Creating a Sloped Ceiling Above a Staircase

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The information in this article applies to:

QUESTION

I need to generate a sloped ceiling above a staircase that extends to the floor above. What is the best way to create this in Chief Architect?


ANSWER

Creating a sloped ceiling above a staircase can be accomplished using a custom ceiling plane and modifying the height and pitch.

To create a sloped ceiling plane above a staircase

1. Start by creating your desired staircase using one of the **Stair** tools.

   In this example, a straight staircase is created on floor 1. A wall has also been created beside the stair that follows the rise angle.
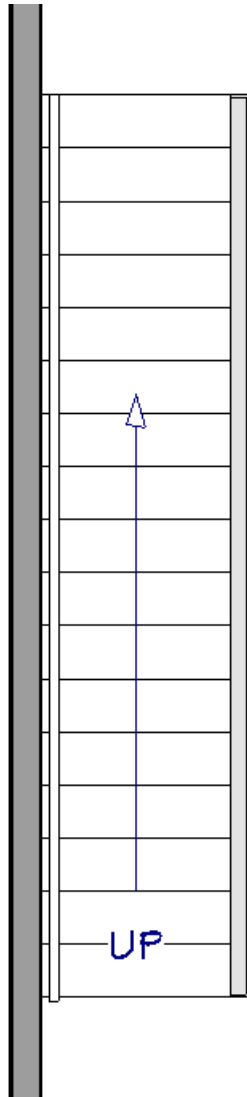
   > To create walls and/or railings that start at the floor and follow the rise of the staircase, please see the "Creating a Stair Rake Wall" resource in the Related Articles section below.

2. If an additional floor has not yet been created for the staircase to connect to, navigate to **Build> Floor> Build New Floor** to generate an additional floor level.

3. Select **Down One Floor** to navigate down to floor 1, click on the staircase using the **Select Objects** tool, then click on the **Open Object** edit tool.

4. In the **Staircase Specification** dialog that opens, make any desired adjustments to the staircase. Once the stair is to your liking, take note of the **Rise Angle** that is mentioned on the GENERAL panel, then click **OK**.

Interior Staircase Specification

General
Style
Stringers
Breakline
Railing
Newels/Balusters
Rails
Line Style
Fill Style
Materials
Arrow
Components

Staircase Information

Staircase reaches next level.
Best fit riser height of 6 3/4" requires 18 total risers to reach 121 3/4" to next level.

Number of Sections: 1
Number of Landings: 0
Number of Risers: 18
Rise Angle: 31.59

Make Best Fit

Advanced Options

- ◉ Automatic Treads
- ○ Lock Tread Depth
- ○ Lock Number of Treads

- ☑ Automatic Heights
  - Top Height Reference
    - ◉ Floor/Landing
    - ○ Top Tread
- ☐ Ignore Subsection Boundaries

- ○ Lock Top
- ◉ Lock Bottom

Section Number	Length	Width	Tread Depth	Treads	Bottom Height	Top Height	Riser Height	Winders
◉ 1	187"	39"	11"	17	7/8"	122 5/8"	6 3/4"	☐

5. With the staircase still selected, click on the **Auto Stairwell** edit tool to create an automatic stairwell, then navigate **Up One Floor** to see the railings and stairwell room that the program created.
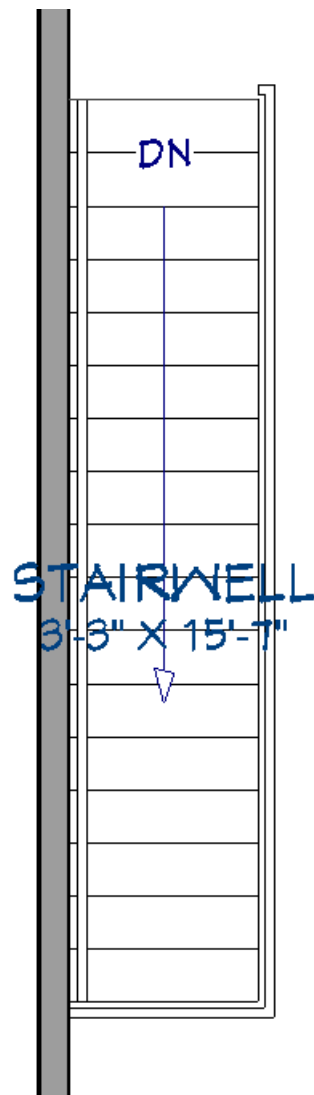
> **Note:** Stairwells are Open Below room types that are created on the floor above. For more information on stairwells, please see the Related Articles section below.

