REVERSE ENGINEERING CONTRACT CLAUSES FOR EFFECTIVE RISK MANAGEMENT OF DELAY CLAIMS

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I. Introduction

This paper considers effective strategies for resolving and preventing construction delay claims. Construction delays are frequently at the center of construction litigation and often require an expert's early involvement. First, the key contract clauses that hold the most “grey areas” leading to unresolved delay claims will be discussed. Second, scenarios in which delay claims typically arise will be explored. The two specific scenarios considered in this paper include: 1) the abuse of Liquidated Damages provisions and 2) the amorphous understanding between the parties if “formal notice” of a delay impact has really been given. Discussion questions will be posed for the reader to “put him or her in the shoes of the arbitrator” and consider the award they would make in the given scenario. Finally, best practices will be addressed on how help mitigate risks, manage client expectations, and maximize successful resolution of delay claims.

II. Critical Contract Clauses in Delay Claims

We have all no doubt heard the phrase “time is money.” In no other context is the phrase more apropos than in the construction industry, where time is also typically “of the essence.” Most contracts for construction are tied to an embedded schedule which mandates final completion of the job on a date certain. Failing that, one party or another will likely seek remedies for extra time and possibly damages due to a failure to meet the goals set at contract formation. Evaluating these delay claims becomes a true forensic investigation, searching for clues, recreating events, discovering causes and motives.

To properly address delay claims, a good understanding of the different types of delay is first in order. Delays are frequently classified based on their causes and impacts and fall into a number of distinct categories.

A. Different Types of Delays

1. Critical vs. Non-critical

The first question to answer is whether a delay is critical or non-critical. Whether a delay is critical depends on how it impacts the overall scheduled completion date for the project. Most construction professionals are familiar with the concept of a “critical path methodology,” setting a timeline of each individual task to complete on a project. This method sets out a “path” through the job by activities which are critical – ones ultimately impacting the completion date – and those that are not. Activities which are critical should be accomplished within a specific time and follow a sequential order, known as the “critical path.” In its simplest terms, a delay that extends the duration of a construction project is critical. This is delay which cannot be made up. Critical delays often cause a cascade of collateral impacts to other activities along the schedule.

A textbook definition of the "critical path," is: "the longest path through the network of identified and logically sequenced construction activities that establishes the minimum overall project duration." Delay that does not have any impact on the activities in a project's critical path is non-critical. Non-critical delays should be able to be corrected, and possibly with less expense and effort than critical delays.

2. Excusable vs. Non-excusable

An excusable delay will possibly entitle a contractor to an extension of time to complete the project, additional compensation, or possibly both. Excusable delays are those that are out of the contractor's or owner's control, and generally result from unforeseen conditions. Common excusable delays include natural disasters, labor strikes, force majeure events, owner caused delays, or errors or omissions in contract documents.

Non-excusable delays are wholly within the control of the contractor or are reasonably foreseeable at the time of contracting, and thus, the contractor becomes responsible for their extension of the project's duration. Generally, non-excusable delay could expose the contractor to damages or losses caused by the delays. Some of the causes of non-excusable delays include untimely submission of required submittals, delayed mobilization, delayed procurement of necessary resources, late performance by subcontractors or material suppliers, or poor planning.

3. Compensable vs. Non-compensable

Whether a delay is compensable or not will depend on its nature and cause. As the name suggests, compensable delays allow for additional compensation to the contractor, an extension of time, or both. A delay is "compensable" to the contractor when the delayed activities are on the critical path, if the delay is caused by the owner (or parties for whom the owner is legally responsible), if the contractor incurred actual costs because of the delay, and if the contractor is not itself responsible for causing a concurrent delay.

Non-compensable delays, usually due to a non-excusable event, generally do not allow for any additional compensation but could result in an extension of time to complete the project. However, they may open the contractor up to penalties or damages for delays they caused.

4. Concurrent Delays

Construction projects are complicated, multi-party affairs, with many moving parts. It is common that a delay can occur which has ties to two or more different causes, parties, or events. Such a situation is called a "concurrent delay." Concurrent delays occur when the critical path or project schedule is affected by multiple construction activities simultaneously. When analyzing concurrent delays, there is generally much debate over whether one was the overriding causative factor, or the extent to which one delay was more impactful than another.

Concurrent delays lead to debate over whether certain activities could have started earlier, and which was the true delay event. Most schedules will have "float" in them, or the amount of time an activity can be delayed from its early start date without changing the overall completion date of the project. Total project float, in simple terms, is determined by calculating the durations of every activity on the project schedule and comparing it against the contract completion date. This can lead to a situation known as "negative float," when the critical path exceeds the allowable time to complete the project.

