NUCONSTEEL® A NUCOR COMPANY

1. Product Name

NUTRUSS® Pre-Engineered Cold-Formed Steel Trusses

2. Manufacturer

NUCONSTEEL
A NUCOR Company
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3. Product Description

BASIC USE

NUTRUSS® is a fully engineered and integrated, light gauge steel, load-bearing truss system designed for residential and commercial construction. From the planning stage through fabrication and on to the jobsite, NUTRUSS provides superior strength, design flexibility and wider spans. This truss component system delivers complete structural framing that is ready for roof sheathing installation.

NUTRUSS has been used as all or part of the primary framing in assisted living centers, schools, hotels, office buildings, apartments and churches and in virtually every other commercial building segment. It is compatible with other NUCONSTEEL systems, as well as with other structural products in the market.

BENEFITS

- Virtually unlimited truss design - Extremely versatile
- Chord and webs in one plane
- Lightweight, easily handled onsite
- Strong weak-axis performance helps prevent damage in handling; reduces bracing requirements; and provides a solid footing for installers and other trades
- High strength-to-weight ratios
- Long span capabilities
- Mechanically fastened - No welding

COMPOSITION & MATERIALS

NUTRUSS is made from cold-formed light gauge steel and features a protective zinc coating. It is produced from the highest quality steel coils provided by NUCOR.

Truss Chord & Web Components

Truss chord and web components are manufactured with rolled or closed edges to minimize the danger of injury during handling. Chord and web components without rolled edges are prohibited.

Cold-formed truss chord and web components are manufactured from ASTM A1003/A1003M or A653/A653M galvanized sheet steel with a minimum G60 coating (per ASTM A924/A924M) with yield strengths of Grade 33 or 50, as indicated, in shapes, sizes and thicknesses indicated on the shop drawings.

Nominal 27 mil (22 gauge) Members

- Minimum uncoated steel thickness - 0.0269" (27 mil)
- Maximum design thickness - 0.0283" (28 mil)

Nominal 33 mil (20 gauge) Members

- Minimum uncoated steel thickness - 0.0329" (33 mil)
- Maximum design thickness - 0.0346" (35 mil)

Nominal 43 mil (18 gauge) Members

- Minimum uncoated steel thickness - 0.0428" (43 mil)
- Maximum design thickness - 0.0451" (45 mil)

Nominal 54 mil (16 gauge) Members

- Minimum uncoated steel thickness - 0.0538" (54 mil)
- Maximum design thickness - 0.0566" (57 mil)

Fasteners

Manufacturer will provide self-drilling, self-tapping, corrosion resistant screws of sufficient size and number to ensure the strength of the connection, as specified by the truss designer. All connection points shall utilize mechanical fasteners. Welded connections are prohibited.

FABRICATION

Truss fabrication shall be performed in a quality controlled manufacturing environment by an experienced cold-formed steel truss fabricator. The truss fabricator must have references confirming sufficient experience designing and fabricating cold-formed steel truss systems equal in material, design and extent to the systems required for the project.

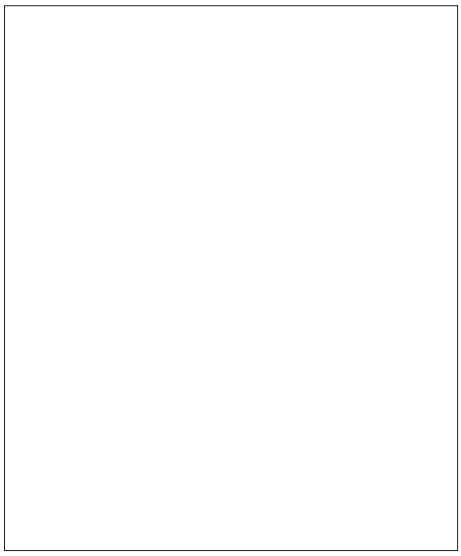
The truss type, span and height shall be fabricated as indicated on the drawings and in compliance with the requirements of the International Building Code (IBC) and International Residential Code (IRC), 2006 editions.

Trusses, chords and webs are shop fabricated in accordance with shop drawings using jigging systems to ensure consistent component placement and alignment of components, and to maintain specified tolerances. Components are fabricated straight, level and true, without rack, to the following tolerances:

- Trusses up to 30' (9.2 m) long - Maximum 1/2" (12.7 mm) variation from design length
- Trusses over 30' (9.2 m) long - Maximum 3/4" (19.1 mm) variation from design length
- Trusses up to 5' (1.5 m) high - Maximum 1/4" (6.4 mm) variation from design height
- Trusses over 5' (1.5 m) high - Maximum 1/2" (12.7 mm) variation from design height

LIMITATIONS

Review NUCONSTEEL's Technical Manual for load and span tables. Load carrying applications are design dependent. All designs should be reviewed by a competent design professional familiar with the system and the requirements of the specific project.



