This Practice Note describes several of the most common categories of documents that may be necessary to prove a claim or defense in construction-related arbitration. It suggests ways that parties can prepare for a potential arbitration by maintaining good record-keeping practices throughout the construction period.

SCOPE OF THIS NOTE

International arbitrations that arise out of construction disputes are notoriously document-intensive. To prove claims or establish defenses regarding inefficiencies, costs, and delays to the project, parties must rely on documents created and maintained during the construction period. The complexity of modern-day construction projects, and the wide variety of recordkeeping practices companies use in different jurisdictions, result in widely divergent views about what type of documentation constitutes adequate proof in a construction arbitration.

It is often difficult to know during a construction project precisely which events will later be the subject of an arbitration claim. Accordingly, the best way to ensure that the documents necessary to support a claim or defense are available when a dispute arises is to establish strong recordkeeping practices from the earliest stages of the project and emphasize to the entire project team the importance of good document maintenance.

Although the practices described here are not exhaustive nor applicable to every matter, they provide guidance on how parties to a construction contract should think about document management long before a dispute arises.

THE IMPORTANCE OF DOCUMENTS TO A CONSTRUCTION ARBITRATION

Although access to contemporaneous documentation is important in all international commercial arbitration, it is especially important in complex and cross-border construction disputes. This is because arbitrators are tasked with unraveling a detailed factual record to determine cause and effect and apportion liability. The following sections describe the various ways in which documentation may prove critical in a construction arbitration.

DOCUMENTS ARE CRITICAL TO MEETING THE BURDEN OF PROOF

As a basic matter, proper documentation is critical to meeting the burden of proof, that is, the burden of tipping the scales in favor of the likelihood that a claim or defense a party asserts is more likely than not to be true or correct. (See John W. Hichey & Troy L. Harris, *International Construction Arbitration Handbook* § 9.5 (2015)).

In construction arbitration, the importance of the burden of proof cannot be overlooked. For example, depending on the legal context, a contractor seeking damages for a compensable delay to the project schedule likely bears the burden of demonstrating the following, among other things:

- The delay occurred.
- Events within the control of the counterparty caused the delay.
- The contractor was not responsible for any concurrent delay.
- The delay caused damages to the contractor.
- The amount of those damages.

(See 67 Am. Jur. 3d *Proof of Facts* § 2 (2015).)

Without contemporaneous documentation such as project schedules tracing the delay events as they occurred or correspondence noting the delay and anticipating the resulting damages that may occur, the contractor is left to rely on witness testimony to establish the facts and expert testimony to re-create the project history.

The counterparty is certain to present competing witnesses and a competing expert insisting that it is not liable for the delay. The arbitral tribunal is left to assess liability, causation, and the amount of loss based largely on the credibility of witness testimony alone. Where the claimant bears the burden of tipping the scales in support of its claims, a lack of adequate documentation may pose a considerable obstacle to success in the arbitration.

While the burden of proof is a critical factor in all construction arbitrations, different types of claims present unique evidentiary issues. For example, a party may bring warranty claims relating to the quality of work years after the project is completed, giving rise to a different set of evidentiary considerations. Or the parties may amend the general...
burden of proof rules through their contract, requiring submissions to be tailored to account for the revised burden. (See Anne Véronique Schlaepfer, "The Burden of Proof in International Arbitration," in *Legitimacy: Myths, Realities, Challenges* 127, 129 (Albert Jan van den Berg ed., 2015)). Accordingly, some of the recommendations in this Note may not apply in all construction disputes.

**DOCUMENTATION PROTECTS AGAINST LATER CLAIMS OF WAIVER, ESTOPPEL, AND RELEASE**

Documentation can also be critical in responding to waiver, estoppel, or release arguments. A common defense in a construction arbitration is that the claimant did not provide proper notice of its claim(s), or that the claimant implicitly accepted changed terms or work defects at the time. This can lead to arguments that the party waived the claim or that the claimant should be estopped from asserting the claim based on the lack of notice during the project period, when actions might have been taken to remedy the situation. (See 2 Philip L. Bruner & Patrick J. O’Connor, Jr., *Bruner and O’Connor on Construction Law* § 7:149 (2015)). Contemporaneous documentation noting when notice of claims was first given and how (or whether) the claims were resolved can assist in defending against these arguments.

