

Creating Roof Trusses

Reference Number: **KB-00981**

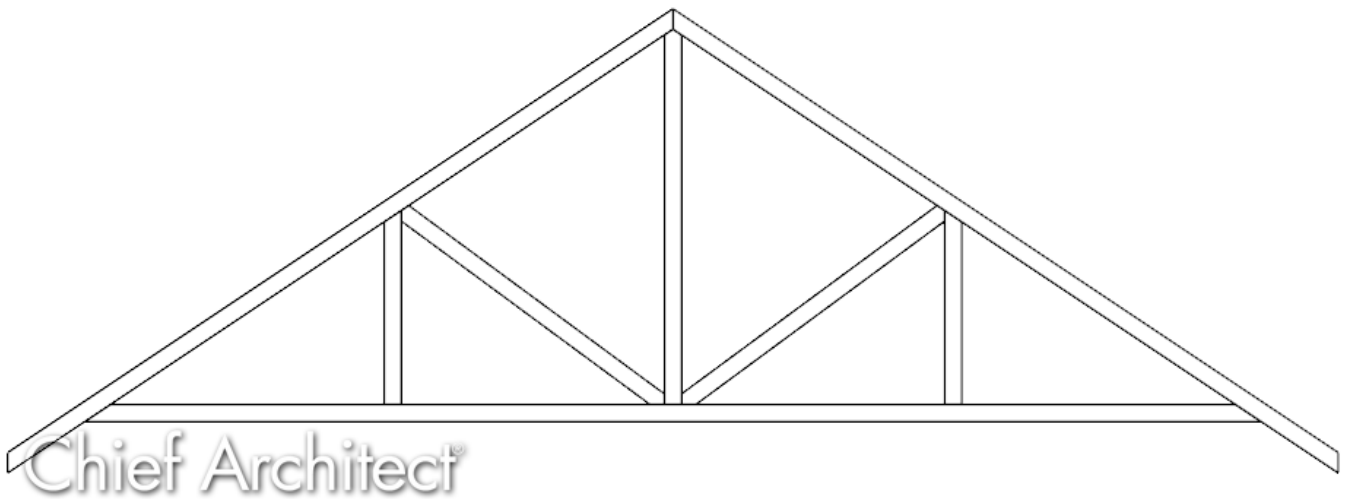
Last Modified: **March 15, 2022**

The information in this article applies to:



QUESTION

How do I create a roof truss?





ANSWER

Drawing roof trusses in Chief Architect is as simple as drawing and replicating it - as long as certain conditions are met. Roof trusses in the program are defined by the position of one or more roof planes above and one or more ceilings below, so both must be in place before a truss is drawn.

