TECHNICAL PROFILES

Technical Profile #9

Flashing Details

This technical profile illustrates many of the most common flashing details for residential and commercial buildings. The purpose for flashing is to prevent moisture from deteriorating steel angles or other building components. In addition it serves to move any moisture out away from the inside of the wall. The following details were designed to accomplish both goals. Modification to these details are normal however the changes should always focus on the primary objectives for flashing. There are some details that vary from standards practiced by the brick industry however it is our belief that these variations are a more practical approach. These details are available on discs using CAD software. THE RESPONSIBILITY FOR SPECIFYING THESE ALTERNATIVES BELONGS TO THE DESIGNER OR ENGINEER

A. General Considerations Pertaining to Flashing Installation

1. When flashing needs splicing, the ends should be overlapped a minimum of 4" and sealed with a compatible mastic.

2. Corner flashing also requires sealing overlapping ends.

3. Watertight end dams are suggested where horizontal flashing terminates. An alternative to end dams is shown on detail 23.

4. Flashing generally should extend 8" above the bottom of the flashing and be fastened to the backup.

5. Through wall flashing at the base of the walls should be located 2" or 3" above finished grade.

6. Any cavity space below the flashing at the wall base should be completely filled with mortar.

7. When flashing is placed over a brick, block, or concrete wall adjacent to habitable rooms, a thin bed of mortar or a compatible mastic must be spread onto the brick, block, or concrete walls before the flashing is set in place.

8. Flashing should be noncorrosive and nonstaining. Copper and galvanized steel may stain adjacent masonry. Copper and stainless steel require a protective material when they are placed next to a steel angle.

9. Impregnated felt, polyethylene, aluminum or lead should not be used as flashing.

B. Special Considerations Pertaining to Flashing Installation - Brick industry standards require the flashing to project 1/4" past the face of the brick. For asethetic reasons, this is normally unacceptable to brick users. The following are alternative details.

1. For commercial buildings with horizontal control joints, the flashing may stop at the brick face or 1/8" back from the face. An alternative is to wrap the flashing around the angle toe, provide a 100% solid brick below the shelf angle and a moisture resistant sealant in the joint. A third choice is to place the flashing in the mortar joint above the first brick, hold the flashing back 1/2" from the brick face and cover the shelf angle with a self adhering flashing.

2. For commercial and residential buildings with sills or lintels over openings, the flashing can stop 1/2" to 3/4" back from the brick face. Fill the core holes with mortar and spread sealant on the brick below the flashing before it is placed. The lintel detail is illustrated on detail 23. The sill detail is shown on detail 19.

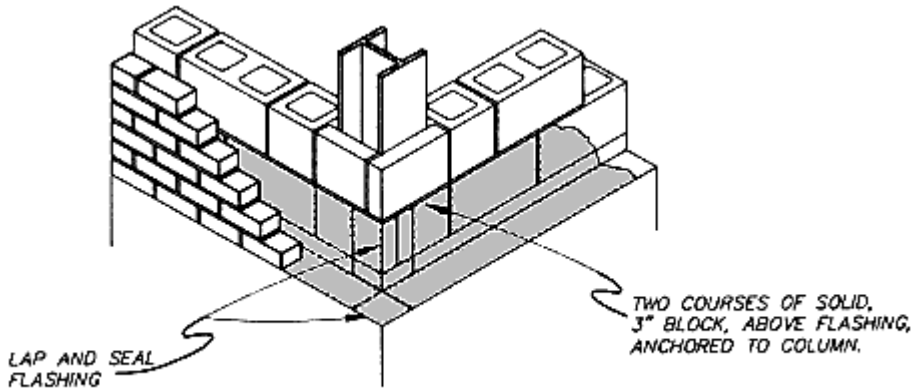
C. Advantages and Disadvantages of Rubber versus Composite Flashing

Rubber flashing should normally be neoprene, however PVC may also be used. For commercial buildings, 50 to 60 mil thickness is suggested. For residential buildings, 30 mil thickness is suggested. Composite flashing is typically made with copper or lead material, covered by bitumen or kraft paper. This cover protects the metal from corrosion if it is placed in contact with other metals, such as a steel lintel.

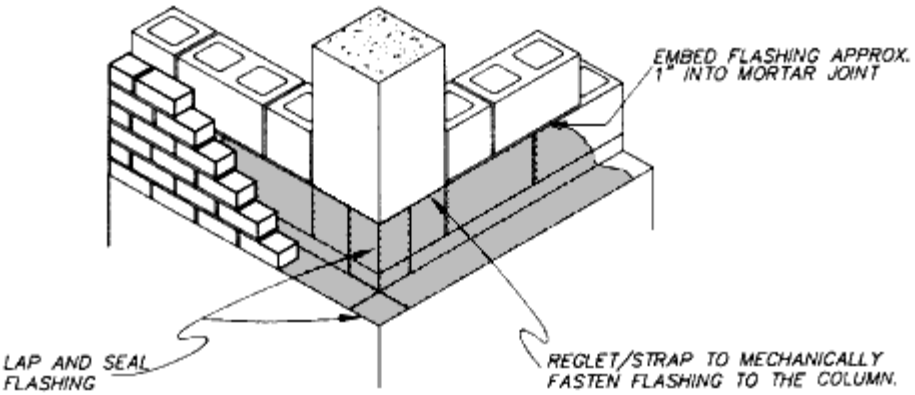
Rubber flashing is easier to bend, mold and seal at corners and end dams than composite flashing. When flashing needs to span across a cavity, composite flashing is more effective since rubber flashing will sag and eventually tear from sustained weight. If anchors need to penetrate the flashing, a thick rubber flashing will seal better around the anchor than composite flashing.

