

Creating CBS Walls With a Tie Beam

Reference Number: **KB-00495**

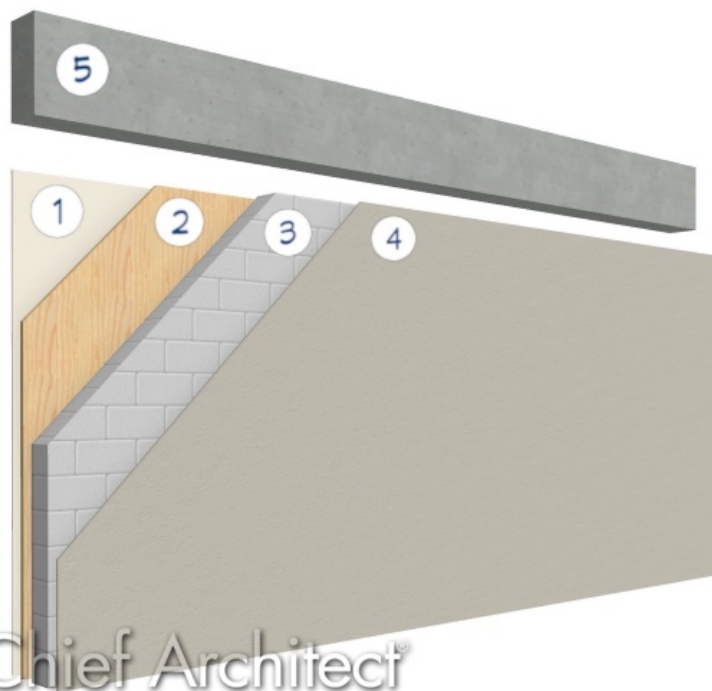
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The information in this article applies to:



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

1. First, **Open**  the Chief Architect plan in which you would like to add a CBS wall.
2. From the menu, navigate to **Build> Wall> Define Wall Types**  to open the **Wall Type Definitions** dialog.
3. Create two new custom wall types - one for the lower block wall and one for the tie beam, or upper wall.

Please see the [Related Articles](#) section below for more information on creating new 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**.

Wall Type Definitions

CBS Lower Wall New Copy Rename Delete Delete All Unused

Wall Layers

Layer #	Line Color	Line Style	Weight	Material	Pattern	Texture	Fill	Thickness
Exterior Layers								
1			1	Sand Finish - ...		No Texture		5/8"
Main Layers								
2			35	Grey-Blocks ...				8"
Interior Layers								
3			35	Fir Framing 2				1 1/2"
4			1	Drywall		No Texture		1/2"
5			1					

Insert Above
Insert Below
Move Up
Move Down
Delete
Total Thickness: 10 5/8"

Selected Wall Layer Line

Line Color: ☒ By Layer
 Line Weight: ☐ By Layer 1
 Line Style: ☒ By Layer Library...

Material Layer

☐ Framing
☐ Use Default Framing Material
 Type: Lumber
 Spacing: 0" On Center
 Width: 0"
☐ Horizontal Framing
 Bottom Run Elevation: 0"
☐ Auto Detail as Insulation
☐ Air Gap

Energy Values

Wall Type: Solid Concrete or Masonry
 Cavity R-Value: 0.0
 Continuous R-Value: 0.0

Wall Settings

Brick Ledge Depth: 8"
 Build Platform to Exterior of Layer: 2 - Grey-Blocks I
 Dimension to Exterior of Layer: 2 - Grey-Blocks I
 Foundation to Exterior of Layer: 2 - Grey-Blocks I
 Foundation Offset: 0"
☐ Partition Wall

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 New Copy Rename Delete Delete All Unused

Wall Layers

Layer #	Line Color	Line Style	Weight	Material	Pattern	Texture	Fill	Thickness
Exterior Layers								
Main Layers								
1			35	Concrete				10 5/8"
Interior Layers								
2			35					

Insert Above Insert Below Move Up Move Down Delete

Total Thickness: 10 5/8"

Selected Wall Layer Line

Line Color: ☒ By Layer

Line Weight: ☒ By Layer 35

Line Style: ☒ By Layer Library...

