CHAPTER 22 STEEL

SECTION 2211
COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION

2211.1 Structural framing.

For cold-formed steel *light-frame construction*, the design and installation of the following structural framing systems, including their members and connections, shall be in accordance with AISI S240, and Sections 2211.1.1 through 2211.1.3, as applicable:

1. Floor and roof systems.
2. Structural walls.
3. Shear walls, strap-braced walls and diaphragms that resist in-plane lateral loads.
4. Trusses.

2211.1.1 Seismic requirements for cold-formed steel structural systems.

The design of cold-formed steel *light-frame construction* to resist seismic forces shall be in accordance with the provisions of Section 2211.1.1.1 or 2211.1.1.2, as applicable.

2211.1.1.1 Seismic Design Categories B and C.

Where a response modification coefficient, *R*, in accordance with ASCE 7, Table 12.2-1 is used for the design of cold-formed steel *light-frame construction* assigned to *Seismic Design Category* B or C, the *seismic force-resisting system* shall be designed and detailed in accordance with the requirements of AISI S400.

> **Exception:** The response modification coefficient, *R*, designated for "Steel systems not specifically detailed for seismic resistance, excluding cantilever column systems" in ASCE 7, Table 12.2-1, shall be permitted for systems designed and detailed in accordance with AISI S240 and need not be designed and detailed in accordance with AISI S400

2211.1.1.2 Seismic Design Categories D through F.

In cold-formed steel *light-frame construction* assigned to *Seismic Design Category* D, E or F, the *seismic force-resisting system* shall be designed and detailed in accordance with AISI S400.

2211.1.2 Prescriptive framing.

Detached one- and two-family *dwellings* and *townhouses*, less than or equal to three *stories above grade plane*, shall be permitted to be constructed in accordance with AISI S230 subject to the limitations therein.

2211.1.3 Truss design.

Cold-formed steel trusses shall comply with the additional provisions of Sections 2211.1.3.1. through 2211.1.3.3.

2211.1.3.1 Truss design drawings.

The truss design drawings shall conform to the requirements of Section I1 of AISI S202 and shall be provided with the shipment of trusses delivered to the job site. The truss design drawings shall include the details of permanent *individual truss member* restraint/bracing in accordance with Section I1.6 of AISI S202 where these methods are utilized to provide restraint/bracing.

2211.1.3.2 Trusses spanning 60 feet or greater.

The owner or the owner's authorized agent shall contract with a *registered design professional* for the design of the temporary installation restraint/bracing and the permanent *individual truss member* restraint/bracing for trusses with clear spans 60 feet (18 288 mm) or greater. *Special inspection* of trusses over 60 feet (18 288 mm) in length shall be in accordance with Section 1705.2.

2211.1.3.3 Truss quality assurance.

Trusses not part of a manufacturing process that provides requirements for quality control done under the supervision of a third-party quality control agency in accordance with AISI S240 Chapter D shall be fabricated in compliance with Sections 1704.2.5 and 1705.2, as applicable.

2211.2 Nonstructural members.

For cold-formed steel *light-frame construction*, the design and installation of nonstructural members and connections shall be in accordance with AISI S220.