6. In some cases, you may want to have framed walls encompassing the stairwell, or maybe a combination of walls and railings. To convert the automatically generated railings to walls, select them using the **Select Objects** ▷ tool, click on the **Open Object** ▯ edit tool, then make the following adjustments in the **Railing Specification** dialog:
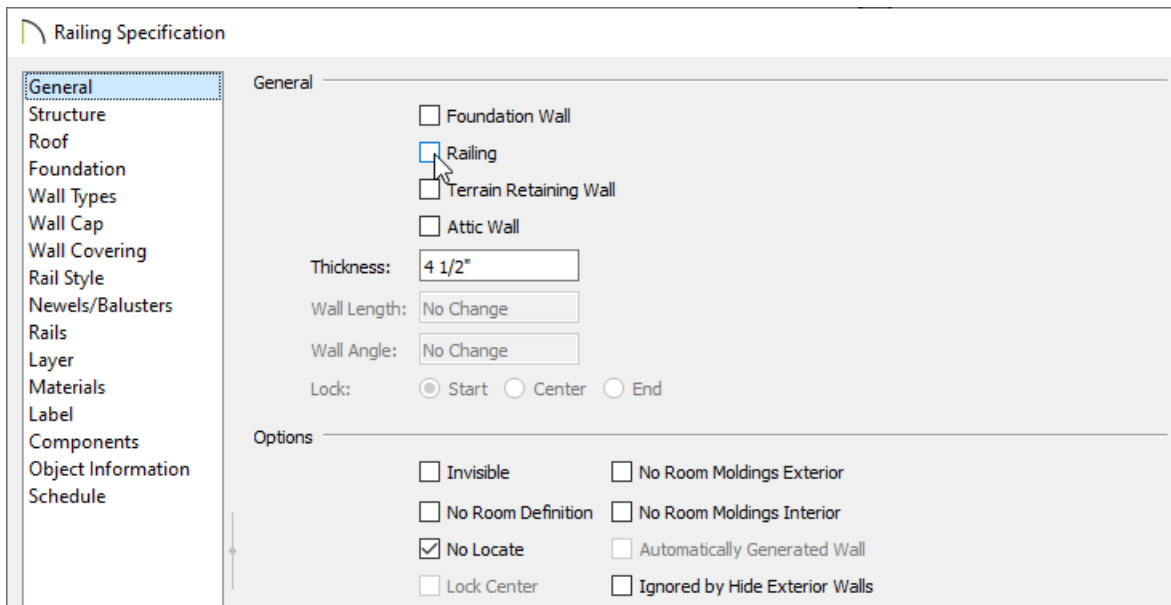
- On the GENERAL panel, uncheck the **Railing** and **No Locate** boxes if you want to create full-height walls.

  If you want to create half-walls, leave the boxes above checked, but set the railing to be **Solid** on the RAIL STYLE panel.

 In this example, we have converted the railings to full-height walls.

- On the WALL TYPES panel, use the **Wall Type** drop-down to choose an appropriate wall type from the list.

  In this example, the Interior-4 wall type is selected.

- Make any other desired adjustments, such as to the MATERIALS, then click **OK**.

> The Add Break edit tool can also be used to break a wall/railing into separate segments that can be edited individually. This is useful if you would like to create a scenario where a railing leads directly into a full-height wall.

