

Design-Build Gains Ground in Healthcare Market

Healthcare Owners Favoring Alternative Delivery Systems as Prescription to Better Manage Cost, Schedule, Project Quality

By Carol Eaton

In the complex arena of health facility design and construction in California, the traditional design, bid, build project delivery approach looks to be going the way of the dinosaur.

Increasingly owners are looking for teams with expertise in alternative approaches such as design-build and design-assist to deliver their projects on or ahead of schedule, within budget and with top quality and safety records.

The design-build project delivery system in particular has gained favor with some owners seeking ways to mitigate the many challenges posed by healthcare projects. Design-build's advantages include helping to expedite the design and construction process, foster collaboration and teamwork and bring the contractor and key stakeholders in from the outset to ensure the design is complete, fully coordinated and buildable.

Unique Challenges

The planning, design and construction of health facility projects typically pose a unique set of challenges. Among other things, the projects are labor intensive; highly technical; contain many specialized, complex systems with heavy equipment loads; and in California they are strictly regulated and permitted by OSHPD. Having a single source design and construction team on board from the initial planning stage can prove highly beneficial.

Leading AGC member contractors who have extensive experience in the healthcare market, including McCarthy Building Companies, Hensel Phelps Construction Company and Harbison-Mahony-Higgins Builders, among others, have demonstrated the distinct advantage these alternative delivery systems offer to the health facility owner.

Building a Collaborative Environment

A collaborative environment among the project team can improve the outcome of any project, but particularly so on challenging healthcare projects. Design-build helps foster that collaboration and focuses the team on a common purpose from the outset, according



Hensel Phelps Construction Co., Irvine, is currently constructing Phase 2 of a project at the UCI Hospital via design-build, heading up the same design-build team that successfully completed Phase 1 of the project in the fall of 2008.

to Scott Henrikson, operations manager, medical division for HMH Builders, Sacramento.

complex, this collaboration is extremely important to ensure a complete, fully coordinated project that can be permitted

“Utilizing design-build delivery for our major projects has become more critical as we try to manage escalating project costs. We were faced with serious budget challenges on this project, and we were able to mitigate them by working together with McCarthy, TAYLOR and the major subcontractors during the design phase to maximize our budget.”

– Jim Bostic, Assistant VP of Construction, St. Joseph Health Systems

“We, as the general contractor, are able to get involved early to help control costs, speed up the schedule and collaborate across disciplines,” Henrikson comments. “Because medical construction is so

and constructed without delays.”

Over the past 20 years HMH has constructed over 340 medical projects in Northern California, totaling over 2.5 million square feet of development.



HMH Builders is currently constructing the Kaiser South Sacramento Hospital, Outpatient Surgery Center, as depicted in this rendering.

Currently, HMH has four medical campus expansions under construction as well as half a dozen acute and non-acute ancillary projects. Much of its work in this market is done in a design-assist manner, Henrikson says, in which the owner still holds the contracts for the design team, but the project team works together in the same collaborative manner as design-build.

In addition to growth in design-build project delivery, Henrikson has seen healthcare owners increasingly looking to other alternative delivery methods including Integrated Project Delivery (IPD) and the incorporation of Lean processes. “Both design-build and IPD can add value to a medical project, and most other types of construction as well,” he notes. “The goal is to become more efficient and

more precise in targeting the right design solution for the right cost, delivered at the right time. This minimizes the risk to the owner that a project will go over budget or not be completed on time.”

McCarthy Employs Design-Build on Kaiser Project

McCarthy Building Companies, consistently ranked as one of the nation’s top healthcare builders, has demonstrated on several recent and current projects the benefits of the design-build approach to healthcare project delivery. Most recently, McCarthy successfully completed the \$385 million Kaiser Permanente Downey Medical Center in Downey, Calif. nearly five months early using the design-build delivery method. This new 650,000-sq.-ft., 352-bed facility designed by HMC Archi-

itects replaces an existing facility which did not comply with the stringent seismic requirements of Senate Bill 1953 for health-care facilities. Planning is currently in progress to convert that hospital for outpatient uses.

The project reportedly represents Kaiser Permanente’s first major new facility delivered through design-build, which allowed McCarthy and Kaiser Permanente to develop and coordinate the systems engineering early and simultaneously with the overall design. The team used design-build to deliver the hospital’s and central plant’s mechanical, electrical and plumbing systems. By accelerating this phase, McCarthy was able to avoid or resolve early on many of the conflicts that may have arisen during a traditional construction process.

