Creating Walls with a Block and Tie Beam (CBS)

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The information in this article applies to:



QUESTION

I live in the southeastern United States and regularly build CBS (Concrete Block Stucco or Concrete Block Structure) structures. How do I model a CBS wall that is block on the bottom and has a tie beam on top?

ANSWER

A CBS wall is essentially two wall types placed on top of one another, a layered concrete block wall with a solid poured concrete tie beam across the top. By defining these two wall types and stacking them using the pony wall option, this type of wall can be accurately modeled.

To create a CBS wall

- 1. From the menu choose **Build> Wall> Define Wall Types** to display the **Wall Type Definitions** dialog.
- 2. Create two new custom wall types one for the lower block wall and one for the tie beam, or upper wall.
 - A predefined CBS wall type option is available in most all template files. You can**Copy** this wall type and name it **CBS Lower Wall**.

📉 Wall Typ	e Definitions							×
CBS Lower W	/all ~	New	Сору	Rename	Delete	Delete All Uni	used	🥽 🖸 🏤 🖪
Wall Layers								
Layer # Lir	ne Color Line Style	Material	Pattern	Texture	Fill	Thickness	Insert Above	
Exterior Lay	ers			-		-	Insert Below	
1		Sand Finish		No Texture		5/8"	Mayalla	
Main Layers	;						Move op	
2		Blocks Running			\boxtimes	8"	Move Down	\square
Interior Laye	ers					-	Delete	$ \times \times \times $
3		Fir Framing 2				1 1/2"	Total Thickness:	
4		Drywall		No Texture		1/2"	10 5/8"	
5			L	3				
Selected Wall	Layer Line			_				•
Line C	olor: 🗹 By Layer							
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Era	aming							
	Use Default Fram	ing Material						
	Type:	Lumber	\sim					
	Spacing:	0" {	On Cente	r				
	Width:	0" {	2					
	Horizontal Framin	g						
	Bottom Run Elevation	: 0"						
Air	Gap							
							ОК	Cancel Help

If you choose to modify a wall type that is already in use in your plan, all existing walls in the file that are using that wall type will update when you make changes to the wall type. This is why it's recommended to create a copy of an existing wall type.

• You can also **Copy** a concrete wall type and name it **CBS Upper Wall**.

Wall Type Definitions						×
CBS Upper Wall V New Co	ру	Rename	Delete	Delete All Uni	used	🥽 🖸 💼 🗈
Wall Layers						
Layer # Line Color Line Style Material	Pattern	Texture	Fill	Thickness	Insert Above	
Exterior Layers					Insert Below	
Main Layers			1 · · · ·		Movellp	
1 Concrete 1			antan tanan Aristo atan	² 10 5/8"	Move op	
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Material Layer		-				
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Use Default Framing Material						
Type: Solid Concrete	~					
Spacing: 0"	On Center	r				
Width: 4" (¹	7					
Horizontal Framing						
Bottom Run Elevation: 0"						
Air Gap						
					ОК	Cancel Help

- Typically, these two wall types will have the same **Total Thickness**.
- 3. Once these these new wall types are created, click **OK** to confirm the changes and close the dialog.
- 4. Navigate to Edit> Default Settings 🖞, expand the Walls category, click on Pony Wall, then click Edit.



5. In the **Pony Wall Defaults** dialog that displays:

eral						
Wall Type:	CBS Upper Wall ▼ Define					
Lower Wall Type:	CBS Lower Wall Define					
Elevation of Lower Wall Top:	48"					
Height Off Floor:	48"					
Align Pony Wall at:	O Outer Surface					
	 Main Layer Outside Wall Center Main Layer Inside 					
22	Inner Surface					
Display In Plan View:	O Upper Wall					
	O Lower Wall					
	Opper Wall and Lower Wall Outline					
	O Upper Wall Outline and Lower Wa					
	O Upper Wall and Lower Wall					
Display of Openings in Non-Displayed Parts of Walls:	Outline					
	- 288 m					
	○ Always					

- For the **Wall Type** field at the top, use the drop-down menu and choose the **CBS Upper Wall**.
- For the Lower Wall Type field, use the drop-down menu and choose the CBS Lower Wall.

- In the **Elevation of Lower Wall Top** field, type in the height you would like the **CBS Lower Wall** to be.
- In the Align Pony Wall section, select Inner Surface.
- Specify your desired display options.
- 6. Once you click the **OK** button you will be able to draw your structure using the **Pony Wall** tool and the wall types that you have customized.

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