

CONSTRUCTION

THE USE OF PROJECT CONTROL RECORDS FOR DELAY ANALYSIS

As construction projects increase in complexity and contracts place more risk on the contractor, the need for proper documentation to support a delay analysis and claim for additional time-related costs is vital. Project controls are essential to maintain and efficiently organize contemporaneous project documentation. Project control tools are numerous, and each can have varying levels of detail. The following article, while not a comprehensive listing of all available documents, discusses what types of records can be useful and what owners and contractors should do with these records during the project. This discussion is limited to delay claims, both excusable and compensable.

TYPICAL PROJECT CONTROL RECORDS

A time extension request is usually performed and submitted during the project. A delay analysis, however, is often performed after project completion. Both rely on a variety of project control documents that are typically prepared by the owner, the design professional, the construction manager, the general contractor, and/or its subcontractors. The size and type of project often dictate the extent of the project controls, which may include some or all of the most common tools discussed below. Many of these tools and logs may be housed in a single program, which simplifies the data-gathering. However, the contractor, the project needs, and the contract documents may all impact where and how the data is gathered and maintained. Depending on the forum for resolution of the dispute, the result could be that some of these documents may not be immediately available to both parties unless they were exchanged during the normal course of the project. For example, the parties to a dispute that is outside the structure of arbitration or litigation will not get access to the others' internal documents. Thus, good record-keeping as well as an accurate recording of the project history during the active project benefits both parties.



- **CPM Schedules:** Critical path method (CPM) schedules can incorporate the changes often seen in today's dynamic and complicated projects and have become the contractor's standard project control tool. A baseline CPM schedule and regular updates, including a written narrative, are typical for most projects.
- **Change Order Log:** A change order (CO) log is often maintained by both the owner's design professional and the contractor. This log maintains a history of proposed and executed changes to the contract.
- **Submittal Log:** A submittal log tracks the contractor's submittals to the owner and its architect or engineer. The contractor's submittal preparation and the owner's corresponding approval process often impact the schedule. The log should accurately record the receipt, response and disposition dates of each submittal. The submittal log is also used to update procurement activities in the schedule.
- **Request for Information Log:** A request for information (RFI) log tracks the questions submitted by the contractor and the response date from the owner and its architect or engineer. While the log itself can be useful, the paperwork for the RFI should also be maintained to explain what work items may have been changed and the potential impact on any controlling work item that allegedly caused project delay.
- **Material Receiving Log:** A material receiving log is usually maintained by the contractor, or on much larger projects, by the construction manager or owner's agent. The log provides a timeline for the delivery of critical materials to the project site and is used by the contractor to update its schedule.
- **Other Logs:** Large industrial projects such as chemical plants, process plants, oil, gas or chemical facilities, etc., may require additional logs such as hydrotest, system turnover and final-completion logs. The delay analysis on one of these multifaceted projects may only relate to a certain system or systems. The availability of these logs will help identify and prove a critical path delay on one or more of these system(s).
- **Quantity and Man-hour Reports:** Large projects that are driven by bulk quantity installation, such as concrete, steel, pipe, wire, and cable and instrumentation often employ more sophisticated tracking systems. As a result, key commodities can be tracked by quantities installed and man-hours incurred. Progress and productivity can then be computed and compared to the schedule output, and additional metrics can be calculated to evaluate and quantify delay.
- **Monthly Pay Requests:** Monthly pay requests track project status by line items and can be used to gauge progress, especially on smaller projects that lack quantity and man-hour reports. However, line items that combine equipment, material and labor may result in a skewed interpretation of project status and progress. The owner should consider breakouts between equipment, material, and labor by line item.
- **Monthly/Weekly Progress Reports:** Contracts often define the project parameters required for inclusion in these reports. However, regardless of the contract, items that should be included are schedule status, critical path, progress curves, open issues, contractor needs, and other required data. A chronological set of monthly and weekly reports provides a history of the project for the analyst and recipient of the claim. The contractor's claim should be consistent with the written reports and attachments submitted during the project.
- **Daily Reports:** A daily report is the most common periodic record of the project maintained by the contractor. It typically lists manpower and activities by trade or subcontractor, weather conditions, and key events. A series of daily reports can be used to help define and support a discrete delay period and support (or dispute) as-built activities as recorded in the project schedules.
- **Meeting Minutes:** During most projects, weekly progress reviews, design reviews, change order negotiations, and other meetings are regularly held to review, document, and facilitate project progress. The contract often identifies the party responsible for preparing the meeting minutes; nevertheless, each party typically reviews and approves the minutes before they become official. The meeting minutes are an excellent means to track critical issues and key directives and decisions from the owner, as well as contractor commitments. The contractor should use these meetings to define its needs from the owner and advise of impacts and delays. The owner should use these meetings to gather information from the contractor. In both cases the meeting minutes should form a record of events and impacts, notices, discussion, decisions, or directives, etc.
- **Project Correspondence:** Correspondence between all project participants is extremely helpful to "connect" all of the documents above and draw conclusions. Correspondence from the contractor is helpful to provide notices of delay and provide the basis for its positions on certain issues. Similarly, correspondence from the owner can provide perspective or provide more information on issues. The parties' correspondence is necessary to establish facts and determine what happened during the project while it was being delayed. These records help identify the cause of the delay, as well as the responsible party.
- **Emails:** Emails are yet another tool for fact-finding or establishing a party's position on an issue contemporaneous with the event. As formal correspondence declines in today's world and email becomes more prevalent, email should be maintained as part of the project record. Even though email can sometimes be considered informal, it is important to maintain the same level of professionalism and thoroughness that is typically used in formal letters.

