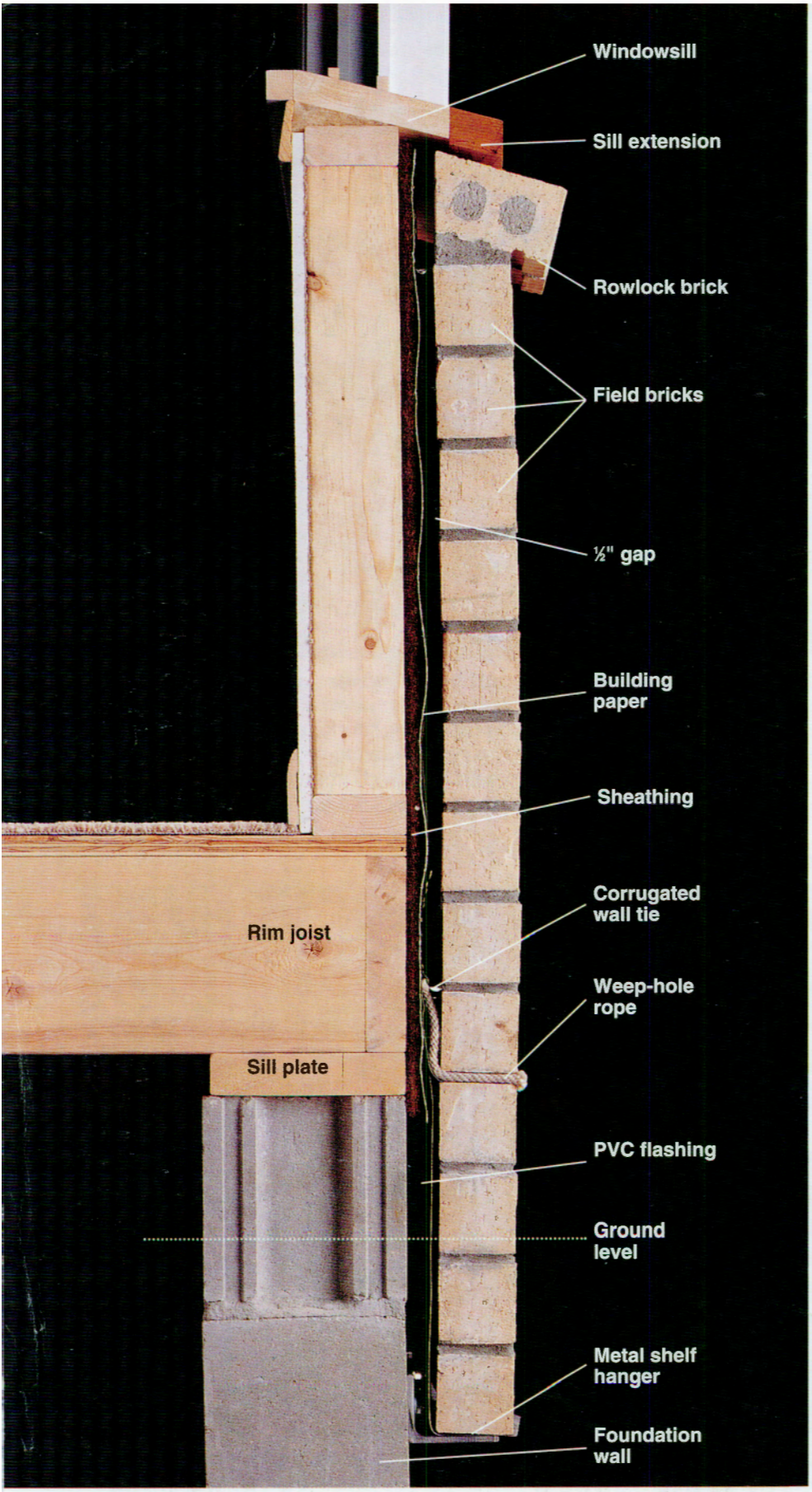


Anatomy of a brick veneer facade: Queen-sized bricks are stacked onto a metal or concrete shelf and connected to the foundation and walls with metal ties. Rowlock bricks are cut to follow the slope of the windowsills, then laid on edge over the top course of bricks.

Finishing Walls with Brick

Brick veneer is essentially a brick wall built around the exterior walls of a house. It's attached to the house with metal wall ties and supported by a metal shelf hanger on the foundation. It's best to use queen-sized bricks for veneer projects because they're thinner than standard construction bricks. This means less weight for the house walls to support. Even so, brick veneer is quite heavy. Ask your local building inspector about building code rules that apply to your project. In the project shown here, brick veneer is installed over the foundation walls and side walls, up to the bottom of the windowsills on the first floor of the house. The siding materials in these areas are removed before installing the brick.

