

STRUCTURAL BUILDING COMPONENTS MAGAZINE (FORMERLY WOODWORDS)

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"Allowable Stress Design Manual" by John "Buddy" Showalter, P.E.

In 1998, after receiving strong endorsement from the industry's technical committee to proceed, the American Forest & Paper Association (AF&PA) began development of an *Allowable Stress Design (ASD) Manual for Engineered Wood Construction*. Paralleling the format of AF&PA's *Load and Resistance Factor Design (LRFD) Manual for Engineered Wood Construction*, the *ASD Manual* culminates a wood-industry-wide effort to bring together allowable stress design information in a single source document. With the *ASD Manual*, specifiers and designers will be able to find all the information they need for complete wood building design in one comprehensive document.

The *ASD Manual* is packaged with the building code-recognized *National Design Specification® (NDS®) for Wood Construction (1997 Edition)*; its *Supplement: Design Values for Wood Construction*; and the *NDS Commentary*. It also includes design information and examples for connections, structural lumber, glued laminated timber, structural-use panels, shearwalls and diaphragms, poles and piles, I-joists, structural composite lumber, metal plate connected wood trusses, and pre-engineered metal connectors. The comprehensive *NDS Commentary*, updated for the 1997 *NDS*, contains background information on *NDS* provisions, an explanation of their historical development and example problems.

The ASD package incorporates the following design information:

- Allowable Stress Design Manual for Engineered Wood Construction
- National Design Specification (NDS) for Wood Construction, 1997 Edition
- NDS Supplement: Design Values for Wood Construction
- NDS Commentary with 1997 Addendum
- Structural Lumber Supplement
- Structural Glued Laminated Timber Supplement
- Structural-Use Panels Supplement
- Structural-Use Panels Shearwall and Diaphragm Supplement
- Timber Poles and Piles Supplement
- Structural Connections Supplement
- Wood I-Joist Guideline
- Structural Composite Lumber Guideline
- Metal Plate Connected Wood Truss Guideline
- Pre-engineered Metal Connector Guideline

As with the *LRFD Manual*, ASD Supplements contain design values for products such as lumber, glulam, poles and piles, structural-use panels, shearwalls and diaphragms, and connections. Additional design information such as capacity selection tables, span tables, section properties, etc., are also included.

Guidelines contain general design information on proprietary products such as wood I-joists, structural composite lumber, pre-engineered metal connectors, and metal plate connected wood trusses. Since design values for these products are generally available only through code evaluation reports, they are not included in the guidelines. Rather, discussion of design principles, applicable adjustment factors, and other special considerations such as handling and installation, bracing, and fire and sound resistive construction are included. An example of this is the discussion of bracing in the *ASD Metal Plate Connected Wood Truss Guideline* as shown in Figure 4.2.3.

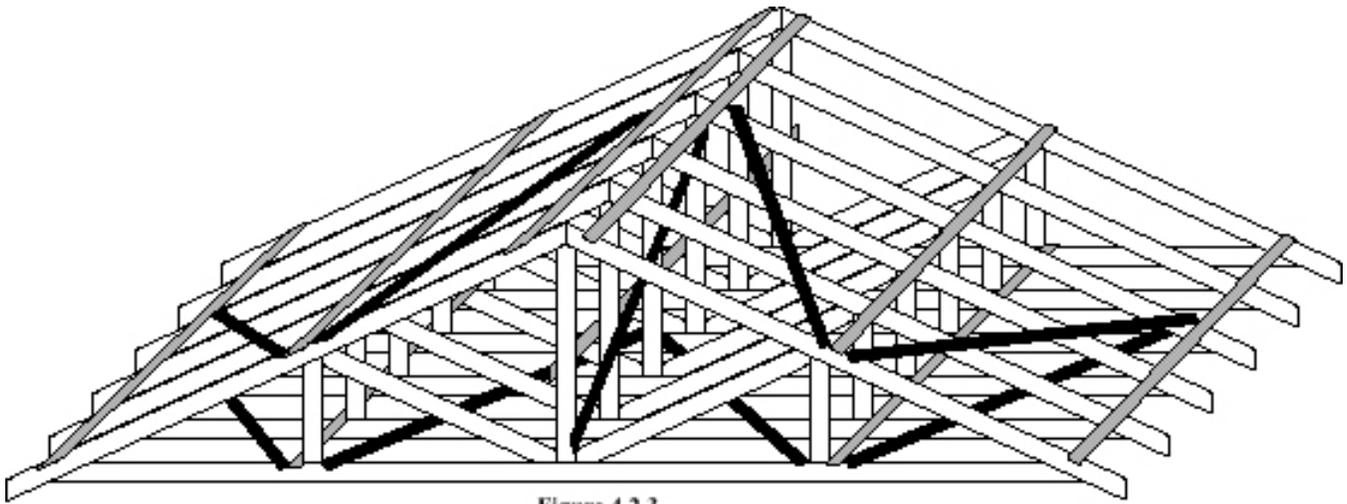


Figure 4.2.3

AF&PA worked closely with allied industry organizations such as the Wood Truss Council of America (WTCA) to complete the *ASD Manual*. WTCA, as the industry leader for marketplace information on wood trusses, was responsible for developing the *ASD Metal Plate Connected Wood Truss Guideline* with assistance from TPI.

Prices for the *ASD Manual* are \$70 [AWC members \$35] plus \$7.00 handling. Send orders to: American Forest & Paper Association, American Wood Council, Technical Publications, P.O. Box 5364, Madison, WI 53705-5364, Phone: 800/890-7732, Fax: 608/231-2152, www.awc.org.

For more information on the *ASD Manual*, or other technical information on wood products and design, contact AWC's Help Desk at 202/463-4713.

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