

Progressive Design-Build Primer for Community Colleges

By Brandon Dekker, DBIA

Progressive Design-Build is a project delivery method that breeds collaboration, guarantees cost and schedule, and delivers better project outcomes. This article explores the many benefits of progressive design-build and how it can help community colleges design and build new facilities in a more collaborative and predictable way for better project results.

Community colleges are integral to the American education system and economy. They prepare millions of students for in-demand careers, train displaced workers, provide affordable education and serve as a gateway to four-year universities.

But just like everything, community colleges have their fair share of challenges that have been exacerbated amid the pandemic. One of the bigger challenges is the ongoing need to evolve dated campuses to meet student and

industry demand—and—to do so with very limited funding and resources. In fact, you would be hard-pressed to find another industry that is expected to accomplish so much with so limited resources as community colleges.

Recognizing many infrastructure improvements cannot be delayed even amid COVID-19, community college facility teams are looking for partners that are highly resourceful, innovative and able to design and deliver cost-effective solutions

without budget or schedule surprises. Based on our experience working with learning institutions across the country, we have found that the progressive design-build model is an extremely effective delivery platform for doing exactly that. Using this delivery method, colleges are able to precisely control scope, budget and schedule while working collaboratively with the most qualified teams.





We were the architect on the progressive design-build team for the new \$11.4 million fitness center located at San Diego Community College District's Mesa College Campus

Why progressive design-build?

New buildings within higher education are most often delivered using the design-bid-build model. This means colleges hire an architect first to design their building, and once that is done, they put the design out to bid and hire a general contractor to build it. One of the challenges with this method is that a significant amount of the budget is used in the design phase before

fully understanding the price of the construction phase. Challenges can also emerge when a design team creates a solution without early input from the contractor and trade partners, which is why many design-bid-build projects experience cost creep and schedule slippage.

Design-bid-build also presents an inherent conflict in law between the owner, designer and builder. In 1918, there was a landmark case between the United States and Spearin, a utility contractor, otherwise known as the Spearin Doctrine. In the case,

the Supreme Court ruled that the owner impliedly warrants that the information, plans and specifications they give a contractor are accurate and suitable for their intended use. In other words, when a project owner gives a contractor plans and specifications, the contractor is expected to build according to those plans and cannot be damaged for losses based on insufficiencies or defects in the documents. Herein lies the very root cause of why the design-bid-build model has had its inherent challenges over the years.

What's the difference between design-build and progressive design-build?

It is easiest to explain what makes these two delivery methods different by first starting with what makes them similar. In both methods, owners manage a single design-build entity contract as opposed to the multiple contracts used in design-bid-build delivery. This is really the defining characteristic of any design-build project. It ensures the architect, contractor and trade partners work together from start to finish, sharing responsibility and risk as opposed to working with the owner separately and often looking out for their own best interests. Beyond the contract, the two methods take different shapes.

TRADITIONAL

There are two primary types of traditional design-build delivery: prescriptive and performance. In procuring prescriptive design-build projects, design-build teams create a design package based on an owner's clear and prescriptive requirements. The owner has input into the preliminary design, however, once a team is selected the owner's involvement diminishes. Changes to any element of the project after contract negotiations can lead to change orders.

In performance design-build procurement, design-build teams are more focused on addressing measurable performance criteria or objectives for operation rather than specific design approaches. After the award of the design-build contract is completed, the owner input is limited, apart from the performance objectives detailed in procurement documents. Although the selection is qualifications based, in both cases, price can often drive the team selection more than it should and the college is virtually eliminated from the process once the design-build team is selected.

PROGRESSIVE

Progressive design-build allows community colleges to select a design-build team based on qualifications as opposed to asking them to develop a robust design package during procurement. There is still one contract, but the college has input in the design/pre-construction phase and the ability to control crucial decisions of scope, schedule and cost.

Progressive design-build encourages heightened levels of collaboration between the college, designer and builder as the design is developed, and trade contracts are bought in a step-by-step progression, collaboratively. Even with this heightened collaboration, the Design-Build Institute of America notes that progressive design-build is 102 percent faster than traditional design-bid-build, which is why it has experienced a 600 percent growth in use since 2002.

While both progressive and traditional design-build methods can deliver successful projects, more and more community colleges are opting for progressive design-build because of clear benefits, including:

- A procurement process based on more than cost, which allows colleges to select the best team as opposed to just the cheapest.
- A procurement process that attracts a larger number of qualified teams to compete for projects. Because traditional design-build procurement often requires teams to spend months developing design packages with no guarantees they will be hired, it is not uncommon to have a small number of teams participating in the process.
- Greater collaboration with the design team, specialty trade contractors and builder, which leads to superior buildings.
- A single source of responsibility that creates shared ownership as opposed to having each teaming partner looking out for their own best interests.
- Better BIM coordination, which results in definitive adherence to budget and scope, and reduced RFIs, change orders, total cost of operation, and more.
- A reduction in the time it takes to design and complete a project (i.e. speed to market)
- Overall reduction of risk through enhanced risk allocation.
- And, often the most important outcome, guaranteed price.

Steps for success

CannonDesign has been fortunate to contribute to progressive design-build projects for dozens of clients—acting as the architect, the engineer, and in certain instances, even the builder. Here are a few lessons we have learned along the way that can help community colleges as they explore progressive design-build delivery.

A predictable process leads to predictable outcomes.

At the core of a successful progressive design-build project is a team’s ability to deliver predictable outcomes. Key to doing this is seamless and very intentional collaboration among the full design and construction team; to be effective, the team needs to function as a single organism following prescriptive steps. When considering partners, ask to see their standardized process for delivering progressive design-build projects—and ask for proof the process works. Predictability is almost totally reliant on a solid, proven process.

Total team transparency.

Because designing to an owner’s budget is perhaps the most important element in successful progressive design-build projects, knowing what the budget is for each building element is critical. This is precisely why complete transparency among the full team is so important. Without this level of trust and up-front transparency, the design team is developing design drawings without a target in mind. Be sure to have a clear understanding of how your partners plan on being transparent with each other and you throughout the process. Without total transparency, there is a risk your partners could over promise and under deliver various program elements, materials, quality and long-term building life-cycle costs.

Subject matter expertise matters more than ever.

Partners need to have deep expertise in the building type they are pursuing to ensure they can translate the aspirations of the owner and understand the intricacies of the program. Beyond typology expertise, look for a team that has the knowledge to help you use the building to address the change and disruption unfolding across higher education. Simply designing a functional building using past precedents will not prepare a college for success in today’s ever-changing world. New buildings not only provide more square footage; they give colleges an opportunity to shape the future of education.



Our progressive design-build team successfully delivered a \$16.5 million training center for San Diego Miramar College’s Fire Technology & Emergency Medical Technician (EMT) programs.



About the Author



Brandon Dekker is a Principal in our Irvine office and one of the industry’s foremost thought leaders on progressive design-build and construction management. He is the President of the Southern California Construction Management Association of America (CMAA) and is a Board Member for the Design-Build Institute of America’s (DBIA) Western Pacific Region where he serves as the Vice President and Conference Co-Chair and Progressive Design-Build sub-committee member.

Looking to learn more about progressive design-build for community colleges?

Reach out and I would be happy to talk through lessons learned and considerations in more detail.

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