

Modifying Garage Floor and Stem Wall Heights

Reference Number: **KB-01855**

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The information in this article applies to:



QUESTION

After naming my Garage room, the floor and ceiling height information changed. Why does this happen?



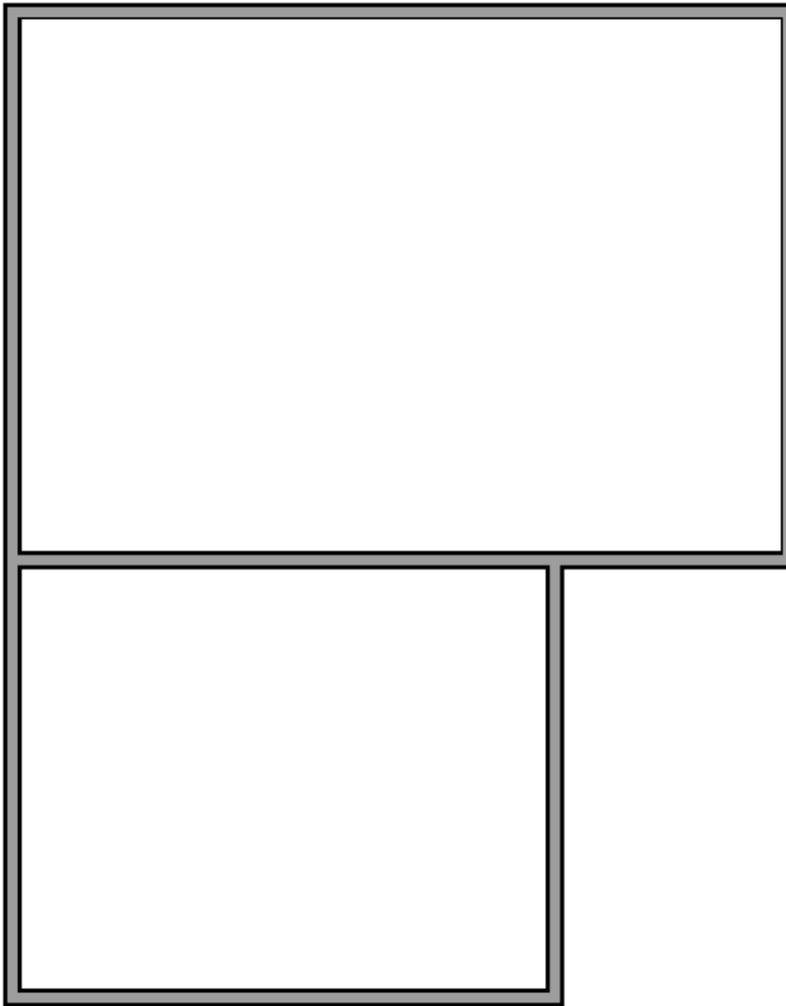
ANSWER

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

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

To create the basic plan

1. In a 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.

If your foundation does not automatically generate, click **Build> Floor> Build Foundation**  , put a check in the **Automatically Rebuild Foundation** box and click **OK**.

The floor and ceiling heights in the room that will be designated as the Garage are still at the default for Floor 1. The Floor height is 0" and in our case, the Finished Ceiling height is 107 5/8".

2. To verify this information, use the **Select Objects**  tool to click on the smaller room on Floor 1, which will become the Garage, then click on the **Open Object**  edit button.
3. In the **Room Specification** dialog, notice the values set on the **STRUCTURE** panel.

Room Specification

General
Structure
 Deck
 Deck Support
 Moldings
 Wall Covering
 Fill Style
 Materials
 Components
 Schedule

Absolute Elevations

Floor Above: 114 5/8"

Ceiling: 109 1/8"

Floor: 0"

Floor Below: 0"

Relative Heights

Rough Ceiling: 109 1/8"

Finished Ceiling: 107 5/8"

SWT To Ceiling: 109 1/8"

Ceiling Below: 0"

Stem Wall: 37 1/2"