5. Force Majeure Events

The term "force majeure" is French for "superior or irresistible force." The term commonly refers to natural and unavoidable catastrophes that affect contract performance. Most standard industry form construction contracts (e.g., AIA and ConsensusDocs), do not use the term "force majeure." Rather, they provide relief for these events under their delay and time extension remedial clauses of the agreements. Contracts sometimes provide a contractor additional time, but no additional money, for "force majeure" delays to the critical path beyond the reasonable control or anticipation of both the owner and contractor.

A force majeure clause will typically list the triggering events like natural disasters, floods, or fires, strikes or war. Force majeure generally covers occurrences not reasonably foreseeable at the time of contracting which are beyond the control of the parties, and not caused or compounded by the negligence of the party seeking relief. When one of these events occur, performance will either be suspended or excused depending on the contract terms and the duration of the disruption.

6. Weather

Weather can lead to delay claims on a construction project, particularly considering the escalating impacts of climate change. However, most project participants are required to plan for weather delays at the time of contract formation, and usually include a typical number of adverse weather days in the schedule.

Industry form agreements addressing weather delays note:

AIA General Conditions, A201, §15.1.6.2:

> "If weather conditions are the basis for the claim for additional time, such claims shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not be reasonably anticipated, and had an adverse effect on the scheduled construction."

ConsensusDocs 200, §8.3.1:

> "if the Contractor is delayed at any time in the commencement or progress of the Work by any cause beyond the control of the Contractor, the Contractor shall be entitled to an equitable extension… including, but not limited to, adverse weather conditions documented in accordance with Section 15.1.6.2."
>
> "§15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction."

Most construction contracts allow time extensions for weather related delays which could not have been reasonably anticipated. However, proof of these claims requires a showing the weather conditions were a substantial deviation from the norm and were not reasonably anticipated.

Delays caused by unexpected, adverse weather conditions could lead to a need to accelerate performance to stay on schedule. Another possible avenue for financial recovery could be submitting a claim under the differing site conditions clause if inclement weather alters the physical characteristics of a job site.

B. Impacts as a Result of Delays

Construction projects are time sensitive for a reason. Often, the owner or developer has committed to some other customer, tenant, or timetable, and must be able to use the building on a date certain. So, delays can cause a myriad of damages to the owner, including lost rents, interest expenses, lost sales, lost profits, and many other potential economic impacts. Contractors also depend on meeting scheduled completion dates, as they have committed personnel, equipment, and other overhead to one job that may be planned to transition to another. If one project is delayed, it can lead to a cascade of other impacts to the contractor, including extended office overhead, unanticipated labor and equipment expenses, and lead to change orders. The same is true for design professionals providing construction administration to a delayed project, their expenses will surely rise along with all parties' potential liabilities.

Some of the impacts that could result from project delays include:

- Extended overhead costs
- Project management and supervision
- Loss of use
- Lost rents
- Lost profits
- Interest carry
- Extra work

- Disruptions, inefficiencies, and loss of productivity
- Acceleration
- Cumulative impacts
- Consequential damages

C. Contract Provisions Governing Claims for Delays

Most industry form documents (AIA, AGC, EJCDC) provide critical terms relating to project schedule and delay, changes, claims, damages, and dispute resolution. Without addressing these critical elements in contract formation, project participants have little leverage over resolving delay claims when they arise. Time should be spent, up front, reviewing and negotiating the essential contract terms to protect the parties when the inevitable issues arise during the project. The following are the main contract provisions which impact delay claims.

Most industry form documents allow for delay claims, under certain circumstances. As an example, the AIA A201 provides:

> §8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

Note the only remedy is an extension of time. What will make the difference is whether the rest of the contract forms are followed, discussed further below.

ConsensusDocs 200 provides more detail and examples of what constitutes a compensable delay, as follows:

> §6.3.1 If the Constructor is delayed at any time in the commencement or progress of the Work by any cause beyond the control of the Constructor, the Constructor shall be entitled to an equitable extension of the Contract Time. Examples of causes beyond the control of the Constructor include, but are not limited to, the following: (a) acts or omissions of the Owner, the Design Professional, or Others; (b) changes in the Work or the sequencing of the Work ordered by the Owner, or arising from decisions of the Owner that impact the time of performance of the Work; (c) encountering Hazardous Materials, or concealed or unknown

conditions; (d) delay authorized by the Owner pending dispute resolution or suspension by the Owner under section 11.1; (e) transportation delays not reasonably foreseeable; (f) labor disputes not involving the Constructor; (g) general labor disputes impacting the Project but not specifically related to the Worksite; (h) fire; (i) Terrorism; (j) epidemics; (k) adverse governmental actions; (l) unavoidable accidents or circumstances; (m) adverse weather conditions not reasonably anticipated. The Constructor shall submit any requests for equitable extensions of Contract Time in accordance with ARTICLE 8.