Exterior Corner Flashing Detail
Steel & Concrete Columns -- Block Backup

Note: Brick anchors & insulation have been omitted for clarity in details 1 and 2.



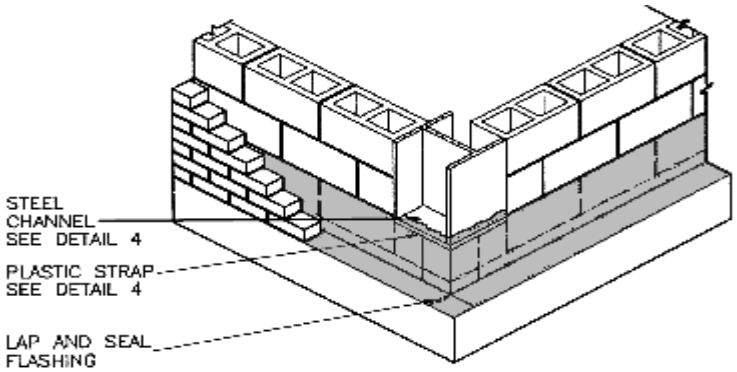
DETAIL 1



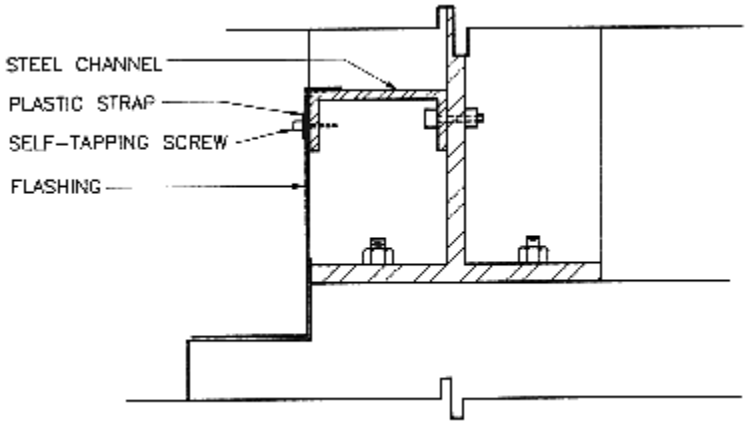
DETAIL 2

Exterior Corner Flashing Detail
Steel Columns -- Block Backup

Note: This detail is an alternate to detail 1. Brick anchors & insulation have been omitted for clarity in details 3 and 4.



DETAIL 3



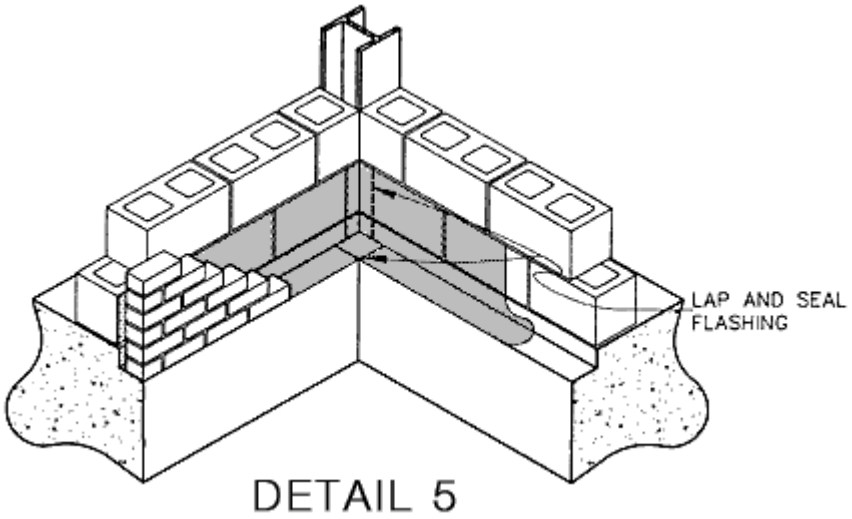
DETAIL 4

Enlarged detail of flashing attachment at column base.

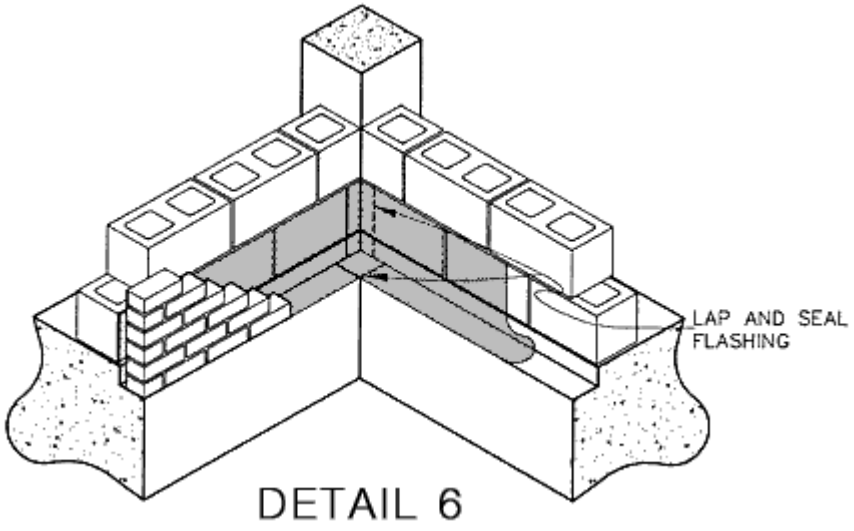
Note: Same detail is used for intermediate column.

