Creating CBS Walls With a Tie Beam

Reference Number: **KB-00495** Last Modified: **May 23, 2024**

The information in this article applies to:



QUESTION

I live in the Southeastern United States and regularly build CBS structures. How do I model a CBS wall that is block on the bottom and has a tie beam on top?



1	DRYWALL
2	FRAMING
3	CONCRETE BLOCKS
4	STUCCO
5	TIE BEAM

ANSWER

A CBS, or concrete, block and stucco wall with a tie beam on top can be modeled using pony walls. The bottom wall type typically has a stucco exterior, then a layer of eight inch concrete block, followed by a thin framing stud, and finally a layer of half-inch sheetrock. Along the top of this block wall is tie beam composed of a continuous pour of concrete all the way around the top of the structure.

A pony wall can be used to model both of these walls in the same wall section.

To create a CBS wall

- In your desired plan, navigate to Build> Wall> Define Wall Types to open 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.

Please see the <u>Related Articles</u> section below for more information on creating and defining wall types.

• 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**.

Vall Type Definitions									
CBS Lower Wall V New Copy Rename Delete Delete All Unused									
Wall Layers									
Layer # Line Color Line Style	Weight	Material	Pattern	Texture	Fill	Thickness	Extension	Display Layer	Insert Above
Exterior Layers	1	Sand Finish		No Texture		5/8"	8"	Default	Insert Below
Main Layers					<u> </u>	, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,	Ŭ	berduit	Move Up
2	35	Grey-Blocks			\boxtimes	8"		Default	Move Down
Interior Layers						-			Delete
3	1	Fir Framing 2				1 1/2"		Default	Total Thickness:
4	1	Drywall		No Texture		1/2"		Default	10 5/8"
Material Properties Layer	Properties	Wall Properties	;						
Framing									
Use Default Framing	g Material								
Place Framing On D	isplay Lay	rer							
Туре:		Lumber	✓ On Ce	enter	Horizonta	l Framing			
Stud Spacing:		0"	(Y		Bottor	n Run Elevati	on: 0"		
Stud Width:		0"	4 4		Ma	ix Girt Length	: 144"	밤	
Top Plate Count:		2	12/						
Top Plate Width:		1 1/2"	12/						
Bottom Plate Count:		1	12/						
Bottom Plate Width:		1 1/2"	12/						
Max Plate Length:									
Auto Detail as Insulation									
Air Gap									

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**.

CBS Upper Wall v New Copy Rename Delete Delete All Unused									
yer # Line Color Line terior Layers	Style Weight	Material	Pattern	Texture	Fill	Thickness	Extension	Display Layer	Insert Abo
ain Layers	35	Concrete				a 10 5/8"		Default	Move Up
erior Layers		<u>.</u>				-			Move Dow
									Delete
									Total Thicknes
									10 5/8"
Naterial Properties	ayer Properties	Wall Propert	ties						
Use Default Fr	aming Material								
Use Default Fr	-	/er							
	-	Lumber		enter		al Framing			
Place Framing	-	Lumber	Ÿ	enter		al Framing m Run Elevat	ion: 0"		
Place Framing Type:	-	Lumber	Ч Ч	enter	Bottor	-		<u>Ф</u>	
Place Framing Type: Stud Spacing:	-	Lumber	Ÿ	enter	Bottor	m Run Elevat			
 Place Framing Type: Stud Spacing: Stud Width: 	-	Lumber 0" 4"	Ч Ч	enter	Bottor	m Run Elevat			
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 Place Framing Type: Stud Spacing: Stud Width: Top Plate Count: Top Plate Width: 	j On Display Lay	Cumber 0" 4" 2	や や や ・ や ・ ・ ・ ・ ・	enter [Bottor	m Run Elevat			

- Typically, these two wall types will have the same Total Thickness.
- 3. Select **Edit> Default Settings** ⁽¹⁾/₍₂₎ from the menu, and in the **Default Settings** dialog that displays, expand the **Walls** category, click on **Pony Wall**, then click **Edit**.



4. On the WALL TYPES panel of the **Pony Wall Defaults** dialog that displays:

Pony Wall Defaults		
General	General	
Structure	Wall Type:	CBS Upper Wall V Define
Roof	iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	
Foundation	网络拉斯拉斯 医基金科学科 网络美国教学 建筑 网络美国大学家	수 있는 것 같은 것은 것은 것은 것이 같은 것이 같이
Wall Types		
Wall Cap		
Wall Covering	Pony Wall	
Rail Style Newels/Balusters		
Rails	Lower Wall Type:	CBS Lower Wall V Define
Layer		
Materials		
Label		<u></u>
Components		401
Object Information	Elevation of Lower Wall Top:	48"
Schedule	Height Off Floor:	48"
	Align Pony Wall at:	○ Outer Surface
		Main Layer Outside
		○ Wall Center
		O Main Layer Inside
		O Inner Surface
		0.1
	Display in Current Plan View (Working Plan View):	O Upper Wall
		Output Lower Wall
		O Upper Wall and Lower Wall Outline
		O Upper Wall Outline and Lower Wall
		O Upper Wall and Lower Wall
	Display of Openings in Non-Displayed Parts of Walls	: • Outline
		○ Always
		○ Hide

- Click the **Wall Type** drop-down menu and choose your CBS tie beam wall type from the list.
- Click the **Lower Wall Type** drop-down menu and choose your CBS block wall type from the list.
- Specify the desired **Height** of the Lower Wall.
- Specify the alignment and display settings to your liking.
- 5. Access the WALL CAP panel to make adjustments to the sill cap, if one is present. You can also delete any profiles located here if they are undesired.
- 6. Click **OK** and **Done** to confirm the changes and close out of all of the dialog boxes.

7. Select **Build> Wall> Straight Pony Wall** from the menu, then click and drag to create a custom CBS wall.



Related Articles

Changing an Existing Wall's Type (/support/article/KB-00443/changing-an-existingwall-s-type.html)

Defining a New Wall Type (/support/article/KB-02944/defining-a-new-wall-type.html)