Construct a story pole before you start laying the brick so you can check your work as you go along to be sure your mortar joints are of a consistent thickness. A standard ⅜" gap is used in the project shown here.

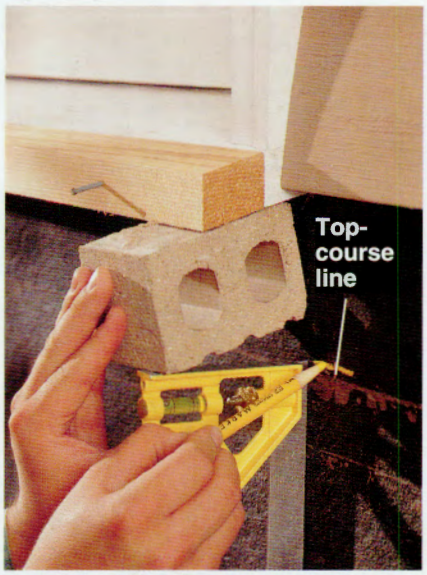
Everything You Need

Tools: hammer, circular saw, combination square, level, drill with masonry bit, socket wrench set, staple gun, mason's trowel, masonry hoe, mortar box, mason's chisel, maul.

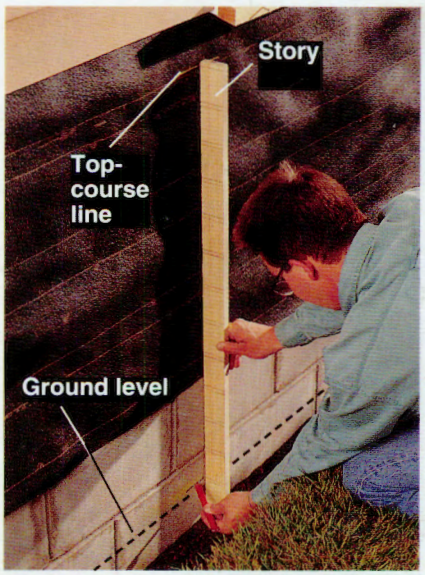
Materials: pressure-treated 2 × 4s, ⅜ × 4" lag screws and washers, 2 × 2, lead sleeve anchors, angle iron for metal shelf supports, 30 mil PVC roll flashing, corrugated metal wall ties, brickmold for sill extensions, sill-nosing trim, Type N mortar, bricks, ⅜-dia. cotton rope.

How to Install Brick Veneer

1 Remove all siding materials in the area you plan to finish with brick veneer. Before laying out the project, cut the sill extension from a pressure-treated 2 × 4. Tack the extension to the sill temporarily.

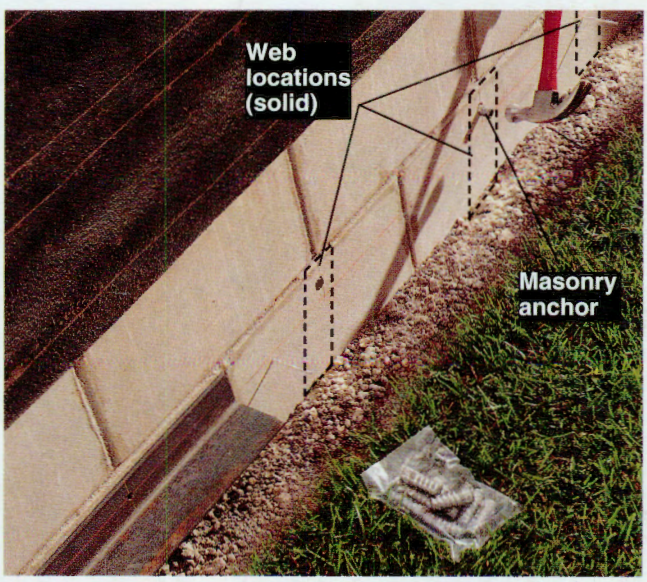


2 Precut the bricks to follow the slope of the sill and overhang the field brick by 2". Position this rowlock brick directly under the sill extension. Use a combination square or level to transfer the lowest point on the brick onto the sheathing (marking the height for the top course of brick in the field). Use a level to extend the line. Remove the sill extensions.



