the surety can seek reimbursement should liability on the bond be established. Occasionally, in lieu of performance bonds, completion guarantees will be provided by a corporate parent of the contractor.

Payment bonds are obtained by a contractor to guarantee that, in the event the contractor defaults on the prime contract, the surety will step in to pay sub-contractors and suppliers for their work on the project. This type of bond protects not only the contractor's sub-contractors and suppliers, but also sub-sub-contractors and suppliers to

sub-contractors. Consequently, the owners and its lenders would be protected against these nonpayment claims as well. Payment bonds are typically employed on public projects, since many states and jurisdictions have prohibitions against the filing of mechanic's/construction liens upon public property. Occasionally, owners on private construction projects will also require contractors to secure such bonds. However, because liens are generally available to attach to privately owned land, the bonds listed above are less common in the private construction world. The laws governing private improvement liens vary from state to state, but most have some time component as to when a lien may be recorded against the property for unpaid improvements to the property, the notice which must be given, which tier of contractor/sub-contractor/sub-sub-contractor/material supplier is permitted to file a lien, which types of construction services qualify for lien protection, and the time period within which the lien claimant may commence a legal action to foreclose on the private property and recover.

9. HEALTH AND SAFETY AND EMPLOYMENT LAW

9.1 What health and safety laws exist?

Numerous health and safety laws and regulations exist at the federal, state and municipal levels. At the federal level, the most prominent law is the Occupational Safety and Health Act, pursuant to which the OSHA (under the US Department of Labor) has promulgated regulations governing the safety of construction worksites. Among other things, the OSHA also promotes safety training, inspects job sites, investigates workplace accidents, conducts hearings and issues monetary sanctions for violations. Civil and criminal liability may be imposed for an OSHA violation. For public construction projects with the US government, the Contract Work Hours and Safety Standards Act also provides, with respect to construction contracts in excess of $100,000, that no contractor or sub-contractor shall require any labourer or mechanic to work in surroundings or under working conditions that are unsanitary, hazardous or dangerous to health or safety. Under this Act, federal contracts can be cancelled for violations and the contractor can be charged with any additional costs incurred by the federal agency to complete the contract. For repeat offenders of the Act, a three-year ban on the award of federal contracts can be imposed, not only upon the offending contractor/sub-contractor, but also upon any person with a substantial interest in the contractor/sub-contractor entity. There are many state and local level analogues to these acts and regulations which should be consulted as well.

9.2 Is health and safety a significant issue for the industry?

Yes. The OSHA published statistics from the US Bureau of Labor Statistics showing that 4,679 workers across all industries (public and private) were killed on the job in 2014, and that over 17% of these total fatalities were of contractors on project sites. Indeed, the OSHA states that out of 4,251 worker fatalities occurring in 2014 among all private industry sectors, 20.5% were in the construction sector – making private industry the sector with the largest number of fatal injuries in the nation in 2014. These statistics and the prevalence of regulations indicate that health and safety are a major concern.

9.3 What risks does a client face in relation to health and safety?

As previously stated, civil and criminal liability may be imposed for health and safety violations. Under the OSH Act, civil penalties can range up to $70,000 for wilful or repeat violations. "Serious" and "non-serious" violations may also garner up to a $7,000 fine. While more rarely seen, criminal penalties of up to $10,000 in fines and six months'

imprisonment can also be imposed where a wilful violation has led to a fatal injury. Work at a job site can also be suspended due to health and safety violations or during the pendency of an accident investigation. Obviously, despite the presence of worker's compensation insurance, there is also exposure to a lawsuit from the injured third party or the decedent's estate when an injury occurs. A contractor's safety track record also factors into how insurance carriers will adjust the contractor's experience modification rate (EMR), a component of determining the premiums the contractor will pay for insurance, such as for worker's compensation insurance. Contractors with high EMRs may be barred from bidding on certain public projects or, at a minimum, may be viewed as less responsible bidders.

9.4 What matters should a client address in relation to health and safety?

The client should carefully negotiate its contract with the contractor to account for health and safety issues. The client should insist that the contractor have a written safety programme in place to govern its work and that of its sub-contractors, that there also be quality assurance and quality control measures, and that there be protocols in place if hazardous substances or environmental contamination are encountered. It would also be wise for the client to think carefully to what extent it may be dictating or controlling the constructions means and methods employed by the contractor. As previously discussed, under many states' worksite safety laws, strict liability may be imposed upon the party which controls the worksite and/or the instrumentality that gave rise to the injury. The more control the client exerts over the precise means and methods of construction, the greater the potential liability for safety issues. In addition, the client should insist that the contractor and its sub-contractors procure the required insurances, with robust policy limits, and that evidence of such policies be demonstrated; further, the client should typically require that it be named as an additional insured on those policies. As set forth above, the client can also procure its own insurance. The client should also consider having carefully worded indemnification provisions in its contracts to ensure that it will be held harmless for injuries caused by the contractor or design professional and their respective sub-contractors and sub-consultants. The client should also consider performing due diligence and/or Phase I or II environmental site assessments and undertake remediation, if necessary.