§6.3.2 In addition, if the Constructor incurs additional costs as a result of a delay that is caused by items (a) through (d) immediately above, the Constructor shall be entitled to an equitable adjustment in the Contract Price subject to section 6.6.

1. Critical Path Definition
   a) longest path, float value threshold, "near-critical" path

The Association for the Advancement of Cost Engineering International's (AACE) definition of critical path is simple and well stated. They define critical path as "the longest continuous chain of activities (may be more than one path) which establishes the minimum overall project duration. A slippage or delay in completion of any activity by one time period will extend final completion correspondingly." And so, there is broad consensus among industry treatises and many professionals that the definition of "critical path" includes the notion of the "longest path." It is important to dictate in the definitions of the contract what the parties understand this phrase to mean, if it is to be defined.

Defining critical path activities by the longest path through the project will dictate that the scheduler will determine the sequence of activities that determine the end date of the project, and label that the critical path. If the critical path is to be defined by a "total float value methodology," the scheduler will need to determine those activities whose early start and late start dates are equal, and thus have "zero float," and sequence them as critical path activities. If the critical path is defined using a "free float methodology," the scheduler will identify all predecessor activities that have zero float (early and late start dates are the same), and label that string of activities as setting the overall project duration. Using a "near critical path methodology" requires the scheduler to identify those activities that are almost critical or are at risk of becoming critical if delayed past their expected completion times, and account for them in the schedule using total float, longest path value, or multiple critical paths. Near critical paths are those where total duration approaches that of the critical path. If the float on a near critical path is exhausted, the near critical path will become a critical path.

Project managers use the terms free float and total float to describe the potential impact of non-critical tasks on those that succeed them. Free float is the length of time you can delay a task without

affecting the early start date of a successor activity. Total float is the length of time you can delay a task from its early start date without delaying the project's anticipated date of completion.

It is important that the scheduler know the project's longest path and continue to monitor it. Project owners may demand schedules identify the critical path, the longest path and that ancillary construction activities such as procurement and resource management and be conducted with the critical path in mind. To enforce this requirement, it is common that an initial "as-planned" CPM schedule be submitted for approval by the owner. The initial schedule is to be submitted both in a time scaled graphic model that uses arrows to indicate each activity and a calendar scale. The CPM must indicate the sequence of each activity, the start of each activity, the dependence of that activity on the completion of a preceding activity, and how the completion of that activity will restrict the commencement of subsequent activities. Once the initial schedule is accepted, it is commonly referred to as the baseline schedule.

On larger projects, the specifications may require that the schedule be resource loaded. In other words, it must also indicate the costs and resources necessary to perform each activity. The contractor is required to breakout within each activity the separate values assigned to specific resources such as labor, equipment, and materials. When a contractor prepares the initial schedule, they should request activity durations from the subcontractors and the long lead time suppliers. That information is not only necessary to accurately prepare the schedule but can be the basis of binding the subcontractor to the activity durations set forth in the schedule.

Once the schedule is approved, copies should be sent to all subcontractors. Most specifications require monthly updated reports that indicate the status of each activity. Each activity's status is usually found by reviewing a status line that runs from the top to the bottom of the schedule. By reviewing each item that line passes through and those which preceded the status line, the completion status of each activity on that date can be determined.

The project general conditions may require the use of the updated CPM to prove that an owner-caused delay impacted one or a series of critical activities. Until such evidence is submitted the owner may deny an extension of time to complete the project or obtain additional delay related compensation.

Some specifications require the preparation of a recovery schedule when the critical activities are not being completed on the dates set forth in the schedule. Such a schedule must indicate how the contractor intends to complete the project within the allotted time and what resources will be used to accelerate the work so that it can be completed on time.

2. Notice Requirements

Most contracts contain a "Notice of Claim" of "Notice of Delay" requirement, setting forth the timeframe within which formal notice must be provided because of any delay-causing event. Generally, this formal notice is a mandatory condition precedent to presenting a valid delay claim.

The purpose of this notice is to provide the parties an opportunity to resolve or mitigate the impacts of delays without resorting to arbitration or litigation. Without formal notice, and if the owner has not waived the notice provision, a contractor may forfeit a claim for a time extension and could assume liability to the owner for damages attributable to the delay, in addition to being unable to pursue its own delay damages claims.

Construction contracts generally contain multiple mandatory notice requirements. Most courts take contractual notice provisions seriously, as they are generally obligated to enforce the parties' agreement as written. If notice is required, but not given, there is a risk the claim will be considered waived.

