

Fellows' Perspective: 50 Years of Construction Management and Project Delivery Development Part 4 – Design-Build Emergence

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Fifty years ago, CMAA began as a bold idea to bring order and professionalism to a changing world of project delivery. Today, it stands as the nation's premier advocate for construction management excellence.

In this fourth post of our Fellows series, we look back to the 1990s, when design-build delivery gained traction with public owners and reshaped expectations for collaboration, efficiency, and results. Following this edition, we'll explore how the growing practice of construction management within all delivery methods fueled the formation of CMAA's first chapters.

Public Sector Design-Build – A Child of the 1990s

As building system technologies became more complex, public owners began to look for a delivery system that did a better job of incorporating technology into the design process by allowing collaboration between designers and contractors. The thought of needing to hold only one contract for the design and construction of a project was also attractive. It provided single-point responsibility for design and construction and transferred design responsibility to the design-builder. Design-build, which was common in the private sector, began to make its way into the public sector in the 1990s.

Another benefit of design-build is the ability to aggressively phase design and construction. Construction can start long



before design is complete, requiring that the owner has a contract with proper scope definition and enforceable guarantees before construction begins.

Design-build was seen to have great potential for improving project delivery, although some perceived it as a bit of a radical departure from the status quo. Special legislation was needed to enable its use in the public sector, jurisdiction by jurisdiction, and sector by sector. Complying with public sector procurement rules and expectations was uncharted territory. Its application required astute owners, often supported by those agency construction managers (CMs) that were knowledgeable in defining, procuring, and managing design-build firms.

In 1993, the Design-Build Institute of America (DBIA) was established to promote the collaboration, innovation, and efficiency of cost and schedule inherent in design-build.

With a number of variations on how design-build might be applied to a project, DBIA took the lead, guiding it through its adolescence and shaping design-build into the effective and often most used delivery system today.

Getting to that one contract for designing and building a project can be a complex path. A CM acting as an advocate of the owner who is well versed in the design-build process can help guide the owner in the critical early tasks, such as initial project definition, project planning, and assembling the design-build team.

Two Very Different Approaches to Design-Build

LUMP SUM DESIGN-BUILD

The CM's involvement became particularly important with Stipulated Sum Design-Build, where the design-build firm provides a lump sum price for a project that is yet to be designed. As with the Design-Bid-Build Delivery System, this arrangement can be fraught with claims, even more so as the lump sum contract is signed before design is fully developed, and the architect now works for the contractor.

Therefore, the CM needs to be a strong advocate for the owner by providing overall project management. To that end, the CM can assist the owner in several critical tasks such as defining the project requirements (design guidelines), establishing a realistic budget, procuring the design-build firm, overseeing the design process, and enforcing the design guidelines as the design-build firm develops the design.

Time is of the essence for the design-builder, and the CM can help ensure that owner decisions and approvals are timely. Onsite representation focuses on facilitating decisions, claims avoidance, resolving conflicts, monitoring quality, and ensuring there are no roadblocks to progress as an advocate of the project.

PROGRESSIVE DESIGN-BUILD


More recently a more collaborative and more owner-friendly version of design-build emerged as an alternative to Lump Sum Design-Build, developed, and championed by DBIA. The design-build firm is typically selected on the basis of

qualifications and fee early in project development. The selected firm works with the owner to develop a project scope, budget, and schedule that meets the owner's needs. Working in collaboration with the owner, the design-build firm's architect, engineers, and key trade partners of the design-build firm develop a design that is responsive to the owner's needs and within budget. Subcontracts are bid or negotiated in a process that is open to the owner. At some point during design and before construction starts, the design-build firm provides a guaranteed maximum price.

All activities of the design-build firm, including trade partner procurement, payment, and management are open to the owner. One could say that Progressive Design-Build is roughly analogous to open-book CM at-Risk, with the exception that the architect/engineer now work for the contractor.

The CM can perform important up-front services, such as establishing scope, budget, and schedule, helping the owner procure the design-build firm, negotiate the contract, and organize the project.

Because of the relatively low conflict of interest between the owner and the design-builder with progressive design-build when compared to stipulated sum design-build, the CM takes on less of a management role and moves toward one of facilitation-helping to keep the project moving. The CM becomes the advocate of the project - helping all team members to achieve their collective goal of fulfilling the owner's requirements and can often be integral to providing a second set of eyes in reviewing costs and the construction documents to ensure on-time and on-budget completion.

As design-build grew rapidly to join design-bid-build and CM at-Risk as the predominant delivery systems in the 1990s, CMAA continued its development as an influential industry association. 



About the Article

The CMAA College of Fellows Blog Series, written by the Communications Committee, will share posts on the development of various project delivery systems over the years and how CMAA emerged and developed in response to changes in construction delivery. The Fellows hope this exploration of the past offers an understanding of the present and may even provide insights into what comes next.

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