Creating and Framing a Dropped Ceiling

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The information in this article applies to:



QUESTION

How do I create a dropped ceiling?

ANSWER

A dropped ceiling is a secondary ceiling, hung below the main, structural, ceiling. They may also be referred to as a drop ceiling, false ceiling, or suspended ceiling.

If you're wanting to design a suspended ceiling consisting of tiles, please refer to <u>Video # 311: Creating a Suspended or Dropped Ceiling</u> (https://www.chiefarchitect.com/videos/watch/311/creating-a-suspendedor-dropped-ceiling.html?playlist=96).

To create a dropped ceiling

1. In your plan, use the **Select Objects** k tool to select the room that you want to assign a dropped ceiling to, then click the **Open Object** ceiling to.

If you select an object located inside of a room, click the Select Next Object edit button ,or press the Tab key on your keyboard, until the room becomes selected.



2. On the **S**TRUCTURE panel of the **Room Specification** dialog that displays, click the **Edit** button next to Ceiling Finish.

Room Specification				
General	Absolute Elevations			
Structure	Floor Above:			
Deck	Colling	109 1/8"		
Deck Support	Ceiling:			
Moldings Wall Covering	Floor:	0" 🖖		
Fill Style	Floor Below:			
Materials				
Components	Relative Heights			
Object Information	Rough Ceiling:	109 1/8" 🖖]	
Schedule	Finished Ceiling:]	
	-			
	SWT To Ceiling:	109 1/8" 🖞		
	Ceiling Below:			
	Stem Wall:	37 1/2"		
	SWT = Stem Wall	Тор		
	Ceiling			
	cennig		Roof Over This Room	
			─ Flat Ceiling Over This Room	
	+		Shelf Ceiling	
			Use Soffit Surface for Ceiling	
	Ceiling Structure:		5 1/2" Edit 🗹 Default	
	Centry Structure.		Sine catal	
	Ceiling Finish:		5/8" Edit 🔀 🗹 Default	

3. In the **Ceiling Finish Definition** dialog that opens next, select the topmost layer, which is Layer # 1, then click the **Insert Above** button to add a new layer.

٦	Ceiling Finish Definition X								
N	Material	Layers		🔝 🖸 🗈					
	Layer #	Material	Pattern	Texture	Fill	Thickness	Insert Above		
	1	Drywall		No Texture		5/8"	Insert Below		
	2	Color - White		No Texture		0"	Move Up		
							Move Down		
							Delete		
							Total Thickness:		
s	tructure								
		Framing							
		Type:	L	.umber	\sim				
		Spacing	g: 9	6"	On Cer	nter			
		Width:	1	/2"					
		Auto Detail as Ins	ulation						
		Air Gap							
[Numbe	r Style					ОК	Cancel Help	

• Specify the desired **Thickness** of this new layer, which will form the dropped ceiling framing.

In this example, 3 1/2" is used.

• Click within the **Material** column for the new layer to open the **Select Material** dialog, and choose your desired framing material.

In this example, the "Fir Framing 1" material is used.

• Under the Structure section, check the **Framing** box for this layer, then specify the **Type**, **Spacing**, and **Width**, as necessary.

In this example, Lumber is set for the Type, 16" is set for the Spacing, and 1 1/2" is set for the Width.

Ceilir	Ceiling Finish Definition							
Material	Layers							
Layer #	Material	Pattern	Texture	Fill	Thickness	Insert Above		
1	Fir Framing 1		Str Melana		3 1/2"	Insert Below		
2	Drywall		No Texture		5/8"	Move Up		
3	Color - White		No Texture		0"	Move Down		
						Total Thickness:		
						4 1/8"	•	
Structure	2							
5	✓ Framing							
	Type:	Lu	umber	\sim				
	Spacing	j: 16	5"	On Cer	iter			
	Width:	1	1/2"					
٢	Auto Detail as Ins	ulation						
C	Air Gap							
Numbe	r Style					ОК	Cancel Help	

• Repeat this process if you require additional layers, such as an air gap, above the framing.

