

RECOVERY SCHEDULES

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In this article, as part of a continuing series of articles regarding critical path method (CPM) scheduling, Warner reviews various facets of schedule management when a recovery schedule is requested. Warner has significant experience in all areas of the construction process with clients varying from contractors and subcontractors to owners, and for all types of projects from residential housing to power plants. This series of articles is designed to pass along observations and insights, highlighting best practices found through the past 25 years of Warner's scheduling experience.

The author, Mark I. Anderson, has over 25 years of experience in the preparation, analysis and resolution of construction claims and disputes, both internationally and in the United States. His clients include many of the world's largest and best known participants in the construction industry. He has testified as an expert in the areas of CPM scheduling, delay analysis, and cost and damage analysis in various forums, including the US Court of Federal Claims, the Armed Services Board of Contract Appeals, and the US District Court, as well as before arbitration panels, mediators, and dispute review boards.

INTRODUCTION

When a contractor finds his project behind schedule and the completion date slipping, the project owner will often request that a new schedule be developed in order to meet the originally scheduled completion date. However, requesting that the contractor attempt to mitigate the slippage through schedule adjustments, and requesting that the contractor develop a recovery schedule are two very different requests. This article will discuss the ramifications of producing a recovery schedule and how contractors should protect themselves from losing rights to a future claim regarding schedule delays caused by others and/or acceleration of the work.

DISCUSSION

Three options are available when an owner requests that the contractor compress his schedule to meet the end date and produce a recovery schedule. The contractor can comply with the request, not comply with the request, or comply with that request in part. There are, of course, differing consequences to each of these actions. By being aware of what the consequences are for each of these options, a contractor may better manage his response and protect his rights.

Birth of a Recovery Schedule

As a project progresses there are a multitude of situations that may arise that are unanticipated at the time of developing the original schedule. An unanticipated event may occur from a change to the work or multiple changes to the work, differing site conditions, a natural disaster, or some other event that may cause a significant adjustment to the schedule. Many of these delay events can be compensable, but others are non-compensable (such as a contractor's slow performance). Some of these events will warrant a schedule adjustment while others may not be permitted to extend the project completion date. Similarly, the contractor could encounter more discrete events or a series of events that delay progress but are attributable to the actions or inactions of the Owner.

When an unanticipated event or a series of events occurs and results in slowing the progress of the work, a recovery schedule may be requested by the project owner. The recovery schedule's purpose is to change the sequencing of activities, and/or duration of activities, in order to return the current projected schedule completion date to that of the planned completion date.¹ Often this request is made when there are liquidated damages (LDs) that will be assessed if the contractor fails to complete the project on time.

Why Resist the Owner's Request for a Recovery Schedule

The owner may request the recovery schedule, but there are many reasons that the contractor may resist creating one. By creating a recovery schedule, the contractor

¹ As discussed in a previous article, by using progress override the schedule activities may be forced to overlap predecessor and successor activities. This is not the recommended way to produce a recovery schedule because the logic of the activity sequencing may appear out of order when this function is used. Best practices would dictate that a new schedule with the adjustments in the logic properly accounted for be performed manually.

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may be admitting that the delays are his responsibility. The contractor could also be waiving his right to recover for impacting events that have not yet been quantified. Also, the contractor could be accepting the cost of acceleration.

Contract provisions that include recovery schedule language often will have language similar to the following: “*Should the Contractor’s performance fall behind schedule and the current projected completion date be beyond the planned completion date, the Owner may request the Contractor to prepare a recovery schedule...*”. But language such as this leaves the responsibility for the late performance with the contractor. Thus, by merely creating the recovery schedule the contractor may be admitting that the reasons for the current delay to the project completion are his responsibility.

Production of a recovery schedule should not be confused with the contractor’s duty to mitigate. By common law principles, a contractor has a duty to mitigate delays caused by impacting events, even if he is not responsible for the impacting event. This means that the contractor must always attempt to find ways to reduce the impact of delay events, whether through a recovery schedule or other means.² This is where the middle ground position is typically taken. The contractor will promise the owner to complete the work as diligently as possible, to reduce any hidden float in their activities, and/or change the sequencing of activities so long as they can be done concurrently without cost impact to save time. These promises would be made without creating a full recovery schedule.