SWT = Stem Wall Top

Ceiling

Roof Over This Room

Flat Ceiling Over This Room

Shelf Ceiling

Use Soffit Surface for Ceiling

Ceiling Structure: 5 1/2" Default

Ceiling Finish: 5/8" Default

Floor

Floor Under This Room

Floor Supplied by the Foundation Room Below

Monolithic Slab Foundation

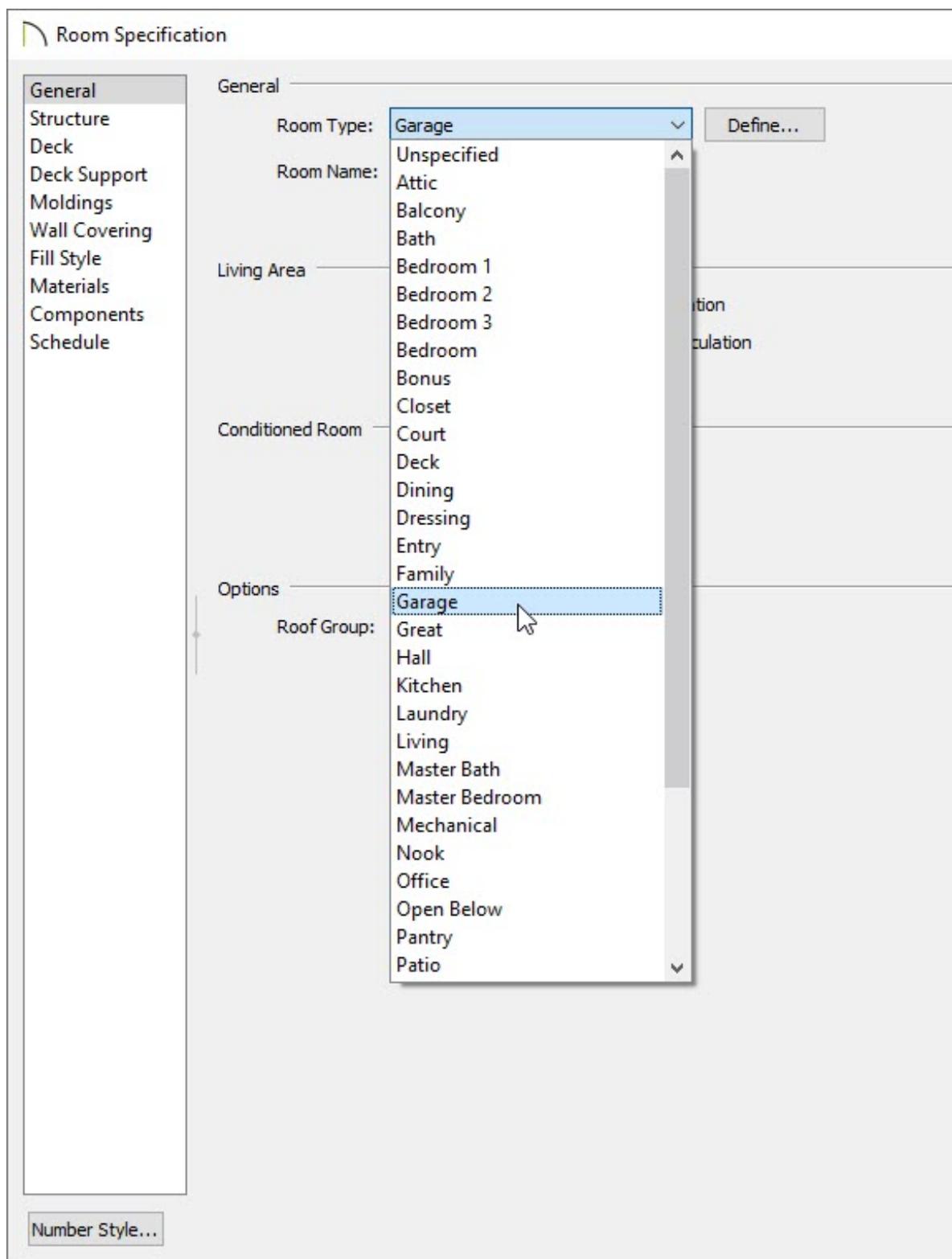
Slab Pour Number: 1

Floor Finish: 7/8" Default

On Structure Resize: Lock Floor Top Lock Floor Bottom

Floor Structure: 12 5/8" Default

- Next, select the **GENERAL** panel, and use the **Room Type** drop-down menu to select **Garage**, then hit **OK**.



When the Room type is changed, the foundation is rebuilt to reflect these changes.

5. **Open**  the garage room to specification and return to the **STRUCTURE** panel to see the changes.

Room Specification

General
Structure
 Deck
 Deck Support
 Moldings
 Wall Covering
 Fill Style
 Materials
 Components
 Schedule

Absolute Elevations

Floor Above: 114 5/8"

Ceiling: 109 1/8"

Stem Wall Top: -14 1/8"

Floor: -26 1/8"

Relative Heights

Rough Ceiling: 135 1/4"

Finished Ceiling: 134 5/8"

SWT To Ceiling: 123 1/4"

Floor To SWT: 12"

Stem Wall: 22 1/2"

SWT = Stem Wall Top

Ceiling

Roof Over This Room

Flat Ceiling Over This Room

Shelf Ceiling

Use Soffit Surface for Ceiling

Ceiling Structure: 5 1/2" Default

Ceiling Finish: 5/8" Default

Floor

Floor Under This Room

Floor Supplied by the Foundation Room Below

Monolithic Slab Foundation

Slab Pour Number: 1

Floor Finish: 0" Default

On Structure Resize: Lock Floor Top Lock Floor Bottom

Floor Structure: 4" Default

- The **Stem Wall Top** height 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** height is set to **22 1/2"**.
- The **Floor Finish** is set to **0"** and the **Floor Structure** becomes a **4"** concrete slab.