**DOCUMENTS MAY BE REQUIRED IN CONNECTION WITH DOCUMENT EXCHANGE IN ARBITRATION**

Arbitrators commonly allow some exchange of documents in an international construction arbitration. (See John W. Hinchey & Troy L. Harris, *International Construction Arbitration Handbook* § 5.22 (2015)). In these circumstances, the respondent usually insists on reviewing documents to which it had no access to (or if it had access showed little interest in) during the project. Depending on the legal context, a party may find itself required to, among other things:

- Produce internal communications about how it selected the contractor and awarded the project bid.
- Turn over its internal accounting records to prove its construction costs.
- Reveal confidential information about its arrangements with subcontractors.
- Produce internal company records, meeting minutes, and other sensitive documents.

If a party has not maintained these documents in a reliable format or if they contain information that the party is unable or unwilling to produce, then the party seeking the documents may ask the tribunal to draw adverse inferences from the lack of documentation or to simply deny the claims altogether for lack of proof. (See Gary B. Born, *International Commercial Arbitration* §16.02, at 2391-93 (2d ed. 2014)). An adverse inference is a “detrimental conclusion drawn by the fact-finder from a party's failure to produce evidence that is within the party's control.” (See Black’s Law Dictionary, “ADVERSE INFERENCE” (10th ed. 2014)).

Parties may also be required to provide to their counterparty outputs from design and modeling software, such as computer-aided design (CAD) and building information modeling (BIM), and from any scheduling software (for example, Primavera). Parties should keep in mind that non-final data inputs may be stored in the programs and may end up being disclosed to the counterparty.

**DOCUMENTATION ENHANCES EXPERT CREDIBILITY AND QUALITY OF EXPERT REPORTS**

Parties to a construction arbitration often hire experts to help the tribunal understand their claims or defenses and to assess the damages claimed. It is critical that the expert can rely on contemporaneous project documentation in formulating his report. When construction experts are forced to piece together claims and fill in large gaps in the project history because of inadequate records, their reports are more easily subject to attack for lack of factual support. Good project records help create credible and high-quality expert testimony.

**CONTEMPORANEOUS DOCUMENTATION MAY BE CRITICAL TO ESTABLISHING CAUSATION AND DAMAGES**

Maintaining detailed documentation of costs throughout the construction period can be vital to proving causation and damages in an arbitration. Once the project is completed, it is often difficult to isolate and identify specific types of losses and their underlying causes. This may be because the project team has been disbanded, access to the site has been terminated, or the project record itself is imperfect. In these cases, without contemporaneous documents allowing identification of damages linked to specific problems or changes, a claimant may risk being unable to sufficiently demonstrate the required causation.

For the reasons mentioned above and many others, parties to an international construction arbitration can greatly improve their chances of success if they can prove their claims not only through fact and expert witness testimony, but also through contemporaneous project records.

**CATEGORIES OF DOCUMENTATION THAT CONSTRUCTION ARBITRATION MAY REQUIRE**

This section describes several categories of documentation that parties commonly rely on in construction arbitrations, and identifies several considerations that parties may wish to take into account during the construction period in order to be prepared to use those documents in connection with an arbitration.

As a general point applicable to all of the sections below, the parties must pay particular attention to the specific requirements of their contract in assessing the type of documentation to be maintained during the project and preserved for a reasonable time thereafter. Where parties have a previous working relationship and a custom of practice between them, the formalities required by the contract can seem unnecessary and overly burdensome. Yet the contract often offers the best guidance on the parties’ agreement on how to demonstrate and preserve claims and is potentially key to the tribunal’s assessment of whether a party has proven its claims. Therefore, it is critical to be aware of and pay close attention to the contract’s requirements and establish a record of compliance with them.