Interior Corner Flashing Detail
Steel & Concrete Columns -- Block Backup

Note: Brick anchors & insulation have been omitted for clarity in details 5 and 6.



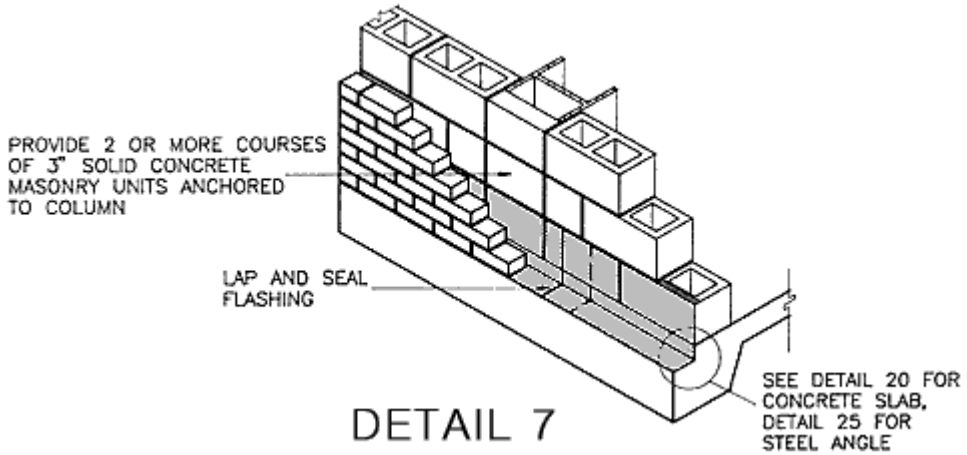
DETAIL 5



DETAIL 6

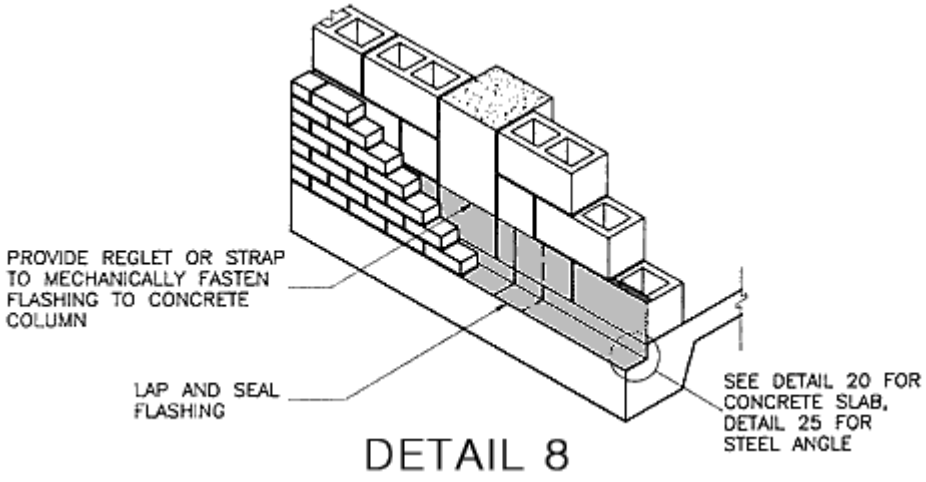
Intermediate Column Flashing Detail
Steel & Concrete Columns -- Block Backup

Note: Brick anchors & insulation have been omitted for clarity in details 7 and 8.