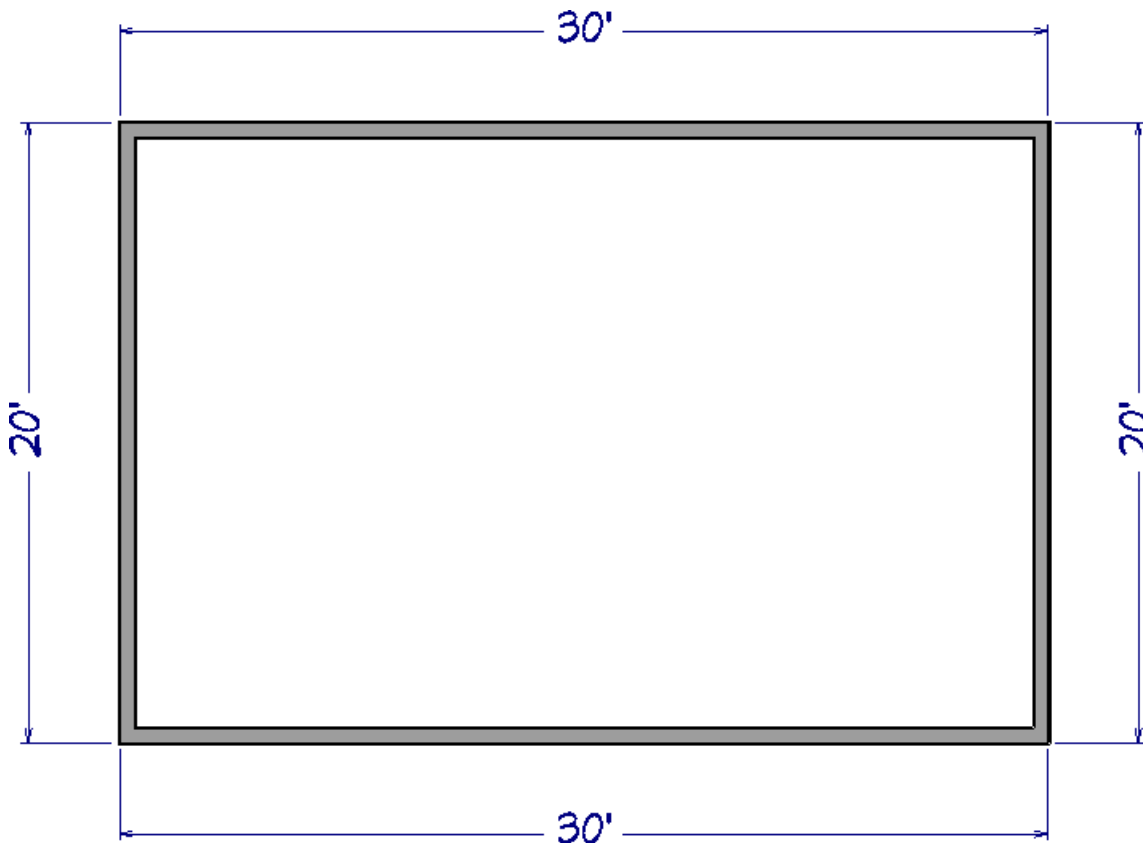
- The roof and ceiling planes can be automatically generated or manually drawn.
- The ceiling can be composed of the default flat ceiling generated in each room by default, of manually-drawn planes created using the Ceiling Plane tool, or of a combination of the two.



- There must be space between the roof and ceiling in which a truss can generate. Trusses cannot be generated along the line where the roof and ceiling come together, usually on a bearing wall.

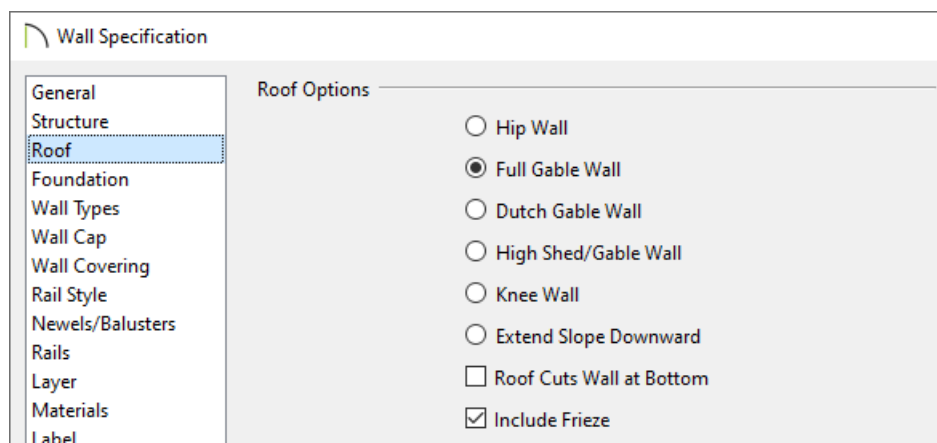
To create a roof truss

1. **Open**  the plan in which you would like to create roof trusses, or select **File> New Plan** .


In this example, a simple 20' x 30' structure is used.

