

SMALL TOOLS LARGE DOLLAR\$

BY MATTHEW SCHEPS

Construction claims often assert that alleged impacts resulted in an extended project duration, thus forcing the contractor to incur additional time-related costs; one such cost that might be easily overlooked is that for small tools and consumables. While these costs may not be a large percentage of the total project budget, cost impacts to small tools and consumables could add up to a large dollar amount. When analyzing this potential cost impact, it is important to always follow the terms and conditions of the signed contract, which often defines small tools as relatively inexpensive items, typically less than \$1,000 in value, that in most cases will be used for multiple tasks. Due to the relatively small value, small tools are typically purchased, but in certain situations may be rented as well. Contracts typically define consumables as everyday items on construction projects that are purchased, used up, and replaced.

Budgets for small tools and consumables are often estimated as a function of labor; a contractor usually multiplies the total estimated labor hours for a project by its historical average cost (per labor hour) for small tools. The simple conclusion from this is that, if a contractor is impacted and required to expend additional labor hours on a project, those additional labor hours are not included in the estimate for small tools, and thus the contractor should be entitled to reimbursement for the corresponding small tools costs.

While the small tools and consumables budget may be simply calculated from a rate-per-labor hour, the number of man-hours estimated for each task, and thus the whole project, is based on the expected project quantities for the expected scope. Many contractors use their historical past costs to estimate upcoming projects. Based on its completed projects with similar scopes, the contractor forecasts that the current project being estimated will require a certain number of labor hours per unit of work installed. It estimates the required labor hours for each individual work-scope item based on the planned installed quantities and then sums these labor hours to estimate the total required labor hours for the project. Thus, while small tool budgets are a function of labor hours, there is also a natural correlation to installed quantities.

Accordingly, a change in both labor and installed quantities should alert the contractor and owner to a potential risk of increased small tools costs. However, an increase in a project's labor hours alone does not necessarily translate to an increased expenditure on small tools and consumables, as demonstrated in the following examples:

- If an unusually scorching Houston summer required additional breaks, resulting in additional expended man-hours above what the contractor estimated to complete the scope, it is unlikely that the contractor purchased extra hammers for the crews' water breaks.
- If a crew is on paid standby at an owner's request, it may be accruing additional expended man-hours above its estimate; however, it is unlikely that the contractor purchased additional shovels for the hours its crew was on standby.

- If a welder's productivity is impacted by inspection availability, the welder may require more hours to complete its welds; however, the total inches of welding is unchanged, and thus the number of welding rods consumed is likely unaffected.

The above scenarios do not involve changes to the original scopes or planned quantities, and thus may not affect the purchases of small tools and consumables. If there are changes to the original scope, or if small tools were rented, then small tools costs could potentially increase despite unchanged project quantities.

Small tools and consumables can amount to large dollar expenses, so it is worthwhile to analyze the risk on a case-by-case basis. Interface Consulting has considerable experience analyzing

project risk and remains available to assist owners and contractors with evaluating their unique projects. ♦



Matthew Scheps, a project consultant with Interface Consulting, possesses experience as both a project engineer and project manager with three national construction companies. Mr. Scheps provides expert services and analysis on complex construction projects, specializing in project management, cost analysis, change order management, planning, and procurement. His practical experience includes projects in multiple industry sectors, including commercial facilities, LNG, utilities, and transportation and infrastructure. Formed in 1986, Interface has been a member of ABC for over 25 years. To learn more, email Mr. Scheps at mscheps@interface-consulting.com.

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