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The following is a five-part article addressing concurrent delay.

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## DISSECTING THE DOCTRINE OF CONCURRENT DELAY

The concept of *Concurrent Delay* is one of the most hotly contested topics in the industry. Both Owners and Contractors invariably use Concurrent Delay as an excuse to avoid responsibility for claims of extended overhead claims or liquidated damages assessments. Unfortunately, there is no uniform application of the Doctrine of Concurrent Delay. Contracts seldom address it. Courts can't seem to agree on what it is or how it is measured. This five part discussion of Concurrent Delay is intended to help provide you with an understanding of the confusion and controversies arising from Concurrent Delay and ways you can proactively address Concurrent Delay to avoid costly disputes of uncertain outcome.

### Criticality - What Do the Courts Say?

While it is common for project participants on a delayed project to toss the term "*Concurrent Delay*" about freely, it is rare that the construction contract actually defines what it means. Furthermore, there is a divergence of opinion on the net effect of concurrent Excusable, Non-Excusable and Compensable delay events when the contract is silent on the topic [1]. If this issue is not addressed clearly in the contract documents, it is virtually certain that the parties will disagree over who should bear the cost of time during the Concurrent Delay periods.

The answer to the Concurrent Delay riddle is further complicated because it is rooted not only on contractual and legal principles but also on a technical assessment of the project schedule. Fortunately, Critical Path Method (CPM) scheduling can assist with this task. Unfortunately, even those that practice CPM scheduling every day can differ in their definition of criticality [2]. Ultimately, answering the question "*What is Critical?*" is a function of whether



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**A. The Longest Path Theory**

*"Under the Longest Path theory, if an activity has float, with respect to the longest path, in excess of a given delay, it can absorb that delay and, thus, no time extension will be required. The mere fact that an activity has negative float will not be determinative of its criticality [3]," Or,*

**B. The Negative Float Theory**

*"Under the Negative Float theory...all activities that have negative float are critical [3]."*

Be aware that each CPM path (including the project's Longest Path) can be influenced by preferential logic, modified work activity durations and specified calculation methods. Further, network paths routinely change as a project is built and the schedule is updated.

Therefore, it is vitally important that *criticality* be defined by your contract documents! If your contract is like most and does not address this topic, you may find yourself at the mercy of the courts when litigating liability associated with the Doctrine of Concurrent Delay. So, what do the Courts and Boards say?

**A Finding That The Longest Path Determines Criticality**

Consider the Board's decision in Santa Fe, Inc., VABCA No's. 1943 – 1946. In this case, Santa Fe, Inc. was awarded a contract for the construction of a hospital at a Veteran's Administration Medical Center. Substantial Completion was 101 days late. The contract contained a liquidated damages provision. As a result of the delay, the V.A. withheld \$242,400 in liquidated damages. The Contractor appealed and sought time extensions and a remission of the liquidated damage assessment.

The section of the contract for this project entitled "Adjustment of Contract

Completion Time” read as follows:

*“Actual delays in activities which, according to the computer-produced calendar-dated schedule, do not affect the extended and predicted contract completion dates shown by the critical path in the network will not be the basis for a change to the contract completion date.” [Paragraph A of NAS-13]*

Despite this contract language, Santa Fe seems to argue that the *Negative Float* approach applied. Santa Fe reasoned that, but for Longest Path Delays incurred by their team, Subordinate Delays incurred by the Government would nevertheless have delayed the project. Santa Fe maintained that:

*“... the impact of changes on the unchanged work cannot be demonstrated by the CPM rules we must use and the Government’s reliance on rules is not applicable or just because All uncompleted work becomes negative and therefore CRITICAL once the scheduled completion date has been reached.”*

Santa Fe also asserted that:

*“...any work sequence or CPM path which runs past its contractually required completion date to be critical and any delays on those work sequences to be on the critical path.”*

In response, the Government relied upon the plain language of the contract in espousing the *Longest Path Theory*. The Board resolved the dispute in favor of the Government, stating:

*“Since liquidated damages are only imposed for delays in project completion, it is manifest that only those delays should be considered which actually affect project completion. By their nature the delayed activities involved must necessarily lie on the critical path of the project as it was actually completed. In terms of the concurrent delay rule then, the concurrent delay must pertain to activities whose completion was critical to completion*

*of the project itself. Appellant cannot successfully urge, as it apparently seeks to do, that because critical contractor-caused delays.....were concurrent with non-critical Government delays... the imposition of liquidated damages may be avoided. Relief from the imposition of liquidated damages must depend upon showing concurrent delay in respect to activities on the critical path.*

*“...DECISION: For the foregoing reasons all of the appeals herein are denied....”*

In support of its finding, the Board cited Blackhawk Heating & Plumbing Co., Inc., GSBCA No. 2432, 75-1 BCA ¶11,261, motion for recon. den., 76-1 BCA ¶11,649. The Santa Fe decision is a clear affirmation of the *Longest Path Theory* of Criticality.

#### **Another Court Accepts the Negative Float Theory of Criticality**

Alternatively, consider the court's decision in *Toombs & Co., Inc. v. United States*, 4 Cl. Ct. 535 (1984). Here, the Federal Aviation Administration contracted with Toombs & Co., Inc. for the construction of an air traffic control tower in Fairbanks, Alaska. The Notice to Proceed date was April 15, 1977. The original Beneficial Occupancy date was January 10, 1978, 270 days later. The contract stipulated liquidated damages in the amount of \$1,000 per day.

During the course of construction, metal siding panel fasteners failed. It was also discovered that grouting, required by specification, had not been placed in masonry block work. Deficiencies in reinforcing steel installations were discovered and block walls were constructed out of plumb.

The Contracting Officer issued a Stop Work Order to prevent work on all activities that could have an impact on the correction of panel deficiencies. The Stop Work Order also addressed necessary remedial work associated with deficient block wall construction. The Government assessed liquidated damages in the amount of \$181,000 for a 181-day delay to the Beneficial Occupancy date.

Toombs filed a lawsuit against the Government seeking among other things the remission of liquidated damages. The Government asserted a counterclaim associated with deficient workmanship.

Although the Court found that the Government bore responsibility for the panel connection failure, the Court also determined that:

*"...Plaintiff's exceptionally shoddy work warranted concurrent suspensions.*

Further, the Court held:

*"Plaintiff seeks remission of the entire....(liquidated damage) assessment on the ground that when both parties are at fault and are responsible for the delay, liquidated damages cannot be recovered from the contractor. Plaintiff paints with too broad a brush. When it is reasonably possible to apportion the delay among the various causes, liquidated damages may be assessed notwithstanding concurrent causes attributable to both parties"*

*"....plaintiff is entitled to....additional days.... . These adjustments, which total 55 days, apportion the delays between the parties according to fault and is a reasonable allocation of their respective deficiencies. Plaintiff is entitled to a remission of \$55,000; and liquidated damages assessed against plaintiff, accordingly, will be reduced to \$126,000."*

In stark contrast to the *Longest Path* findings in *Santa Fe*, the *Toombs* decision affirmed the *Negative Float Theory* of Criticality. In *Toombs*, the Court recognized that both the Contractor and the Government caused the delayed completion. Nevertheless, the Court held that *Toombs & Co. Inc.* was entitled to a remission of liquidated damages for the Concurrent Delay period.

Therefore, reliance on case law for clear and unambiguous guidance on the practical application of Concurrent Delay theory can be dangerous.

**References**

1. Peters, Thomas F., *Concurrent Delay - What is It and Why is It so Important, Dissecting the Doctrine of Concurrent Delay, Part 1 of 5*, PinnacleOne E-Newsletter, November 2003
2. Peters, Thomas F., *Criticality and Multiple Work Paths, Dissecting the Doctrine of Concurrent Delay, Part 2 of 5*, PinnacleOne E-Newsletter, December 2003
3. Jentzen, P.E., Gary H., Spittler, Philip and Dr. Ponce de Leon P.E., Gui, *Responsibility for Delays After the Expiration of the Contract Time*, 1994 AACE Transactions

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