

Dealing with the “Ripple Effect” or “Cumulative Impact” of Change Orders

By Matthew DeVries

Last week was crazy for me! Not only did I have more meetings than one could fit in the work week, but we had to find alternative overnight plans for our six children for an out-of-town event. Just like a construction project, we had to deal with the “ripple effect” of changes to our plans.

Changes, differing site conditions, and delays frequently occur on complex highway and bridge construction projects. Whether the owner is a federal agency, state government, or local municipality, contractors are regularly asked to perform the “additional work” or “remedy the differing site condition” during the construction project. If there is not enough time for the contractor to prepare a change order with proposed costs, the contractor may be required to perform the work on a force-account basis.

RIPPLE EFFECT OR CUMULATIVE IMPACT

The “ripple effect” or “cumulative impact” of changes in the work, delays, and differing site conditions require the contractor to document work activities, as well as money spent for the additional work. In this instance, the contractor should also be focused on recovering compensation for the “impact” that the change, delay, or differing site condition had on the original scope of work.

Although an older case, the decision in *California v. Guy F. Atkinson Co.* provides a perfect illustration of these problems. The owner DOT contracted with the contractor to build 1.6-mile-long section of Highway 101. Various problems arose during the project relating to extremely wet soil conditions, which ultimately prohibited construction as specified under the bid plans. Over the course of the project, state engineers ordered numerous changes.

The contractor initially signed the change orders, which allowed for additional compensation on a unit price basis. The contractor later refused to sign the proposed change orders because its entire project schedule was disrupted and delayed. Ultimately, the



contractor submitted a claim for \$1.5 million in additional compensation for the cumulative impact of the changes.

ARBITRATOR AND COURT DECISIONS

The dispute was subject to mandatory arbitration, which resulted in a decision in favor of the contractor. The arbitrator awarded the contractor 65 percent of its claimed damages, finding that “[t] here were cumulative effects of all of the ordered changes. It is not feasible or possible to separately identify or measure those costs which were incurred by Atkinson as a result of the actions by the state.”

The award was confirmed at the trial court level, as well as on appeal. The appellate court noted that the changes ordered by the state were major, ongoing, and seriously impacted the entire project in terms of efficient use of labor, machinery, and planning ability. The appellate court held:

“The entire operation was disrupted by the ongoing piecemeal changes ordered by the state. The suggestion that only a small amount of the total embankment fill was actually replaced by other materials fails to recognize these massive ‘ripple effects.’”

As noted by the court, in most complex cases it is “humanly impossible to trace, find, specify in detail, and quantify in effect the numerous circumstances [that] cause or contribute to financial consequences.”

Just like a weekend away from six children requires advanced scheduling and backup contingency plans, the best way for contractors to deal with changes, delays, and differing site conditions is to prepare for the “ripple effect” or “cumulative impact.” Consider the time and productivity impacts of changes on the unchanged work when pricing changes. With proper planning and scheduling, the impact can be estimated and predicted. This can minimize the uncertainty of change. ■

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