

# Making Floor Joists Flush with the Top of the Stem Wall

Reference Number: **KB-00546**

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The information in this article applies to:



## QUESTION


I am creating a [floor platform](#) in which the floor joists are even with the top of the stem wall. How do I illustrate the lowered floor joists when using Home Designer Pro?



## ANSWER

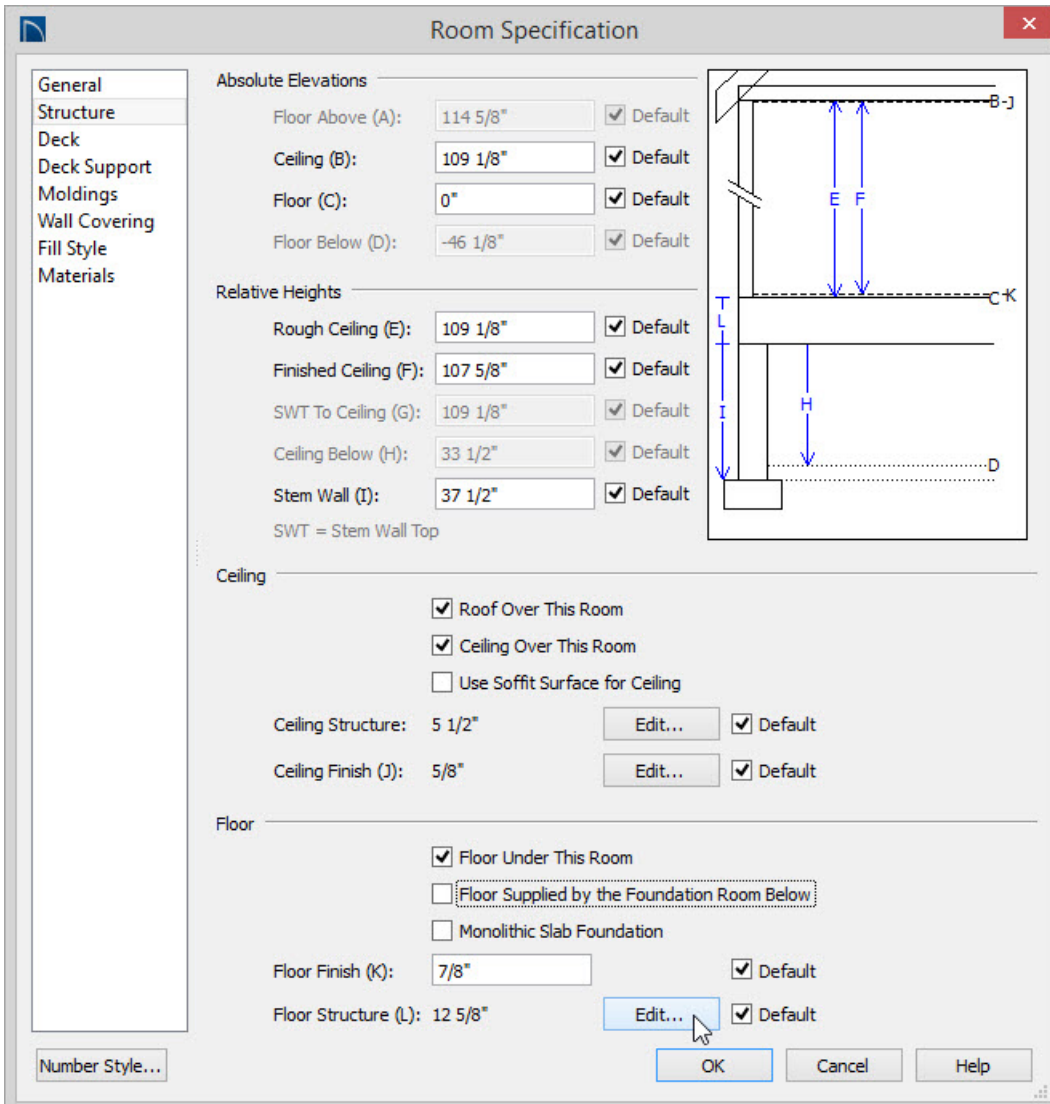
Floor joists can easily be raised or lowered to the height you desire. in this article we start with a simple 20' by 30' structure.