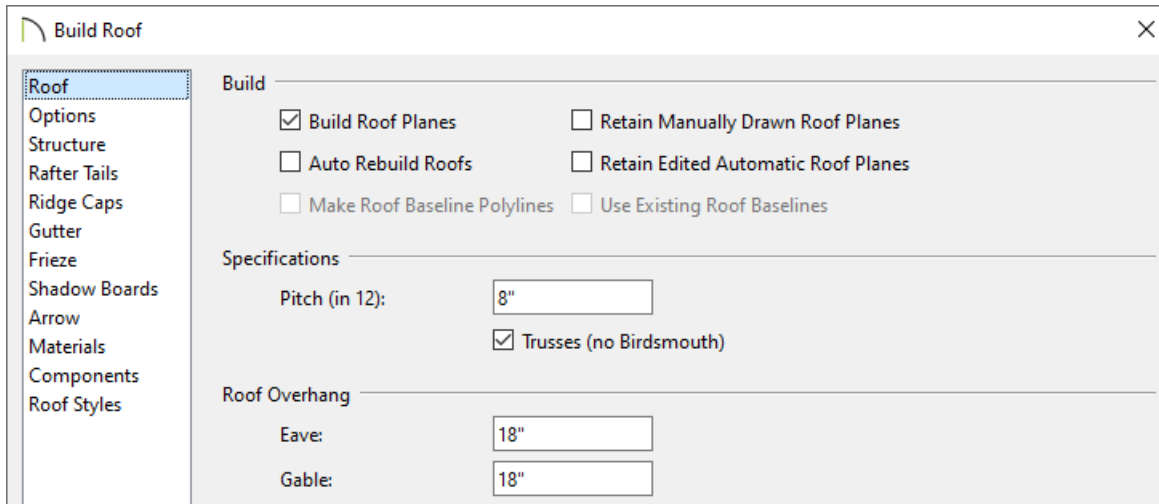


2. With the **Select Objects**  tool, select the left and right walls, then click the **Open Object**  edit button.
3. On the **Roof** panel of the **Wall Specification** dialog that opens, choose the **Full Gable Wall** option, then click **OK**.



For additional information on building an automatic gable roof, visit the "Generating Automatic Hip and Gable Roofs" article linked in the [Related Articles](#) section below.

4. Select **Build> Roof> Build Roof**  from the menu, and on the **ROOF** panel of the **Build Roof** dialog that appears:



- Check the **Build Roof Planes** box.
- Check **Trusses (no Birdsmouth)**.


The Trusses (no Birdsmouth) setting sets the roof height so that the bottom edge of the truss top chord is flush with the top of the wall and roof plane thickness is based on the default Top Chord Depth set in the Framing Defaults. If it is not checked, the roof plane thickness is determined by the rafter Depth setting in the Framing Defaults.

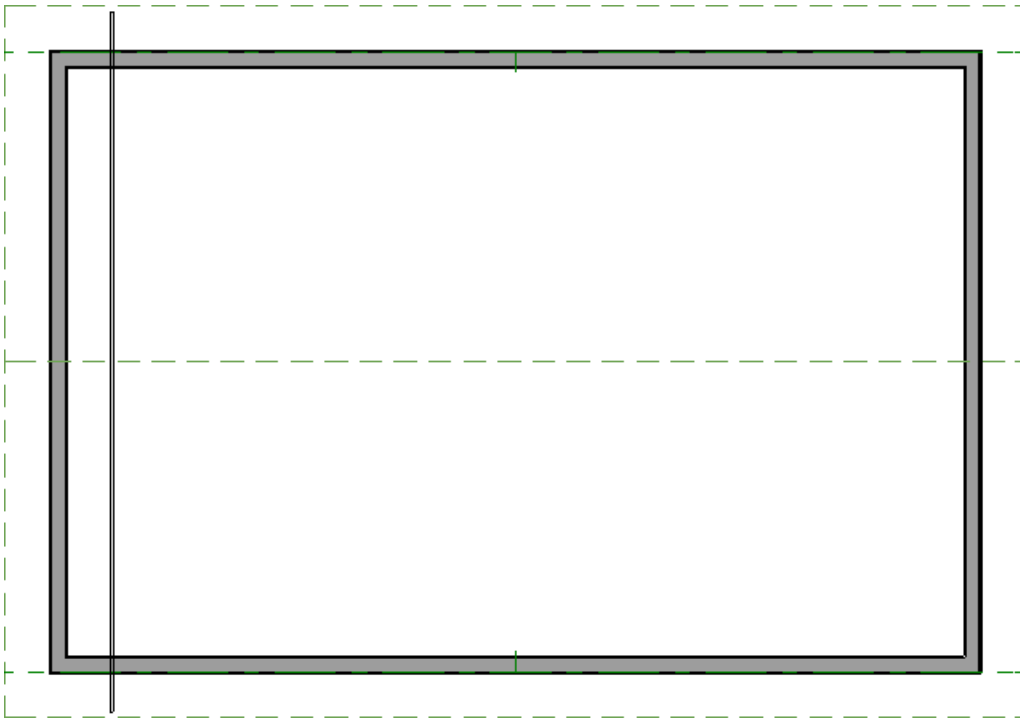
If you plan to use both trusses with rafters, leave Trusses (no Birdsmouth) unchecked so that the rafters' depth can be accommodated. Please review the "Mixing Trusses with Stick Framing" section of the Reference Manual for more information.