There may be requirements for the timing of notice, the proper manner of providing notice, to whom notice must be provided, and what must be contained in the notice. Failure to provide proper and timely notice can be fatal to a meritorious delay claim. Courts in many states may reject claims solely due to lack of proper notice. Reliance on verbal discussions with the owner or architect may not suffice, as there is significant risk that those discussions will not be enough to save a claim for which timely and proper written notice was not provided.

The AIA A201 provides, as an example:

> § 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

ConsensusDocs 200 provides:

> §6.3.3 NOTICE OF DELAYS If delays to the Work are encountered for any reason, the Constructor shall provide prompt written notice to the Owner of the cause of such delays after the Constructor first recognizes the delay. The Owner and the Constructor agree to take reasonable steps to mitigate the effect of such delays.
>
> §6.4 NOTICE OF DELAY CLAIMS If the Constructor requests an equitable extension of the Contract Time or an equitable adjustment in the Contract Price as a result of a delay described in the section above, the Constructor shall give the Owner written notice of the claim in accordance with section 8.4. If the Constructor causes delay in the completion of the Work, the Owner shall be entitled to recover its additional costs subject to section 6.6. The Owner shall process any such claim against the Constructor in accordance with ARTICLE 8.

§8.4 CLAIMS FOR ADDITIONAL COST OR TIME Except as provided in subsection 6.3.2 and section 6.4 for any claim for an increase in the Contract Price or the Contract Time, the Constructor shall give the Owner written notice of the claim within fourteen (14) Days after the occurrence giving rise to the claim or within fourteen (14) Days after the Constructor first recognizes the condition giving rise to the claim, whichever is later. Except in an emergency, notice shall be given before proceeding with the Work. Thereafter, the Constructor shall submit written documentation of its claim, including appropriate supporting documentation, within twenty-one (21) Days after giving notice, unless the Parties mutually agree upon a longer period of time. The Owner shall respond in writing denying or approving the Constructor's claim no later than fourteen (14) Days after receipt of the Constructor's claim. Owner's failure to so respond shall be deemed a denial of the claim. Any change in the Contract Price or the Contract Time resulting from such claim shall be authorized by Change Order.

a) Constructive notice

While generally formal written notice per the contract is required, in some instances, "constructive notice" will suffice. Most courts strictly require adherence with formal notice obligations, but some may not strictly enforce notice provisions, "where fairness demands." This may occur where the contractor provided actual or "constructive notice" of the facts giving rise to the claim or where the notice would have been useless. This may have occurred through contemporaneous communications that discuss the issues and impacts, verbal notice, meeting minutes where the issues are discussed, or other project documents that are not strictly in compliance with the contract's formal notice requirements. The fact that the owner has constructive notice of the problems or claims generally will not relieve the contractor from responsibility for providing the required formal written notice, but it may mitigate against the argument there was no notice whatsoever.

b) *Waivers*

A contractor may waive its right to recover delay damages from an owner in various ways. For example, language in an executed change order may either expressly or implicitly waive the right to delay damages. Similarly, an owner may waive its right to seek damages after it makes a final payment to the contractor or could waive formal notice requirements by their acknowledgement of the delay and efforts to mitigate it. Some contracts contain "no waivers" language, however, which lends further support to strict adherence to all contract forms.

3. Schedule Integrity Requirements

To successfully establish a delay claim, the contractor must first recognize an event caused project delay. Delays impacting activities on the critical path are measured by the durations set out on the project schedule. Therefore, contractors must actively update and use the schedule to determine

when an event may cause critical path delay to provide timely notice of the delay. The schedule also aids in identifying and demonstrating the impact of the delay, allowing a comparison of the original as-planned critical path to the current as-built critical path. Inaccurate, incomplete, or outdated schedules can hinder the ability of a contractor to identify, establish and recover for delays.

Many construction contracts obligate the contractor to maintain and update the schedule on a regular or periodic basis as the project progresses, to reflect the actual as built conditions, and to ensure the objectives of the schedule are being met. Some contractors will use "three week look ahead" schedules in weekly on-site meetings to make sure subcontractors are staying on task and keeping to their timelines.

Some custom form contracts will mandate adherence to a schedule, as follows:

> Your firm shall complete your work in accordance with the project schedule as set forth by [Owner/Contractor/Etc.] Should you fail to meet this schedule due to your own fault or negligence, you will undertake any and all efforts to bring the project back on schedule at no additional cost to [Owner/Contractor/Etc.]. These efforts will include but are not limited to overtime, additional manpower, additional tools, or additional equipment.

