COLD-FORMED STEEL DESIGN DOCUMENTS

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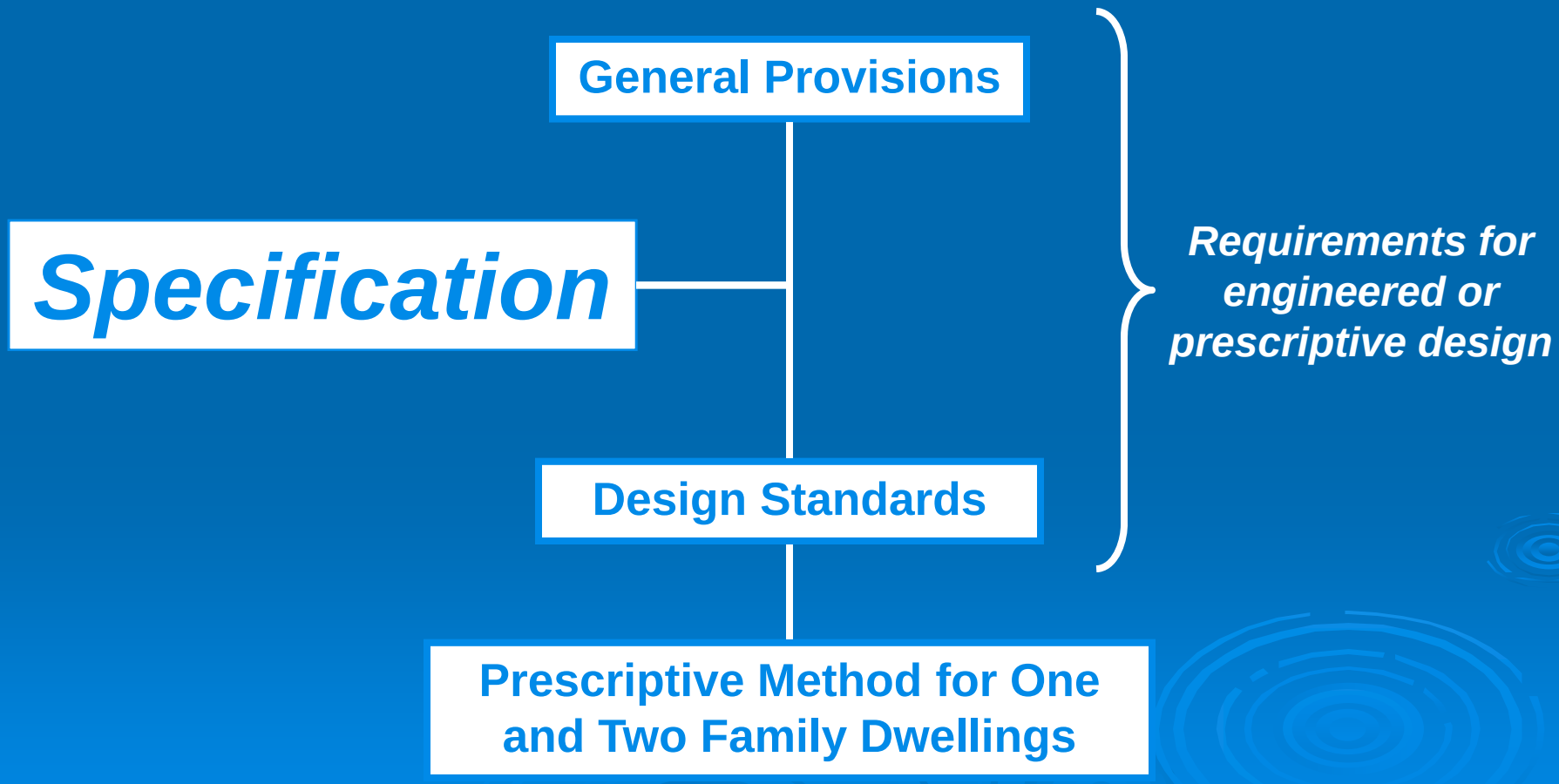
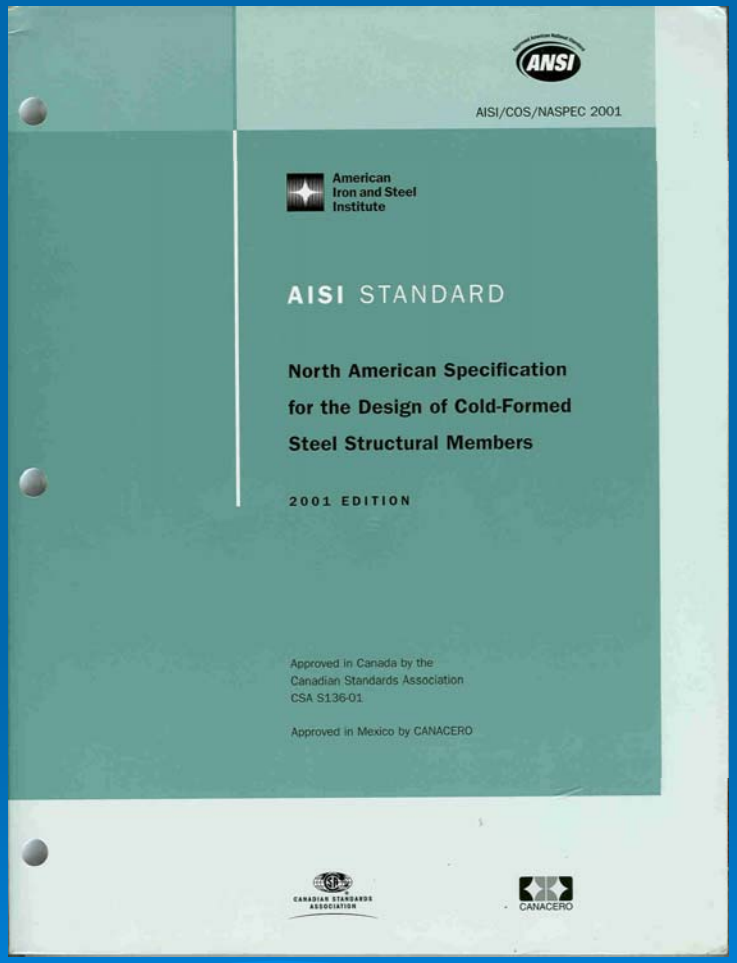
Goal of This Presentation