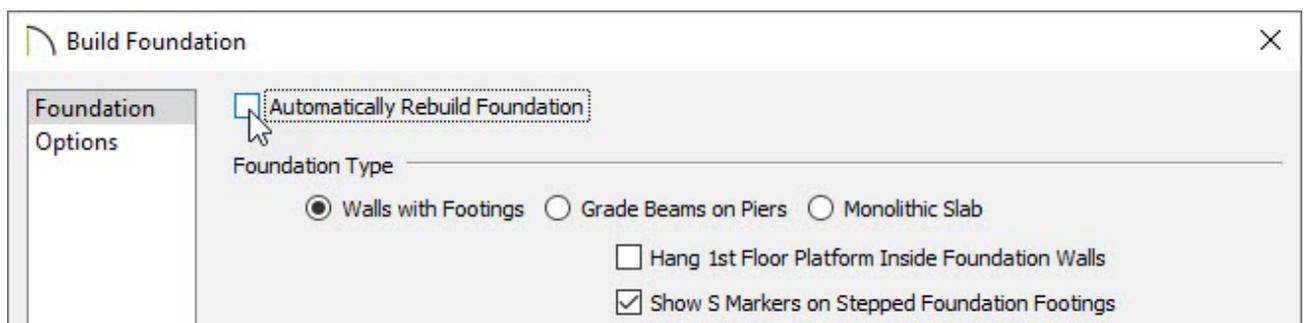
- Click **OK** to close the dialog and take a **Perspective Full Overview**  to see the results so far.



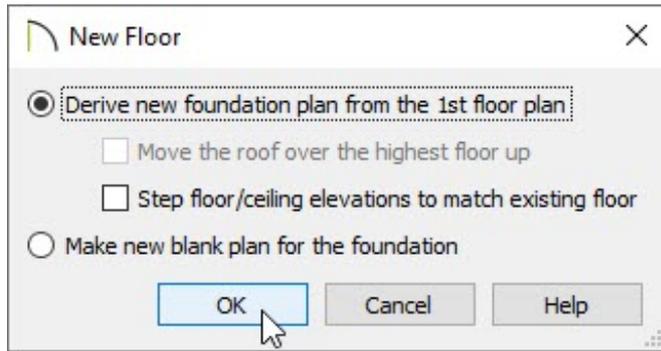
You may want to change the Stem Wall height to meet your frost depth needs, however, before making any changes to the Structure settings in the Room Specification dialog, you must first turn off Auto Rebuild Foundation.

To turn off Auto Rebuild Foundation

- Select **Build> Floor> Build Foundation** .
- In the **Build Foundation** dialog, remove the check next to **Automatically Rebuild Foundation**, then click **OK**.



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



4. Use the **Select Objects**  tool to click within the **Garage** room on the Foundation level, and click on the **Open Object**  edit button to display the **Room Specification** dialog.
5. On the **STRUCTURE** panel, select the **Default** option next to **Stem Wall** to set the Stem Wall height to 37 1/2" to match the stem wall created for the main house.

Room Specification

General
Structure
 Deck
 Deck Support
 Moldings
 Wall Covering
 Fill Style
 Materials
 Components
 Schedule

Absolute Elevations

Floor Above: 114 5/8"

Ceiling: 109 1/8"

Stem Wall Top: -14 1/8"

Floor: -26 1/8"

Relative Heights

Rough Ceiling: 135 1/4"

Finished Ceiling: 134 5/8"

SWT To Ceiling: 123 1/4"

Floor To SWT: 12"

Stem Wall: 37 1/2"

SWT = Stem Wall Top

Ceiling

Roof Over This Room
 Flat Ceiling Over This Room
 Shelf Ceiling
 Use Soffit Surface for Ceiling

Ceiling Structure: 5 1/2" Default

Ceiling Finish: 5/8" Default

Floor

Floor Under This Room
 Floor Supplied by the Foundation Room Below
 Monolithic Slab Foundation

Slab Pour Number: 1

Floor Finish: 0" Default

On Structure Resize: Lock Floor Top Lock Floor Bottom

Floor Structure: 4" Default

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.

- You can raise or lower the slab by modifying the **Floor To SWT** value.

Room Specification

General	Absolute Elevations
Structure	Floor Above: 114 5/8"
Deck	Ceiling: 109 1/8"
Deck Support	Stem Wall Top: -14 1/8"
Moldings	Floor: -20 1/8"
Wall Covering	Relative Heights
Fill Style	Rough Ceiling: 129 1/4"
Materials	Finished Ceiling: 128 5/8"
Components	SWT To Ceiling: 123 1/4"
Schedule	Floor To SWT: 6"
	Stem Wall: 37 1/2"
	SWT = Stem Wall Top

- To create a 6" curb, or stem wall above the slab, set this value to **6"**.
- Click **OK** to apply this change and close the dialog.

7. Finally, select **3D> Create Perspective View> Perspective Full Overview** to see the change.



[📄 Creating a Cutout for Doors in Concrete Walls \(/support/article/KB-00965/creating-a-cutout-for-doors-in-concrete-walls.html\)](/support/article/KB-00965/creating-a-cutout-for-doors-in-concrete-walls.html)

[📄 Matching Building and Terrain Heights \(/support/article/KB-00321/matching-building-and-terrain-heights.html\)](/support/article/KB-00321/matching-building-and-terrain-heights.html)



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