**BID DOCUMENTS AND PRE-CONTRACT ASSUMPTIONS**

A construction arbitration often requires the parties to return to the very earliest assumptions made in connection with the project to prove their entitlement to (or the quantification of) damages. For example, the assumptions and considerations the contractor used to arrive at its bid for the project, as well as the considerations applied
by the owner in awarding the contract bid, are often critical pieces of evidence in determining whether the pricing for the contract was reasonable when it was made. (See Robert F. Cushman et al., Proving & Pricing Construction Claims § 13.02[H] (2016-1 cumulative supp.)). Parties should maintain internal records memorializing these decisions and ensure that those documents are sufficiently detailed to include key decision points that a party or arbitrator may rely on later (for example, an agreement to reduce labor hours in response to an owner’s request).

It is also important to document the parties’ respective expectations when entering into the contract, including all information exchanged between them, about site conditions and applicable regulations and environmental conditions. (See Robert F. Cushman et al., Proving & Pricing Construction Claims § 5.01 (2016-1 cumulative supp.); see also 4A Philip L. Bruner & Patrick J. O’Connor, Jr., Bruner and O’Connor on Construction Law § 14:51 (2015) (discussing site conditions claims)). The reasonableness of these early assumptions and the parties’ mutual understandings on these subjects may become critical in assessing liability later.

PROJECT CORRESPONDENCE AND CLAIM NOTIFICATIONS

During the early stages of the construction period, and even when early disputes arise, owners and contractors may try to avoid escalating disputes by cooperating and negotiating disagreements through informal lines of communication instead of through formal claim notification and documentation. While a good working relationship is critical to the project’s success, there is no reason that this must function to the detriment of documentation or record-keeping practice. Rather, both parties will benefit from a practice that ensures that the counterpart is on notice of any potential claims and that disputes are documented at the time they arise.

A good practice increasingly common in major construction projects today is for the parties to maintain a project database through which all correspondence is exchanged. The communications are generally sent as sequentially numbered letters, which ensures that their transmission can later be tracked. The records are stored in a centralized database accessible by both parties throughout the project period. The database can also be used to store virtually any other category of documents, including for example:

- Schedule updates.
- Field reports.
- Drawing logs.
- Plans.
- Meeting minutes.
- Change orders.

In case of an actual or anticipated dispute, both parties usually want to retain some access to the database once the project is complete or the parties’ relationship ends.

In addition to the shared project correspondence, parties often communicate by email. Parties should maintain all email correspondence, particularly when a dispute has arisen or is anticipated. The parties should also expect that internal email correspondence within their company and email correspondence with the other party may be subject to document production requests. Using a uniform project description (name or number) in the reference line makes it easier to search and compile project communications later.

When documenting claims or potential claims, there are several general rules of thumb to keep in mind:

- **Observe any claim notice procedures specifically designated in the contract.** Construction contracts often include detailed provisions on how to assert claims, including strict time limits. They may also require that the other party have an opportunity to cure the default. While compliance with these procedures may seem like a formality during the project period, observing them can become critical in the dispute context. (See 33 Robert A. Rubin et al., New York Construction Law Manual § 16.2 (2014) and for example, FIDIC, Conditions of Contract for EPC/ turnkey Projects at Sub-Clause 2.5 (1st. ed. 1999) (requiring owner to give contractor “notice and particulars” of employer’s claims); Sub-Clause 20.1 (requiring contractor to give notice to owner “not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance” giving rise to an extension of time and/or any additional payment claim)).