Provide overview of cold-formed steel design specification and design standards used in the construction industry.

Standards Hierarchy



AISI *North American Specification*

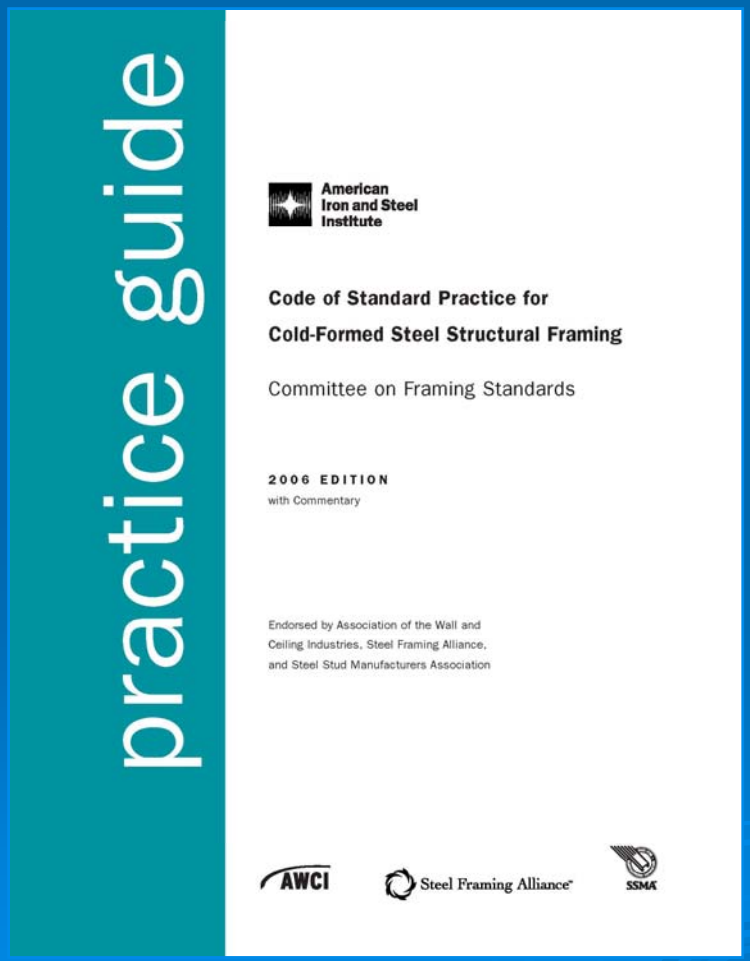


Design Specification for Cold-Formed Steel in Construction

AISI Framing Standards

- General Purpose:
  - AISI S200-07: General Provisions
  - AISI S201-07: Product Standard
  - Code of Standard Practice, 2006 Edition
- Engineering Design Standards:
  - AISI S210-07: Floor and Roof System Design
  - AISI S211-07: Wall Stud Design
  - AISI S212-07: Header Design
  - AISI S213-07: Lateral Design
  - AISI S214-07: Truss Design
- Prescriptive Methods:
  - AISI S230-07: Prescriptive Method for One and Two Family Dwellings

Code of Standard Practice



A. GENERAL
B. CLASSIFICATION OF MATERIALS
C. CONTRACT DOCUMENTS
D. INSTALLATION DRAWINGS
E. MATERIALS
F. INSTALLATION
G. QUALITY CONTROL
H. CONTRACTUAL RELATIONS

Scope

- Defines and sets forth accepted norms of good practice for fabrication and installation of cold-formed steel structural framing
- Supplement to legal building regulation
- Would be used unless there are differing instructions in the contract documents
- Voluntary document

