

Cumulative Impact of Change Orders – Real But Difficult to Prove

By James L. McGovern & Jack A. Lazarczyk

W e never thought we would say it, but two plus two, sometimes, is more than four. While this may appear like an introduction to a bad accounting joke, it is an accurate description of what is known in the construction industry as the cumulative impact of change orders.

What is Cumulative Impact?

Change orders are a fact of life on nearly all construction projects. They come from design changes, owner's requests or unforeseen circumstances or conditions. It is expected and anticipated by contractors. They can add, subtract or modify work on projects and are typically accommodated without disrupting the base work or affecting the overall schedule. However, on some projects, there comes a point when the number of changes starts impacting the overall progress and productivity on the project.

Cumulative impact has been described as, "The unforeseeable disruption of productivity resulting from the synergistic effect of an undifferentiated group of chang-

es." *Coates Indus. Piping, Inc.*, VABCA No. 5412, 99-2 BCA ¶ 30,479, 150,586.

Two points are important when considering cumulative impact. One, there is no bright line as to exactly when cumulative impact occurs, and two, the true cost of cumulative impact is often not discovered until project completion.

The sum of individually priced change orders typically fails to capture cumulative impact. The Electrical Contracting Foundation (ECF), the Construction Industry Institute (CII) and the Mechanical Contracting Foundation (MCF) have commissioned research in this area conducted by professor Awad Hanna of the University of Wisconsin – Madison. Hanna's research confirmed the impact of multiple change orders on labor productivity and offered a methodology to quantify it. *Id.* At 125(4), 224–232.

While cumulative impact damages have been recognized in theory, the resulting claims are often viewed by owners and their representatives with skepticism. The challenge lies in proving causation and segregating the damages from costs previ-

ously incurred by approved change orders and other factors, such as a contractor's self-inflicted harm.

Representative Cases

Claims for cumulative impact have been recognized since the late 1960s after the federal government changed the Standard Changes Clause in 1967, adding language that covers the effect of changes on unchanged work. Prior to then, the Rice Doctrine had precluded courts from considering the effect of change orders on portions of the work not directly covered by the change as ruled in *United States v. Rice* 317 U.S. 61 (1942).

However, since then findings on the application of cumulative impact damages has not yielded a bright-line solution in the law. In the cases where cumulative impact damages were denied, one or more of the following reasons were cited: (a) the change orders did not result in a fundamental change in the contract; (b) there was insufficient proof of a causal connection between the change orders and lost productivity; or (c) waiver language in the contract or change orders prohibited recovery.

Bell BCI Co. Case

One case that stands out as particularly instructive is *Bell BCI Co. v. United States* 81 Fed. Cl. 617 (2008).

Back in 2008, the contracting community was on the edge of its seat, reading an opinion issued by the United States Court of Federal Claims. The opinion validated what many in the construction industry already knew, but had a hard time proving; namely that, multiple change orders can cause damages by reaping havoc on project schedules and productivity.

Bell BCI Company was hired to construct a laboratory building at the National Institute of Health (NIH) campus in Bethesda, Maryland. NIH issued more than 200 contract modifications, which included the addition of a new floor nine months into the construction. These changes delayed the

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completion of the project by 19½ months and increased the contract price by 34 percent or \$21.4 million. Although Bell was paid for most of the change orders, the company asserted an impact claim for the cumulative affect of the changes on Bell's overall performance.

Judge Thomas C. Wheeler found in favor of Bell and noted in a brief summary that the addition of a new floor after construction had begun caused many mechanical and electrical changes after the work had already been installed. While the changes and delays continued to accumulate, NIH and its representative compounded the problems by directing Bell to perform extra work without time extensions or authorizing Bell to accelerate performance. The judge found NIH's defense of accord and satisfaction without merit and awarded Bell all of their claimed damages in the amount of \$6,200,672 plus interest. The awarded damages included: (1) \$563,125, the unpaid balance of the contract price; (2) \$1,610,987 for unresolved changes; (3) \$1,602,053 for the delays of remaining on the project after the original completion date; (4) \$2,058,456 in labor inefficiency costs attributable to the cumulative impact of the changes; and (5) \$366,051 as a 10 percent profit on the delay and labor inefficiency costs.