- Specify your desired **Pitch (in 12)** and **Roof Overhang** values.



In this example, an 8" in 12" pitch is specified with 18" overhangs.

- Once all desired changes have been made, click **OK** to build the roof.

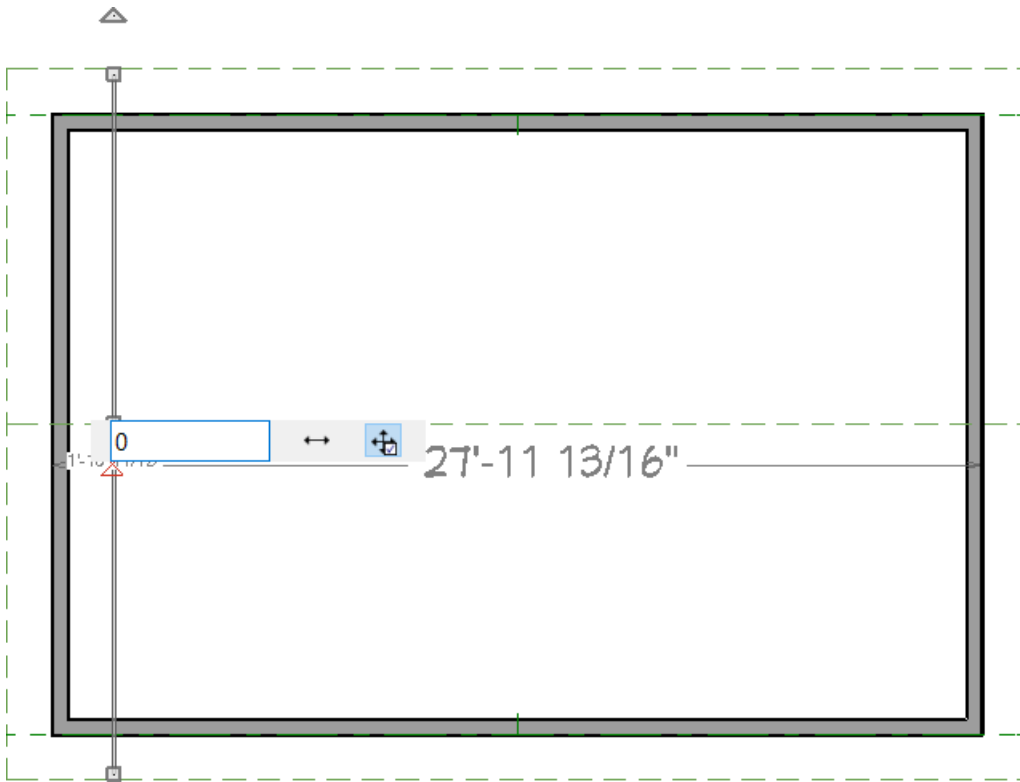
5. Select **Build> Framing> Roof Truss**  from the menu, then click and drag a line at a location where you would like a roof truss.



