

QUOINS

Introduction

Quoins are visually appealing ornamental accents to corners in masonry construction. Quoins can be formed by a series of masonry units near and at a corner differing in size, color, finish or material from the adjacent masonry. Quoins may be flush with the wall surface or project slightly from the surrounding masonry. This brick *Brick Brief* addresses how quoins are incorporated in brickwork.

Materials

Quoins can be formed from a variety of materials to provide aesthetically pleasing exterior wall features. They may be formed by brick of a different color or texture, of larger units than the adjacent masonry, stone, or pre-cast concrete to heighten the appearance of the building's corners. Quoins accentuate the corners of a building by making them more prominent.

Detailing

When quoins are flush with the outside of the wall surface, it is necessary to consider the through-wall dimensions of the quoin unit. If the quoin unit is thicker than the surrounding masonry units, it must not be so thick as to prevent the drainage of the veneer wythe system. Quoins should be flush with the interior side of veneer walls, if possible. Quoins of stone or concrete should be detailed to fit the coursing of brick masonry walls both vertically and horizontally. A single quoin unit can be used instead of multiple units to give even greater emphasis to the feature.

When projecting units to create a quoin, the application is similar to a corbel. Usually only one projection is used to provide the visual effect. Projecting quoins should meet the following requirements.

- The projection of each course should not be more than one-third the width or one-half the height of the masonry unit in the field.
- The total projection should not exceed one-half the masonry wall or masonry veneer thickness.
- Do not expose core holes or frogs when using cored or molded brick, respectively, to form the quoins. That is, limit the projection to $\frac{3}{4}$ in. (19.1 mm) in most cases.

Coursing Patterns

There are a variety of coursing patterns for quoin corners. Stone or concrete quoin units generally are three to four brick courses in height and three to five brick courses in length. They are usually bonded around the corner. Some half-brick units will be required in the adjacent brick

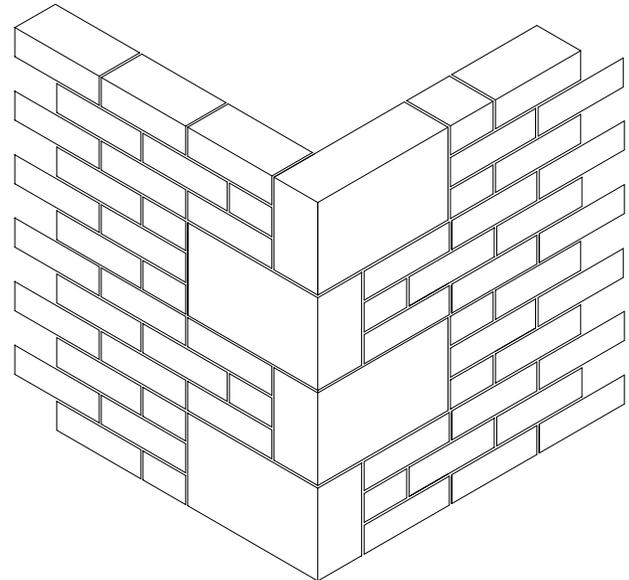


Figure 1
Stone Quoin Corner

wall to bring proper layout to the structure, as shown in **Figure 1**. It is suggested that the length of these quoin units be modules of 4 inches (102 mm) to reduce cutting of adjacent brick when using standard nominal 8 inch (203 mm) units.

For quoins of brick masonry, there are many ways to detail the corners. Typically, quoins made of brick masonry are the same length on each side of the corner. The length on each side is usually two to three brick. The quoins are usually three to seven brick courses in height, with one to three brick courses in the wall plane separating each quoin. As with stone or concrete quoin units, some brick on the adjacent walls will require cutting. (See **Figures 2 and 3**, on following page.) The cut units may be in the courses that are projected or in the courses between the projections.

Quoins are typically found in residential construction but may also be included in other low-rise buildings. Since there is a nearly continuous vertical mortar joint immediately adjacent to the quoins, this can serve as a good location for a vertical expansion joint if necessary. Residential construction typically does not require expansion joints.

Brick Briefs are short discussions of a particular topic. The information contained herein is based on the experience of Brick Industry Association technical staff and must be used with good technical judgment. Final decisions on the use of this information must rest with the project designer and owner.