### To remove the default floor structure

1. On Floor 1, with the **Select Objects**  tool click in the middle of the room to select the room then click **Open**

**Object**  to open the **Room Specification** dialog.

- On the **STRUCTURE** panel, click the **Edit** button next to **Floor Structure (L)**.



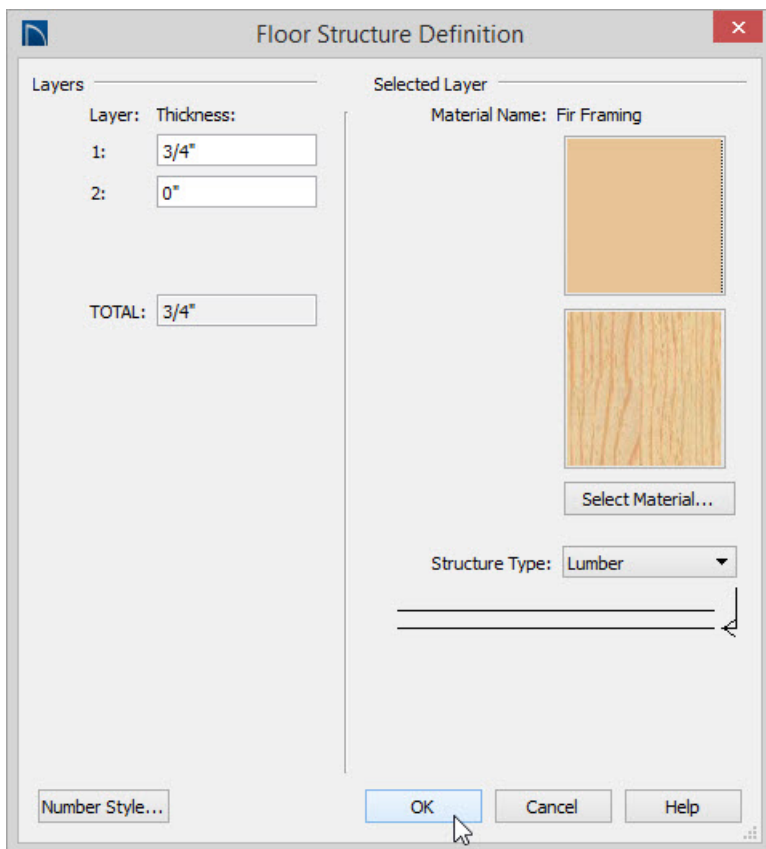
The **Room Specification** dialog box is shown with the **Structure** panel selected in the left sidebar. The dialog is divided into several sections:

- Absolute Elevations:** Includes input fields for Floor Above (A), Ceiling (B), Floor (C), and Floor Below (D), each with a "Default" checkbox.
- Relative Heights:** Includes input fields for Rough Ceiling (E), Finished Ceiling (F), SWT To Ceiling (G), Ceiling Below (H), and Stem Wall (I), each with a "Default" checkbox. A note below states "SWT = Stem Wall Top".
- Ceiling:** Includes checkboxes for "Roof Over This Room", "Ceiling Over This Room", and "Use Soffit Surface for Ceiling". It also has input fields for Ceiling Structure and Ceiling Finish (J), each with an "Edit..." button and a "Default" checkbox.
- Floor:** Includes checkboxes for "Floor Under This Room", "Floor Supplied by the Foundation Room Below", and "Monolithic Slab Foundation". It has input fields for Floor Finish (K) and Floor Structure (L), each with an "Edit..." button and a "Default" checkbox.



A diagram on the right side of the dialog illustrates the room's vertical structure with labels A through J corresponding to the input fields. At the bottom, there are buttons for "Number Style...", "OK", "Cancel", and "Help".

In Home Designer Pro 2014 and prior, click the **Floor Structure (L)** button.

- On the **Floor Structure Definition** dialog, click the text field for Layer 2 and change its value to 0 then click **OK** to close the dialog. Click **OK** again to close the **Room Specification** dialog.