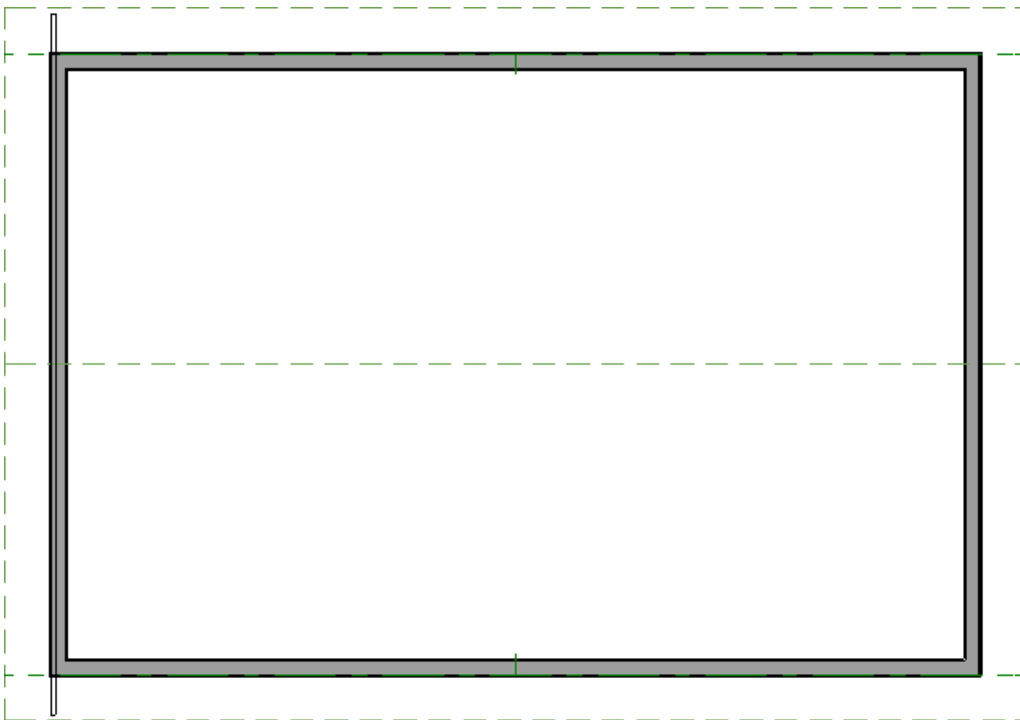
Note: A Message may appear asking "The layer "Framing, Roof Trusses" is not displayed. Do you want to turn on the display of this layer in the current view?" Click Yes to display the Roof Trusses layer in this view.

6. Make sure **Temporary Dimensions**  are toggled on, enable the **Select Objects**  tool, then click on the truss to select it.
7. When the truss is selected, a dimension will depict how far it is from a perpendicular wall. Click on the dimension, type your desired value in the text field, then press **Enter** on the keyboard.




In this example, 0" is specified.



The truss will move so that its outer edge is aligned with the outer edge of the framing layer of the wall