- **Include reference to any long-term or secondary effects of the claim and reserve rights to claim additional damages at a later date.** One of the most common disputes in construction arbitration is whether the claim notice provides adequate notice of secondary or cumulative costs. (See 33 Robert A. Rubin et al., New York Construction Law Manual § 6.29 (2014)). For example, a contractor may notify the owner that it has incurred certain cost overruns or request an extension of time to complete specific tasks, but it may not be in a position to quantify the particular long-term effects of the impact on productivity. In these circumstances, the contractor should highlight the potential for long-term cumulative effects and reserve its right to claim those costs or additional time later.

- **Carefully document meetings at which claims are discussed and decisions are made.** During the project period, the parties are likely to address and resolve many of their claims during regular construction or management meetings, or both. That is when they may, among other things:
  - Amend contract terms.
  - Alter the scope of work.
  - Change the project timetable.
  - Agree to pay certain costs.
  - Waive or release certain claims.

Ideally, both parties should contemporaneously memorialize their meeting discussions in an agreed language and each sign the document. The parties should note where they have made decisions or, alternatively, where they have discussed an action item or claim but not yet reached a solution, noting in these instances that they reserve their rights until a later date.

CHANGE ORDERS AND SCOPE AMENDMENTS

Changes to the scope of work and other variations are common during construction. Because of the importance of keeping the project on track, parties often implement a change in the work before...
they have reduced the change order to writing. This can lead to
disputes down the road about precisely what the parties agreed to at
the time regarding the scope of the change and its associated costs.

Parties should insist that all change requests and change orders be
contemporaneously documented according to a pre-agreed format
and accompanied by back-up documentation supporting the request
and any agreement the parties ultimately reach. Most construction
contracts contain specific requirements detailing the change order
process and the back-up documentation to be submitted with a
change order request, which parties should adhere to absent special
circumstances. (See Robert F. Cushman et al., Proving & Pricing
Construction Claims § 6.02 (2016-1 cumulative supp.) and for example,
FIDIC, Conditions of Contract for EPC/Turnkey Projects at Sub-Clause
13.3 (1st ed. 1999) (detailing the procedure for a variation)).

When requesting or documenting a change order, parties should:

- **Pay close attention to the language used to document change order requests.** Disputes often arise where change orders are
  unclear about the scope of what they cover or where pricing is left
  open to resolve at a future date. Where a request or change order
  is vague, ambiguous, or missing pertinent information, it is more
difficult for the parties to prove any future claims that rely on these
documents. For example, a change order should state clearly:
  - which changes it covers;
  - how the parties have agreed to price the change order;
  - the categories of costs that the parties expect to bear in
    connection with the change;
  - whether the change may lead to additional, unknown costs at a
    later date; and
  - whether there are any particular categories of costs that they
    have agreed to share or for which a party has waived its right to
    compensation.

- **Take into account the impact that a change order may have on
  other work and be mindful of general release language.** Change
  order templates often include general release language on which
  the owner may rely to argue that the contractor has waived all
  other claims related to the change. (See 2 Philip L. Bruner &
  Patrick J. O’Connor, Jr., Bruner and O’Connor on Construction Law
  § 7:155 (2015)). This becomes particularly problematic where the
  change order has not taken into account the cumulative impact or
  secondary effects of the change. When requesting costs associated
  with a change, carefully evaluate the impact that change will have
  on other work, such as the sequencing of work and efficiency of
  labor. Document those costs or reserve the right to claim those
  costs in the change order or a letter sent contemporaneously with
  the change order.

For more information on documenting changes in the work,
see Practice Note, Changes in the Work: Drafting Strategies for
Construction Contracts (http://us.practicallaw.com/5-573-5705).

**PROJECT SCHEDULES AND ACCELERATION REQUESTS**

Project schedules are critical to proving delay claims in construction
arbitration. Yet schedules are not always updated to track disputes
and best maximize the ability to prove potential delay claims.

Additionally, acceleration measures are often implemented without
formal agreement on compensation. Given the difficulties in tracking
events that affect the schedule once the project is complete, careful
attention to scheduling can be a critical component of proving
construction claims in an arbitration.

