Project	Concrete Block Construction

Use QUIKRETE® Mortar Mix or Mason Mix lay up a concrete block wall as shown.

Required Tools & Materials

- QUIKRETE® Mortar Mix or Mason Mix Concrete block
- Mason's line
- Line blocks
- 4' level brick trowel
- Jointer
- Mason's hammer
- Stiff brush
- Mixing board
- Hoe
- Mortarboard

Step by Step

Laying the First Course

1. Excavate the site and construct the footing.

2. Locate the corners of the wall on the footing. Dry-lay the first course of blocks, leaving space for the mortar. Snap a chalk line to mark the position of the blocks on the footing.

3. Pick up the blocks and spread a full bed of QUIKRETE® Mortar Mix or Mason Mix on the footing. Use a trowel to furrow the mortar. It is important to have plenty or mortar along the bottom edges of the block for the first course.

4. Position the corner block carefully, with the thicker end of the face shell up; all blocks should be laid this way to provide a larger mortar bedding area. When handling a block, always tip it slightly toward you so that you can see the edge of the course below.

5. Place several blocks on end and apply mortar to their vertical face

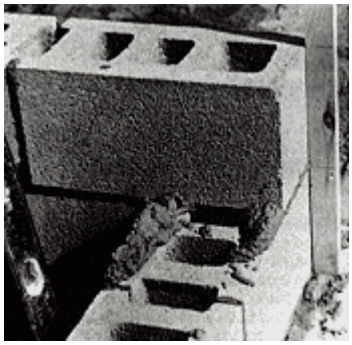
shells. Push each block down into the mortar bed and against the preveiously laid block. Joints should be about 3/8" thick.

6. After three or four blocks have been laid, use a level to check for plumbness and correct alignment. Make any adjustments by tapping the block with the trowel handle, then complete the first course. Make all adjustments while the mortar is still soft. Any attempt to move a block after the mortar has stiffened will break the bond, waekiening the wall and allowing moisture to penetrate.

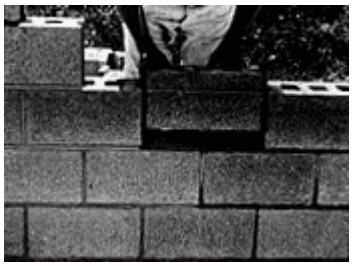
Laying the Remaining Courses

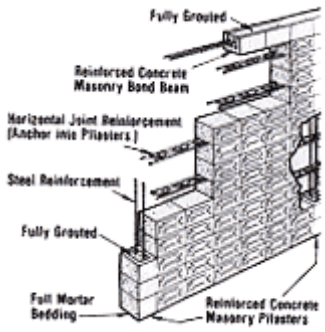
1. With the remaining courses, mortar is applied to the horizontal face shells of each block; for the vertical joints, mortar either the previously laid block or the block to be placed, but not both. As each block is laid, cut off the excess mortar with a trowel.

2. When laying the remainder of the wall, the corners should be built first, usually 4 or 5 courses at a time. As each course is laid at the corner, it should be stepped back a half block. Check for plumbness, alignment, and horizontal spacing of the blocks.



3. To fill in the wall between corners, stretch a mason's line from corner to corner and lay the top outside sedge of the blocks against it. When placing the course block, all edges of the opening and all four vertical edges of the closure block should be buttered with mortar. Make sure all joints are tight and weatherproof.





4. Work the joints after each section of the wall has been laid, and mortar has partially hardened. Proper tooling procedures uniform joints with sharp, clean lines. Tool the horizontal joints first, then work the vertical joints with an S-shaped jointer.

5. Wood plates can be fastened to the top course. Use ½" - diameter, 18" - long anchor bolts in the cores of the top 2 courses, no more that 4' apart. Fill the cores with mortar, making sure that the bolts extend a few inches above the top of the wall.

For Best Results

- Use QUIKRETE® Masonry Coating to waterproof both above and below the grade line.

Decorative Block Screen Walls

Walls, fences, and partitions constructed of concrete masonry screen block offer privacy and provide partial sun and wind control. Since most decorative block is laid up using continuous vertical mortar joints used in standard block and brick work, your main concern when planning and constructing a screen wall project will be stability and strength.

Fortunately, in most home and garden applications, screen walls are required to bear no more than their own weight. In fact, many building codes prohibit the use of screen block in load-bearing applications. Nonload-bearing screen walls require varying amounts of vertical and horizontal support based on the wall height, length, block thickness and design, and local weather conditions. Check your local building codes before beginning a screen block project of appreciable size.

Low decorative walls up to a height of 3' or so usually only require welded steel joint reinforcement in the bed joints of every other course. Screen walls higher that 3' generally require additional lateral support provided by reinforced concrete block pilasters or vertical steel channels built into the wall at properly based intervals. Steel channel must be either fully grounted or tied into the adjacent block with suitable metal ties.

Required Tools & Materials

- QUIKRETE® Mortar Mix or Mason Mix
- Decorative Concrete block
- Welded steel joint reinforcement
- Steel channel and steal metal ties (if needed)
- Mixing board,
- Hoe and hawk
- Mason's line
- Line block
- 4' level
- Brick trowel
- Jointer
- Stiff brush

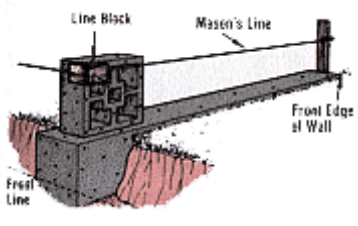
Step by Step

Laying the Screen Wall

1. Construct a footing one block length longer that the wall.

2. Drive a stake into the ground at the end of the footer opposite the end where the wall construction will begin. The leading edge of the stake is placed on the front line of the wall, with a nail driven into it at the exact height of the first course.

3. Set the opposite end block in place. Using a line block, attach a mason's line from the end bock to the nail in the stake. Dry-lay the first course of blocks along the line, leaving ½" joints between the docks. Mark the location of the blocks on the footer.

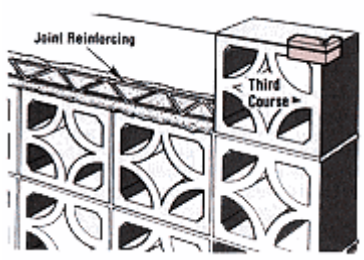


4. Lay a ½" bed of the prepared mortar mix along the footer and lay the first course from the end of the opposite stake. By laying the course from end to end, rather that building the corners first, the first course can be off an inch or two without having to cut a closure block.

5. Butter the ends of each block before setting it in place, making certain to set the blocks level.

6. The remaining courses are laid similarly to their first course, using the vertical joints in the bottom course as guides. Butter the ends and bottom of blocks in the upper courses before placing them. Use a level to check alignment every 3 to 4 blocks and to check plumb every 2 to 3 courses.

7. Place the welded steel joint reinforcement in the bed joints of every other course. Stop the reinforcement short of the ends of the wall.



8. Press the reinforcement into the mortar bed prior to placing the lead block of the course. Trowel additional mortar onto the reinforcement and lift it slightly as you set each block in position. This helps embed the steel at the midpoint of the joint. Be careful to maintain a consistent joint thickness.

9. Strike the joints after the mortar begins to harden; use a stiff-bristled brush to remove any loose particles of mortar.

10. Moist-cure the mortar for 3 to 4 days by misting the wall with a fine spray several times daily.

For Best Results

- Mineral pigments can be added to the mortar mix to match the color of the block. QUIKRETE® liquid Cement Color may also be used.
- When hollow masonry units are laid with their cores vertical, the top course should be capped to prevent the entrance of water into the wall interior.