

Truss Technology

IN BUILDING

Long Span Truss Installation

Instalación de Trusses de Vanos Largos

WARNING! LONG SPAN TRUSSES, 60' FEET OR GREATER IN LENGTH, ARE EXTREMELY DANGEROUS TO INSTALL AND MAY REQUIRE A COMPLEX TEMPORARY RESTRAINT/BRACING PLAN. ALWAYS CONSULT A PROFESSIONAL ENGINEER.

¡ADVERTENCIA! TRUSSES DE VANOS LARGOS, 60 PIES O MÁS DE LARGO, SON EXTREMAMENTE PELIGROSOS A INSTALAR Y PUEDEN REQUERIR UN PLAN DE RESTRICCIÓN/ARRIOSTRE TEMPORAL COMPLEJO. SIEMPRE CONSULTE A UN INGENIERO PROFESIONAL.

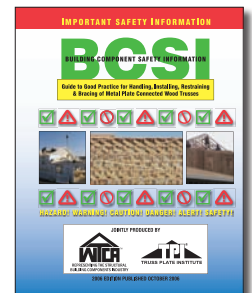


Long span trusses pose significant risk to installers. The dimensions and weight of a long span truss can create instability, buckling and collapse of the truss if it is not handled, installed, restrained and braced properly. Long span trusses can be installed safely and efficiently but they require more detailed safety and handling measures than shorter span trusses.

Trusses de vanos largos plantean un riesgo significativo a los instaladores. Las dimensiones y el peso de un truss de vano largo pueden crear inestabilidad, torciendo y la derrumbamiento del truss si no está manejado, instalado, restringido y arriostrado apropiadamente. Trusses de vanos largos pueden ser instalados seguramente y eficientemente pero requieren que tome medidas de seguridad y manejar más detalladas que los trusses de vanos más cortos.

BEFORE STARTING – ANTES DE EMPEZAR

- Hire a Professional Engineer to provide a temporary restraint/bracing plan and to supervise the erection process.
- Read and understand BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing Metal Plate Connected Wood Trusses published by WTCA.
- Develop a safe, effective truss installation method and inform all crew members of their roles.
- Use installers who have experience in installing long span trusses.
- Inspect the trusses. Document all truss damage. Prior to installation, repair all trusses according to the repair details prepared by the Truss Manufacturer, Truss Designer or a Professional Engineer.
- Ensure that the walls and supporting structure are stable and adequately restrained and braced.
- Have all necessary lifting equipment and building materials on hand. Make sure the crane operator understands the special hoisting requirements of long span trusses.
- *Contrate un Ingeniero Profesional para proveer un plano de restricción/arriostre temporal y para supervisar el proceso de erección.*
- *Lea y comprenda el BCSI – Guía de Buena Práctica para el Manejo, Instalación, Restricción y Arriostre de los Trusses de Madera Conectados con Chapas de Metal publicado por WTCA.*
- *Desarrolle un método seguro y efectivo de instalar los trusses e informe todos los tripulantes de sus partes.*
- *Utilice instaladores quienes tienen experiencia en la instalación de trusses de vanos largos.*
- *Inspeccione los trusses. Documente todo daño a los trusses. Antes de la instalación, repare todos trusses según los detalles preparados por el Fabricante del Truss, Diseñador del Truss o un Ingeniero Profesional.*
- *Asegúrese que las paredes y la estructura soportante son estables y restringidos y arriostrados adecuadamente.*
- *Tenga todo el equipo de levantamiento y materiales de construcción necesarios a mano. Asegúrese que el operador del montacargas entiende los requisitos especiales de levantamiento de trusses de vanos largos.*



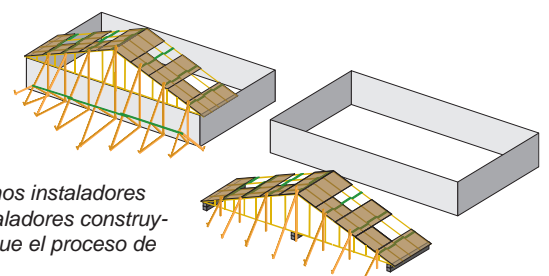
TIPS FOR SAFE AND EFFICIENT INSTALLATIONS – CONSEJOS PARA INSTALACIONES SEGURAS Y EFICIENTES

Build the First Five Into a Stable Base Unit

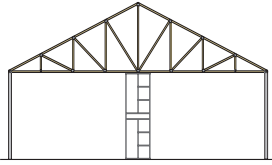
Assemble the first five trusses with all restraint, bracing and Structural Sheathing. Some installers lift the first five trusses one at a time and restrain, brace and sheath as they go. Other installers build the base unit on the ground and lift it into place. Either way, this makes the installation process much easier, accurate and safe.

Construye un Grupo Estable de Base de los Cincos Primeros

Montar los cinco primeros trusses con toda restricción, arriostre y Entablado Estructural. Algunos instaladores levantan los cinco primeros una a la vez y restringir, arriostrar y entablar como van. Otros instaladores construyen el grupo de base en la tierra y entonces levantarlo en lugar. En cualquier caso, esto hace que el proceso de instalación es mucho más fácil, preciso y seguro.