4. EOT Schedule Analysis Requirements

   a) Schedule Analysis Requirements-Observational, Modeled techniques, software required to use (Primavera vs. MS Project), requirements to submit native files (.XER's not just PDF's)

Impacted schedules may lead to a path with more than one impact sequence that occupies different float-paths. For that reason, they must be monitored and tracked separately. Parties who issue notice of delays and extensions of time (EOT) claims should track everything separately and organize each impact as an isolated phenomenon. Impact schedules are not the same as an EOT or delay/disruption claim schedules, though they are one of several components. Typically, an EOT for the minimum expected impact will accompany the impact schedule. Initially, an accounting of the costs associated with the delay are not knowable, as the full impact of the delay has not been calculated. The claim schedule may include all critical paths, as well as accompanying cost factors.

Often the project specifications, or contracts, will establish process by which EOTs are presented and reviewed. They may also stipulate the rate of compensation.

Many contracts provide the specifics of the schedule management software required to be maintained by the contractor. One such program, Oracle's Primavera P6 Professional Project Management scheduling software, remains the preeminent package in construction scheduling. Further, by requiring the contractor to submit as a deliverable the native files, a subsequent scheduler can go into the model and study the relationships, ties and sequences and determine if the critical path was correctly modelled.

In addition to GANTT charts, other documentation should inform the claim. S curves and Earned Value Analysis (EVA) are used to show actual rates of production as compared to the baseline. Scheduling software can generate executive briefs, forensics, and metrics, which enhance the level of claim preparation not available in stand-alone CPM scheduling platforms.

The AIA A201 provides:

> § 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

ConsensusDocs 200 reads:

> §6.3.1 If Constructor is delayed at any time in the commencement or progress of the Work by any cause beyond the control of Constructor, Constructor shall be entitled to an equitable extension of the Contract Time. Examples of causes beyond the control of Constructor include, but are not limited to, the following: (a) acts or omissions of Owner, Design Professional, or Others; (b) changes in the Work or the sequencing of the Work ordered by Owner, or arising from decisions of Owner that impact the time of performance of the Work; (c) encountering Hazardous Materials, or concealed or unknown conditions; (d) delay authorized by Owner pending dispute resolution or suspension by Owner under §11.1; (e) transportation delays not reasonably foreseeable; (f) labor disputes not involving Constructor; (g) general labor disputes impacting the Project but not specifically related to the Worksite; (h) fire; (i) Terrorism; (j) epidemics; (k) adverse governmental actions; (l) unavoidable accidents or circumstances; (m) adverse weather conditions not reasonably anticipated. Constructor shall submit any requests for equitable extensions of Contract Time in accordance with ARTICLE 8.

b) Productivity Loss/Disruption as a form of delay causation (acceptable or not)?

When an impact to the schedule occurs, the scheduler should record the event or network of events that impacted the baseline operations by adding additional steps or activities that are expected to extend the critical path. However, unlike a delay, which generally has a known start and end date, it can be difficult or impossible to discern the ultimate impact of a disruption until it is concluded. For that reason, the contractor should provide a more open-ended notice of delay to address disruption claims.

Delay and disruption often occur together. However, disruption claims are not the same as claims for pure delay. Disruption of the contractor's planned sequence and method of construction can lead to a loss of productivity. A loss of productivity does not necessarily mean the overall contractual completion date will be delayed because of a disruption.

Disruption is the result of being forced to perform contracted work in a manner different and less efficient than originally planned. Although similar, courts generally distinguish between damages caused by disruption (loss of efficiency) and damages caused by delay. It is important to remember that delay claims are time related and contain time related damages such as extended overhead or increased direct costs related from the delay, while disruption claims (which may arise from the same event justifying delay claim) involve losses based on lost labor and equipment efficiency. A contractor's request for damages due to loss of labor productivity relates to the additional labor costs incurred when work is disrupted or delayed. The following examples could cause a loss in labor productivity: unusually adverse weather conditions, adverse site conditions, restricted access, out of sequence or scope work, delays responding to RFI's or design errors or omissions, excessive change orders, and other conditions.

The first and most common source of disruption is delay. Delays cause damages by preventing the contractor from working or completing its work timely and impacting the contractor's efficiency. Deviation from planned sequence or levels of manpower can also damage efficiency and productivity. Substantiating a cause-and-effect relationship between issues and resulting labor productivity losses and establishing entitlement to recovery for lost labor productivity can be a difficult process.

5. Damages Clauses
    - *a) What milestones are they tied to?*
    - *b) Requirements to achieve these milestones (Substantial Completion)*
    - *c) Grace Period, etc..*

The project duration is measured either in calendar days or working days, and is based on the number of days that the parties predict it will need to complete the project. Three potential options for the date of commencement of work, according to Section 3.1 of AIA Document A101 – 2017 are:

- The date of the agreement;
- A date set forth in a notice to proceed issued by the owner;
- Another date or means of determining a date described in the agreement.

