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Design-build done right*R. Craig Finley, P.E.*

In my last column, I discussed how bridge professionals have used design-build to create innovative bridge structures in Europe and Asia. This time, I consider how this "master builder" approach is best applied, as well as how the process can break down and cause a project to go off track.

Owners choose design-build for reasons as varied as the projects themselves—lower cost, shorter schedule, collective innovation, improved constructability, reduced claims, and project complexity are some of the most common motives.

And, depending on the project, each may be valid and valued. But from my perspective, the primary reason to use design-build is to ensure that there is a single, unified entity focused solely on the best interests of the client and the project. Moreover, the client can solicit the most innovative and appropriate ideas, and select the best design-build team in a competitive environment.

This is more than simply a convenience for the owner. This is a group of individuals and companies responsible for developing the best ideas on how to design and build specific applications, with establishing and managing schedules, and with coordinating and integrating team members.

The current Tacoma Narrows Bridge is a prime illustration of how a well-managed, well-coordinated design-build team can create a successful bridge project. This ongoing, \$850-million project sits parallel to and just south of the existing Tacoma Narrows Bridge (1950). Nicknamed the "2007 Narrows Bridge" for its expected completion date, the 2,800-foot-long suspension bridge will provide three additional traffic lanes to alleviate highway congestion for commuters to and from the booming city of Tacoma. The decision to use design-build enabled a fast-track schedule; groundbreaking occurred one month after the contract was awarded in September 2002 and the project was 35 percent complete by April of 2004.

Using the motto "One Project, One Team," the design-builders practice what they preach.

Designers set up shop in the contractors' offices, contractors placed key staff in the designer's offices, and the owner's representatives work on site at the project office. Key individuals continue to meet constantly and communicate openly, sharing the same documents and the same systems.

When a design-build project doesn't feature that kind of cooperation, the results predictably are less successful—schedules run over, costs rise, quantities are off, lawsuits spring up, and the owners find themselves refereeing disputes. It's likely that the owners are forced to deal with exactly the issues they had hoped to avoid by using design-build in the first place. This type of breakdown usually is the result of team members forgetting the reason they became a team. Instead, they succumb to the temptation of doing things "the old way," and the project suffers.

So how can you ensure that a design-build project stays on track? Here are a few suggestions:

Assemble a capable, committed team that shares the vision. It may be tempting to add team members for reasons other than the value they can bring to the project—their reputation or relationship with the owner, for example. But if they aren't the right firm for your team, resist that temptation or winning the project may be a curse rather than a blessing.

Plan the work and work the plan. Be thorough in your planning and then stick to that plan. If one part of the team veers away from the plan without a consensus, the entire process can break down.

Be flexible. While it's critical to establish a plan, it's just as important to recognize when the plan needs to be modified or revised. Just make sure that all the key players participate in the process and understand why the change in course was necessary.

Set goals and focus on results. The only way to know if the plan is working is by taking occasional stock of where you are and how you're doing. Don't lose touch with your goals and don't allow unsatisfactory results to slide.

Operate as a team. The "One Project, One Team" concept is critical to a successful design-build project. As soon as one team member strays from that approach, the project is at risk of breaking down. Those folks need to be reeled back in.

Communicate constantly and consistently. Err on the side of "over-communicating" and (choose your cliché here) make sure that everyone is on the same page, speaking the same language, and marching to the same tune.

Finally, it's important to have a handful of qualified, committed people in key roles. No one person can handle the monumental task of managing a large, design-build bridge project. It takes a few people with a common vision, commitment, skills, and a "can-do" approach to problem-solving to successfully drive a design-build project.

R. Craig Finley, P.E. President of Finley Engineering Group in Tallahassee, FL.

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