

# Modifying Garage Floor and Stem Wall Heights

Reference Number: **KB-01845**

Last Modified: **July 21, 2021**

The information in this article applies to:



## QUESTION

After changing the room type to Garage, my floor and ceiling heights changed. Why does this happen?





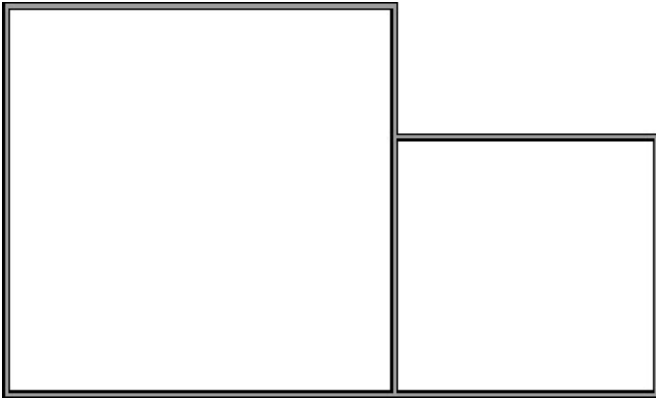
## ANSWER

When Auto Rebuild Foundation is turned on, naming a room as "Garage" will cause changes to the way the foundation is built under that room.

First, let's begin with creating a basic example plan, where you will be using all of the default settings for Floor 1 floor and ceiling heights and for building your foundation.



To create the basic plan

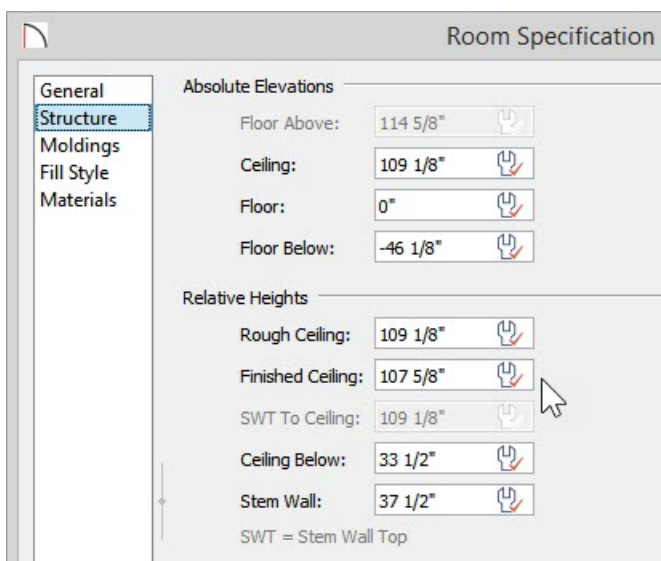
1. First, launch Home Designer and select **New Plan**  to create a new plan, using the **Default Style** template.
2. In the new plan file in floor plan view, select **Build> Wall> Straight Exterior Wall** , then click and drag out the walls to create a basic structure with attached garage, as shown in the image below.