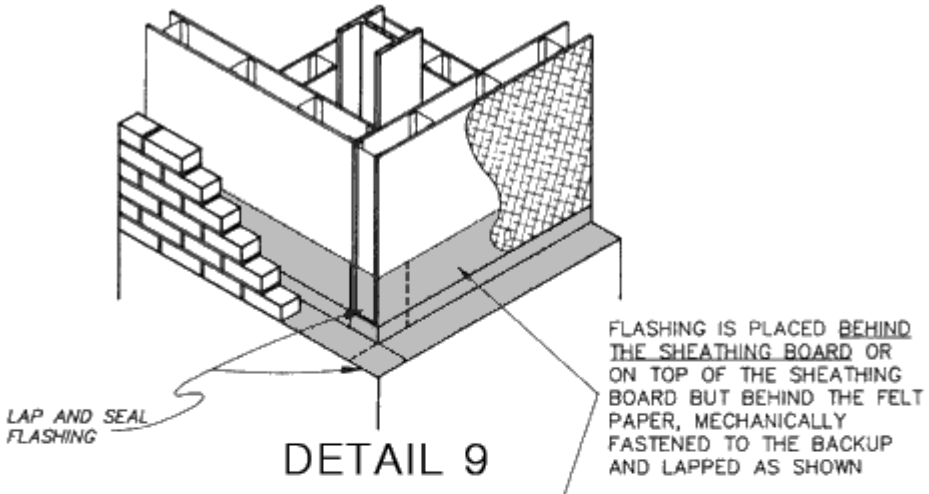
DETAIL 7

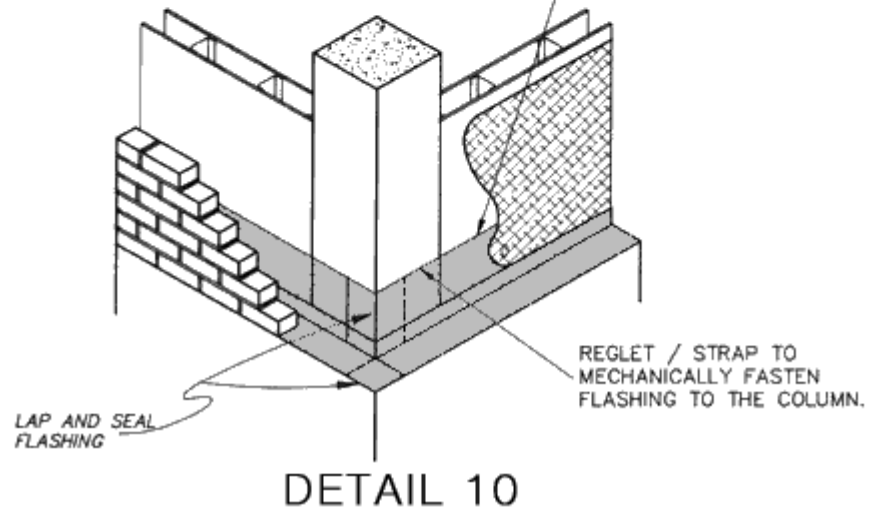
Note: Support for the brick may be a steel angle instead of a concrete footing. Support for the concrete block may be a concrete slab on metal decking supported by a steel beam.



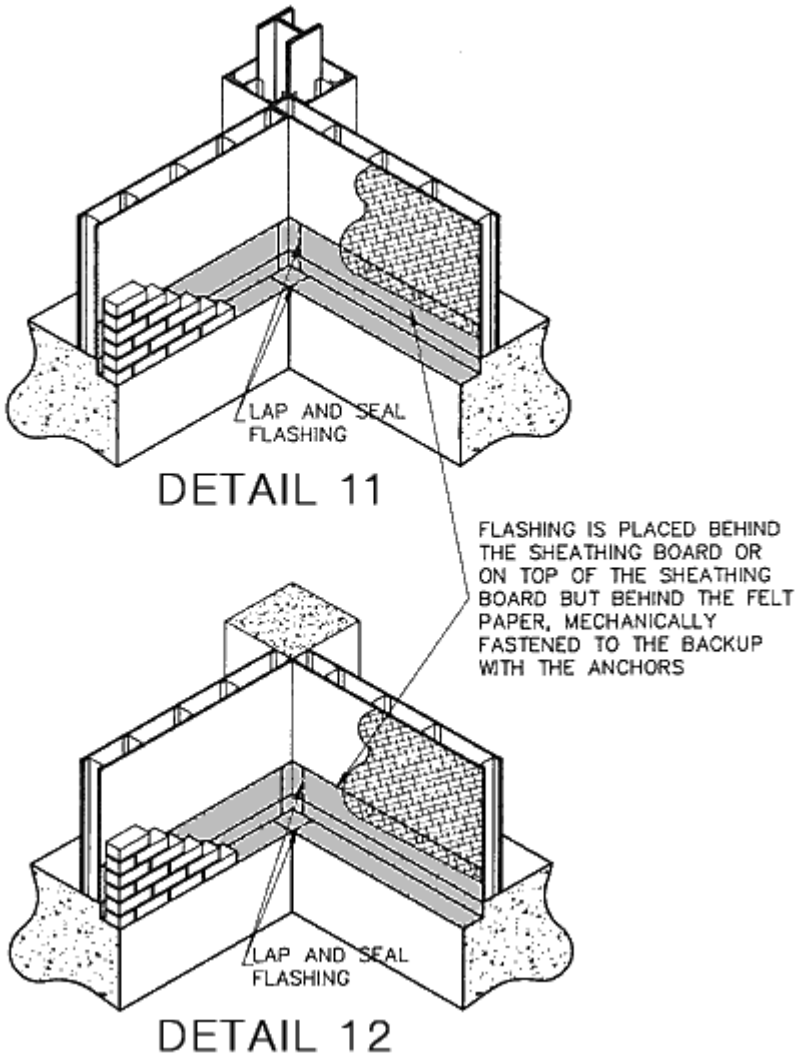
Note: Support for the brick may be a steel angle instead of a concrete footing.

