

Adding Value Through Value Engineering



By Kieran Flanagan

According to the US Department of Labor, the role of a construction manager, or CM, is to plan, coordinate, budget and supervise construction projects from early development to completion. A real estate developer in today's challenging economy might look at this and think, "Great, but how will working with a CM benefit my bottom line?"

Real estate investors, owners and developers are familiar with the lowest-bid-wins process of working with a general contractor. A GC provides a comprehensive bid for a job based on fully finalized drawings. The contractor profits from buying down subcontractor costs and any changes made after bid. If the GC shaves costs, the owner gains no benefit from the savings.

Working with a CM turns this process on its head. Construction managers get paid fixed fees, which are established upfront, and they are then responsible for managing all subcontractors and purchases. Because they generally join projects before designs are finalized, CMs can identify problems and uncover savings right from the beginning.

Whether it's the location of the stairs or the choice of an HVAC system, a CM's review of early schematic drawings can uncover potential budget-busters. Since changes become increasingly expensive as designs progress, these preconstruction alerts can have a significant impact on final costs. A CM can also start demolition or place orders for long-lead items before designs are finalized.

As drawings evolve, a CM can start giving dollar estimates for some of the big, expensive pieces of

the project. The sprinkler system or loading dock, for example, can get carved out of the overall budget and priced when the facility's design is 60% finalized, ensuring fewer surprises for the owner further down the road.

At any point in this process, the client may realize that budgets are heading into the red, and the CM will step in to provide expert value engineering. A facility's "must-haves" are separated out from its "nice-to-haves" in a painstaking review of each component. The architect may have specified \$400 lighting fixtures—the CM knows from experience that an equivalent \$150 model is available. This type of value engineering adds up to savings that realign the architect's vision and the owner's budget.

My firm recently constructed a Newark charter school and demonstrated these benefits. The new school features a metal exterior "skin" that we suggested as a cost-saving alternative to the original design's masonry surface. This and other value engineering changes resulted in the school having 30% lower construction costs than comparable structures. Similarly when starting the Newark Farmers Market, a 180,000-square-foot, temperature-controlled distribution center, we were able to reduce costs by nearly \$300,000 by switching from copper to aluminum wire for power distribution. An experienced construction manager can steer the project and generate savings to the owner by merging the CM's knowledge with the design intent.