To make the floor joists in your drawing flush with the top of the stem wall

1. Joists will need to be manually added to the foundation of your structure. If you do not already have a foundation drawn select **Build> Floor> Build Foundation**  and create a new foundation.
2. On Floor 0, select **Build> Framing> Joist**  from the menu.
3. Click and drag to place a joist. If you do not already have the "Framing, Floor" layer displayed, the program will prompt you with a dialog, asking if you want to display this layer.



Choose **Yes** and remember you can always turn off its display in the Display Options dialog when you have completed working on this section of the plan.

4. Once the joist has been created, use the **Select Objects**  tool to select the Joist. When the floor joist is selected temporary dimensions will display. These dimensions can be used to precisely place the joist.

More information on precisely positioning objects and using dimensions can be found in the Related Articles section located at the bottom of this article.



5. With the Joist sill selected click on the **Open Object**  edit button to display the **Framing Specification** dialog.

- On the **GENERAL** panel, click in the **Depth** field and change this value to the thickness of your joist then click **OK**.

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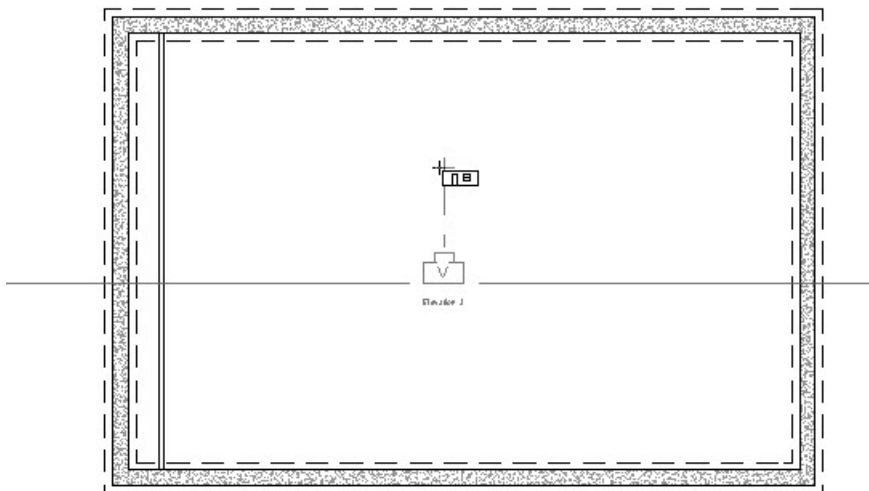
6. Next select **Build> Floor> Rebuild Walls/Floors/Ceilings** .

## To create a camera view

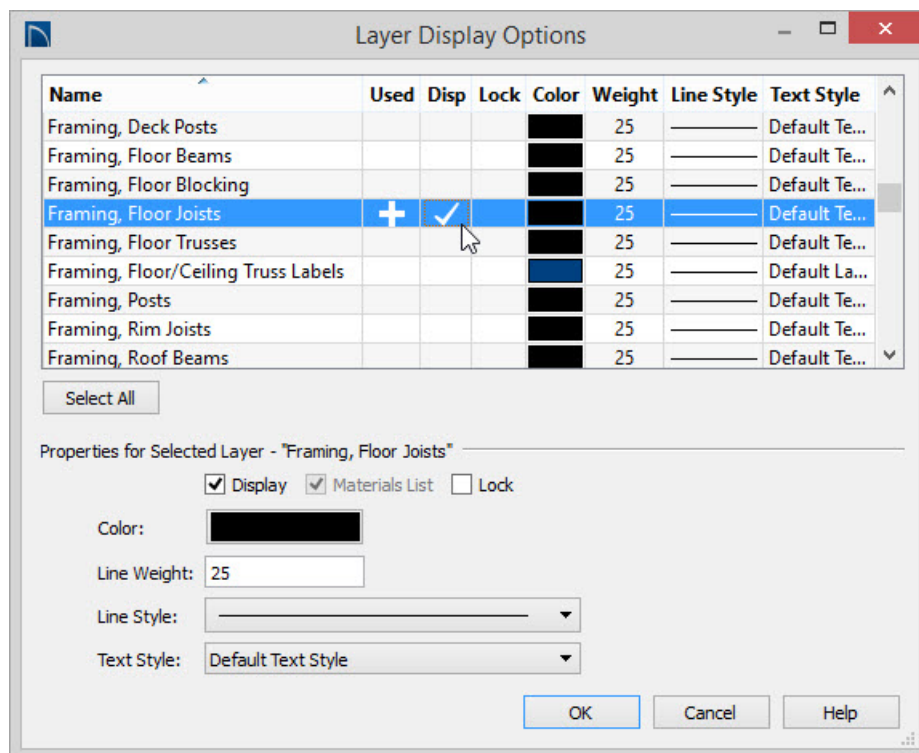
1. To create a view in which you can see the stem wall and floor joists, from the menu select **3D> Create**

## Orthographic View> Cross Section/Elevation

Click and Drag to place and orient a cross section camera.