Exterior Corner Flashing Detail
Steel & Concrete Columns -- Metal Studs



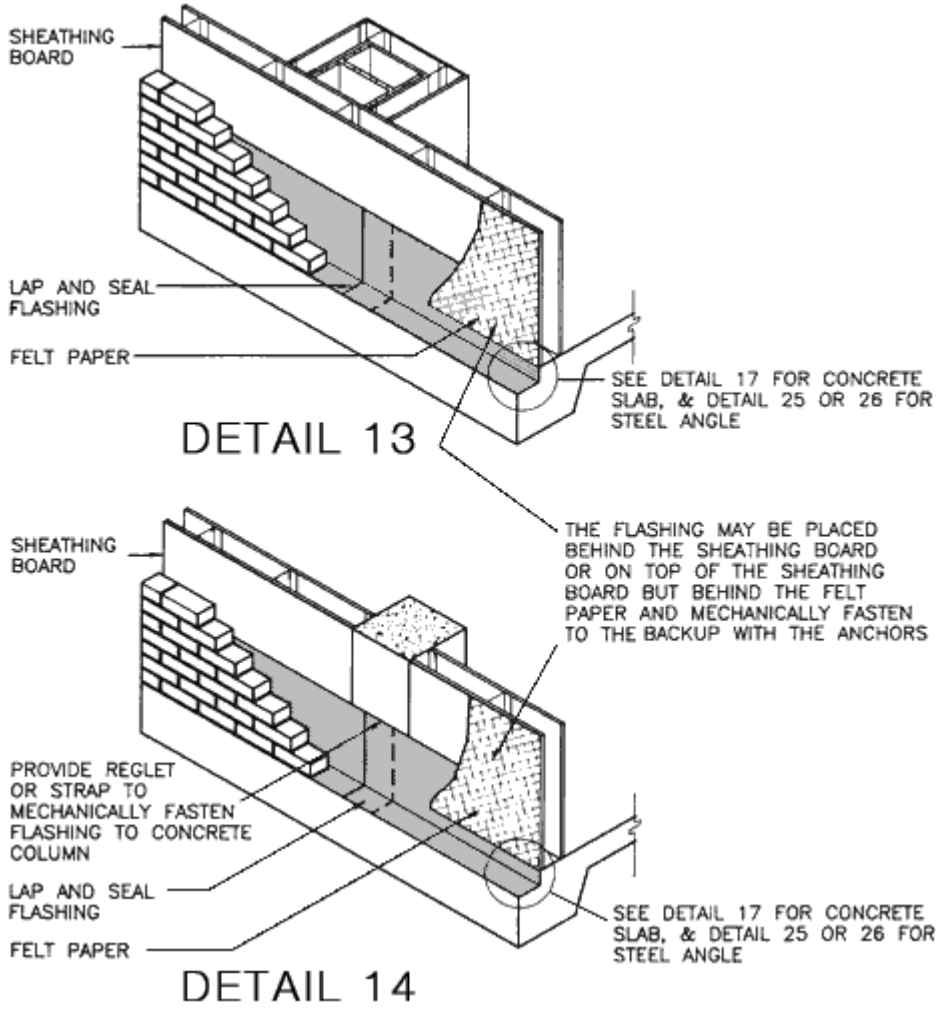


Interior Corner Flashing Detail
Steel & Concrete Columns -- Metal Studs



Intermediate Column Flashing Detail
Steel & Concrete Columns -- Metal Studs

Note: Brick anchors & insulation have been omitted for clarity in details 13 and 14. Support for the brick may be a steel angle instead of a concrete footing. Avoid supporting steel angle from metal studs.



Typical Flashing Details
Brick Veneer on Steel Studs

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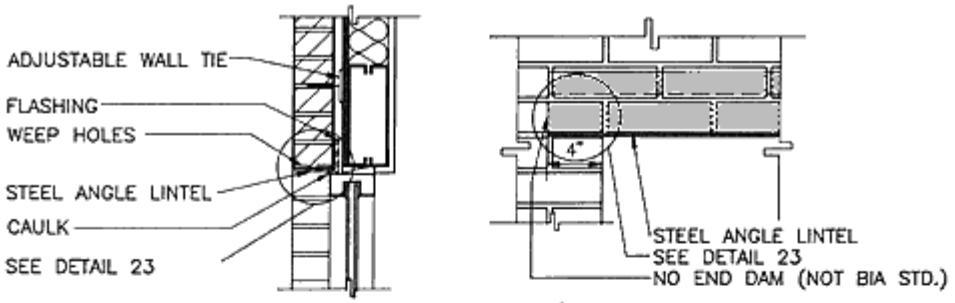
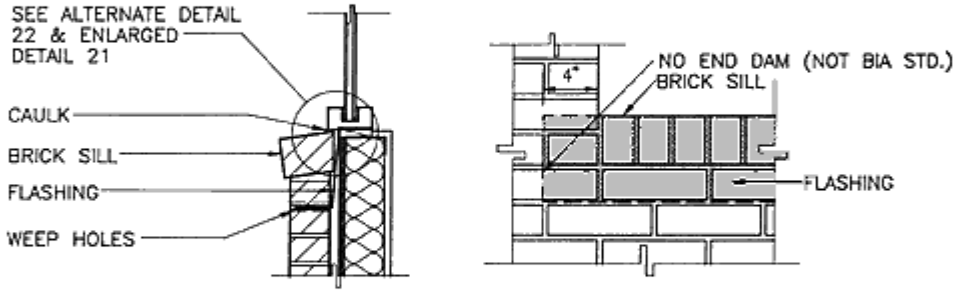
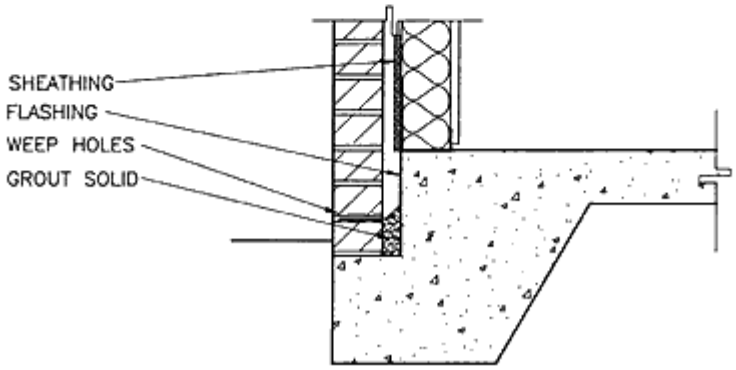


