**Construction and Design Law: Managing the Network of Interdependent Relationships**

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**Lesson 13: Schedule and Delays**

 Project success often depends on sound schedule management. Delay claims and other time-related problems implicate complex industry practices, highly developed legal principles, and a host of procedural hurdles and evidentiary challenges. The Bruner and O’Connor treatise devotes over one hundred sections to these topics. See Phillip L. Bruner & Patrick J. O’Connor, Jr., 5 *Bruner & O’Connor on Construction Law*, §§ 15:1-15:136 (Westlaw Aug. 2023).

A good way to begin to understand the important roles that schedules, schedule management, and scheduling methodologies play is to review relevant contractual provisions and industry practices and to explore how construction lawyers and scheduling experts assess the causes and effects of delaying events. The assigned readings for this lesson, each authored by experienced practitioners, cover those matters in considerable detail. Setting aside, for the moment, citations to cases and other legal authorities and the technical aspects of scheduling methods, a brief and informal overview of the most important considerations will prepare you to get the most out of these assigned readings.

In the context of the contemporary construction industry, the common law’s attitude toward timely performance seems quaintly naïve. In early cases, the courts treated a failure to perform on time as a potential breach of contract that could give rise to a damage remedy, but not as a material breach that would necessarily give the non-defaulting party a right to terminate the contract. For owners (and their lenders), however, timely completion is normally critical. Accordingly, in reaction to contract law’s relaxed attitude, owners began to insist on demanding time-related terms in construction contracts, beginning with an express acknowledgment that “time is of the essence” of the parties’ bargain. Beyond that general provision, which effectively reverses the common law framework, industry contracts typically include detailed terms requiring the contractor to establish and manage the completion schedule and specifying related procedures and remedies for dealing with delays. At a minimum, contracts usually require the contractor to furnish a baseline schedule, to update that schedule to reflect actual progress, to coordinate and supervise the progress of subcontractors and suppliers, and to achieve both substantial completion (generally meaning the point at which the owner can occupy and use the project) and final completion in accordance with strict deadlines.

Recognizing that construction is a dynamic process, however, contracts also ordinarily include force majeure clauses and other time-related provisions that establish standards and procedures allowing the contractor to secure time extensions or additional compensation, or both, when circumstances beyond the contractor’s control interfere with progress. Other terms may include a liquidated damage formula for computing the owner’s delay damages, an owner’s waiver of consequential damages resulting from delays, and a no-damage-for delay clause, by which the contractor agrees that it may only be entitled to a time extension and not additional compensation if delays occur for which the owner is responsible. The parties often engage in extensive and difficult negotiations over such provisions, and courts sometimes impose limits on their enforceability based on policy considerations. Overall, as Chapter 15 of the Bruner and O’Connor treatise referenced above shows, scheduling and delays account for many complex disputes that demand the attention of the courts and that generate ongoing debates among the commentators.

Turn now to the three assigned readings to explore schedule and delay considerations in greater detail. These articles review not only the relevant case law and other legal authorities, but they also introduce you to principles of scheduling methodologies and to the highly specialized and complex process of resolving delay claims.

 Begin by reading the introduction and all of Part I (Delay) in *It's a Matter of Time: Delay and Change*, 8 Am. Coll. Constr. Laws. J. 1 (February 2014), by James Duffy O'Connor. This article provides a concise introduction to schedule and delay issues. The discussion begins with an interesting historical perspective. Part I.D. reviews legal principles concerning timely performance and notes several relevant contracting practices. Part I. E covers some critical procedural issues, and Part I. F concludes the delay discussion with an important summary of the concepts of excusable, compensable, and inexcusable delays.

 Next, for a more complete picture of delay claims, read *Effective Presentation of the Forensic Schedule Analysis*, 36 Constr. Law. 19 (Winter 2016), by Judah Lifschitz, Laura Fraher, and Denise Martini. This article emphasizes evidentiary considerations relating to delay claims and offers a practical guide to presenting direct testimony and conducting cross-examination. As such, it provides an effective transition from the relatively simpler situations featured in much of O’Connor’s article (disputes largely stemming from discrete events with relatively direct time impacts) to more complicated ones that often involve conflicting evidence, multiple delaying events, and competing expert analyses. The authors promote a storytelling theme that reflects an experienced legal advocate’s approach to resolving complex delay claims. They effectively demonstrate the kind of case preparation and evidentiary strategies that characterize delay claim litigation and arbitration. The article also briefly introduces the critical path method (CPM) for developing and managing a project schedule and for analyzing delays. The third assigned reading, to which we now turn, provides a more comprehensive discussion of scheduling methodologies.

