Creating CBS Walls With a Tie Beam

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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

- 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**.

| Wall Type Definitions | | | | | | | | | | |
|---|----------------------------|----------|-----------------|---------|------------|-----------|---------------|-----------|---------------|------------------|
| CBS Lower Wall Vew 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 | | 4 | | | N. T. I. | | 5 (0) | 01 | | Insert Below |
| Main Lavers | | _ | Sand Finish | | No lexture | | 5/8" | 8" | Default | Move Up |
| 2 | | 35 | Grey-Blocks | | | | 8" | | Default | Move Down |
| Interior Layers | | | - | | i | | J | | | 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 Pr | operties | Wall Properties | ; | | | | | | |
| Framing | | | | | | | | | | |
| Use Defau | lt Framing I | Material | | | | | | | | |
| Place Fran | ning On Dis | play Lay | er | | | | | | | |
| Туре: | | | Lumber | ✓ On Ce | enter | Horizonta | Framing | | | |
| Stud Spacing: | | | 0" | (ł) | | Botton | n Run Elevati | on: 0" | | |
| Stud Width: | | | 0" | († | | Ma | x Girt Length | : 144" | 밤 | |
| Top Plate Cou | int: | | 2 | 12/ | | | | | | |
| Top Plate Wid | th: | | 1 1/2" | 12/ | | | | | | |
| Bottom Plate | Bottom Plate Count: 1 | | | | | | | | | |
| Bottom Plate | Bottom Plate Width: 1 1/2" | | | | | | | | | |
| Max Plate | Max Plate Length: 144" | | | | | | | | | |
| Auto Detail as Ins | ulation | | | | | | | | | |
| 🗌 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**.

| Vall Lavers | | | | | | | | | |
|--|---------------------------------------|---|---|---------|--------------------|---|-------------------|---------------|----------------|
| yer # Line Color Line S terior Layers | tyle Weight | Material | Pattern | Texture | Fill | Thickness | Extension | Display Layer | Insert Abov |
| 1 | | Concrete | | | | a 10 5/8" | | Default | Move Up |
| erior Layers | | k | | | | | | | Move Dow |
| | | | | | | | | | Delete |
| | | | | | | | | | Total Thicknes |
| | | | | | | | | | 10 5/8" |
| Naterial Properties Lay | yer Properties | Wall Proper | ties | | | | | | |
| Use Default Fran | ning Material | | | | | | | | |
| Use Default Fran | ning Material)n Display Lay | /er | | | | | | | |
| Use Default Fran Place Framing C Type: | ning Material)n Display Lay | Lumber | ∼ On C | enter | Horizonta | al Framing | | | |
| Use Default Fran Place Framing C Type: Stud Spacing: | ning Material)n Display Lay | Lumber | v On C | enter | Horizont | al Framing m Run Elevat | on: 0" | | |
| Use Default Fran Place Framing C Type: Stud Spacing: Stud Width: | ning Material On Display Lay | Lumber 0" 4" | · On C | enter | Horizonta Botto | al Framing m Run Elevat ax Girt Lengtł | on: 0" 144" | ų. | |
| Use Default Fran Place Framing C Type: Stud Spacing: Stud Width: Top Plate Count: | ning Material)n Display Lay | Lumber 0" 4" 2 | On C | enter | Horizont. Botto | al Framing m Run Elevat lax Girt Lengtł | on: 0" 144" | Ш Ш | |
| Use Default Fran Place Framing C Type: Stud Spacing: Stud Width: Top Plate Count: Top Plate Width: | ning Material)n Display Lay | Lumber 0" 4" 2 1 1/2" | On C චු චු චු චු චු | enter | Horizonta Botto | al Framing m Run Elevat ax Girt Lengtl | on: 0" 144" | | |
| Use Default Fran Place Framing C Type: Stud Spacing: Stud Width: Top Plate Count: Top Plate Width: Bottom Plate Count | ning Material)n Display Lay t: | Lumber 0" 4" 2 1 1/2" 1 | On C ひ C<td>enter</td><td>Horizont. Botto</td><td>al Framing m Run Elevat ax Girt Lengtł</td><td>on: 0" n: 144"</td><td>Ŷ</td><td></td> | enter | Horizont. Botto | al Framing m Run Elevat ax Girt Lengtł | on: 0" n: 144" | Ŷ | |
| Use Default Fran Place Framing C Type: Stud Spacing: Stud Width: Top Plate Count: Top Plate Width: Bottom Plate Count Bottom Plate Width | ning Material)n Display Lay t: | Lumber 0" 4" 2 1 1/2" 1 1/2" | > On C | enter | Horizonta Botto | al Framing m Run Elevat lax Girt Lengtł | on: 0" h: 144" | (Ľ) | |

- 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 | | 수 있던 것도 같은 것 같은 모든 것 같은 것 같아요. |
| Wall Types | | |
| Wall Cap | | |
| Wall Covering | | |
| Newels/Balusters | | |
| Rails | Lower Wall Type: | CBS Lower Wall \checkmark Define |
| Laver | | |
| Materials | | |
| Label | | <u></u> |
| Components | | 101 |
| Object Information | Elevation of Lower Wall lop: | 48 |
| Schedule | Height Off Floor: | 48" |
| | Align Pony Wall at: | ○ Outer Surface |
| | | Main Layer Outside |
| | | O Wall Center |
| | | O Main Laver Inside |
| | * | |
| | | |
| | Display in Current Plan View (Working Plan View): | ○ Upper Wall |
| | | O 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 |
| | | O Always |
| | | Aiways |
| | | ○ 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)