In order to help protect the contractor’s interest, it is best at the time of developing and submitting a recovery schedule to provide an estimate of the magnitude of the likely costs of implementing the recovery schedule. This, in turn, forms a basis of notice to the owner of the likely cost implication of a recovery schedule directive. It opens the dialogue as to the consequences the owner may face if the recovery schedule mechanism is utilized without the contractor conceding to pay for the costs of such revised plans. A recovery schedule might not even be possible or feasible, and the owner must be alerted to such a situation as soon as possible.

The contractor can resist the request to produce a recovery schedule without an order (or directive) from the owner. The requested order would effectively be to

² This is done so long as there are negligible costs associated with the mitigation, or the mitigation reduces the ultimate cost/time impact of a change event.

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accelerate completion of the project. If a contractor is ordered to complete the project earlier than the adjusted scheduled completion date, then the owner is directing acceleration. The adjusted scheduled completion date would be the date that the contractor should finish after extending the period of performance for excusable delay events. If an acceleration of the project schedule is requested, then the contractor should alert the owner as to the costs that will be incurred due to such acceleration and request a clear directive from the owner that directs the acceleration.

Without a direct order to accelerate, the contractor may still claim “constructive acceleration”. If the owner does not explicitly instruct the contractor to accelerate but does direct the contractor to produce a recovery schedule that maintains the original (unadjusted) completion date, then the owner is constructively ordering the contractor to accelerate by ignoring excusable delays. By ignoring excusable delays and maintaining the finish date, the contractor may need to add work crews or work more days each week to maintain the original finish date. These added costs are the acceleration costs.

Of course, constructive acceleration falls under the changes clause of the contract and therefore requires a notice by the contractor to the Owner that they have taken steps to accelerate and will incur costs as a result of the change. The notice provision within the contract should be carefully reviewed to be sure the timing of this claim submission is given correctly. For example, in the Engineers Joint Contract Documents Committee Standard General Conditions of the Construction Contract (form 1910-8) Article 12 is entitled, “Change of Contract Times” and states in part:

Any claim for an adjustment of the Contract Times (or Milestones) shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim.

Similarly, the American Institute of Architects General Conditions of the Contract for Construction (form A201) Article 4 (4.7.3), entitled “Time Limits on Claims” states in part:

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Claims by either party must be made 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.

These contract boilerplate forms may also be supplemented with language referring to recovery schedules, thus, a careful review of the contract should be performed prior to creating the recovery schedule.

These concepts are applicable in Federal Government contracting as well. In order to recover for constructive acceleration the Federal Court of Claims declared in Norair Engineering Corp. v. United States, 666 F.2d 546 (Ct. Cl. 1981) that the contractor must prove:

- 1) The Contractor has encountered excusable delay for which he is entitled to a time extension;
- 2) The Contractor specifically requested a time extension from the Owner according to the contract provisions;
- 3) The Owner failed or refused to grant the extension;
- 4) The Owner either:
 - a. expressly ordered completion within the original performance period, or
 - b. acted in such a way that it was clear that he required the Contractor to complete within the original performance period;
- 5) The Contractor gave notice to the Owner that he considered the actions of the Owner a constructive change order for acceleration; and
- 6) The Contractor actually incurred excess costs as a result.

The contractor might also want to avoid incurring the acceleration costs if the LDs are not high enough to offset the cost of acceleration. This situation is most likely to occur when the projected delay is not very great and the cost for acceleration is very high. However, this puts a heavy reliance on the current projected completion of the schedule. If all the delays have not yet occurred or if the projected completion appears to be speculative, the cost of the risk may also offset the cost of acceleration.

Results of Not Complying with a Recovery Schedule Request

Again, there is a difference between a failure to mitigate and a failure to produce a recovery schedule. If the contractor fails to mitigate, he may forfeit rights to a delay claim or offset damages claimed. However, if the contractor fails to produce a recovery schedule he may be in breach of contract. A contract breach would occur if there is a specific provision in the contract requiring the performance of the recovery schedule. But a contract breach could also occur if the contract is not performed in a timely manner or the contractor fails to perform the owner's directives. The failure to perform in a timely manner could include missed intermediate milestones, depending upon the contract. Therefore, if the contractor decides to not comply with a directive to create a recovery schedule, he must also consider if the owner would declare a breach of contract and dismiss the contractor or withhold further funding.