“Design-build is increasingly being embraced to reduce cost and eliminate design-related schedule impacts,” said Steven Mynsberge, executive vice president and healthcare business unit leader for McCarthy. “Careful planning and coordination on this project saved a significant amount of time and money, making the decision to replace (the existing hospital) with an entirely new campus a much more cost effective solution.”

St. Joseph Expands Design-Build to Larger Jobs

Last summer, McCarthy also completed a trio of projects through design-build at St. Joseph’s campus in Orange, Calif.: a new 87,000-sq.-ft. cancer center, a 131,000-sq.-ft. medical office building (MOB) and a 1,083-car parking structure. TAYLOR of Newport Beach was executive architect and Stantee Architecture of San Francisco the design architect on the design-build team for the cancer center and MOB projects.

The McCarthy-led design-build team was brought on board the project after it had been in design and planning by another design team for over four years, according to McCarthy Project manager Jim Mynott. The new team brought its expertise and the benefits of the design-build delivery system to bear and was able to get the project moving forward quickly; within just seven months, the project moved from planning and design to construction. The team coordinated the design, permitting, entitlements and moved the design package through the phased plan check process to get construction underway.



Photo by Lawrence Anderson

Photo courtesy of TAYLOR
McCarthy Building Companies led the design-build team on a trio of projects at The St. Joseph Hospital Orange campus, completed last year. TAYLOR served as Executive Architect.

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Using the Design-Assist project delivery method, McCarthy Building Companies is constructing the 279,000 sq. ft. Acute Care Pavilion at Rady Children's Hospital and Health Center near San Diego. The project is slated for completion in the spring of 2010. McCarthy also had previously completed design-build services for an adjacent 1,000-car parking structure including a podium deck for the future new Ronald McDonald House.

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"By breaking up the design packages, we were able to expedite the permitting and saved the client about four months in permitting delays," Mynott comments.

St. Joseph had used design-build for years on small to medium size projects, but this

represented one of the first cases in which it employed design-build on larger projects such as the Cancer Center and MOB in Orange.

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dent of construction for St. Joseph Health Systems. "We were faced with serious budget challenges on this project, and we were able to mitigate them by working together with McCarthy, TAYLOR and the major subcontractors during the design phase to maximize our budget."

As a result of the team's success on that project, McCarthy was invited to provide preconstruction services and is now contracted to deliver a new health-care facility for the same owner in Orange County using design-build project delivery. That project entails a new \$300 million, 200,000-sq.-ft. patient treatment hospital at the St. Jude Medical Center in Fullerton.

Hensel Phelps Progresses on Phase 2 at UCI Hospital

Hensel Phelps Construction Company, another leading national healthcare builder, also has demonstrated its expertise in delivering healthcare projects via design-build and other alternative delivery methods. The contractor is currently in the midst of the \$100 million, Phase 2

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project at the University of California – Irvine (UCI) Hospital, heading up the same design-build team that successfully completed Phase 1 of the project in the fall of 2008, several months early. HOK is the architect on the design-build team led by Hensel Phelps that includes several other design and engineering companies and key subcontractors.


Phase 2 of UCI Hospital got underway in October of 2008 and is slated for completion in late 2011. It includes the build-out of 80,000 square feet of shell space with 45 additional patient beds, four operating rooms and an extensive imaging / radiology department. The work also includes the demolition of the existing hospital after the new hospital is put in service and completion of new roadways and landscaping.

Clint Squire, operations manager with Hensel Phelps Construction’s Irvine office, points to a number of benefits that design-build can offer healthcare projects when employed by an experienced team.



HMH Builders currently has several healthcare projects underway in Northern California, including the Lodi Memorial Hospital Expansion, as depicted in this rendering.

“These are complex projects that can benefit from the collaborative efforts that design-build, if done properly, will achieve,” Squire comments. “Design-build allows the design to be based on the actual materials and construction techniques that the contractor will employ on the project. This reduces inspection issues and design revisions,

which can lead to increased field efficiency. When issues do come up, the team approach inherent in a design-build process allows for a faster and more complete response, also leading to increased field efficiency. Supporting the productivity of the field work minimizes the potential for costly claims or delays.” 



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