In this example, an additional layer was added with a Thickness of 7 7/8" and the material set to "Insulation Air Gap". When adding layers, it's important to check that the properties under the Structure section are set correctly. With this new layer, we made sure that the Framing box was unchecked and checked the Air Gap box instead.

Ceiling Finish Definition X										
Material	Layers									
Layer #	Material	Pattern	Insert Above							
1	Insulation Air Gap		No Texture		7 7/8"	Insert Below				
2	Fir Framing 1				3 1/2"	Move Up				
3	Drywall		No Texture		5/8"	Move Down				
4	Color - White	Delete								
						Total Thickness:				
						12"				
Structure	·									
	Framing									
	Туре:	L	umber	\sim						
	Spacing	j: 16	5"	On Cen	iter					
	Width:	1								
	Auto Detail as Inst									
5	🗹 Air Gap									
Numbe	Number Style OK Cancel Help									

4. When you are finished, click **OK** to return to the **Room Specification** dialog and notice the ceiling preview on the right. Click **OK** again to confirm the change and close the dialog.



These results can also be seen in a **Backclipped Cross Section** $\stackrel{\frown}{ ext{def}}$ view.



If part or all of the platform above the dropped ceiling is a ceiling platform, a dropped ceiling's framing can be created automatically when ceiling framing is generated.

If, however, the entire platform above the dropped ceiling is a floor platform, the framing may need to be drawn manually.

To manually frame a dropped ceiling

1. Select the room with the lowered ceiling and click the **Open Object [**] edit button.

2. On the **STRUCTURE** panel of the **Room Specification** dialog:

Room Specifica	ation		
General	Absolute Elevations		
Structure Deck	Floor Above:		
Deck Support	Ceiling:	109 1/8" 🖖	
Moldings Wall Covering	Floor:	0"	
Fill Style	Floor Below:		
Materials Components	Relative Heights		
Schedule	Rough Ceiling:	109 1/8" 🖖]
	Finished Ceiling:	96 1/4" 🖞]
	SWT To Ceiling:	109 1/8"	
	Ceiling Below:		
	Stem Wall:	37 1/2"	
	SWT = Stem Wall	Тор	
	Ceiling		
			🗹 Roof Over This Room
			✓ Flat Ceiling Over This Room
			Shelf Ceiling
			Use Soffit Surface for Ceiling
	Ceiling Structure:		5 1/2" Edit 🗹 Default
	Ceiling Finish:		12" Edit Default

• Take note of the Ceiling height under the Absolute Elevations section.

In this example, this value is 109 1/8".

• Click the **Edit** button next to Ceiling Finish and take note of the Thickness of the

layer(s) located above the framing layer.

In this example, the layer(s) above the framing equal a value of 7 7/8".

- Click **Cancel** to close both dialog boxes.
- 3. Subtract the thickness of the ceiling finish layers above the framing layer from the ceiling height. The resulting value is the top height of your lowered ceiling framing members.

In this example, we subtracted 7 7/8" from 109 1/8", giving us a value of 101 1/4".

4. Select **Build> Framing> General Framing** from the menu, then click and drag to draw a framing member across the room with the lowered ceiling.



- 5. Click on the joist to select it, then click the **Open Object** edit button.
- 6. On the **GENERAL** panel of the **Framing Specification** dialog:

Framing Specification	on (Ceiling Joist)	×
General	Depth and Height	
End Profile Line Style	Raise/Lower:	0" Apply
Fill Style	O Lock Top Height:	101 1/4"
Materials Label	O Lock Bottom Height:	97 3/4"
Components Object Information	Ock Depth:	3 1/2"
Schedule	Options	
	Width:	1 1/2"
	Role:	Ceiling Joist ~
	Туре:	Lumber ~
		Treated
	Length and Angle	
	Length:	228"
	Angle:	90.0°
	Lock:	○ Start

• Specify the desired **Width**, **Role**, and **Type**.