The time for the completion of work is typically described through a number of days or weeks from commencement, or by a specified date. The time for completion does not typically mean the end of all work, but rather reaching the point of substantial completion. What constitutes substantial completion needs to be expressed in the contract. Substantial completion is defined by AIA Document A201 – 2017 (which provides general conditions that become part of the owner/contractor agreement) in Section 9.8 as follows:

> Substantial completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

This is a common standard (see ConsensusDocs 200 § 6.1.1), and reflects the fact that owners often occupy or utilize the project before final completion, and thus receive benefits of the construction contract, prior to the point when the contractor finishes the work.

Parties may define substantial completion with more specificity, such as by requiring issuance of a certificate of substantial completion by the architect or certificate of occupancy from a local code official as a condition precedent to achieving substantial completion.

If the parties have agreed upon liquidated damages, discussed below, the relevant point to start, or stop, liquidated damages is usually substantial completion. (See § 3.3 of AIA Document A101 – 2017, and ConsensusDocs 200 § 6.5.) Liquidated damages are a contractually stipulated amount the parties agree in advance will serve as damages for untimely completion of work and usually take the form of a specified daily amount that accrues for each day of work that continues past the contractually required completion date. Legally, liquidation damages must not be deemed to be a penalty, but rather a good faith estimate of actual damages.

Options for mitigating against liquidated damages and bringing some leverage back to the contractor may include an established grace period in the contract, (such as liquidated damages begin on the Xth day after the required date of substantial completion), an increase in the contract sum to account for the risk, increasing liquidated damages over time (i.e., $500 for the first 10 days, $1,000 for the following 10 days, etc.), or placing a cap on liquidated damages (i.e., in no event shall liquidated damages exceed a certain amount). Another option is to provide for an early completion bonus to the contractor.

6. Liquidated Damages

Over the years, the construction industry has developed various methods of contractually allocating the risk of project delay and disruption. Some of these methods include liquidated damages provisions, “no damages for delay” clauses, mutual waivers of consequential damages, provisions that limit liability, claims notice provisions, and provisions addressing responsibility for the adequacy of the construction plans and specifications. Parties frequently litigate the sufficiency of these risk-shifting efforts in conjunction with the underlying merits of delay and disruption disputes.

Because it is difficult to calculate damages for contractor delay at the time of contracting, contracts frequently include a provision for liquidated damages, generally set out on a per-day basis for each day the project is not completed on schedule.

Liquidated damages clauses, are enforceable if, at the time of contracting, it would be difficult (or impossible) to ascertain the actual amount of damages in the event of breach, and that the amount set in the liquidated damages clause was a reasonable estimate by the parties of the actual damages they expected to suffer in the event of a breach. If the amount of liquidated damages is found to be punitive, rather than a reasonable representation of probable damages, it may not be enforceable.

7. Other key clauses/No damage for delays/Recovery Plans

Because delays are so prevalent, construction contracts often include a "no damages for delay" clause, declaring that delays are part of projects, and any costs associated with them should be written off. These clauses have been declared unenforceable in many jurisdictions, so to be enforceable, they must make sure they cover all the damages claimed, do not cover delays contemplated at the time of contracting, are not sustained for an unreasonable time, or result from conduct of the party seeking to enforce the clause.

Once delay impacts are realized, the contract may require an impact or recovery plan. Such plans are most effective when the full impact is a known quantity, and the resources and productivity associated with the impact is measured. These recovery plans are intended to minimize subsequent impact; however, it implies that there already is an impact, and that the impact is expected to continue. In both mitigation and recovery, resequencing the schedule may be required, or more likely acceleration, overtime, or other strategies may need to be employed to achieve the original schedule or minimize schedule impacts.

III. Scenarios Triggering Litigation on Delay Claims

From the view of the authors, the two scenarios described below give rise to construction delay claims that become difficult to resolve. The parties tend to entrench themselves in their positions, relying on contract clauses that may not be totally clear on the requirements needed to either ask for a time extension or put the Owner on notice that there is a potential impact causing critical path delay. Typically, these scenarios arise because the contract clauses themselves are not specific enough or altogether mute on the issue. Therefore, the parties must use their own interpretation of the requirements to satisfy these clauses. As is human nature, the parties will "interpret" the clauses to suit their respective needs and minimize the risk and potential damages for their stakeholders. Three primary scenarios will be discussed below. However, there are permutations and combinations of these scenarios, as well as numerous other scenarios, that give rise to delay claims. The authors are focusing on the scenarios that have been reoccurring themes in their own experiences.