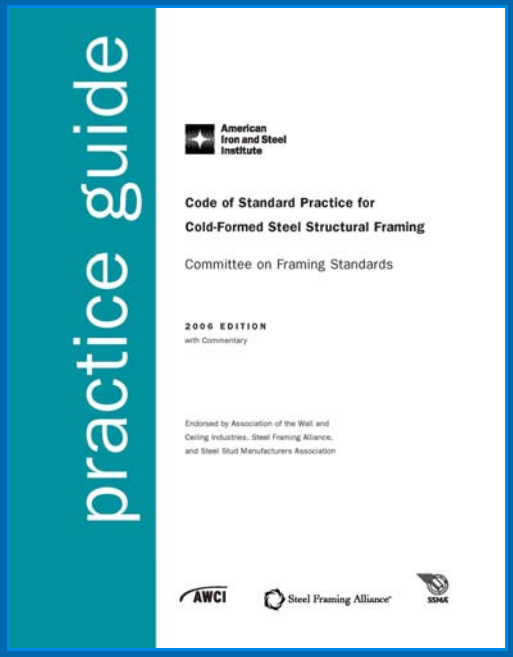
Model Documents

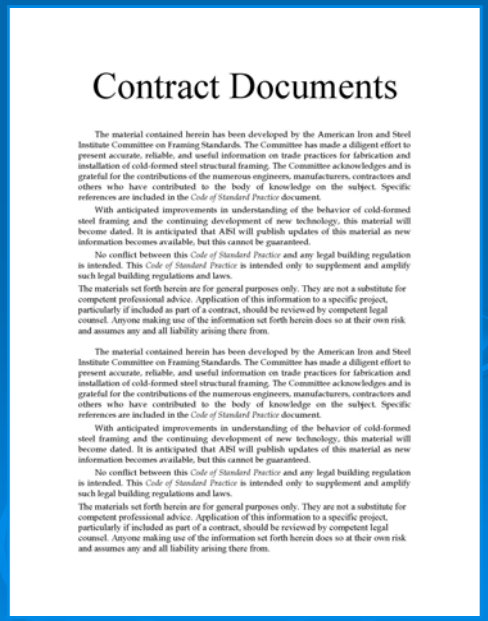
- AISC - Code of Standard Practice for Steel Buildings and Bridges
- SJI – Recommended Code of Standard Practice for Steel Joists and Joist Girders

Summary

- The Age-Old Question: “Who is responsible for what?”
- The Age-Old Answer: “Good Communication”
  - Code of Standard Practice
  - Contract Documents – nothing replaces the need for a set of well thought-out and executed contract documents.

These documents compliment each other





Contract Documents

The material contained herein has been developed by the American Iron and Steel Institute Committee on Framing Standards. The Committee has made a diligent effort to present accurate, reliable, and useful information on trade practices for fabrication and installation of cold-formed steel structural framing. The Committee acknowledges and is grateful for the contributions of the numerous engineers, manufacturers, contractors and others who have contributed to the body of knowledge on the subject. Specific references are included in the *Code of Standard Practice* document.

With anticipated improvements in understanding of the behavior of cold-formed steel framing and the continuing development of new technology, this material will become dated. It is anticipated that AISI will publish updates of this material as new information becomes available, but this cannot be guaranteed.

No conflict between this *Code of Standard Practice* and any legal building regulation is intended. This *Code of Standard Practice* is intended only to supplement and amplify such legal building regulations and laws.

The materials set forth herein are for general purposes only. They are not a substitute for competent professional advice. Application of this information to a specific project, particularly if included as part of a contract, should be reviewed by competent legal counsel. Anyone making use of the information set forth herein does so at their own risk and assumes any and all liability arising there from.

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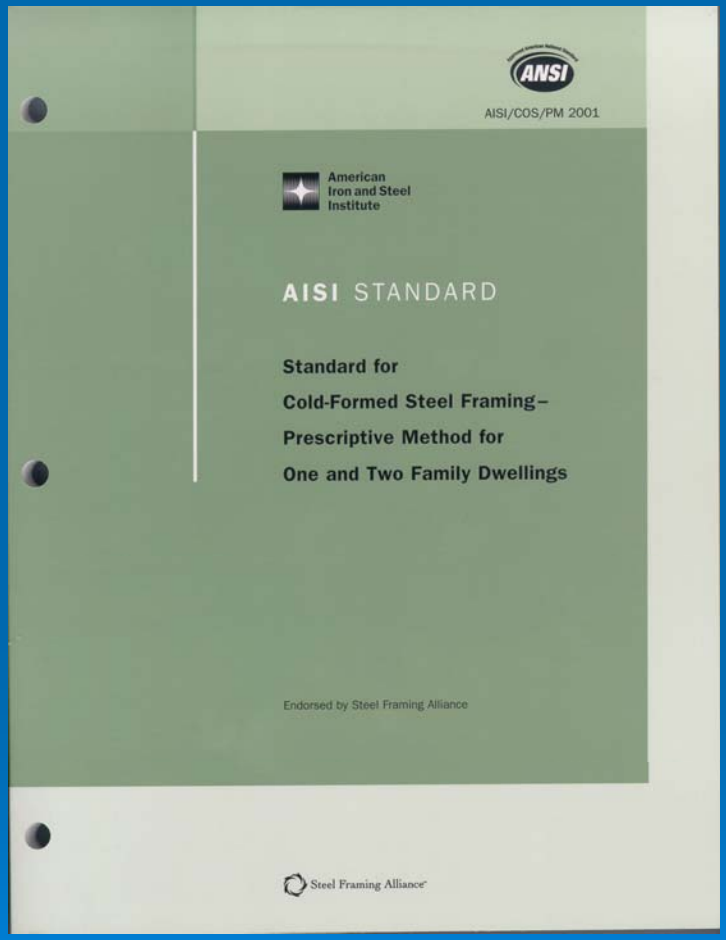
Example