In this example, 1 1/2" thick Lumber is used.

• Specify the desired depth using the **Lock Depth** field, then click the radio button beside this field to lock this value.

In this example, 3 1/2" is used.

- Specify the desired top height using the **Lock Top Height** field. Use the value you determined in Step 3, above, which is 101 1/4" in this example.
- Press the **Tab** key on your keyboard to update the dialog, then confirm that your changes are all correct.
- 7. On the LINE STYLE panel, use the Layer drop-down to select the "Framing, Ceiling Joists" layer from the list, then click **OK**.

Framing Specification	on (Ceiling Joist)	×
General End Profile Line Style Fill Style Materials Label Components Object Information	Line Options Layer: □ Default Framing, Ceiling Joists ∨ Define Color: ☑ By Layer Style: ☑ By Layer Weight: ☑ By Layer 25	
Schedule	Bumping CAD Stops Move Wall Stops Move Drawing Group Default: 20 - General Framing	

8. With the framing member still selected, click the **Object Layer Properties** of edit button to open the **Object Layer Properties** dialog, place a check in the **Disp** column or **Display** checkbox for the "Framing, Ceiling Joists" layer, then click **OK**.

∧ Object Layer Properties ×									
Properties for Active Layer Set - " Working Layer Set"									
Name Filter:									
Name	Used	Disp	Lock	Color	Weight	Line Style	Text	t Style	
Framing, Ceiling Joists					25			ult Text Style	
Framing, Labels	+	√°			25		Defa	ult Label Style	2
Show All Layers									
Properties for Selected Layer	- "Fram	ing, C	eiling .	loists"					
⊡ Displ		-	-						
Color:									
Line Weight: 25									
Line Style:					- ~	Library			
Text Style: Default	Text Sty	/le			~	Define.			
						ОК	Cancel	Help	

9. Move the framing member into position along the inside surface of a wall's Main Layer using whatever method you prefer. For example:

◬



- Using its **Move** ∉ edit handle;
- Using a dimension line;
- Using the **Transform/Replicate Object •** edit tool;
- Using the **Point to Point Move** p^+ edit tool.
- Once the framing member is positioned against a wall, select it and click the Multiple Copy difference edit button, then click-and-drag to produce copies at regular intervals.

Note: You can specify your desired Multiple Copy interval by clicking the Multiple Copy Interval edit button.



- 11. You can add ledger boards for the lowered ceiling joists using the same steps:
 - Draw a **General Framing** object;
 - Edit its **Depth**, **Top Height**, and other attributes as needed;
 - Move it into position.
- 12. To trim the dropped ceiling joists so that they butt against the ledger instead of extending into it, use the **Trim Objects** addit tool:
 - **Zoom** \bigcirc in on the ledger so you can see it clearly.
 - Click on the ledger to select it;
 - Click the **Trim Objects** 🔁 edit tool;
 - Click and drag to draw a temporary fence inside of the ledger and through the joists that you wish to trim.
 - When you release the mouse button, all joists touched by the temporary fence will trim to the edge of the ledger.



13. You can now see the lowered ceiling framing in a **Backclipped Cross Section** $\stackrel{\frown}{\underset{}}$ if you turn on the display of the "Framing, Ceiling Joists" layer.



Related Articles

- Creating a Room with a Short Ceiling or Plant Shelf Closet Effect (/support/article/KB-03057/creating-a-room-with-a-short-ceiling-or-plant-shelf-closet-effect.html)
- Creating a Vaulted Ceiling and Scissor Trusses (/support/article/KB-00068/creating-avaulted-ceiling-and-scissor-trusses.html)
- Manually Drawing Framing Members (/support/article/KB-00727/manually-drawingframing-members.html)
- Troubleshooting Why Floor and Ceiling Framing Doesn't Generate (/support/article/KB-00400/troubleshooting-why-floor-and-ceiling-framing-doesn-tgenerate.html)



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