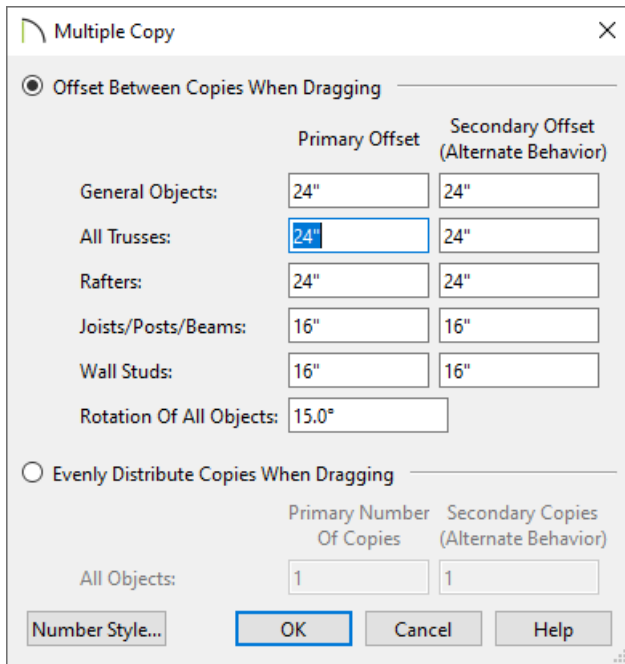
To replicate trusses


1. Using the **Select Objects**  tool, click on the single roof truss to select it, then click on the **Multiple Copy**  edit button.
2. By default, the Multiple Copy interval for trusses is 24" (600 mm). To change this interval, click the **Multiple Copy Interval**  secondary edit button, specify the desired **Primary Offset** value for **All Trusses**, then click

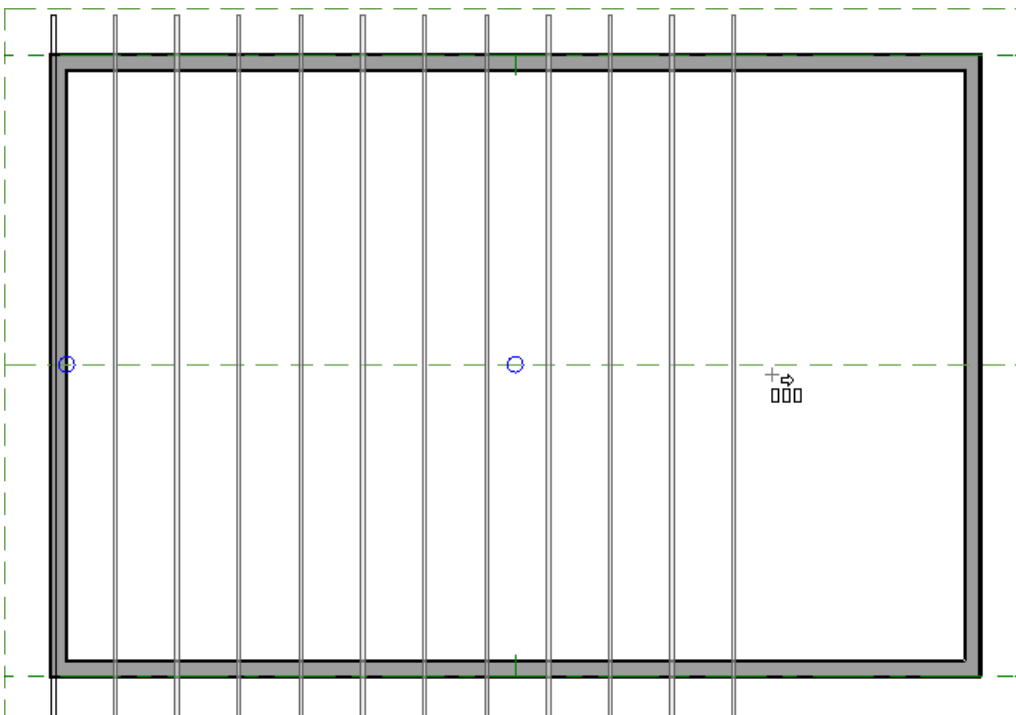
OK.

In this example, the default Primary Offset value of 24" is used.