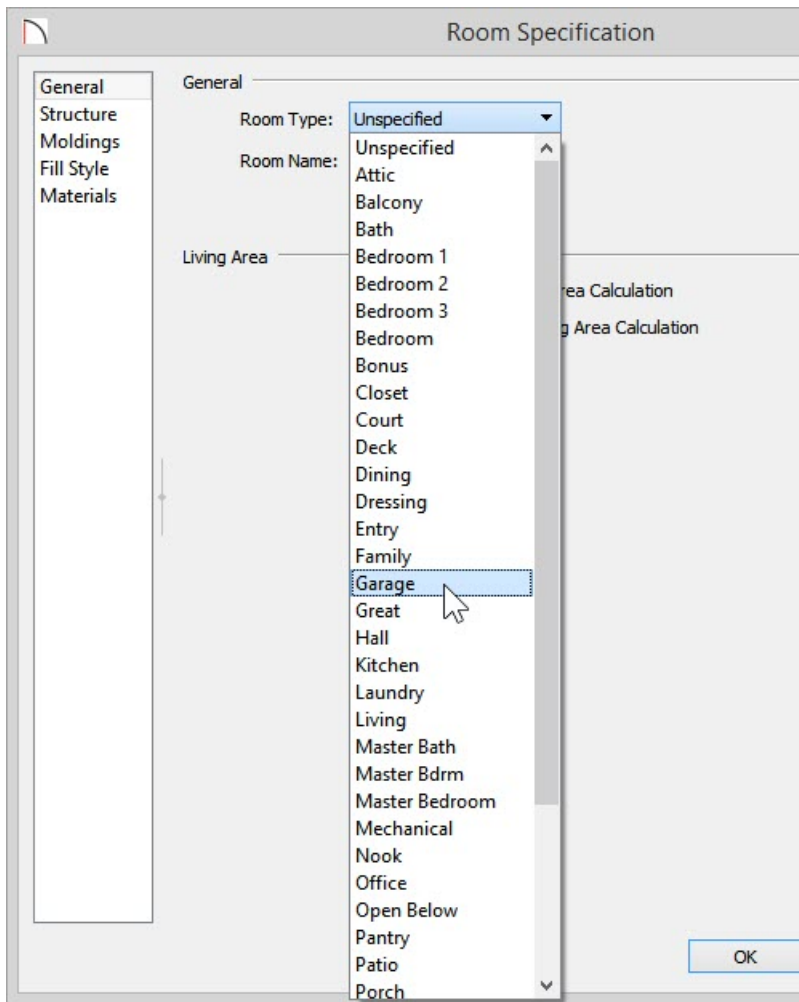
Once the main building and garage room have been created, the foundation is automatically created with the default stem wall and footing heights.

The floor and ceiling heights in the room that you want to designate as the Garage are still at the default for floor 1. The Floor Height is 0" and in your case, the Finished Ceiling Height is 107 5/8".

3. To verify this information, use the **Select Objects**  tool to click on the smaller room, which will become your Garage, then click on the **Open Object**  edit button.
4. In the **Room Specification** dialog, notice the values set on the **STRUCTURE** panel.

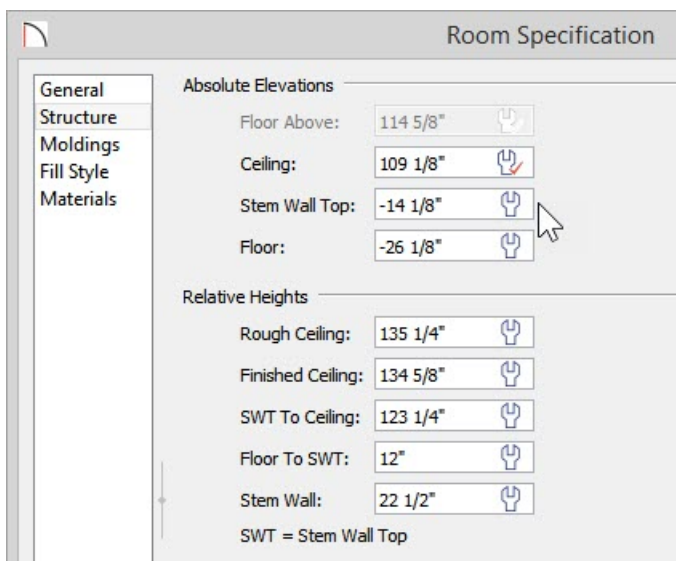


5. Next, select the **GENERAL** panel, and use the **Room Type** drop down menu to select **Garage**.



When you changed the **Room Type** on the **GENERAL** panel of the **Room Specification** to **Garage**, the foundation was rebuilt to reflect these changes.