A. Abuse of LD Provisions

A liquidated damages clause (LD's) is tied to a certain key milestone or multiple milestones in a contract. Typically, the authors have seen LD's tied predominately to achievement of Substantial Completion and a particular Substantial Completion Date. However, what drives the analysis of LD's to Substantial Completion is the critical path in the project schedule, which in the authors' experience, does not get the attention it deserves.

In this sample scenario, there are two driving issues that cause the LD provision to be abused. The first problem is that there is not a clear definition in the contract of the individual requirements to achieve Substantial Completion. In a good contract, usually attached in the Appendix or Exhibits, there should be a detailed list of all the requirements needed for the project to be deemed "Substantially Complete." For example, Substantial Completion may be defined by the following: mechanical completion achieved (and again another detailed explanation in the contract exhibits of what the definition of mechanical completion is), hydrostatic testing of all the systems, commissioning certificates issued and signed, and completion of "A" Punchlist items are examples of specific requirements to achieve Substantial Completion. In this scenario, the requirements to achieve Substantial Completion only state that Mechanical Completion is achieved, and an SC certificate has been issued by the Owner and signed.

The second issue is that the substantial completion milestone in the project schedule is not tied to the correct predecessor activities, or these predecessor activities have never been detailed out in the schedule. Therefore, the items defined in the contract exhibit for Substantial Completion haven never been entered into the schedule as activities to measure their completion.

The hypothetical project is an oil storage tank farm on the east coast of the United States. The contract in this scenario defines LD's being triggered after a grace period of 5 days slippage of the contractual SC date of June 15, 2021. LD provisions state that the LD's are assessed at 10K per day after the grace period completes. The actual Owner-proclaimed achievement of SC was on July 15, 2021. The Owner sends a formal letter to the contractor on July 16, 2021, claiming that he is withholding 25 days of LD's totaling $250,000 (10K per day x (30 days of delay -5 day grace period) from the contractor's final progress payment.

The contractor promptly sends a letter back saying that they achieved SC on June 20th, 2021 and due to the grace period, they owe no LD's.

In this scenario, there are several questions to ponder. How is this possible that the two parties are so far off on their belief on when SC has been achieved? Does the Owner just want to get some money back in an underhanded way, to avoid paying the contractor for additional change orders? Or has he really been damaged by the fact that his idea of SC achievement did not occur until July 15? Why is the contractor confident they achieved SC on that date? So what has the contractor been doing between June 15th and July 15th? These are all pertinent questions to understand where the disconnect occurred.

The Owner does not respond to the contractor's letter and withholds 250K from final payment. The contractor promptly triggers the dispute resolution clause in the contract that requires an escalation process of dispute resolution, starting with a meeting between the company representatives from both parties.

In the meeting, each party brings up valid points. The Owner states the reason they felt entitled to charge LD's to July 15th is that in this time period:

- They "punch list" work was not done;
- They did not get the final operating manuals from the contractor; and
- The did not receive lien waivers from the contractors' subcontractors

The Contractor lists the reasons why they felt they achieved SC on June 20th:

- Punchlist Item "A" work was done and is so verified in the Punchlist Log;
- The owner had operational functionality of 4 out of the 8 tanks and was already introducing hydrocarbons into them in this period;
- Final operating manuals are not required until Final Completion, but they did give them draft manuals to use; and
- Lien waivers from the contractors' subcontractor are not required until Final Completion.

Well, who is right, who is wrong? The problem is that both parties are right and both are wrong. The contract does not specify what type of punchlist items need to be cleared to achieve SC, just that "punchlists are to the completed." The Final Completion clause simply states, "remaining items not completed at SC shall be completed prior to Final Completion." The SC clause does state the project must be operable to its intended purpose to be considered Substantially Complete. But it does not specify if all the tanks need to be 100% ready for hydrocarbons or just a portion of the tanks.

The friction between the parties further escalates since the Owner had "privately" told the contractor in off-the-record chats that since fuel prices were so low, they were going to stagger their clients, and just make the first three tanks operational. The Owner wanted to negotiate a better agreement with the other clients which, they stated, "may tank a few months."

If you were the arbitrator, would you uphold the Owner's claim to charge full LD's for the period, partial LD's, or no LD's at all? Why or why not?

B. When is "Notice" Not Notice?

Another scenario that triggers unresolved delay claims is the oft-debated question: "has notice really been given?" In this scenario, a contractor has submitted an EOT claim 8 months into a

12-month contract. He claims he is entitled to a time extension of 90 days and extended overhead costs due to excusable compensable delays the responsibility of the Owner. The Owner promptly rejects the EOT claim stating that the events giving rise to the delay claim occurred outside the notice provision window. Is that true?