DETAIL 15 – WINDOW HEAD W/ LOOSE ANGLE



DETAIL 16 – WINDOW SILL



DETAIL 17 – BASE OF WALL

Typical Flashing Details
Brick Veneer on Concrete Block

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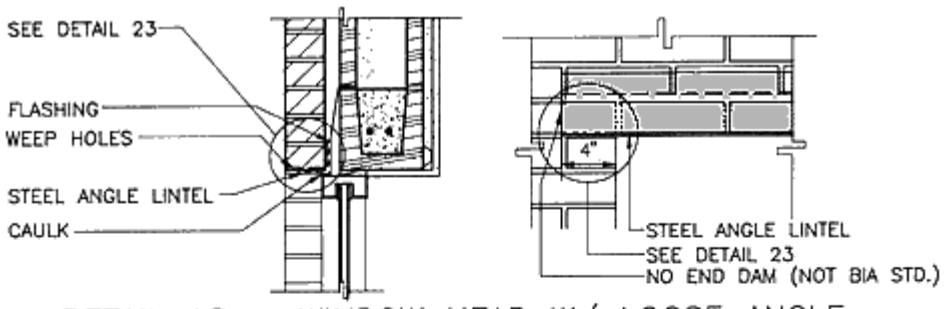
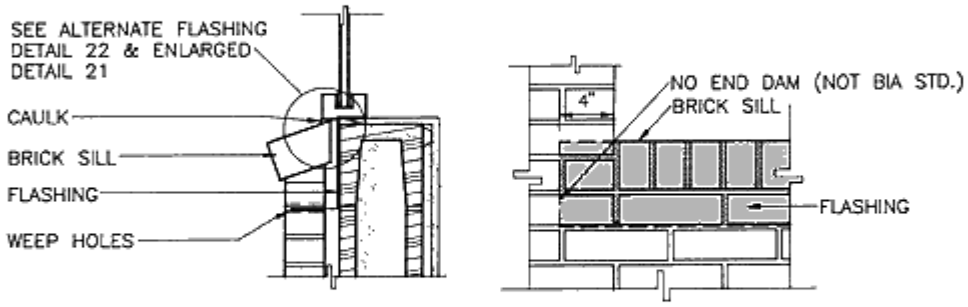
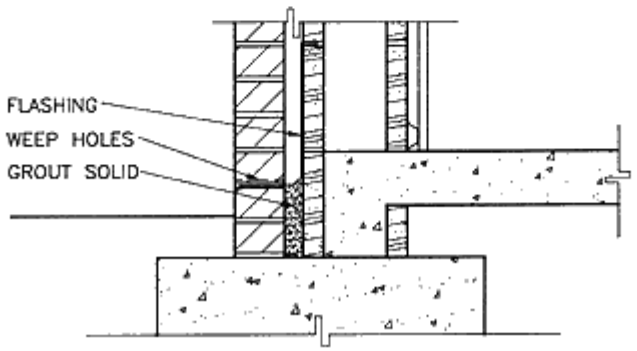