Other Considerations

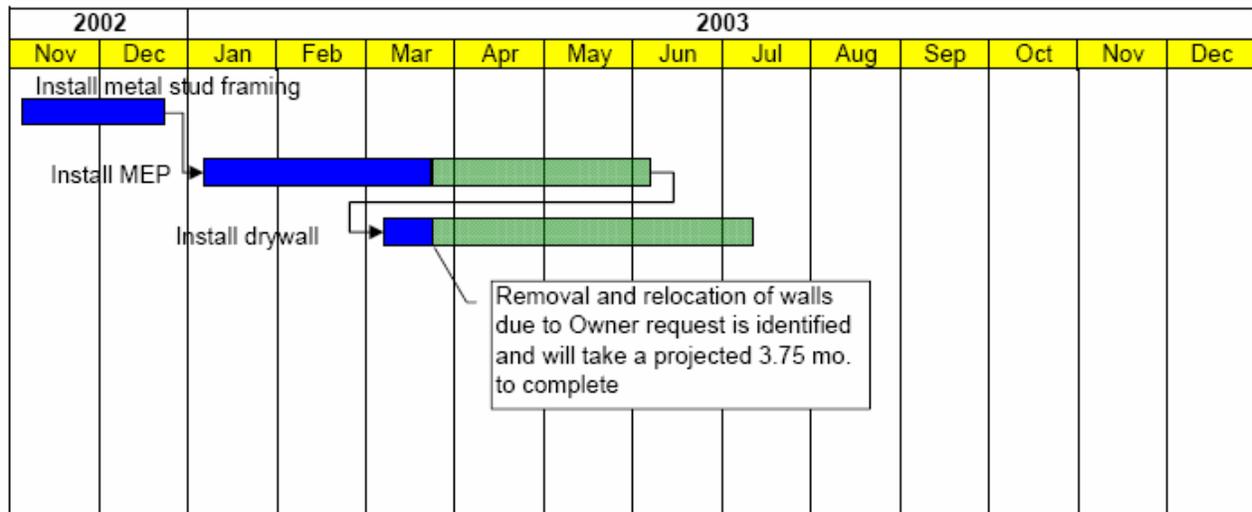
The contractor may avoid a request for a recovery schedule from the owner by both providing regular schedule updates and using a fragnet for specific delay events. By providing regular schedule updates, the contractor can be assured that the impact of delay events are captured in a timely manner and the delay to the project is not a surprise. By catching the delay as soon as it occurs, the contractor may be able to alert the owner as to the cause of delay and thwart additional impacts from the event or series of events. Regular updates also provide an opportunity to insert a group of activities, or a fragnet³, into the schedule to demonstrate the source of the delay and to track its impact. When an unanticipated event or changes to the work occur, the logic of the original schedule may no longer be accurate. If this becomes systemic, the scheduling logic may be so different from the actual work sequencing that a recovery schedule may be required. In order to avoid reaching this point, a fragnet, or group of activities representing the change, should be inserted into the schedule. By using a fragnet, a recovery schedule may not be required and/or a time extension is more likely to be given. At a minimum, developing and presenting a

³ Primavera allows a fragnet to be built independently, saved, and later recalled into schedules. Other scheduling software may not have this capability, but it can be done in concept by manually adding activities to the schedule. Fragnets are more typically used when you have recurring groups of activities with the same sequence in multiple areas. However, they can also be used in this context to breakout a change or unanticipated logic for planning purposes, and later inserted into the schedule as a separately identifiable group of activities.