- **Photographs/Video:** Time-stamped photographs or project videos are invaluable to show progress as well as conditions that caused delay. To ensure that all issues and conditions are captured, the owner and contractor both should take photographs and/or videos throughout the project.
- **Monthly Reports:** Monthly project reports contain narratives of events for the past month, required status reports and metrics, and quite frequently, a list of potential delay events and pending changes and time extension requests. If the contract requires it, these reports may also include the contractor's plan for making up lost time and/or working around impacts to the project.
- **Design Bulletin/Sketch/Proposal Request Logs:** These logs are an official record of directed changes, responses to contractor inquiries, cost and time proposals requested, etc., and form a contemporaneous record of when events such as these occurred.
- **Nonconformance Logs:** These quality-control logs document certain inspection events revolving around installed work that did not meet the requirements of the contract. Such events are typically classified as contractor-caused delay (or non-excusable delay).

PROJECT CONTROLS: BEST PRACTICES FOR OWNERS

The owner has the ability to set the basis for project controls in its request for proposals or invitation to bid and the subsequent contract documents. In the bidding stage, the owner, in lieu of providing the contract-required forms, can request the contractor to define its project control methods and submit samples, which can help the owner choose the successful contractor and set expectations for project monitoring and reporting. The contract should define the scheduling requirements, procedures for time extensions, standard meetings, and project reporting required of the contractor.

During the project, the owner should review all schedule submittals and respond with its concerns. To aid in its evaluation, the owner should require the schedule to be provided in native format, which can be analyzed in greater depth than a .pdf or hard copy. The owner should also be diligent and timely in responding to all contractor correspondence, requests for information, submittals, and notices of delay.

It is also recommended that the owner obtain the basis for the contractor's daily overhead rate as part of the bid or as a line item in the pay requisition to aid in resolution of compensable delays.

PROJECT CONTROLS: BEST PRACTICES FOR CONTRACTORS

The contractor typically is responsible for means and methods. Nevertheless, the contractor should conform to the scheduling, notice, and project control requirements in the contract. Failure to do so could jeopardize any delay claim, either excusable or compensable. Obviously, the contractor has the option to utilize more project control tools if it feels additional tools are required for the project and, if necessary, prove any owner delays or defend against an owner's liquidated damage claim.

The schedule should contain submittal, approval, and delivery activities for key materials on the project, and any owner or third-party required activities since any or all of these activities could impact the schedule. Although the difficulty is understandable, the contractor should add change-order work to the schedule as contemporaneously as possible to identify, quantify, and disclose potential impact. The contractor should also ensure that its schedules, particularly the reported critical paths and other documents, are accurate. A schedule that overstates delays and/or creates false critical paths alerts the owner to an inappropriate claim and may lead to an adversarial relationship.

The daily report is the lowest level of detail that exists on the project. The daily report can be used to record impacts, owner decisions, and other relevant data to support a delay claim. As with the schedule, daily reports have to be accurate, timely and complete.

Project control tools and the record they create can be very effective aids to proving or defending a delay claim. However, the contractor should not abuse these tools, as the owner's records and/or representatives could challenge them or label them erroneous, leaving the claim as lacking the proper support.

CONTACT

SCOTT A. BEISLER

Director
Navigant
Global Construction Practice

navigant.com

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CONCLUSION

The contractor's schedule analysis and delay claim preparation, the owner's review of the delay claim, and the negotiation of a delay claim are all aided by reliable project control records. If the claim proceeds to higher forums, project control records can assist the mediator, arbiter, or judge to understand the quantification and proof of the delays.

The owner increases its claim vulnerability if it does not include the necessary schedule specifications, project management requirements, and time extension and dispute clauses in the contract. The owner further escalates its exposure if it does not properly enforce the specifications, as its silence may imply a waiver of such requirements. The owner should also respond to the contractor's requests for time extensions.

On the other hand, if the project control records are accurate and consistent with the facts, the contractor increases the likelihood of proving the delays, thereby increasing the probability of avoiding the advanced stages of dispute resolution. However, a contractor that does not utilize project control tools does so at its own risk.

Furthermore, if the contractor maintains inaccurate project control documents, the owner can use the contractor's own records to discredit the analysis and reject the claim.

Putting the legal arguments aside, it is in the best interests of all parties to use accurate project control tools during the performance period. Such tools improve the odds of a timely project completion, assist with time extensions during the project and, if necessary, provide valuable supporting documentation for the resolution of delay claims after completion.

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