 Finally, read, *Successful Forensic Schedule Analysis*, 1 Am. Coll. Constr. Laws. J. 7 (2007), by Jennifer W. Fletcher & Laura J. Stipanowich. This article takes a deep dive into scheduling analysis, including alternative methodologies that experts use. Part II covers some of the same evidentiary considerations discussed in the article by Lifschitz, Fraher, and Martini. Part III. discusses experts and delay analysis, emphasizing the role of an as-planned or baseline schedule, the importance of accurate and timely schedule updates based on what actually happens on site, and the preference for CPM technology. Part III also reviews how judges (and, by analogy, arbitrators) may assess expert testimony. Take special care in reading Part IV, on forensic scheduling methods. That section begins with a detailed discussion of CPM scheduling.

To the uninitiated, a technical exposition on CPM scheduling can be confusing. An overly simplified explanation may help as a first, albeit incomplete, step toward understanding a characteristic of CPM technology that distinguishes it from the prior state of the art. A simple bar chart, which dominated before CPM technology, shows a project’s timeline for identified activities, whether as proposed (the as-planned schedule) or as actually accomplished (the as-built schedule). By contrast, a CPM schedule incorporates links or relationships, showing which activities must occur before others may begin and which activities have “float” (flexible dates for starting and completing an activity). The activities with no float are on the project’s critical path, meaning that one day’s delay in any of these activities will either cause a day’s delay in the project’s completion or will require adjustments to get the project back on schedule.

Do not be overly concerned if you struggle to understand certain details of the alternative methodologies that Fletcher and Stipanowich discuss. At this stage in your career, you need not master all the terminology and technical distinctions involved. Instead, engage with this material primarily to understand how important it is for lawyers dealing with delay claims to learn to work effectively with qualified experts to present an analysis appropriate for the forum (be it a bench trial, a jury trial, or an arbitration) and to develop a plan for discovering and addressing potential gaps and flaws in the competing expert analyses. You should readily see that some methodologies are more valid or persuasive than others, but that they all involve risks of faulty assumptions and presumptions, incomplete or inaccurate data, user error, and even manipulation. Moreover, this article should help you appreciate that proving the causes and effects of delaying events in contested cases involves judgment as well as technological expertise.

Many additional resources explore other aspects of scheduling practices and delay claim strategies. See, e.g., Ralph Artigliere, *Admissibility and Use of Electronic Information in Construction Cases*, 17 Am. Coll. Constr. Laws. J. 2 (Summer 2023) (exploring, among other things, the use of artificial intelligence and computer-generated animations); Daniel G. Quackenbush & Kenneth A. Slavens, *Concurrent Delays and Pacing in Construction Contractor Delay Claims*, 41 Constr. Law. 15 (Summer 2021) (discussing special complications that concurrent delays may present, including a practice in which a project participant argues that its delay to an activity originally on the critical path is not a concurrent delay but a logical “pacing” response to another party’s delay in a different activity also on the critical path); Buck Beltzer, J. Andrew Howard, Richard Wittbrodt & Ashley M. Tullius, *“It’s Getting Better All the Time”: Best Practices in Presenting Delay Claims Bench Trial/Arbitration/Jury Trial*, 37 Constr. Law. 6 (Fall 2017); Shelly L. Ewald & Julia M. Fox, *Introduction of Construction Scheduling Expert Testimony: An Overview of the Current Standards in Federal and State Courts and Administrative Boards*, 37 Constr. Law. 26 (Fall 2017); Fredric L. Plotnick, *Rewriting the CPM Scheduling Specification to Better Support the Project Owner*, 35 Constr. Law. 31 (Summer 2015).

For Review and Discussion

1. From the perspectives of both an owner and a general contractor or design-builder, identify two common contractual terms concerning scheduling and delays that you believe to be especially important to both parties and explain why you believe those provisions are important.
2. In the context of a delay claim, explain how and why the *Daubert* test assigns a gatekeeping function to the trial court.
3. Compare and contrast the advantages and disadvantages of two of the commonly used forensic scheduling methods that Fletcher and Stipanowich discuss.
4. Assume that a project incurs a 60-day delay in substantial completion and that the owner and the general contractor disagree about responsibility for the delay. The contractor places most of the blame on ambiguities in the plans and specifications the owner furnished that required the contractor to submit multiple requests for information (RFIs) that the contractor believes the owner’s architect did not answer adequately and in a timely manner. The owner, however, claims that most of the delay resulted from the contractor’s failure to have a sufficient workforce on site at various times throughout the construction process. How might the lawyers for each party work with qualified scheduling experts to assess the causes and impacts of the delay?