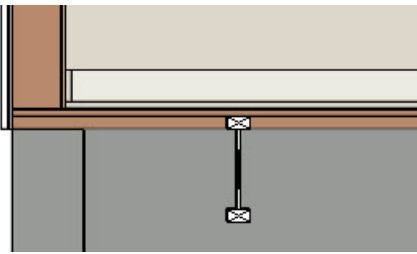
- From the menu, select **Tools> Display Options**  to open the **Layer Display Options** dialog.




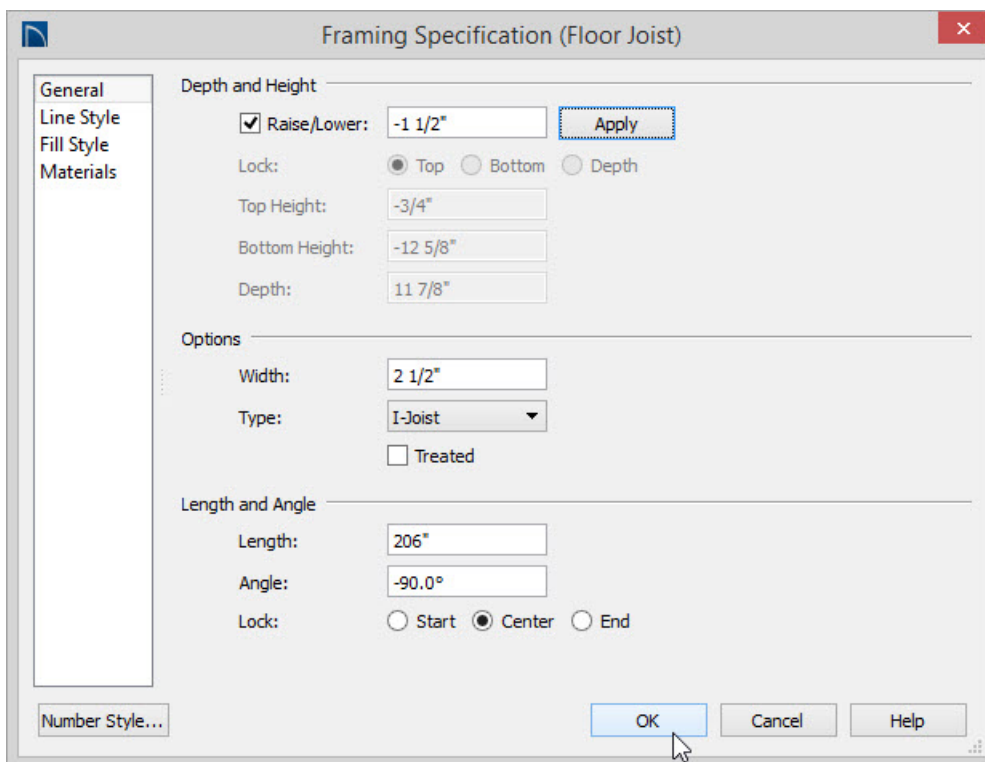
- Once this dialog is open, put a check in the **Disp** column next to the "Framing, Floor Joists" layer to allow the floor framing to be displayed in the 3D view. Click the **OK** button.

In Home Designer Pro 2014 and prior, look for the "Framing, Floor" layer.

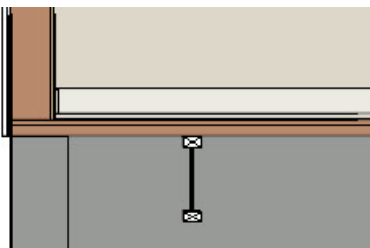
- You will be able to view the Floor Joist in relation to the subfloor and foundation walls to determine if you will need to raise or lower the floor joist.