- Return to the **STRUCTURE** panel after specifying the room as a Garage and notice the changes

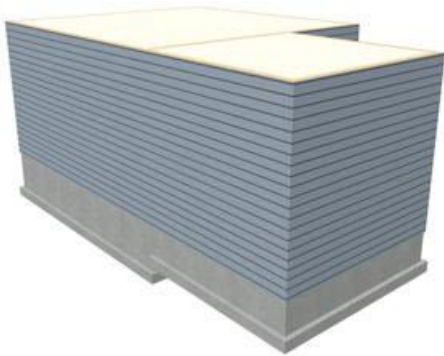


- The **Stem Wall Top** value is added to the Absolute Elevations and is set to the height of the underside of the floor joists on floor 1. The floor is changed to a slab and the slab is lowered 12" below the top of the stem wall.
- The **Stem Wall** is set to 22 1/2".


7. Click **OK** to close the dialog for now.

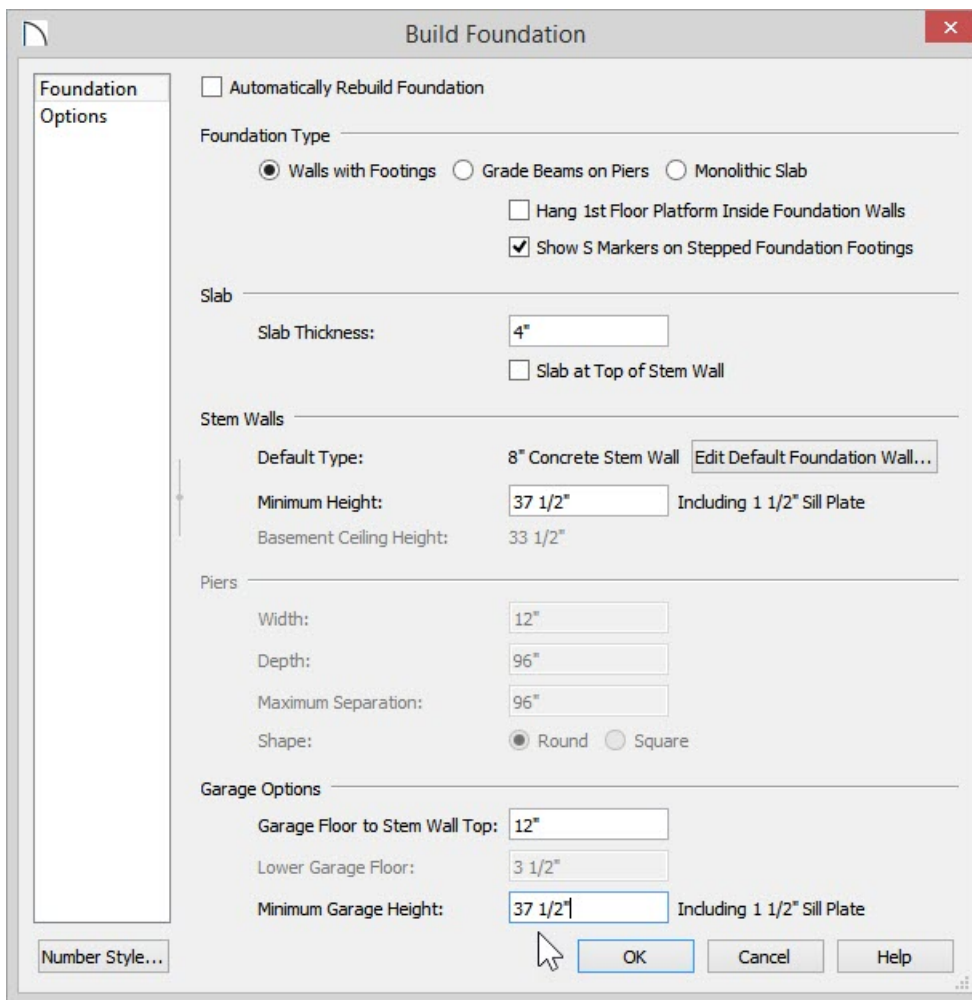
**Note:** You may want to change the **Stem Wall** height to meet your frost depth needs, however, before making any changes to the **STRUCTURE** settings in the **Room Specification**, you must first turn off **Automatically Rebuild Foundation**.