TIPS FOR SAFE AND EFFICIENT INSTALLATIONS (CONTINUED)
CONSEJOS PARA INSTALACIONES SEGURAS Y EFICIENTES (CONTINUADO)



Add a Temporary Center Support

It is highly recommended that temporary supports be set up at interior locations during the erection/installation process. This will provide greater stability and increased safety at the jobsite. Temporary interior supports should be left in place until all Permanent Building Stability Bracing is installed.

Añade un Soporte del Centro Temporal

Es muy recomendado que los soportes temporales están colocados en ubicaciones interiores durante el proceso de erección/instalación. Este proveerá mayor estabilidad y seguridad aumentada en la obra. Soportes interiores temporales deben ser quedados en sitio hasta que todo el Arriostre de Estabilidad Permanente del Edificio está instalado.



Keep Trusses Straight During Hoisting

Long span trusses are very prone to bending out-of-plane while being lifted into place. It is very important to provide support so the trusses flex as little as possible. A good hoisting device and spreader bar can provide support and be a real time saver.

Mantenga los Trusses Derechos Durante el Levantamiento

Trusses de vanos largos son propensos a doblando fuera-de-plano mientras están levantado en lugar. Es muy importante que provea soporte adicional para que los trusses muevan tan poco como posible. Un buen aparato de levantamiento y barandilla de extender pueden proveer soporte y ahorre mucho tiempo.

Sheath the Top Chord as Trusses are Installed

Save time by applying Structural Sheathing to the top chord immediately. Installation is also safer when the crew can work from a sheathed deck.



Entable la Cuerda Superior mientras los Trusses están Instalados

Ahorrar el tiempo por aplicando Entablado Estructural a la cuerda superior inmediatamente. También la instalación es más segura cuando la tripulación puede trabajar por una cubierta entablada.

Install All Permanent Building Stability Bracing Immediately

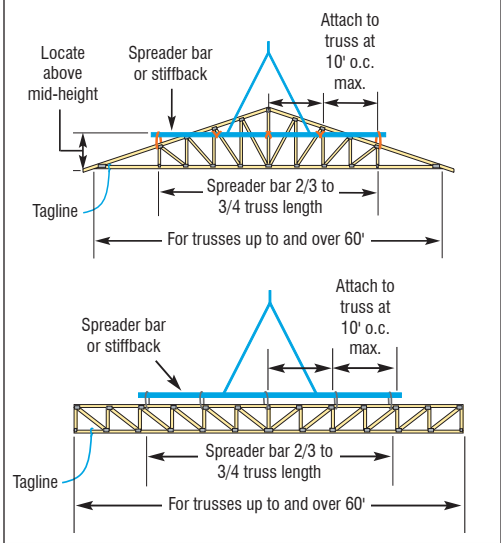
Once the installation crew becomes familiar with the procedure, the permanent Lateral Restraint and Diagonal Bracing for webs and bottom chords can be installed in the time it takes to release the hoist and install the next truss.

Instale Todo Arriostre de Estabilidad Permanente de Edificio Inmediatamente

Una vez que la tripulación de instalación se hacen familiar con el procedimiento, la Restricción Lateral y Arriostre Diagonal permanente para los miembros secundarios y las cuerdas inferiores pueden ser instalados en el tiempo que toma a soltar el levantador e instalar el próximo truss.



Hoisting Recommendations for Single Trusses



Visit www.sbcindustry.com/longspan.php for a detailed handling and installation strategy, articles on long span truss installations, and more resources for temporary and permanent restraint/bracing of metal plate connected wood trusses.

Visite www.sbcindustry.com/longspan.php para una estrategia detallada de manejo y instalación, artículos sobre instalaciones de trusses de vanos largos, y más recursos para la restricción/arriostre temporal y permanente de trusses de madera conectados con chapas de metal.

WARNING! CONTRACTOR EXPERIENCE IS REQUIRED TO INSTALL TRUSSES OVER 60' IN LENGTH.
¡ADVERTENCIA! ES REQUERIDO QUE TIENE EXPERIENCIA DE CONTRATISTA PARA INSTALAR TRUSSES MÁS DE 60 PIES DE LARGO.

To view a non-printing PDF of this document, visit www.sbcindustry.com/ttblog.

Disclaimer: The Truss Manufacturer and Truss Designer must rely on the fact that the Contractor and crane operator (if applicable) are capable to undertake the work they have agreed to do on a particular project. The Contractor should seek any required assistance regarding construction practices from a competent party. The methods and procedures outlined are intended to ensure that the overall construction techniques employed will put floor and roof trusses into place SAFELY. These recommendations for handling, installing restraining and bracing trusses are based upon the collective experience of leading personnel involved with truss design, manufacturing and installation, but must, due to the nature of responsibilities involved, be presented only as a GUIDE for use by a qualified Building Designer and/or Contractor. It is not intended that these recommendations be interpreted as superior to the Building Designer's design specification for handling, installing, restraining and bracing wood trusses and it does not preclude the use of other equivalent methods for restraining/bracing and providing stability for the walls, columns, floors, roofs and all the interrelated Structural Building Components as determined by the Contractor. Thus, WTCA expressly disclaims any responsibility for damages arising from the use, application, or reliance on the recommendations and information contained herein.

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Truss Technology in Building

An informational series designed to address the issues and questions faced by professionals in the building construction process.

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