The court's finding in favor of Bell, however, did not create an automatic passage for Bell's subcontractors. Out of five subcontractor *pass through* claims, the court sustained only one. The key factor in this decision was that the subcontractors did not submit any specific evidence as to their damages and they did not present any witnesses at trial. The successful subcontractor whose claim was sustained, presented *measured mile* based calculations of damages and presented witnesses at trial.

The Appeal

NIH appealed the Federal Claims court decision to the U.S. Court of Appeals for the Federal Circuit. *See Bell BCI Co. v. United States* 570 F.3d 1337 (2009). The appeals court focused its attention on one particular modification, Mod 93 that Bell signed for costs and time incurred as a result of a material change to the contract, under which NIH wanted to add an additional floor to its five-story project. Mod

93 was different from previous modifications in that it contained new waiver and release language stating:

The modification agreed to herein is a fair and equitable adjustment for the Contractor's direct and indirect costs. This modification provides full compensation for the changed work, including both Contract cost and Contract time. The Contractor hereby releases the Government from any and all liability under the Contract for further equitable adjustment attributable to the Modification.

Bell argued that by signing this modification, it was agreeing to the cost of adding the additional floor, including indirect costs and impacts such as extended home and field office overhead. Bell claimed that it did not intend to waive its right to recover future delays and impacts caused by cumulative changes to its work. There were more than 100 modifications, combining 279 extra work orders issued after Mod 93, causing Bell further delay, disruption and loss of productivity.

The trial court sided with Bell, finding that waiver language in Mod 93 did not address cumulative delay and impact. The appeals court, however, reversed, holding that modification language released the government from *any and all* liability attributable to Mod 93, including cumulative impact and delays. The appellate court's opinion was not unanimous; it was accompanied by a dissenting opinion from Judge Newman, who found the findings and rulings of the trial court to be fully supported by the evidence and the law, and should have been affirmed. In the discussion, Judge Newman pointed that:

...the cumulative impact and inefficiency problems did not arise right away, but burgeoned as changes continued to be required. The trial court did not err in holding that the release terms in Mod 93 did not bar compensation for future events, for it was not disputed that Bell was told that no more than 4-6 Extra Work Orders should be expected, and that 279 Extra Work Orders caused cumulative disruption, delay, and inefficiencies.

The appeals court remanded the case to the Court of Federal Claims to determine what portion of Bell's cumulative impacts and delays were attributable to Mod 93 or other modifications containing the same waiver language.

In our opinion, determining a particular change order's contribution to the cumulative impact is a very difficult, if not impossible, task. It goes against the grain of the very premise of the cumulative impact; that the damages are not caused by individual events, but their aggregate. Not surprisingly, that task was never completed in that case as attorneys for the government and the contractor, Bell, submitted a joint stipulation of dismissal to the U.S. Court of Federal Claims ending seven years of litigation.

Lessons from the Case

The *Bell* case affirmed that while a certain quantity of change orders is nearly inevitable on a construction project, there is some point where multiple changes cumulatively impact a contractor's ability to perform the work efficiently. In fact, Bell's methodologies for quantifying the cumulative impact survived the rigor of litigation. However, in the end, Bell did not prevail because the release language contained in Mod 93 limited Bell's entitlement.

Bell's experience points to several recommendations for contractors and their advisers. Proving cumulative impact requires excellent tracking of productivity on the job. Documenting periods of unimpacted performance is as important as doing so when things go poorly. Technological advances make it easier to maintain detailed daily logs, track cost and time based on distinct activities. A contractor's very best performance data can be used as a benchmark on the same or other projects. Reliance on expert and lay testimony combined with a well-organized compilation of the historical events of the project will go a long way toward a successful outcome.

Even the best record keeping and analysis, however, can be rendered useless by inadvertently signing a waiver or release. Thus, contractors should be very careful when presented with waivers and pay close attention to what is expressly covered by the waiver. When in doubt, it is always best to consult with an experienced attorney.