- Responsibilities for field modifications and repairs must be clearly defined and communicated

Prescriptive Method



Consists of design tables and construction details

Prescriptive Method Tables and Details

33 KSI

Table E3-1a
Stud Thickness
24-Foot Wide Building Supporting Roof and Ceiling Only[1,2,3]
F_y = 33 ksi

Wind Speed		Member Size	Stud Spacing (inch)	Minimum Stud Thickness							
				8-Foot Studs				9-Foot Studs			
				Ground Snow Load (psf)							
Exp. A/B	Exp. C			20	30	50	70	20	30	50	70
85 mph		350S162	16	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33
		550S162	16	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33
90 mph		350S162	16	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33
		550S162	16	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33
100 mph	85 mph	350S162	16	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33
		550S162	16	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33
110 mph	90 mph	350S162	16	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	4
			16	33	33	33	33	33	33	33	3

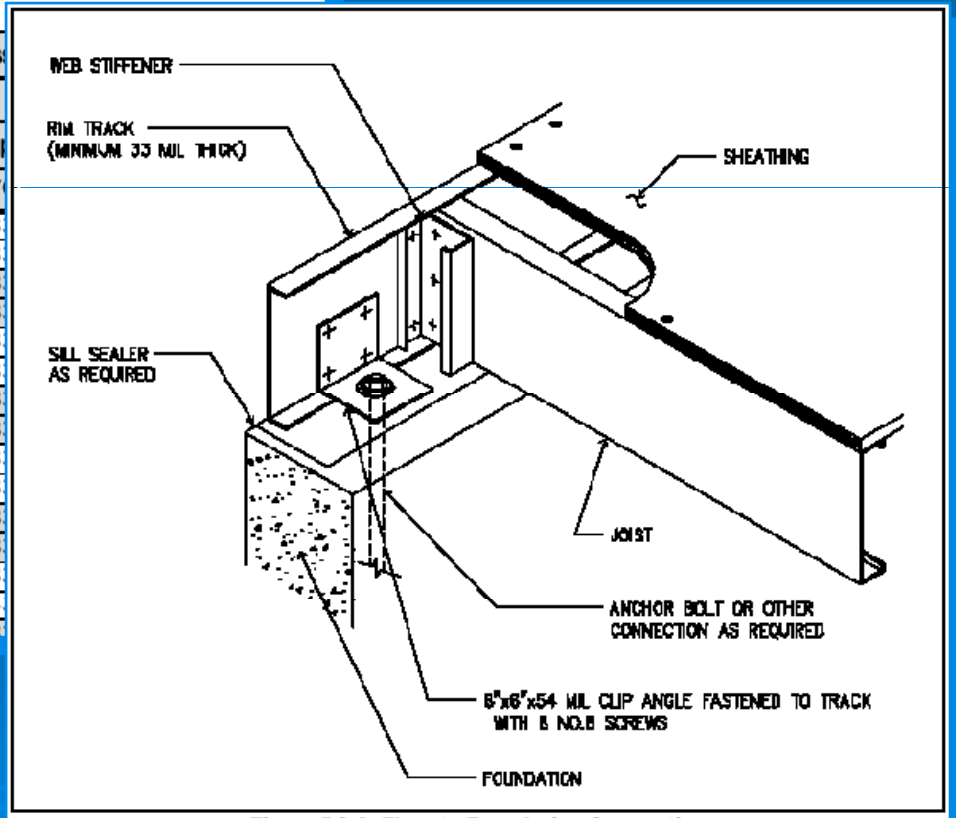


Figure D2-3 Floor to Foundation Connection