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# Technical Bulletin

FROM SPEIGHT, MARSHALL & FRANCIS, P.C.

Structural Engineering - Special Inspections

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On a regular basis, we plan to distribute these informational leaflets about crucial - but often ambiguous - structural engineering topics. With the knowledge of our featured subjects, our goal is to help our clients improve their profitability while reducing their liability. We suggest distributing a copy of our technical bulletins throughout your office and keeping them on hand for quick reference.

## Prefabricated Metal-Plate Connected Wood Trusses

### Part III of III - Floor Trusses

#### Introduction:

Floor trusses can be economically utilized in lieu of other types of floor framing systems. This technical bulletin will briefly discuss details and features of a floor truss system, as well as information that should be included by the design team on the Contract Documents. Please note that this technical bulletin is Part III of a three-part series on prefabricated metal-plate-connected wood trusses.

#### Typical Floor Truss Definitions:

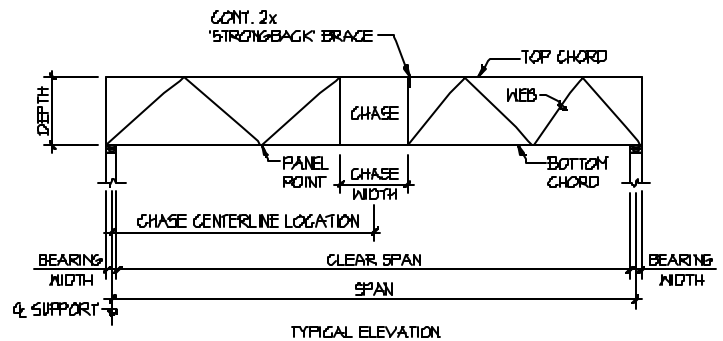
(see Part I of this three-part technical bulletin for definitions not noted)

**Chase** Opening in truss with no diagonal webs to allow passage of mechanical ducts, plumbing, etc. Chases typically are located in the middle-third of the truss span (larger-span truss may allow two chases to be incorporated in the truss layout).

**Depth:** Vertical dimension over support location

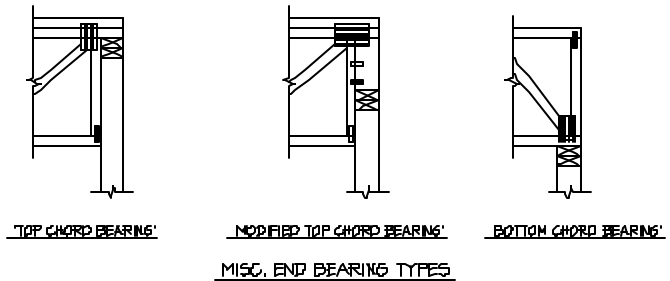
**Parallel Chord Truss:** Another nomenclature for prefabricated metal-plate-connected wood floor truss. Floor truss members are oriented with the long side horizontal (typically termed "4x2"), while roof trusses have the long side vertical (termed "2x4", "2x6", etc.).

**Strongback Brace:** "2x" (typically a 2x6) member attached perpendicular to floor trusses at vertical webs (typically located adjacent to chase - see diagram above). A strongback helps to distribute load to adjacent trusses and is typically used in lieu of cross-bridging.



## End Types:

End supports are typically located at bottom chord panel points. However, some cases may require the support to be located at a position other than the bottom chord. As is true for roof trusses various end types are available. Examples are shown below (contact the local truss manufacturer for other custom conditions available):



## Design Team Responsibility: (in addition to responsibilities described in Part I of this three-part technical bulletin)

### The Architect is additionally responsible for:

#### **Truss configuration**

- Bearing condition (if not typical bottom chord bearings)

#### **Truss dimensions**

- Depth
- Chase width
- Chase location (dimension to centerline)

### The Structural Engineer is primarily responsible for:

#### **Special loading**

- At chases

## Conclusion:

The design team should be aware of typical floor truss details. It is also recommended that the websites below (among other sources) be reviewed for additional information regarding floor trusses and how they can be effectively utilized in lieu of other framing systems. This will help the design team to properly and efficiently specify a floor truss system.

## References:

General Truss Information: [www.trussnet.com](http://www.trussnet.com)

Typical Truss Span Tables: [www.woodtruss.com](http://www.woodtruss.com)

## Truss Manufacturers:

Nationwide: Wood Truss Council of America Directory:

[www.woodtruss.com/membership/memberlist.php](http://www.woodtruss.com/membership/memberlist.php)

Hampton Roads, Virginia area:

Kempsville Building Materials, Inc.: [www.kempsvillebuilding.com](http://www.kempsvillebuilding.com)

Universal Forest Products, Shoffner LLC: [www.ufpi.com](http://www.ufpi.com)

Trusswood, Inc.: (757) 833-5300



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