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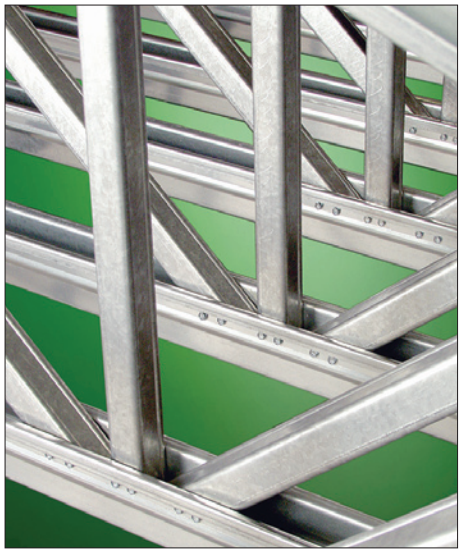
4. Technical Data

American Iron and Steel Institute (AISI)

- AISI North American Specification for the Design of Cold-Formed Steel Structural Members, 2001 edition with 2004 supplement
- AISI Standard for Cold-Formed Steel Framing - General Provisions, 2004 edition
- AISI Standard for Cold-Formed Steel Framing - Truss Design, 2004 edition



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- AISI Standard for Cold-Formed Steel Framing - Header Design, 2004 edition
- AISI Stub-Column Test Method for Effective Area of Cold-Formed Steel Columns
- AISI Test Methods for Mechanically Fastened Cold-Formed Steel Connections

ASTM International

- ASTM A370 Standard Test Methods and Definitions for Mechanical Testing of Steel Products
- ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- ASTM A924/A924M Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process
- ASTM A1003/A1003M Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members
- ASTM C645 Standard Specification for Nonstructural Steel Framing Members
- ASTM C955 Standard Specification for Load-Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Panel Products and Metal Plaster Bases
- ASTM C1513 Standard Specification for Steel Tapping Screws for Cold-Formed Steel Framing Connections

International Building Code (IBC) and International Residential Code (IRC), 2006 editions

NUTRUSS is designed in accordance with the AISI standard and applicable building codes. Fire and sound ratings, UL listings, MSDS and other certifications are available in the NUCONSTEEL Technical Manual.

ENVIRONMENTAL CONSIDERATIONS

NUTRUSS uses recycled steel products from NUCOR.

5. Installation

PREPARATORY WORK

Handle and store product according to NUCONSTEEL recommendations.

Do not unload trusses onto uneven surfaces or terrain. Trusses must be stored on a slight slope, supported by blocking, to ensure proper drainage of water and to prevent ponding on the interior of truss members.

When tarping trusses during storage, allow for proper ventilation to prevent condensation. Do not lift bundled trusses by the bands.

Do not store bundles of trusses upright unless they are properly braced. Do not break the bundle bands until the bundles are placed in a stable position. Upon cutting the bands, immediately inspect the trusses to ensure the chord and web members are undamaged.

Do not overload trusses with stacks of construction material during construction. Design loads should not be applied until all permanent bracing, including sheathing (when used), has been properly attached.

METHODS

Install trusses in accordance with the truss fabricator's shop drawings. Use manufacturer recommended fasteners. Space components as indicated on shop drawings.

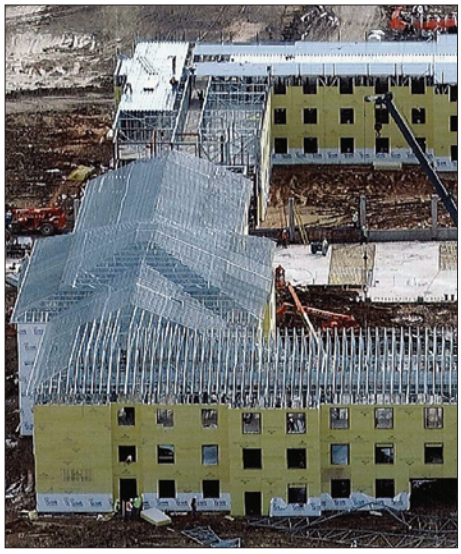
Install all construction (temporary installation) bracing in compliance with the truss fabricator's guidelines before application of any loads. The bracing must hold trusses straight and plumb in a safe condition until the decking and permanent truss bracing are secured.

Do not alter, cut or remove any truss members or component without prior written approval by the truss designer.

Repair or replace damaged chords, webs or completed trusses as directed in writing by the truss fabricator.

On steel framed walls, align the truss bottom chord with load-bearing studs, or continuously reinforce the wall top track to transfer roof loads to the structure.

Anchor trusses securely at all bearing points with fasteners and/or accessories as instructed by the truss fabricator's recommendations and guidelines, as indicated in the shop drawings.



NUTRUSS® and NUPANEL™ products used in a University of North Texas dormitory project in Denton, TX

Install trusses to a maximum allowable tolerance variation from plumb, level and true to line of 1/8" (3.2 mm) in 10' (3.1 m). Space individual trusses no more than ± 1/4" (± 6.4 mm) from plan location. Cumulative error shall not exceed the minimum fastening requirements of sheathing or other finish materials.

PRECAUTIONS

Maintain an adequate distribution of temporary construction loads, throughout all trades, to ensure that the carrying capacity of any single truss or group of trusses is not exceeded.

Provide lifting equipment suitable for handling the sizes and types of trusses required for the project. Industry accepted spreader devices must be provided to lift the trusses into place without causing stress or damage to the truss components.

Never disassemble a factory built truss onsite for any reason. Should installation problems or field conditions require the removal of truss components, contact the truss manufacturer.

BUILDING CODES

Current data on building code requirements and product compliance can be obtained from NUCONSTEEL technical support specialists. Installation must comply with the requirements of all applicable local, state and national code jurisdictions.

6. Availability & Cost

AVAILABILITY

NUTRUSS is available throughout the United States.

COST

Budget installed cost information can be obtained from the manufacturer upon request.

7. Warranty

Contact the manufacturer for complete warranty details.

8. Maintenance

NUTRUSS components require no maintenance and will last for the life of the structure when installed in an enclosed, properly designed and maintained roof or floor cavity.

9. Technical Services

NUCONSTEEL's sophisticated, state-of-the-art Truswal® software generates layout, design and engineering and fabrication drawings.

10. Filing Systems

- Reed First Source®
- MANU-SPEC®
- Sweet's Catalog Files
- Additional product information is available from the manufacturer upon request.