5. If you do need to alter the height of the floor joist, choose the **Select Objects**  arrow tool and double click on the joist.
6. After the **Framing Specification** dialog displays, you can alter the **Raise/Lower** field, and click **Apply** to adjust the height of the floor joist, and then click **OK**.





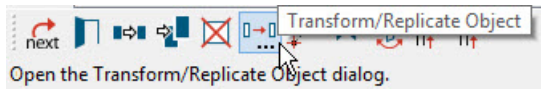
7. The current cross section will update with the results.



8. Using this technique, you can set the floor joist so that its top is flush with the top of the stem wall, and then make copies of that joist for the rest of the plan.

To replicate the floor joist across the plan

1. In plan view, use the **Select Objects**  tool to select the floor joist.
2. With the joist selected, click the **Transform/Replicate Object**  tool located on the Edit Toolbar.



3. In the **Transform/Replicate Object** dialog put a checkmark in the box next to **Copy** and put in the number of copies necessary for your plan.
4. Next put a checkmark in **Move** and specify the distance and direction you need to replicate the copies of the joists.

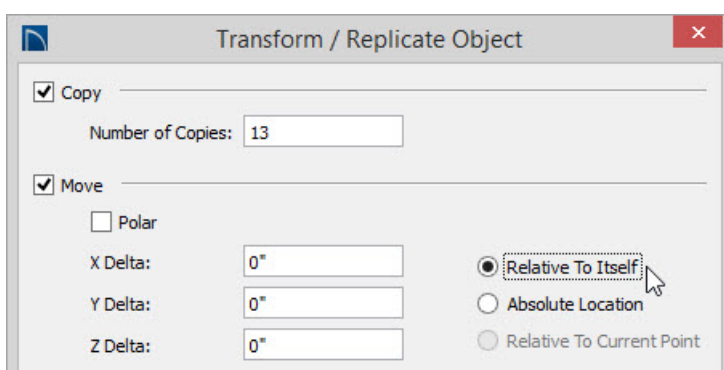
**Note:** For this article it is necessary to have the joists replicate to the right of the selected joist so a positive number in the X delta is used.

A negative number in the X Delta would make the Joists replicate to the left.

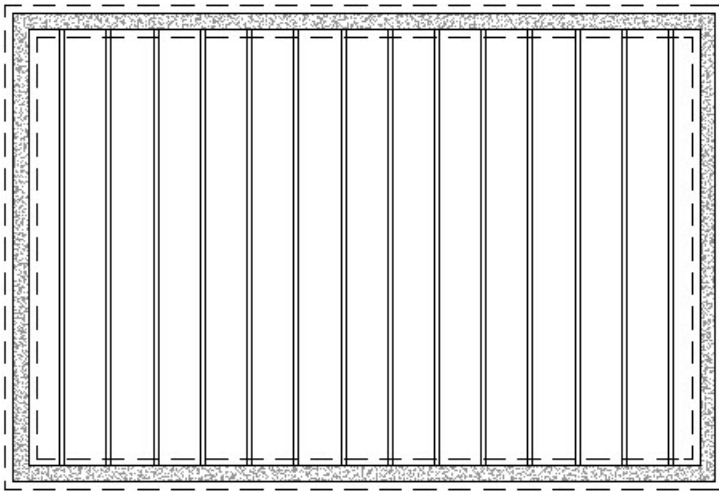
A positive in the Y Delta would replicate towards the top of the screen while a negative would replicate down.

A positive in the Z Delta would replicate towards the sky and a negative towards the ground.

5. Lastly, make sure that the radio button for **Relative to Itself** is selected so that the joists replicate from the 1st joist placed and not the absolute location. Then click **OK**.



6. See the results.



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#### Related Articles

📄 [Positioning Objects Precisely Using Dimensions \(/support/article/KB-00487/positioning-objects-precisely-using-dimensions.html\)](/support/article/KB-00487/positioning-objects-precisely-using-dimensions.html)

📄 [Using the Dimension Tools \(/support/article/KB-01002/using-the-dimension-tools.html\)](/support/article/KB-01002/using-the-dimension-tools.html)