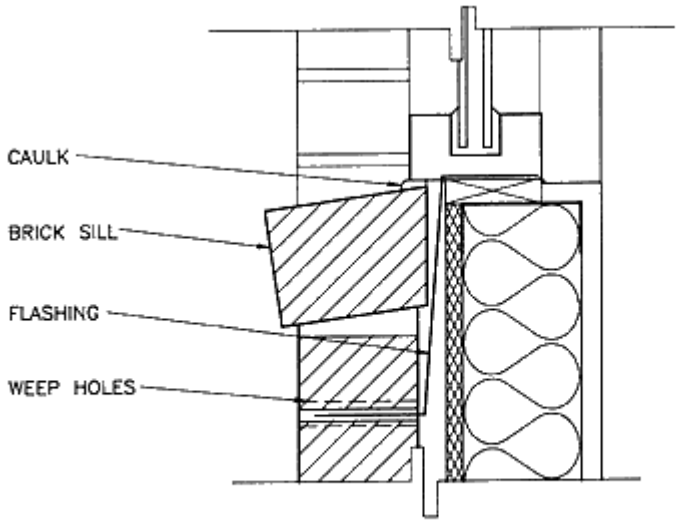
DETAIL 18 – WINDOW HEAD W/ LOOSE ANGLE



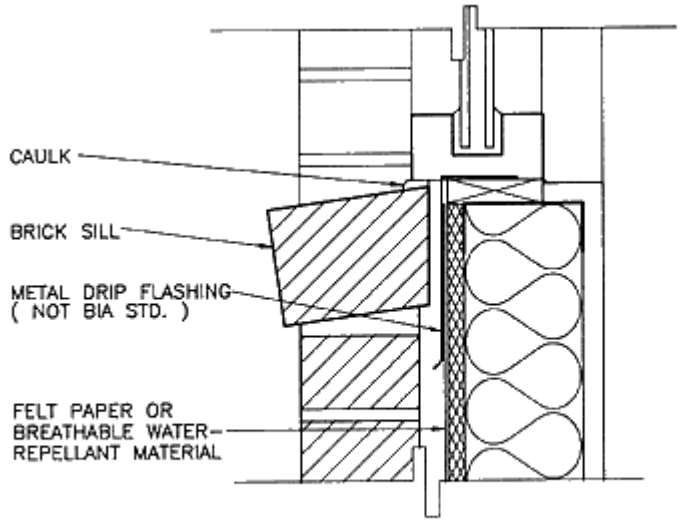
DETAIL 19 – WINDOW SILL



DETAIL 20 – BASE OF WALL

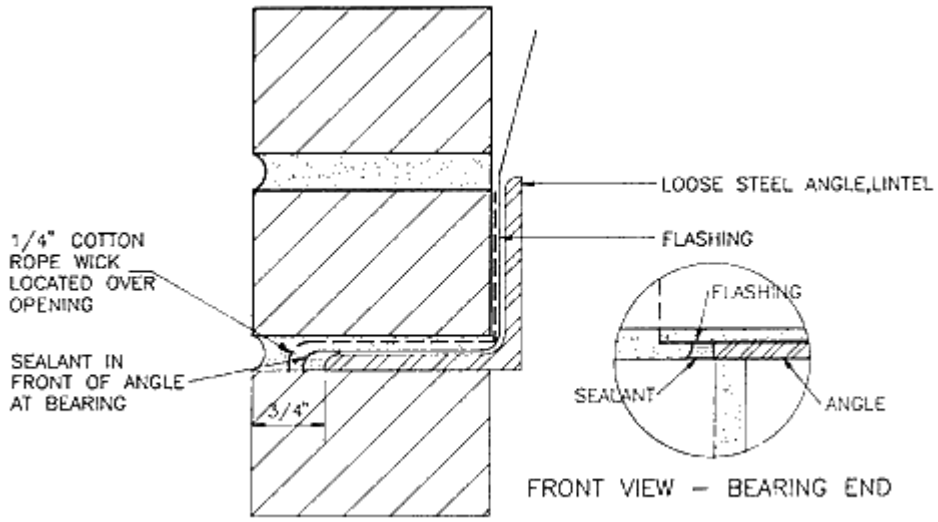


DETAIL 21 – SILL DETAIL W/ BRICK WINDOW JAMBS



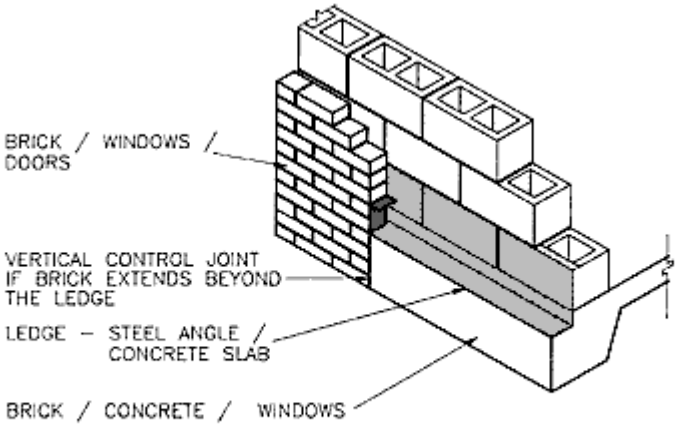
DETAIL 22 – SILL DETAIL W/ BRICK WINDOW JAMBS & METAL DRIP FLASHING

Note: Sill detail 22 to be used with spandrel window systems and as an alternative to sill detail 21.



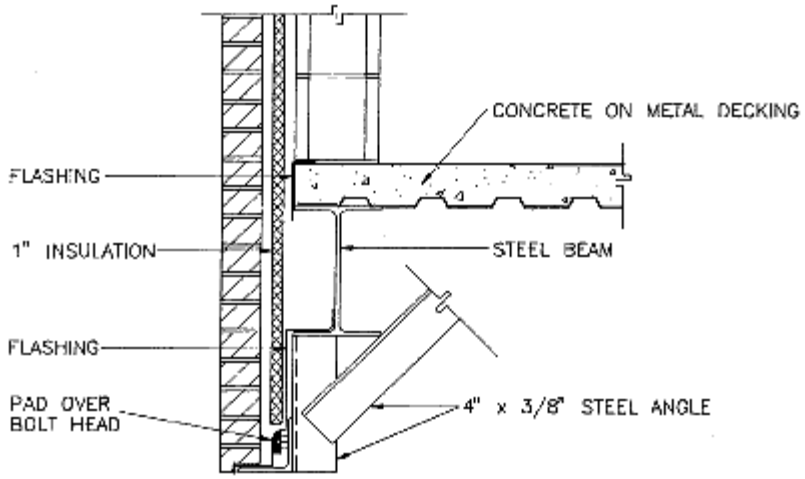
. DETAIL 23 – ENLARGED FLASHING DETAIL AT LINTEL

Note: Sealant goes around the bearing end of the angle and provides a protective barrier from moisture.



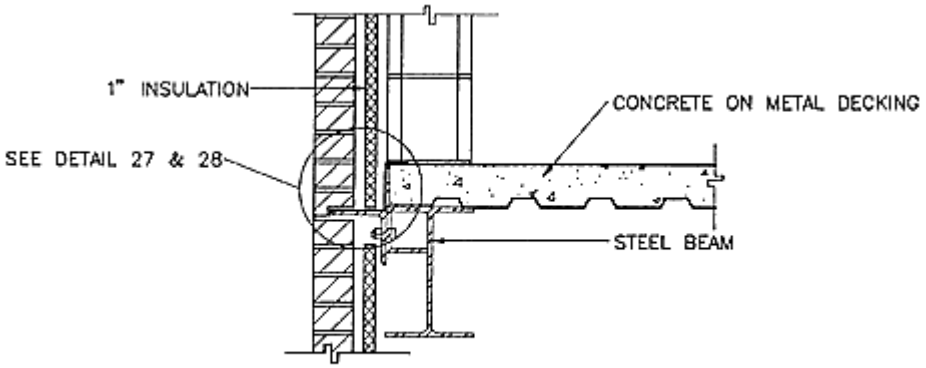
. DETAIL 24 – END DAMS

Note: This detail may occur at windows, doors, and where shelf angle stops at vertical control joints.



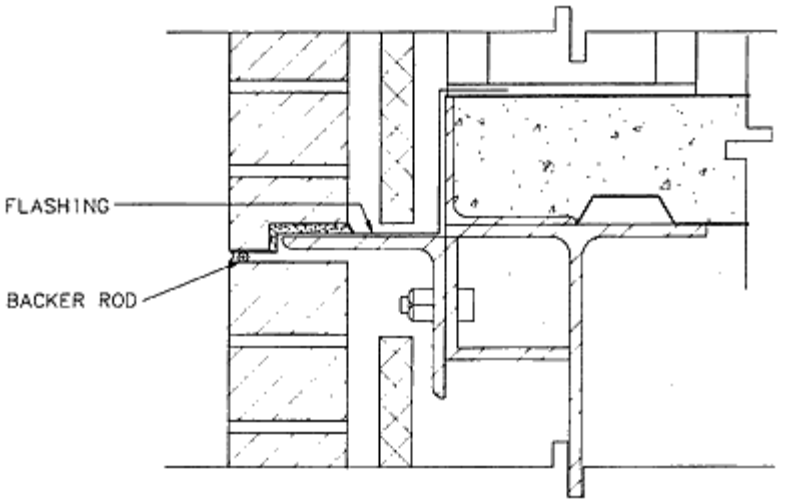
DETAIL 25 – SHELF ANGLE

Note: Windows or brick can go below shelf angle. Beam could be concrete. Block backup could be metal studs. Anchors omitted for clarity.