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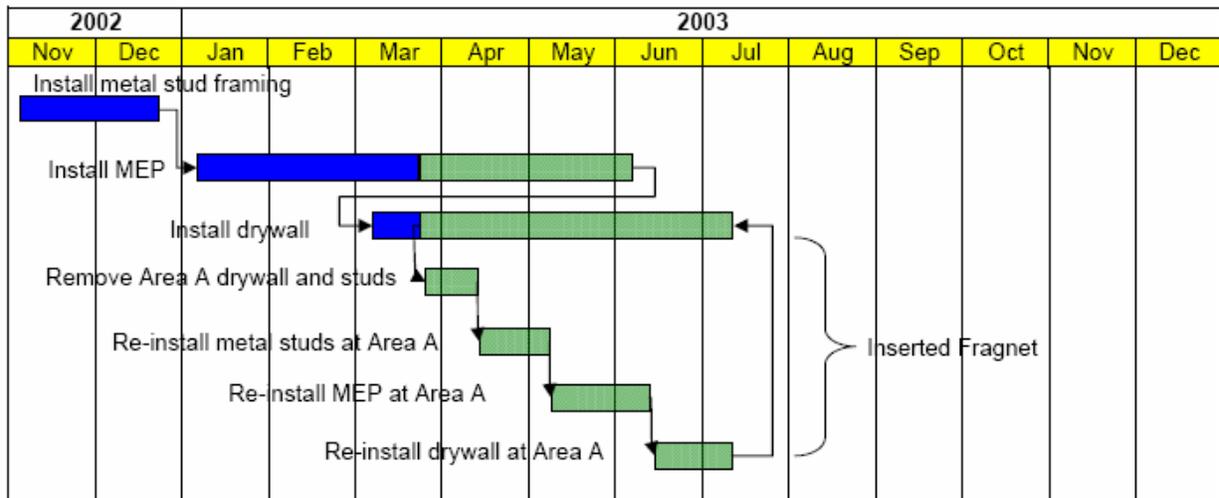
contemporaneous time extension request will serve as a basis to later argue for recovery of additional costs incurred to implement a recovery schedule.

A simple example of inserting a fragnet is as follows. A building Owner decided to remove and relocate certain walls during the building's construction, but only after the walls were already installed. Hypothetically, the contractor projects the removal and reinstallation to take 3.75 months and that it will be performed simultaneously with the installation of the other areas of the building. Please see the figure below for a graphical representation of this scenario where the blue represents the current progress and the green represents the projected durations.



As you can see in the graphic above, the durations and sequencing of the activities become ambiguous due to the projected prolonged installation of the drywall. This is even more complicated if these activities are resource loaded because the drywall activity represents demolition, metal stud reinstallation, as well as drywall installation. In order to better manage this scenario, a group of activities (a fragnet) may be added as shown below.

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The graphic above shows the activities required to perform the new work. The new activities may now be properly man-loaded by trade, while the remaining drywall installation can continue to be loaded as planned. This is, of course, an oversimplified example, but it is easy to see how without the inserted fragnet progress tracking would be inaccurate. These inaccuracies could lead the owner to believe that the extended duration (in this case the drywall and MEP operations) could be due to some other cause, and the responsibility of the contractor, and hence lead to the owner requesting an unnecessary recovery schedule.

CONCLUSION

The contractor has several options when a project owner requests a recovery schedule; comply, fail to comply, or provide an estimate of costs and request a written directive to accelerate. Whether one of these three options or another avenue is chosen, several important points a contractor should keep in mind are listed below.

1. Keep schedule up-to-date and accurate with respect to project status and changes incorporated.
2. Add changes that impact the schedule as independently identifiable activities, or fragnets, whether or not a time extension has been finalized or approved.
3. If entitled to a time extension at the time of the recovery schedule requirement, fully document and submit this request contemporaneously with the recovery schedule request.

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4. Demand from the owner specific direction for development of a recovery schedule be made in writing by the owner, especially if the contractor believes it is entitled to a time extension.
5. Document the basis of recovery and estimate the costs.
6. Seek owner's acknowledgement of these costs, if not an agreement to pay.
7. Keep records of costs incurred in implementing the recovery schedule. Submit these regularly to the owner with an update of the current estimated costs.
8. Be cautious with refusing the owner's direction to produce recovery schedule. As a first step, consider preparing the schedule and estimating the cost for the owner's approval before implementing.
9. Mitigate cost increases wherever and whenever possible as an obligation under your contract.
10. Do not volunteer a recovery schedule; protect your interest if Owner impacts have occurred.