9.5 Are workers in the construction industry generally members of trade unions? Do the unions effectively represent their members?

The US Bureau of Labor Statistics of the Department of Labor has published that in 2015 approximately 11% of all wage and salary workers belonged to a union, totalling about 14.8 million workers. Within the private construction industry the Bureau has estimated that, in 2015, 13% of workers were unionised. Union membership varies among the states and regions of the United States, and the Bureau found that roughly half of all union members reside in California, New York, Illinois, Pennsylvania, Michigan, Ohio and New Jersey. States in the Southeast, South and Midwest (west of the Mississippi River, but excluding the Pacific Coast) typically have the lowest unionisation rates. Some states have "right-to-work" legislation, meaning that employees have the option of not joining a union (or paying union dues) and instead working directly for the employer. Other states, however, permit collective bargaining agreements to contain clauses which mandate that a company may only hire employees from a particular union or that require new employees to become part of (or pay fees to) a union as a condition of working. Roughly half of all US states are "right-to-work" states, per the National Conference of State Legislatures. There are no definitive

statistics to judge how effectively unions represent their members, and there is a political debate surrounding this issue.

9.6 What "employee burden" do clients face?

Employers generally must withhold federal and, in many jurisdictions, state or local income taxes from their employees, in addition to other payroll taxes, such as social security and Medicare taxes (also known as the Federal Insurance Contributions Act taxes), state and federal unemployment taxes, state worker's compensation tax, family and medical leave insurance tax (in some states) and disability insurance taxes (in some states). In addition, for unionised construction labourers, included in the hourly rate an employer pays is a contribution to the employee's fringe benefits (health, life, dental and disability insurance, and pension). For federal public construction projects or those that are federally funded, the employer is responsible for paying labourers "prevailing wages" under the Davis-Bacon Act – which means an hourly rate equal to or greater than the locally prevailing wages and fringe benefits for corresponding work on similar projects in the area. The US Department of Labor determines the locally prevailing wage rates, and the employer demonstrates compliance by submitting certified payroll records. For contracts with the federal government in excess of $100,000, the Contract Work Hours and Safety Standards Act mandates that labourers and mechanics get paid at least one and one-half times their regular rate of pay for all hours worked over 40 in a work week. Similarly, for construction companies with an annual gross sales volume of $500,000 or more or whose work affects "interstate commerce", they are required to pay certain minimum wages and overtime compensation, as set forth in the US Fair Labor Standards Act. The US Family Medical Leave Act also mandates that eligible employees be permitted up to 12 weeks of unpaid, job-protected leave each year for specified family and medical reasons. Many states have adopted similar wage and hour and medical leave laws that affect public construction projects and/or the state workforce as a whole.

10. PUBLIC PROCUREMENT

10.1 What laws govern how public bodies choose their contractors and consultants?

Generally, most states and the federal government have laws requiring all public contracts to be subject to competitive bidding and awarded to the contractor that provides lowest bid price for the work. This is the general rule for public contracting, and it works well for design–bid–build projects. However, if a different contracting method is desired, such as design–build or public–private partnership, the public body will not be able to utilise that contracting method unless there is enabling legislation permitting it to do so. Many states and the federal government do have such enabling legislation to permit alternate project delivery methods such as best value evaluations, as well as other evaluative and negotiation-based mechanisms. In utilising these alternate project delivery methods, the public entities will typically have a shortlist of pre-qualified contractors that it will allow to submit proposals.

10.2 Are public construction works procured on standard industry forms or upon particular forms for government works?

Most large public bodies procure public construction works using forms that are standard to that public body. Smaller public bodies, such as municipalities, typically rely upon their design professional for each project to provide them with a form of contract and specifications that may be used in soliciting bids from interested contractors.

10.3 Is public procurement a significant source of work for the construction/civil engineering industry?

Public procurement is a significant source of work for the construction industry, and currently accounts for roughly 30% of all construction. (The figure was even higher during the during the financial crisis.)

10.4 Are there particular or unusual issues in undertaking public procurement?

Nothing beyond what has already been discussed in response to other questions.

11. OTHER JURISDICTION SPECIFIC MATTERS

11.1 Comment on any other matters of importance to the construction industry/construction law which are specific to your jurisdiction or which are not addressed under any other heading

Not applicable.