Parties should:

- **Maintain and regularly update project schedules.** It is usually
  the contractor’s responsibility to update the schedule and advise
  the owner of these updates at regular intervals or as changes
  occur. Usually, parties maintain the schedule electronically
  using specialized software and with reports accessible in an
  agreed format. To ensure continuity, the contractor should have
designated scheduling personnel in place to update schedules,
ensure their accuracy, and regularly share schedule updates with
the owner. The lead scheduler should be in close communication
with the team negotiating changes and delays to the schedule and
in a position to maintain alternate versions of the schedule (for
example, accelerated and unaccelerated) where necessary. The
scheduler also should be aware that draft schedule updates may
be disclosed in a dispute.

- **Carefully document requests to accelerate the project schedule,
  including constructive acceleration demands.** Parties should
carefully document instructions to accelerate through meeting
minutes or letters. If a contractor believes it is being constructively
directed to accelerate because the owner has denied a time
extension or has otherwise directed measures that would result
in a need to accelerate (see Robert F. Cushman et al., Proving &
Pricing Construction Claims § 4.05) (2016-1 cumulative supp.)), then
the contractor should document that belief both internally and in
correspondence with the owner. Conversely, if an owner is aware
that a contractor is taking measures to accelerate but believes it
is not the cause of the acceleration, it can send a letter seeking
explanations for the acceleration or noting the owner’s position.

For more information on scheduling requirements, see Practice
Note, Construction Project Scheduling: Keys to Success (http://
us.practicallaw.com/0-574-8625).

**DAILY LOGS, LABOR HOURS, AND PROJECT REPORTS**

A labor overrun claim seeks compensation for the additional
man-hours incurred to satisfy acceleration demands or compensate
for delay events, additional scope, or project impacts. The party
seeking the cost overrun usually bears the burden of proving
the monetary amount owed and that the opposing party is the
cause of the cost overrun. (See 33 Robert A. Rubin et al., New York
Construction Law Manual § 7.53 (2014)).

A common defense to labor overrun claims is that the contractor
has not adequately linked the additional labor hours incurred to
specific, owner-caused events. For example, the owner may challenge
estimates of labor hours that are not based on contemporaneous
records as unreliable or unfairly accumulating hours in the
contractor’s favor that may not have been owner-caused. An owner
may further argue that the contractor has not adequately linked
“cumulative” additional labor hours to specific owner-caused
productivity losses.
While there are other methods that can be used to support this type of claim, a strong documentary record may be helpful and parties should:

- **Maintain detailed daily logs and reports.** In addition to weekly and monthly reports, daily work logs or work reports are often essential to proving labor overrun claims (and many other construction claims) because they allow the parties to connect labor hours to specific site activity on a daily basis. Make sure to include detailed information in daily reports, including:
  - the number of workers on site;
  - the number of man-hours worked;
  - subcontractors on site;
  - task-specific equipment on site;
  - a description of the work conducted on that date; and
  - any noteworthy events, such as changes to the work sequence or schedule, worksite conditions, owner-directed instructions, project interferences, and weather conditions.

- **Evaluate the methodology for tracking worker hours and ensure that it is consistently applied and defensible.** Although documentation methodologies must be reasonable and cost-effective, it is worth spending some time at the start of the project to choose the best methodology for tracking labor hours and ensuring that all the managers working on different areas of the project site are familiar with and implementing this methodology. Mutual agreement by the parties on this methodology is ideal.

- **Consider hiring an independent expert/consultant during the project.** A more rigorous, but also more expensive, method to document cost overruns and other construction claims involves hiring an independent expert or consultant to monitor events during the project. This approach has the advantage of adding an independent and unbiased view to the documentation process. However, it is important to ensure that the expert has formed his own views regarding the proper apportionment of liability and costs and cannot be cast later as merely a hired gun. An owner may also consider hiring an independent consultant to create a contemporaneous record of any contractor-caused inefficiencies while the contractor remains on the job, thereby enabling the owner to challenge a cost overrun claim in a dispute.

