

Choosing Constructability

BY JAY RUBY, P.E. AND DAVID RUBY, S.E., P.E.

Being successful in today's highly competitive construction industry increasingly requires this collaborative and effective approach.

AS PROFESSIONALS SERVING the built environment, we know that change is here; we know that the way we do business is changing and we need to align within this new environment. Now. Sooner or later, informed owners and developers will put the wrecking ball to poorly orchestrated building design and construction practices. And they will reward those of us who show them the better way. A better way to do what? A better way to plan, to design, and to construct.

Constructability is becoming the common thread binding together an industry that is quickly moving toward greater collaboration. Tremendous momentum exists to drive efficient use of resources—natural resources, energy resources, financial resources and human capital—and constructability is increasingly recognized as an important tool to aid this effort.

Constructability has been in our vocabulary for many years and is defined as the application of *in-depth construction knowledge* and *real-world experience* to achieve the most efficient, effective and extraordinary results. Constructability infuses construction knowledge into the entire design process and is capable of weaving the myriad of project requirements into a new common thread. By beginning when the project is at its earliest conceptual stages and creating a comprehensive team to develop and maintain a clean, concise vision of the project, constructability influences every stage of design and construction, and improves efficiency and results for each team member that touches the project.

By embracing constructability, the steel industry has an opportunity to make a huge impact on the use of resources in projects, to move beyond the traditional role of a “trade,” and to become an active participant in the design process. To make this happen, all members of the construction community—fabricators, erectors, designers, engineers and construction managers—must become more receptive to the value that construction knowledge and experience can bring to the overall project. Fabricators and erectors must become part of the solution by investing

in relationships with like-minded design and construction professionals, becoming confidants, and moving away from the traditional bid/hope approach.

Ruby+Associates will lead a four-part discussion on the evolving role of constructability at the upcoming NASCC conference. Our goal is to help set the stage for improved cross-functional project collaboration that will measurably improve efficiency and economics for construction teams and owners. Following is an overview of discussion elements:

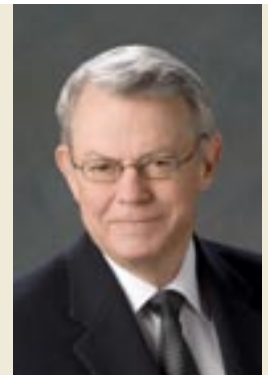
Constructability: A Primer. Intended for both design and construction team members to establish the impact that constructability can have on project cost, schedule and profitability. Attendees will learn how to position their firms with project owners and other design/construction team members who participate in the constructability process. The session will provide an overview of the key business drivers that make constructability a competitive advantage in today's highly competitive market.

Constructability for Designers. Every building that is designed and constructed is custom because each site has different subsurface conditions, seismic considerations and loading criteria. This session will describe how constructability solves potential issues on the design side by expanding the decision matrix and prevents problems on the construction side by not only bringing together design disciplines, but also by inserting construction knowledge into the design process as well.

This article introduces a series of presentations the authors will be a part of at The Steel Conference, May 12-15 in Orlando, Fla. Learn more about The Steel Conference at www.aisc.org/nascc.

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Constructability for Fabricators. When implemented, constructability can enhance any project through more accurate and more cost-effective proposals based on complete and coordinated design documents. This, in turn, can improve the entire structural steel detailing and fabrication process through economical material procurement, timely shop drawing preparation, and conformance to standard shop fabrication processes and OSHA requirements. This session discusses each of these areas, and provides fabricators with a solid background on how to infuse constructability into the design process, improving their deliverables and profitability.

Constructability for Erectors. Most in the construction community typically have limited input during the traditional design process. The present design process often undermines the ability of construction team members to influence the designer's decision matrix because the matrix often doesn't include such items as construction sequencing, site constraints, construction trade interface, and specification relevancy. This session outlines constructability suggestions that can deliver better decision making, reduced costs, improved schedules and reduced conflict between the design and construction teams.

At Ruby, our philosophy requires transparency and seamless integration with our cross-functional partners. We invite all those who are interested in improving their own efficiency and bottom-line results to join the discussion. We're eager to identify mutual opportunities to engineer or design something new, whether that means a better way to do the same thing, or a new way to do something never dreamed of before. The change is here in our business. How we deal with it will make all the difference.

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