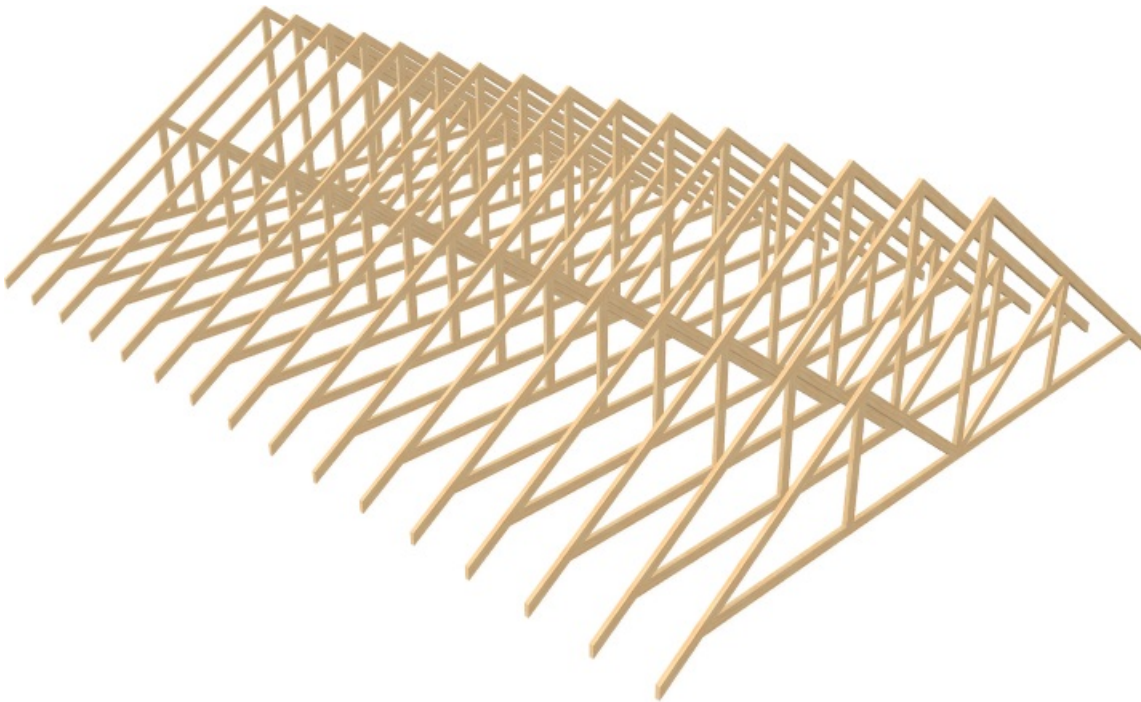
Note: Multiple Copy is not available in Home Designer Pro. Instead, use the Transform/Replicate edit tool. As an example, if you wanted to create 6 copies all separated a certain distance from each other, you would check the Copy box, set the Number of Copies to 6, then check the option for Move and set the X Delta to be 24". Negative values can also be set for each of the deltas if needed.





3. Hover over the main Move edit handle on the truss until you see the **Multiple Copy**  cursor display, then click and drag across the structure. As you drag, new trusses will be created at regular intervals. Release the mouse button to complete the command.