7. Next, navigate to **Build> Roof> Ceiling Plane** 🔲 and draw a ceiling plane starting at the bottom of the stairwell and stopping at the top, making sure to encompass the wall or railing that is directly beside the stairwell.
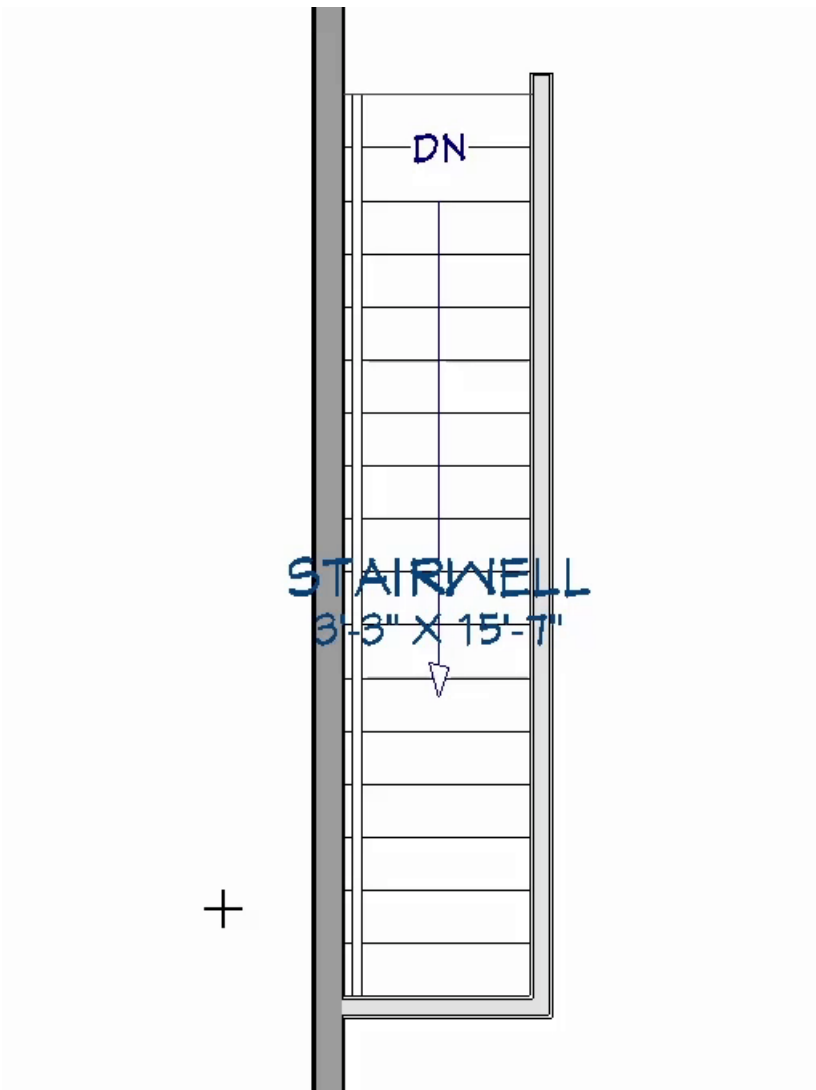
8. With the ceiling plane created, select it using the **Select Objects** ⬚ tool, then click on the **Open Object** ⬚ edit tool.

9. On the GENERAL panel of the **Ceiling Plane Specification** dialog that displays:
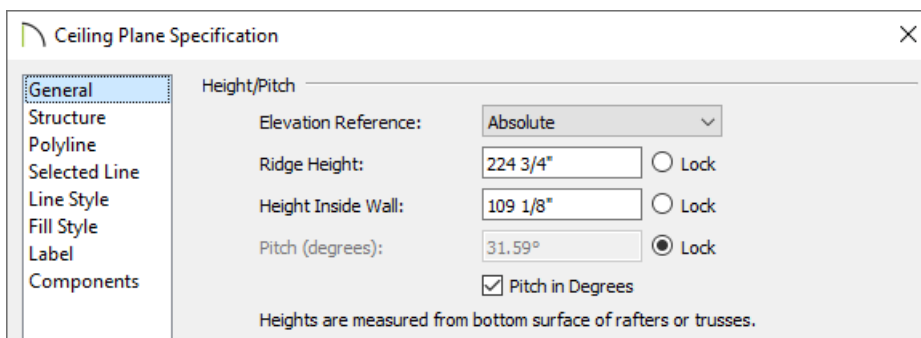
- Check the **Pitch in Degrees** box.

- In the **Pitch (degrees)** field, enter the value that was mentioned in step 4 above, then select the **Lock** radio button.

- Set the **Height Inside Wall** value to be equal to the ceiling height of the room the staircase was created within.

In this example, a value of 109 1/8 is specified.

> **Note:** If you're unsure of what this value should be, open the room the staircase is located within up to specification, and select the Structure panel to see the ceiling height that is specified.

- Make any other desired adjustments to the ceiling plane, such as to its STRUCTURE, then click **OK**.

10. Take a **Camera** 📷 view to see the results.

Related Articles

📄 Creating a Stair Rake Wall (/support/article/KB-03107/creating-a-stair-rake-wall.html)

📄 Creating a Stairwell (https://www.chiefarchitect.com/support/article/KB-00757/creating-a-stairwell.html)