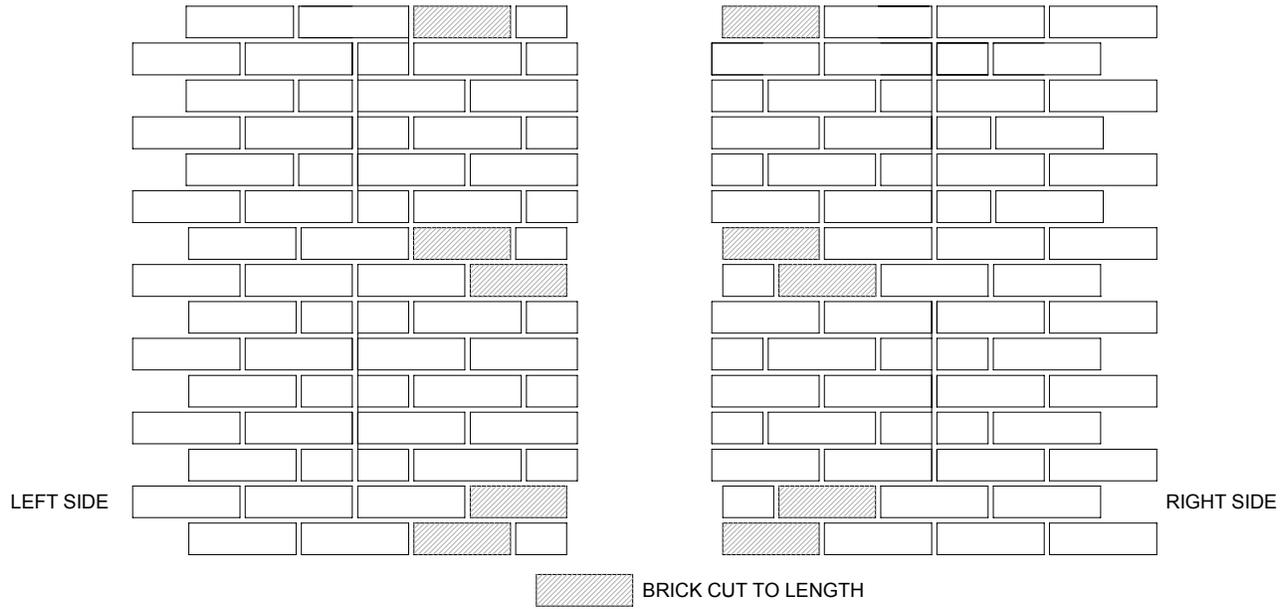


Figure 2
Brick Quoin Detail, 5 Course Quoin with 2 Regular Courses

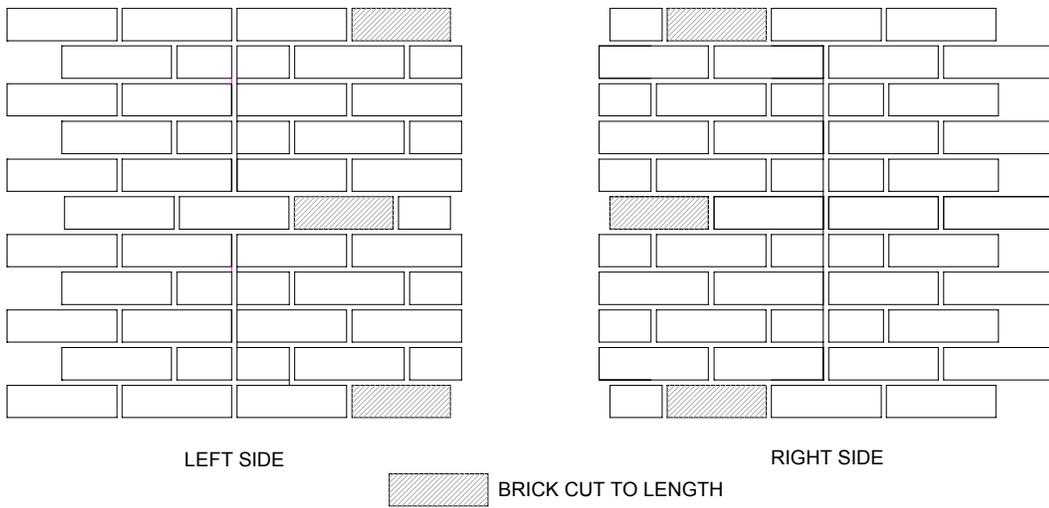


Figure 3
Brick Quoin Detail, 4 Quoin Courses with 1 Regular Course