

# Long Span Truss Installation

Installation Guide

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**SBCA**

**SBCA** has been the voice of the structural building components industry since 1983, providing educational programs and technical information, disseminating industry news, and facilitating networking opportunities for manufacturers of roof trusses, wall panels and floor trusses. **SBCA** endeavors to expand component manufacturers' market share and enhance the professionalism of the component manufacturing industry.

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# Introduction

- Long span trusses are defined as trusses with clear spans 60' or greater.
- Due to the greater dimensions and weight, there is a greater chance of instability, buckling, and even collapse during handling and installation of long span trusses.
- This presentation provides a step by step example of proper handling and installation of long span trusses.

# Introduction

- The following is one recommended method for installing long span trusses at 24" o.c.
- There are other methods used to accomplish the same installation but SBCA encourages communication with both a professional engineer with wood truss experience and truss designer to discuss different methods before considering other options.

# Step 1

- On the ground, ensure level bearing, set and position the first five trusses.
- Plumb and properly brace the trusses to the ground.



## Step 2

- Attach 27" (or longer) 2x4 lumber spacer pieces to the top chord every six feet to hold trusses plumb and properly spaced.
- Fasten the end of each spacer with two 16d box nails.
- Install sheathing beginning at heel and alternating 4x8 and 4x4 sheets up to truss peak.



## Step 3

- Brace webs laterally and diagonally where required by the Truss Design Drawing and the Engineer's Bracing plan.
- Install bottom chord permanent lateral bracing every ten feet and install the diagonal bracing



## Step 4

- Hoist the first set of five trusses (“superstructure”) off the ground and raise into position above exterior walls.
- This provides a solid structure to laterally support additional trusses.





# Step 5

- Hoist the sixth truss into position.
- The goal is to install the remaining trusses as efficiently and safely as possible.
- Use the appropriate spreader bar to keep each truss rigid.
- Specially designed lifting equipment is available for this purpose. (See WTCA's BCSI 1-03, pgs. 7-9 for hoisting information).



## Step 6

- Install 4x8 sheathing in the alternating gaps so that two feet extends past the sixth truss.
- Fasten the sheathing to trusses per construction documents.



## Step 7

- Hoist the seventh truss into place and attach the sheathing to the top chord.
- At the same time, the crew can install the permanent web and bottom chord bracing.



## Step 8

- Repeat steps 6 and 7 with the remaining trusses using the sheathing each time as both the temporary and permanent bracing.
- This approach can result in a fully sheathed and permanently braced roof system in the same time it takes to install the trusses with only temporary bracing.