**TECHNICAL SPECIFICATIONS, DRAWINGS AND PLANS, AND WORK APPROVALS**

The owner can bring disputes about the quality or sufficiency of the work performed as formal warranty claims or as a defense or counterclaim to a contractor's claim for entitlement to additional compensation. For the owner, documents establishing the technical specifications and design required by the contract are critical to proving lack of conformity with it. For the contractor, any evidence that the owner approved work during the project period or agreed to alter technical specifications may help defend against these claims.

**DOCUMENTS ESTABLISHING DAMAGES**

Once liability is established, it is necessary to provide the tribunal with a mechanism to calculate the damages resulting from the counterparty's wrongdoing. It may be appropriate to consult with internal or external counsel during the construction period to discuss the possible methods available to prove loss causation and quantify damages and to ensure that the parties carefully maintain the proper records during the construction project to later support those methods.

In some instances, the contract will provide a specific mechanism for calculating the amounts to be paid for additional scope or change order work. This may include a schedule of unit rates to be applied to the additional work or an instruction to refer to the price itemization included in the original lump sum bid. In other instances, the contract may not specify a mechanism to calculate the type of damages incurred. There are many ways in which the parties may choose to present and calculate their damages in these instances, and an expert can often help create an objective and credible damages assessment.

To support a claim for damages with adequate documentation, counsel should:

- **Consider in advance the types of damages claims that may be asserted in an arbitration.** The type of documentation that may be required depends almost entirely on the type of damages sought. With some forethought, parties can anticipate and maintain the categories of documents necessary to prove their specific claims. For example, a claim for lost profits based on late or defective construction work is often supported by records indicating the profits or revenue that the owner expected to earn from a fully performing project. (See Robert F. Cushman et al., *Proving & Pricing Construction Claims*, § 7.15 (2016-1 cumulative supp.)). Claims for costs associated with completion or repair of work within the contractor's scope may be supported with invoices or contracts (or both) with third parties hired to complete the work. (See Robert F. Cushman et al., *Proving & Pricing Construction Claims*, § 7.12 (2016-1 cumulative supp.)).

- **Establish and maintain regular practices for payments and advances.** Cash flow pressures during a construction project can often take precedence over the importance of documentation. This can be problematic if a party cannot later tie cash advances to specific change orders or agreements on costs. Take some time at the beginning of the project to discuss internally and with all project parties how payment requests should be made and amounts exchanged, and adhere to this documentation format throughout the project. For more information on establishing payment practices, see Practice Note, Payment Provisions in Construction Contracts: Drafting Strategies (http://us.practicallaw.com/1-568-1506).

- **Be mindful that sensitive accounting records could serve as crucial support for damages claims.** Even where the bid price provides a reasonable basis for an estimate of damages, owners often insist that contractors be required to show their actual costs through accounting or other records. Contractors are often understandably reluctant to make their books and records available to a counterparty, especially one within their field of work and with whom they may someday again do business. On the other hand, accounting records can also serve as a powerful tool where actual costs line up with or support a claim. It is important to be aware of the significance accounting records may take on in the event of a dispute and to plan accordingly.
MULTIPLE BENEFITS OF DOCUMENTATION

Cross-border construction disputes will continue to grow in complexity and importance, and the project record will remain critical to an international arbitration tribunal’s ability to unravel and decide those disputes. With some advance planning, attention to documentation methods, and an emphasis on the importance of maintaining accurate and clear contemporaneous records throughout the project period, parties can significantly strengthen their position in a construction arbitration. They also benefit from significant time and costs savings by avoiding re-creations of the project record after the fact. The arbitrators, in turn, benefit from assessing the parties’ claims and defenses by reference to documentation that memorializes the parties’ intentions and expectations at the time that the facts giving rise to the dispute actually occurred.