To visually see the changes created by making the smaller room a **Garage** type room, you can create a **Perspective Full Overview**  camera view.

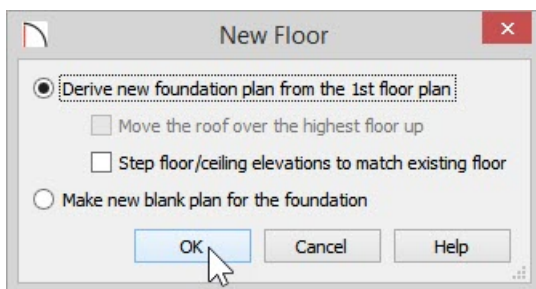





To turn off Automatically Rebuild Foundation

1. Select **Build> Floor> Build Foundation** .
2. In the **Build Foundation** dialog, remove the check mark next to **Automatically Rebuild Foundation**. In Home Designer Pro, set the **Minimum Garage Height** to 37 1/2" to match the main house. Click **OK**.



3. In the **New Floor** dialog, choose **Derive new foundation plan from the 1st floor plan** and click **OK** again.

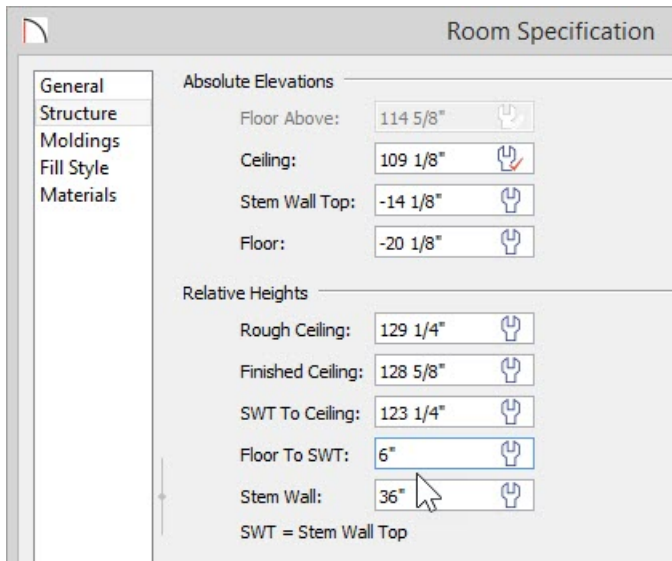


4. Select **Tools > Floor/Reference Display > Up One Floor**  to return to Floor 1.
5. Use the **Select Objects**  tool to click on the Garage room, then click on the **Open Object**  edit button to again display the **Room Specification** dialog.
6. On the **STRUCTURE** panel, change the **Stem Wall** value to 36". in Home Designer Pro, observe that the Stem Wall height is already 36". This stem wall height is just under the garage so that the bottom of the footing matches the footing of the main house.

The slab remains in its original position, 12" below the top of the stem wall, but the footing is moved down to accommodate the increased stem wall height.

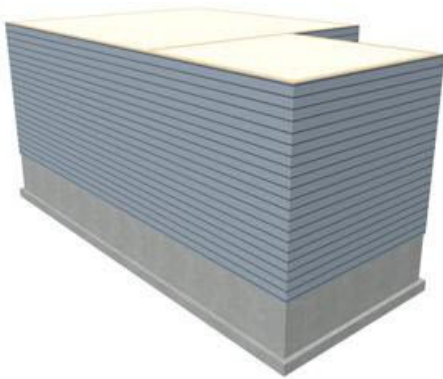
7. You can raise or lower the slab by modifying the **Floor To SWT** value from Floor 1.

In this example, a 6" curb is generated inside the garage by changing the **Floor To SWT** value.



Click **OK** to apply this change and close the dialog.

8. Finally, create a **Perspective Full Overview**  to see the change.



Now that you understand this procedure, you can take the knowledge you have gained and apply it to your own designs.