Material Layer

☐ Framing

☐ Use Default Framing Material

Type: Solid Concrete

Spacing: 0" On Center

Width: 4"

☐ Horizontal Framing

Bottom Run Elevation: 0"

☐ Auto Detail as Insulation

☐ Air Gap

Energy Values

Wall Type: Solid Concrete or Masonry

Cavity R-Value: 0.0

Continuous R-Value: 0.0

Wall Settings

Brick Ledge Depth: 0"

Build Platform to Exterior of Layer: 1 - Concrete


Dimension to Exterior of Layer: 1 - Concrete

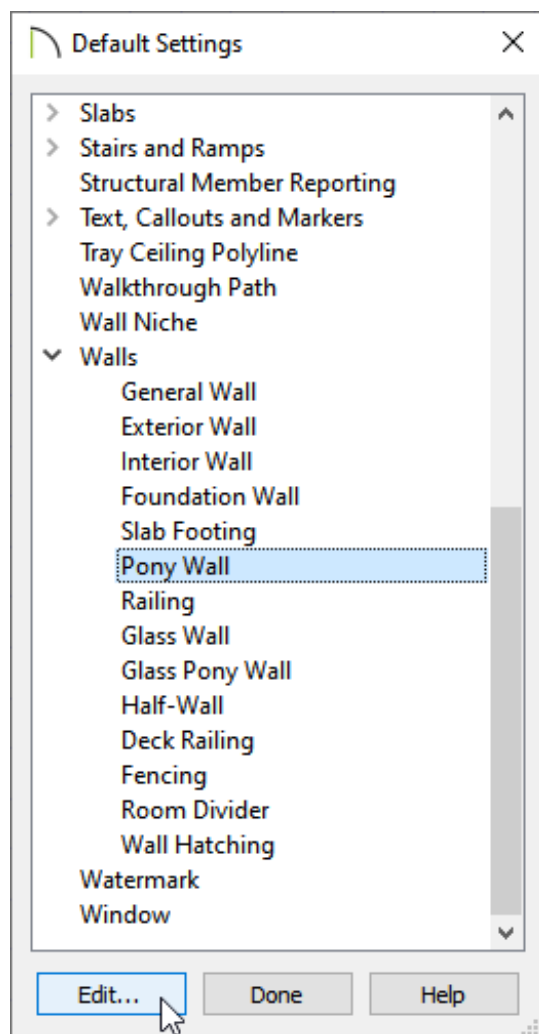
Foundation to Exterior of Layer: 1 - Concrete

Foundation Offset: 0"

☐ Partition Wall

- Typically, these two wall types will have the same Total Thickness.

- Select **Edit> Default Settings**  from the menu, and in the **Default Settings** dialog that displays, expand the **Walls** category, click on **Pony Wall**, then click **Edit**.




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

Pony Wall Defaults

- General
- Structure
- Roof
- Foundation
- Wall Types**
- Wall Cap
- Wall Covering
- Rail Style
- Newels/Balusters
- Rails
- Layer
- Materials
- Label
- Components
- Object Information
- Schedule


General

Wall Type: CBS Upper Wall Define...



☒ **Pony Wall**

Lower Wall Type: CBS Lower Wall Define...



Elevation of Lower Wall Top: 48"

Height Off Floor: 48"

Align Pony Wall at:

- ☐ Outer Surface
- ☒ Main Layer Outside
- ☐ Wall Center
- ☐ Main Layer Inside
- ☐ Inner Surface

Display In Plan View:

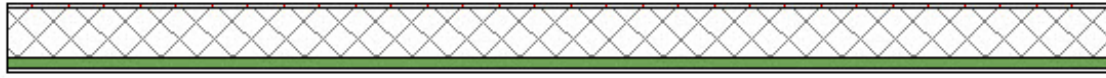
- ☐ Upper Wall
- ☒ Lower Wall
- ☐ Upper Wall and Lower Wall Outline
- ☐ Upper Wall Outline and Lower Wall
- ☐ Upper Wall and Lower Wall

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.
- Click **OK** and **Done** to confirm the changes and close out of all of the dialog boxes.

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




Related Articles

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



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