

# **CONTINGENCY**

*...deal with it now or deal with it later.*

**Definition:** *In construction, a reserve fund to pay for unanticipated or unexpected project costs.*

**The Problem** *...10% may NOT be good enough.*

Most owners are quite familiar with the use of a Construction Contingency. A percentage of the project's anticipated Construction Cost is set aside at the beginning of construction to cover unforeseen construction conditions. If there is such a thing as a standard contingency it is probably 10%. The usual practice is to use or reduce this amount as the project moves toward completion.

Wise owners know that, by itself, this may not be a sound approach to Project Planning.

There are two reasons. First, in spite of what we might like to think, 10% may not be enough. Second, there are occurrences other than construction conditions that can require additional funds.

Let's consider the kinds of contingencies that may be needed.

**What can happen?** *...Almost anything!*

A contingency is an insurance policy of sorts for the whole project. The premium should be paid out of the overall Project Budget, not just the Construction Budget. For this reason, contingency planning should occur early in the project budgeting, before the design phase.

Contingency planning and adjustment is an on-going process. Reducing the contingency over the design and construction process is a reasonable concept. However, there may be times when slowing that reduction is advisable. In some unusual cases it may be advisable to increase the contingency, even if that means reducing the project scope.

There are several kinds of contingencies that should be considered. The applicability and amount for each will vary considerably with the project's characteristics.

## **1 Design and Bidding Process**

*"The new building should cost less than \$10 million. That's what the one at XYZ College cost them."*

At the beginning, all project team members will have difficulty projecting the final cost of the project. This suggests the use of a design contingency of 20% of the anticipated Construction Cost plus inflation. It should be reduced as design progresses and cost estimates are based on detailed documents, but reduction below 10% before final bids are received would be inadvisable.

## **2 Owner-Initiated Changes**

*"The president decided that the auditorium needs to seat 500 people, not 450. How do we do that?"*

Unanticipated changes in the program, quality upgrades and changing previous decisions are examples of these kinds of changes. They can increase costs considerably. This is a very difficult contingency to predict, but experienced owners try.

### 3 Additional Professional Fees

*"Your invoice covers what? The time to redesign the auditorium? And that computer animation requested by the new board member?"*

Owner-initiated changes, problems arising out of the construction process and unexpected regulatory, lender or certification needs will require professional fees for the architect, for additional consultants and sometimes for legal services.

### 4 Imperfect Documents

*"You didn't verify the availability of all materials, and now the LEED-certified insulation is no longer available. Fortunately, the additional cost will be minimal."*

The owner is paying for professional services and should expect that the documents will control costs due to errors and omissions. However, the perfect set of documents does not exist and owners are not interested in paying for attempts at perfection.

Building design is a highly technical, customized process. There will, on almost every project, be something that costs more due to an error or omission. When these added costs are minimal, at less than two percent of construction cost, many owners accept them as part of a reasonable process and budget for them.

### 5 Unexpected Project Conditions

*"All our information showed the utility line ten feet to the north of where we found it...by digging it up. We have to repair it and find another solution to locating the footing."*

Schedule delays, changes in agency requirements, unexpected site conditions and construction or financing changes can all increase cost.

### Meaningful Contingency Planning

*"Using a higher contingency may significantly reduce the project scope!" ...that's right, but we can deal with it now or deal with it later. Which will be more painful?"*

Experienced owners know that Project Planning that ignores the problems above is wishful thinking.

However, it is unlikely that all of those problems will affect a given project. So, the key to successful contingency planning is to understand the magnitude and probability of each type of problem and to allocate contingency funds accordingly.

Certain **project risk characteristics** suggest increasing contingency allocations:

**Schedule** - speed in delivery or completion by a specific date.

**Project Type** - renovation or addition vs. new construction.

**Complexity** - many program elements, several levels of client approval or a historic project.

**Uniqueness** - unusual program, untested technology or a unique image, site or financing approach.

As an **example of contingency allocation**, consider a project for about \$10 million in Construction Cost to renovate an existing factory to turn it into a private school that will need to open at the beginning of the next school year.

Rating the project risk characteristics suggests that Schedule is high, Project Type is high, Complexity is moderately high and Uniqueness is moderate.

Assigning contingency percentages of Construction Cost at the beginning of this project might look like this:

<b>Design &amp; Bidding Process</b>	<b>20.0%</b>	Reduce to 15% at Design Development 10% at the end of Construction Documents and zero at end of Bidding.
<b>Owner-Initiated Changes</b>	<b>4.0</b>	Reduce during construction.
<b>Additional Professional Fees</b>	<b>1.0</b>	Reduce during construction.
<b>Imperfect Documents</b>	<b>2.0</b>	Reduce during construction.
	<b>27.0%</b>	<b>\$2.7 million</b>
<b>Project Conditions</b>	<b>10.0%</b>	Insert at Start of Construction and reduce to zero at Substantial Completion.

Based on the above, the contingency would be 27% at the outset and it should probably not be reduced below 17% or \$1.7M at the Start of Construction.

These are high numbers. However, they are percentages of Construction Cost, and unused contingency can usually be spent as the project progresses by identifying elements that can be added - if things go well.

Taking this approach to planning a project has real benefits to the owner.

To realize them, project planners incorporate the contingency, whatever it is, into the project budget when it is conceived. **The owner will receive a better product and avoid much of the headaches, agitation, negotiation and legal bickering common to projects that experience problems.**

*Good project planners know that the key to success is to think through a project's specific conditions and not be swayed by the old "10%", one size fits all, calculation of the contingency.*

*...dealing with it now is better than dealing with it later.*