

## **Understanding Project Estimates and Contingencies For the NHS Addition and Renovation Project**

**Target Construction Budget:       \$27,023,541**

To be “on budget,” the established GMP should be at or below the Target Construction Budget.

Items included within the **GMP cost estimate** will include the following:

- Direct cost of the work
- CM General conditions and fee
- Design and Estimating contingency
- Escalation contingency
- CM Contingency

### *Contingency Definitions:*

**Design and Estimating Contingency:** This contingency is utilized during the budget estimate phase in recognition of the fact that the budget estimate is being developed based on progress design documents. The contingency allows for the fact that, because certain construction details have not yet been defined, the estimate will be subject to omissions. Also, as design decisions evolve, certain design details not previously included or evident will be added. The design and estimating contingency is higher at the earlier stages of design; the contingency will be reduced to 0% within the GMP budget.

Typically values are as follows:

- Schematic Design: 10%
- Design Development: 5% to 7%
- 60% Construction Documents: 3% to 5%
- 90% Construction Documents: 1% to 3%
- GMP: 0%

In the DD cost estimate, we are currently carrying a 3% design and estimating contingency value. Although this is lower than what is typically carried at this stage, we feel that this will be sufficient given the value engineering mode that the design team will be in for the balance of the design.

**Escalation Contingency:** Cost estimating is typically based on current or historic cost data for the pricing of various work items. The purpose of the escalation contingency is to make allowance for the fact that there may be an increase in subcontractor pricing between the time the estimate was compiled and the time of bidding. In addition, even when such duration is short, if at the time of bidding contractors believe that their costs are subject to increase over the duration of the project’s life, they may include their anticipated escalation costs into their bid price.

Escalation is typically based on a projected annual escalation amount pro-rated to the midpoint of the construction period (from the point in time when the estimate was developed). For the NHS DD estimate we are carrying an escalation value of 3%. Last

year's construction industry saw a 2.4% increase in the construction cost index. Indicators seem to point to likelihood of continued increases in construction costs. We are carrying a 3% index with a 12-month period to mid-point of construction for a total escalation amount of 3%.

At the time that the actual GMP is established, the escalation contingency value will be reduced to 0%.

**Construction Management Contingency:** When the final, actual GMP is established, the GMP amount will be inclusive of a mutually-agreed Construction Management Contingency. This contingency is used during the construction phase (post-GMP) to address items such as:

- Cost overruns on items carried under allowance (temp heat, temp electric, etc.)
- Cost overruns when final best bid price for a particular discipline comes in higher than the amount carried for that item in the GMP (likewise, for award amounts lower than the GMP budgeted estimate amount, the under-run amount will be added to the CM Contingency)
- Items of work not fully identified in, but that can be reasonably inferred from, the Contract Documents, but which are not included in any of the trade or non-trade contractor bids received by the Construction Manager
- Costs to recover the schedule as the result of delays incurred that were not the fault of WTR or its subcontractors
- Repair or replacement of damaged items when such damage cannot be attributed to a responsible party

CM Contingency will only be used by the CM with the expressed written permission of the Owner.

In private sector construction, the CM contingency is often set in the 3% to 4% range, but the GMP is often established based on drawings that are not 100% complete. The GMP for Norton will be established based on 100% complete construction documents and after Trade Contractor bidding. As a result, the CM contingency will typically be set in to the 1% to 2% range. For the DD estimate, we are currently carrying a 1.5% CM contingency.

### **Additional Contingencies**

The contingencies presented above are carried within the cost of the GMP estimate. There are two additional contingency items that are carried outside of the GMP estimate (i.e. outside of the \$27,023,541 construction budget). These two contingencies are as follows:

- **Construction Contingency** – This contingency is in essence a change order contingency. It is used to pay for construction costs that are required or desired but that are not part of the 100% Construction Document set. Change orders will arise on a major renovation project of this nature in large part due to hidden or unanticipated conditions that were not properly accounted for in the design documents. Despite best efforts by the designer and the CM to reduce the possibility of such changes, a certain number of these types of changes are likely to be encountered. In addition, as construction progresses it is not unusual for used-requested changes to be identified and implemented. Change order contingencies for large renovation projects are typically in the range of 3% to 10%. On the Norton High School project, the overall budget currently provides a \$945,833 construction contingency, which equates to 3.5% of the construction budget.
- **Owner's Contingency** – The Owner's Contingency is used to cover any cost over-runs on the project, including construction cost change orders, soft cost overruns, overruns or furniture, technology, etc. It is essentially a "contingency of last resort" for any added cost beyond the available budget. On the Norton High School project, the overall budget currently provides a \$497,366 Owner's Contingency, which equates to 1.4% of the total project budget.