The contract's notice provision states that notice for any delay claim must be made "in writing" within 10 days of each impact occurrence followed by additional notice every 5 days until the impact completes. The Owner claims they never received such notice for each delay event giving rise to the contractor's EOT request.

The contractor disagrees. They claim they gave notice of delay periodically and notice was captured in writing. The contractor further states that the meeting minutes taken for the weekly progress meetings between the Owner, contractor and other prime contractors were signed by both parties. In addition, these meeting minutes noted the delay impacts occurring in that week and also noted when the impact completed. In addition, the Owner "agreed" in these meetings verbally that those events did give rise to critical path delay. Therefore, the contractor feels adequate notice has been given and they are entitled to make their EOT claim.

The Owner does not disagree that "some of the delay events" were indeed excusable compensable and if the proper notice protocols had been followed, the Owner would have gladly entertained a time extension. The Owner feels that the meeting minutes themselves are not a proper notification mechanism. The contractor should have submitted a follow up letter after the meeting stating the delay impact of the event and the amount of EOT they were requesting.

If you were the arbitrator, would you uphold the Contractor's ability to submit an EOT claim? Do you think meeting minutes constitute "enough notice" in this case based on the "verbal actions" of the Owner? What would "enough notice" look like for you to be satisfied that proper notice was given? Even if you have enough evidence to note excusable compensable delays occurred, would there be a case that you would 100% reject an EOT claim due to the notice provision not being followed?

IV. Reverse Engineering/Risk Management of Delay Claims

Perhaps the most effective way to mitigate/manage construction claims in general and, in specific, delay claims, is to address them on the front end. It has been the writer's experience over the past three decades of practice that addressing all critical issues when a project's front-end materials are being developed is the best way to avoid claims/issues on the back end. This way, all the parties can get on the same page in terms of project expectations. In short, managing project expectations is one of the best ways to avoid/manage construction claims.

There has been a proliferation of construction claims of all kinds and especially for delay claims due to unrealistic expectations of perfection by project participants, especially owners/developers.

Traditionally, owners/developers recognized the nature and complexity of construction project required that they assume certain risks. That has evolved over time with owners/developers effectively shifting all risk to the design and construction teams. The design and construction communities, however, have pushed back in the past decade to even the playing field. Our discussion will focus on defining the problem of client expectations of perfection, how to manage them to mitigate risk of claims, and the identification of tools to address these issues on the front end. We will than explore practice tips to prevent claims from evolving but, importantly, things you can do to arm yourself in the event delay claims arise so you can present and effective defense.

A. Managing Client Expectations on the Front End

1. Beating Back Expectations of Perfection to Mitigate Delay

A. What Are they?

.i. Design Professionals held to negligence standard

Common Law- Responsible to your client to meet the standard of care for your profession. Perform in a manner consistent with that degree of care and skill ordinarily exercised by the same profession currently practicing under similar circumstances (for example, location)

ii. Contractor – Perfect Workmanship

` 2. Projects are one-of-a-kind…We don't manufacture products

3. Historically, perfection was never contemplated

4. Driving Factors – Need to Deconstruct Misconceptions

CDs are 100% complete and defect free

CD's guaranteed to Comply with all codes and laws

No change orders expected

All COs stem from design/construction faults

Pay only for owner initiated Cos

No contingency budget/funds /allowances

All extra costs are damages

RFIs are evidence of Design/Construction Issues

All Insurance is no-fault

Project Delivered on time or Damages (LDs, etc.) due to these drivers/misconceptions

5. Need to Address with All Critical Players on Front End

- 6. Critical Clauses:

No Damages for Delay

No LDs

Include Contingencies

Careful Drafting of Triggers & Notice Provisions

7. Other Solutions

Educate Clients

Set Expectations Early – Nobody Perfect

Communicate

Document

Project Killers – lead to delays

Out of Sequence Design

Fast-track Schedule

Phased Projects with Multiple Bid Packs

Unrealistic Budget – Recoup through (delay) claim generation

Keep communications open

Identify Issues up front and monitor

Avoid scope disputes: Clarify and Document

Address client-directed changes that could lead to issues

B. How to Prevent Claims – Preclaim Tools / Arm Yourself

1. Make sure your team READS and adheres to the contract

2. Educate- Contract Risk Review Session

3. Tools - Use a Contract Matrix/Laminate/By Project Role

4. Maintain Issue Database

5. Documentation is Critical

C. Post-Claim Process / Defense or Prosecution

1. Front end critical to starting point

2. Document collection

3. Early Expert Conclave

4. Discovery Tactics