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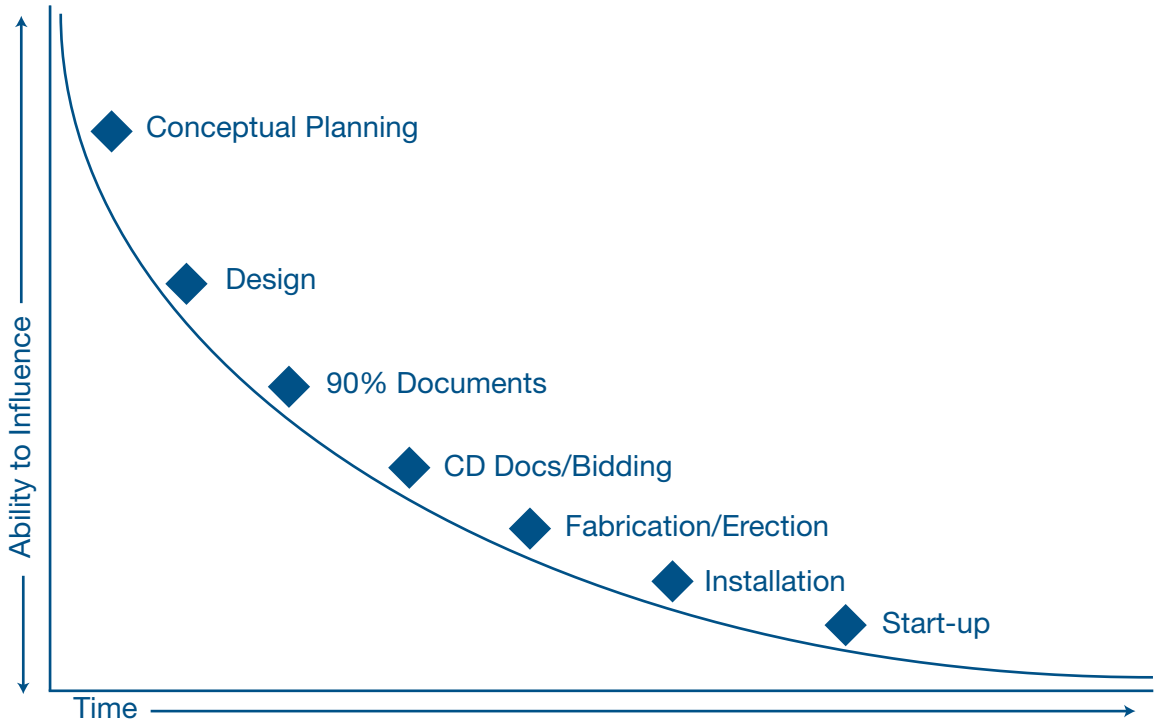
Steel Design Guide

Constructability of Structural Steel Buildings



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Constructability of Structural Steel Buildings

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AMERICAN INSTITUTE OF STEEL CONSTRUCTION

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Printed in the United States of America

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PUBLISHER'S NOTE

This document differs in use and application from many previous AISC publications. It is based upon evolving thought on new project delivery systems in the industry and addresses concepts that are appearing in the professional literature on an increasing basis. The author's ideas involve all construction trades and design disciplines, not just structural engineers and structural steel fabricators, and this document can serve as a primer for structural engineers and others in the structural steel industry who seek new approaches to construction and new ways of doing business.

While the terms are not used explicitly, the author's recommendations very much parallel the concepts of integrated project delivery, lean construction, and alliance contracting. In many respects the concepts in this Design Guide are ahead of many industry theorists—with one important difference. The author is not just theorizing about integrating "constructability" into his structural engineering practice. Rather, he has actually done it and is sharing his knowledge with colleagues and the industry, which he has served well for many years.

This Design Guide does not constitute a code or standard; nor is it intended to be incorporated by reference into a contract document. However, it has tremendous potential utility in guiding an evolving practice and standard of care in an era when new contract documents and contract relationships are being developed to address some of the concerns raised in this text.

Several distinguishing characteristics of this work should be kept in mind as its principles are applied to current and future real-world construction projects:

1. Some of the practice suggestions addressed are clearly within the recognized, traditional province of the Structural Engineer of Record.
2. Some of the practice suggestions addressed are applied by some structural engineers, but not by all practitioners—or even a majority of practitioners—and therefore have not risen to the level of either "standard practice" or a recognized standard of care.
3. Some of the suggestions addressed are either "means and methods" of construction or matters that, under current project delivery systems, can only be addressed by the owner or the prime design professional (usually the project architect).
4. Because this text is not constrained by traditional thought and traditional approaches, it does not differentiate among the categories of traditional practice or the traditional professional responsibility that is applied to those categories of practice by different members of the project team. Therefore, this work should not be used in an attempt to define the professional responsibility of any individual member of a project team.
5. Finally, this text covers a great deal of technical information. It is an extremely valuable tool, but cannot be applied in a vacuum, or by someone who does not have the prerequisite level of technical training and experience. It has to be applied simultaneously by a host of qualified professionals, working together, using the references noted, and a good many additional references that may not necessarily be noted.

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