

technical viewpoint

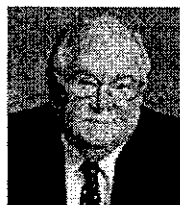
PROGRESSIVE PROJECT DELIVERY

'Bridging/CM': A New System That Gives Owners Results

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By George T. Heery

Construction management-at-risk is a widely used project delivery system. It is preferred by many contractors and sureties because the contracts turn on qualifications, earlier design input and better risk control. Bridging also is coming into greater use because it offers owners the significant advantages of a more enforceable price early in the design process, less exposure to change orders and claims and single post-construction responsibility. Many people think the two methods are distinct, but they now can be combined in a new project delivery method that has a number of significant advantages.



Heery

In considering the selection of any project delivery system, an owner must first understand what type of organization it is. All owners fall into two broad types: (1) those that may prudently rely upon relationships in procuring design and construction and (2) those that cannot or should not rely upon relationships to obtain the expected end-product on time and at a fair price. The two are as different as night and day.

Buying design and construction on a relationship basis can be the best way to go but it also can be the most dangerous financially if the owner is not really a Type 1. Loss of leverage is the issue. Several project delivery methods tend to cause the owner to suffer an early loss of leverage and end up in a position in which they are forced to rely upon relationships. Bridging does a good job of preventing this, but leverage loss can be an issue in CM-at-risk.

In CM-at-risk, the owner typically will either select the architect/engineer first so they can be involved in the selection of the CM, or it will select the CM and the A-E at the same time. The CM typically will assist the owner and the A-E with continuous input on costs, materials, constructability, scheduling and sequencing issues throughout the pre-construction design phases.

At design milestones, the CM in many cases will provide the owner, A-E and program manager with the most reliable possible estimate of the final total cost. These cost statements will sometimes be issued in the form of a guaranteed maximum price. But the most serious concern is the fact that a GMP issued before design and design documentation are 100% complete is not really very enforceable.

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George Heery: Building Contractual

Bridges

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Building Bridges

Bridging is a hybrid of the traditional design-bid-build and design-build methods. The objective of bridging is to retain the better features of each of those project delivery methods and eliminate aspects of both that often cause problems for the owner.

Bridging allows the owner to obtain a highly enforceable fixed price for construction in about half of the time and about half of the at-risk cost compared to the traditional design-bid-build method. The price obtained under this method and at this earlier point in the schedule is more enforceable than the final preconstruction price obtained by the design-bid-build, CM-at-risk or design-build methods.

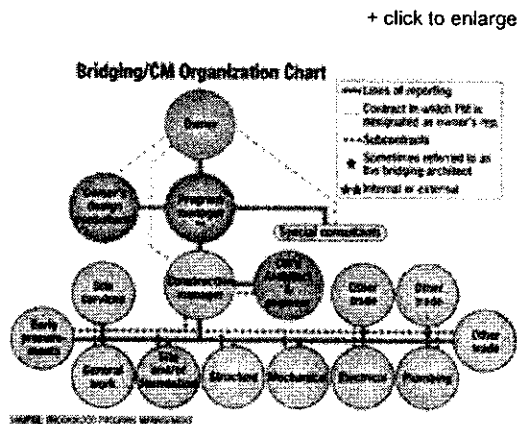
Combining bridging with CM-at-risk is not only easily feasible, but can have significant added advantages for owners. This idea recently emerged during the pre-bidding process for a new \$40-million multi-use residence/dining hall at Spelman College in Atlanta.

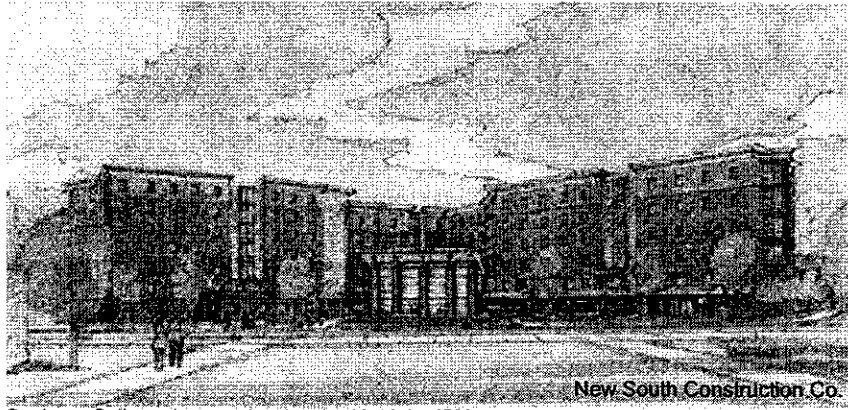
We were serving as the owner's program manager and were having a tough time getting bidders lined up in a very overheated market. So we selected a team on a prequalification basis and invited them to work with us prior to bid. We picked a general contractor to serve as CM using its selected A-E firm and then reached a final, firm price for a bridging type contract as opposed to a GMP.

That project cannot be considered to be exactly a bridging/CM project, but it was during that period that the bridging/CM idea began to solidify in our organization. Under bridging/CM, the owner receives all of the advantages of both systems plus:

- An early enforceable price. In CM-at-risk, the GMP received during the design phase is usually received at about the point when design development is completed. However, under bridging/CM, the owner gets a highly enforceable fixed price at this same early point. This action is at a point that has only taken about half as much time and cost as it takes to get to a fixed bid price under traditional design-bid-build.
- Better cost-effectiveness. The contractor/CM and its A-E consultant come into the design process quite early and provide helpful information and insight to the owner and its design consultant and can help with more cost effective systems selections and details. This also gives the contractor/CM a running start in preparing for the construction, which tends to run smoother and faster. The chart (left) shows how a bridging/CM project is organized.

One aspect of bridging that is still not well understood is how to prepare the bridging contract documents. This is as important in bridging/CM as it is in plain bridging. In both cases, the owner's design consultant really is the main architectural designer, not the contractor's A-E.





Spelman College dorm project inspired bridging/CM.

Most architectural decisions and many architectural details are covered in detail in the bridging contract documents, which are based on the type of design-build type proposals received. The majority of the engineering systems remain to be designed, but major decisions affecting the end product are made by the design architect and its consulting engineers. These engineers will prepare mostly performance specifications, with some items covered by prescriptive specifications.

This whole area is a judgment call on the part of the design architect and its engineers. The idea is to protect the owner and the design while allowing the design-build bidders as much latitude as feasible without affecting the quality or the end product.

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