4. Create a **Perspective Framing Overview**  to see the results.

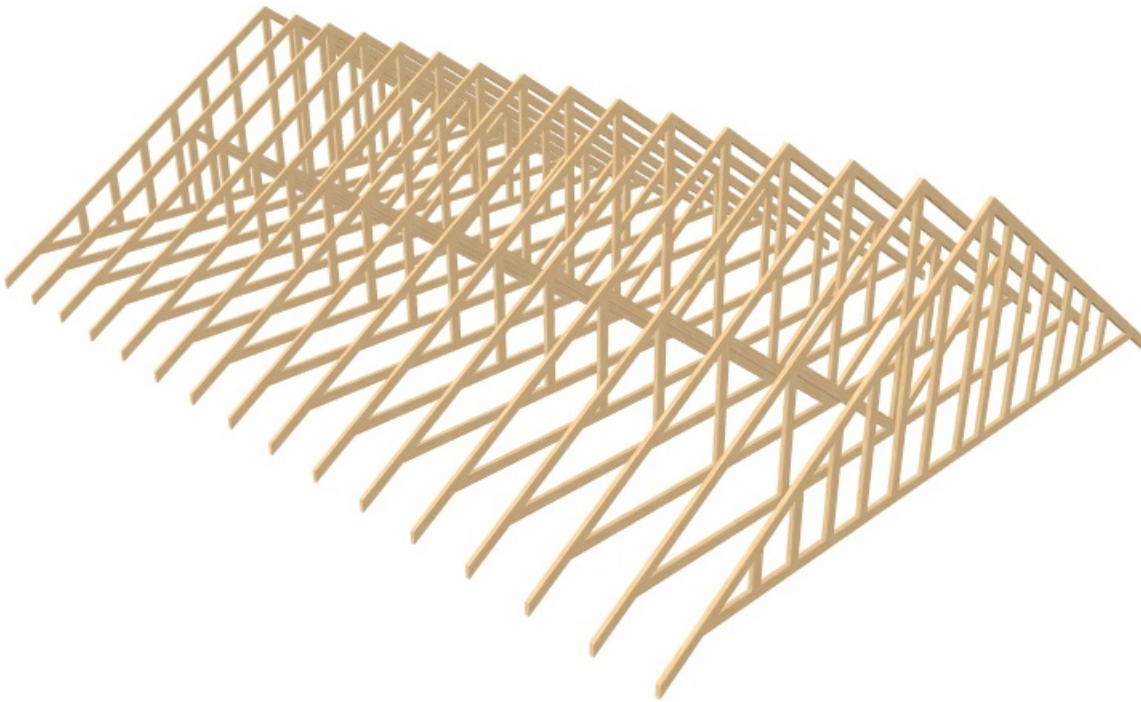


To create a reduced gable or an end truss

1. With the **Select Objects**  tool, select the trusses on either end of the gable and click the **Open Object**  edit button.

Holding the Shift key while selecting object allows you to group select multiple trusses. For more information on group selecting objects, please see the [Related Articles](#) section below.

2. On the **GENERAL** panel of the **Roof Truss Specification** dialog that opens, check the **End Truss** and **Force Truss Rebuild** boxes.
 - Check the **Reduced Gable** box in this dialog as well to lower the top chord of an End Truss so that lookouts can pass over the truss.
 - Click **OK** to rebuild the truss based upon the settings just specified.
3. Create a **Perspective Framing Overview**  to see the results.



For more information on roof trusses, please see your program's Reference Manual or the [Related Articles](#) section below.

Related Articles

- 📌 [Creating a Log Truss \(https://www.chiefarchitect.com/support/article/KB-02781/creating-a-log-truss.html\)](https://www.chiefarchitect.com/support/article/KB-02781/creating-a-log-truss.html)
- 📌 [Creating a Vaulted Ceiling and Scissor Trusses \(/support/article/KB-00068/creating-a-vaulted-ceiling-and-scissor-trusses.html\)](/support/article/KB-00068/creating-a-vaulted-ceiling-and-scissor-trusses.html)
- 📌 [Creating an Attic Truss \(/support/article/KB-00933/creating-an-attic-truss.html\)](/support/article/KB-00933/creating-an-attic-truss.html)
- 📌 [Creating an Energy Heel Truss \(/support/article/KB-00032/creating-an-energy-heel-truss.html\)](/support/article/KB-00032/creating-an-energy-heel-truss.html)
- 📌 [General Framing Guidelines \(https://www.chiefarchitect.com/support/article/KB-00465/general-framing-guidelines.html\)](https://www.chiefarchitect.com/support/article/KB-00465/general-framing-guidelines.html)
- 📌 [Generating Automatic Hip and Gable Roofs \(https://www.chiefarchitect.com/support/article/KB-00758/generating-automatic-hip-and-gable-roofs.html\)](https://www.chiefarchitect.com/support/article/KB-00758/generating-automatic-hip-and-gable-roofs.html)
- 📌 [Group Selecting Objects \(https://www.chiefarchitect.com/support/article/KB-00623/group-selecting-objects.html\)](https://www.chiefarchitect.com/support/article/KB-00623/group-selecting-objects.html)