

Construction cost estimates: reconciling, comparing and relating your estimate to another independent estimate

Ramani Sundaram, CCP CEP MRICS PMP

It is likely that two independent cost estimators will come up with two different costs, even when given the same set of project documents for pricing. Estimating is an art as well as a science, so no two estimates will be precisely the same. When independent versions of estimates are compared, differences in the estimated costs may sometimes be small, but can be significantly 'out', requiring more time and money to re-evaluate.

This piece discusses a number of important points to consider when reconciling, comparing or relating your figures to another independent estimate.

Reconciling the owner's design phase estimate with another independent estimate

The following steps will aid efficient reconciliation of two given estimates:

1. Check first whether the same set of project documents has been used by both parties for preparing the estimate. This is essential, as interpretation of project drawings, drawing notes and project narratives could vary significantly if the issued documents are not the same.
2. Review the basis of estimates (BOE) and the project scope for any discrepancy.
3. Compare quantities, unit prices and assumptions.
4. Make a side-by-side comparison of cost for subtotals (using CSI 'uniformat', 'master format' or another cost breakdown structure), and attempt to identify reasons for any cost variances.
5. Schedule a meeting with the other estimator and review the complete estimate.
6. Revisit take-offs and unit prices.
7. Refine assumptions, quantities, prices and mark-ups.

Following the reconciliation meeting, each party may go back and refine their estimates. Remember that the intent is not to match the other number to the penny, but to come close to each other within a variance of 5 to 10%.

Following standard methods for quantity take-offs

Methods used to quantify items can make a huge difference to the final outcome, especially for items with high unit prices. In one project example, an owner engaged a second consultant to do an independent estimate for a high-rise structure. The owner already had an estimate prepared by a different firm. The second consultant's estimate

was much higher for the foundations package. While comparing quantities, it was found that there was a large difference in the quantity of excavation, particularly in rock excavation. Even though contour drawings and a well-written geotechnical report had been provided, the first firm had not come up with the right quantity for rock excavation as their take-offs were not per issued documents. The first estimator had assumed an average depth of excavation for the building footprint (three below grade floors) without following the contour levels that indicated the rock depth varying almost by 18 feet between the diagonally opposite corners.



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Estimating with the same set of documents

Independent estimators need to receive the same set of project documents from the owner in order to make sure the scope is captured in both versions of the estimate. If there are multiple reports, it is better to issue a consolidated project scope summary that will form the basis of estimate.

As an example, in a recent hotel renovation project, three different reports were supplied – two reports from two different facility condition assessment consultants and one project improvement plan by the owner. One report recommended modernisation of existing elevators, whereas another one recommended complete replacement. Similarly, recommendations for the existing escalators differed between reports. For guest bathrooms, one report suggested complete remodelling, but the other only minimal renovation. The prospective construction manager (CM), working with the developer on board, prepared an estimate that was significantly lower than our estimate. This was because the CM had assumed the final scope after reading different reports, and included only those items in their estimate!

Aligning cost models

Comparison of estimates will be very difficult if the format differs between estimators. If there is an estimate prepared already in a certain format, the owner should ensure that the independent estimator is instructed to follow the same breakdown. In one example, the owner had asked the consultant to prepare an estimate according to contract packages whereas the CM had prepared the estimate using CSI (Construction Specifications Institute) divisions. In another case, this was reversed. In both these cases, reconciliation was very difficult and the consultant had to redo the whole estimate, involving unnecessary additional time and effort.

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Agreeing on assumptions

During the design phase, not all details may be available from the drawings and specifications. It may be necessary to make assumptions for certain items using methods commonly practised in the industry. Agreeing to use the same assumptions for such items may help to narrow the cost difference between both parties.

Agreeing on design allowances, such as pounds per square foot for steel framing or rebar quantity for concrete, will ease the process. If vendor quotes are available, both parties could agree to use the same quote for pricing. Similarly, both parties could agree to use the same percentages of mark-ups over the trade/raw costs, contingencies, escalation factor and so forth.

Beyond the ‘technical stuff’ and dollars, reconciliations also involve willingness to give and take between the two parties. For some items, both must simply agree to disagree!

Comparing the owner’s estimate with construction bids

Unlike the design phase estimates, the difference here is that the comparison is done in only one way!

The comparison may not be straightforward as in the case of the design phase reconciliations, but preparing bid forms and listing the key items for the contractor to indicate prices against each item may be helpful for comparison of the owner’s estimate with the bids.

By comparing and discovering items where the bid prices differ, the owner will be better equipped to ask questions

during the pre-award meeting to ensure the bidder is clear about the scope. This will aid the owner to make a ‘Yes’ or ‘No’ decision for awarding the contract.

Items for which comparison of unit prices are possible will enable the owner to create a historical database for future reference.

Approving change orders

Comparing the owner’s estimate with the contractor’s change order proposal is required in order to confirm entitlement and fair price.

The first action is to find out whether the contractor’s proposal includes the right scope changes from the change order (CO). Next is the comparison of prices. In this regard, two separate meetings could be scheduled with the contractor. The first meeting may be specifically for clarifying the scope to be included in the CO proposal, and the second meeting could be exclusively to review pricing.

With different approaches, one estimate is bound to differ from another. Well-organised means and methods for reconciling, comparing and relating the estimates, help owners to clarify differences and understand the different cost estimates or bids, and finally to confirm that the variances are appropriate and within range.

The owner’s upfront estimating will help them to form a negotiating strategy for settling and approving COs.