3 Make a story pole long enough to span the project area. Mark the pole with ⅜" joints between bricks. Dig a 12"-wide, 12"-deep trench next to the wall. Position the pole so the top-course line on the sheathing aligns with a top mark for a brick on the pole. Mark a line for the first course on the wall, below ground level.

4 Extend the mark for the first-course height across the foundation wall, using a level as a guide. Measure the thickness of the metal shelf (usually ¼"), and drill pilot holes for 10d nails into the foundation at 16" intervals along the first-course line, far enough below the line to allow for the thickness of the shelf. Slip nails into the pilot holes to create temporary support for the shelf.



5 Set the metal shelf onto the temporary supports. Mark the location of the center web of each block onto the vertical face of the shelf. Remove the shelf and drill ⅜"-diameter holes for lag screws at the web marks. Set the shelf back onto the temporary supports and outline the predrilled holes on the blocks. Remove the shelf and drill holes for the masonry anchors into the foundation, using a masonry bit. Drive masonry anchors into the holes.

(continued next page)

6 Reposition the shelf on the supports so the predrilled holes align with the masonry anchors. Attach the shelf to the foundation wall with ⅜ × 4" lag screws and washers. Allow 1/16" for an expansion joint between shelf sections. Remove the temporary support nails.

7 After all sections of the metal shelf are attached, staple 30 mil PVC flashing above the foundation wall so it overlaps the metal shelf.

8 Test-fit the first course on the shelf. Work in from the ends, using spacers to set the gaps between bricks. You may need to cut the final brick for the course. Or, choose a pattern such as running bond that uses cut bricks.

9 Build up the corners two courses above ground level, then attach line blocks and mason's string to the end bricks. Fill in the field bricks so they align with the strings. Every 30 minutes, smooth mortar joints that are firm.

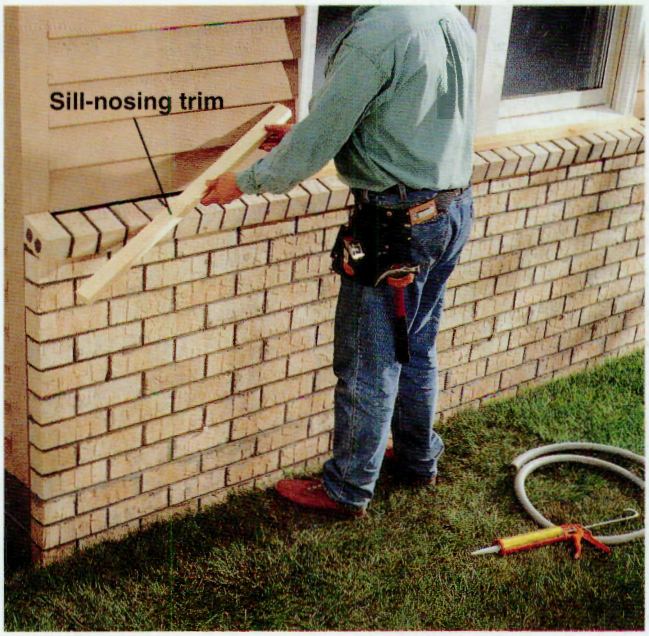
10 Attach another course of PVC flashing to the wall so it covers the top course of bricks, then staple building paper to the wall so it overlaps the top edge of the PVC flashing by at least 12". Mark wall-stud locations on the building paper.

11 Use the story pole to mark layout lines for the tops of every fifth course of bricks. Attach corrugated metal wall ties to the sheathing where the brick lines meet the marked wall-stud locations.

12 Fill in the next course of bricks, applying mortar directly onto the PVC flashing. At every third mortar joint in this course, tack a 10" piece of ⅜"-dia. cotton rope to the sheathing so it extends all the way through the bottom of the joint, creating a weep hole for drainage. Embed the metal wall ties in the mortar beds applied to this course.

13 Add courses of bricks, building up corners first, then filling in the field. Imbed the wall ties into the mortar beds as you reach them. Use corner blocks and a mason's string to verify the alignment, and check frequently with a 4-ft. level to make sure the veneer is plumb.

14 Apply a ½"-thick mortar bed to the top course, and begin laying the rowlock bricks with the cut ends against the wall. Apply a layer of mortar to the bottom of each rowlock brick, then press the brick up against the sheathing, with the top edge following the slope of the windowsills.



15 Finish-nail the sill extensions (step 1, page 161) to the windowsills. Nail sill-nosing trim to the siding to cover any gaps above the rowlock course. Fill cores of exposed rowlock blocks with mortar, and caulk any gaps around the veneer with silicone caulk.