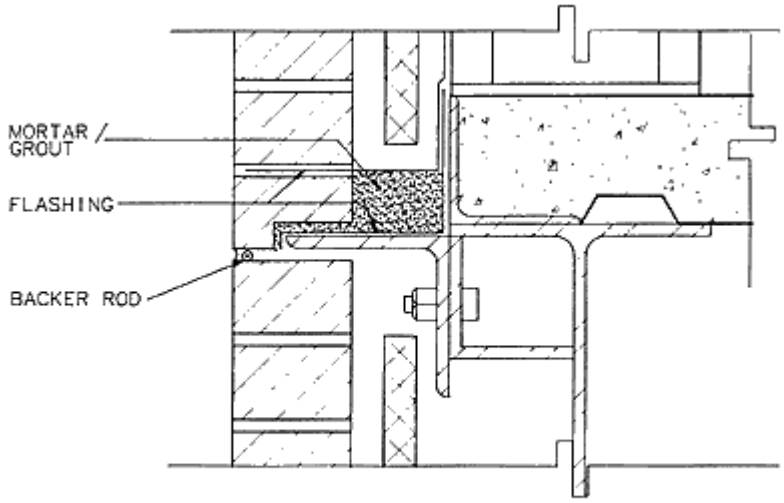


DETAIL 26 – ALTERNATE SHELF ANGLE

Note: Anchors omitted for clarity.

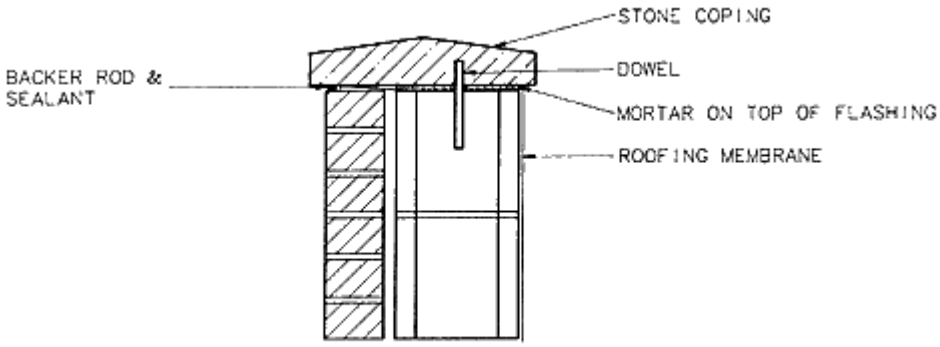


DETAIL 27 – ENLARGED VIEW OF SHELF ANGLE



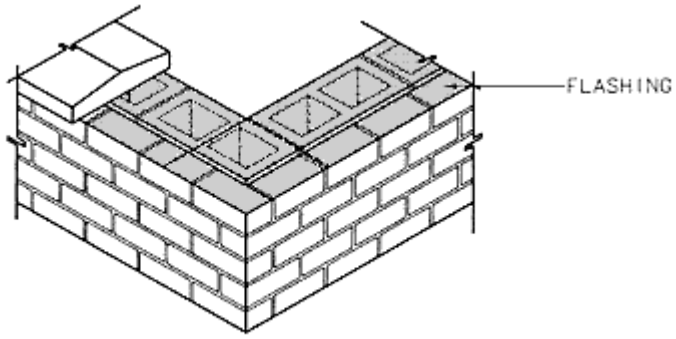
DETAIL 28 – ALTERNATE TO DETAIL 27

Coping Details

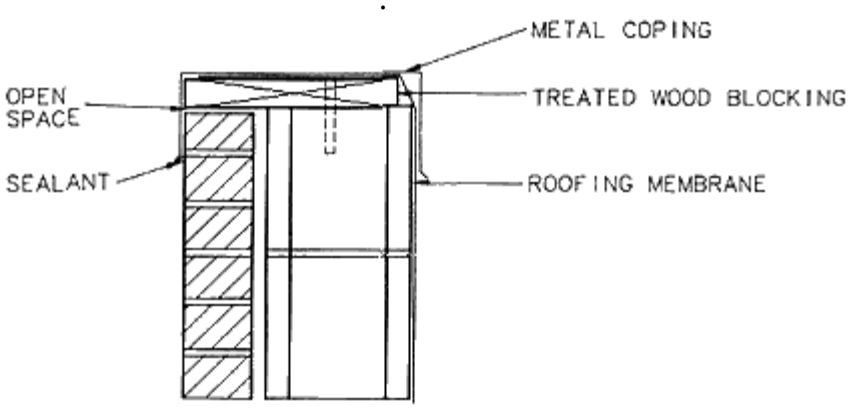


DETAIL 29 – STONE COPING

Note: Dowel which penetrates flashing must be sealed. Flashing at top of wall at corners must be lapped and sealed similar to detail 30.
Mortar can replace backer rod and sealant on top of brick, provided brick is supported by a shelf angle attached to building frame at the roof line.
Flashing covering cavity should be composite metal.

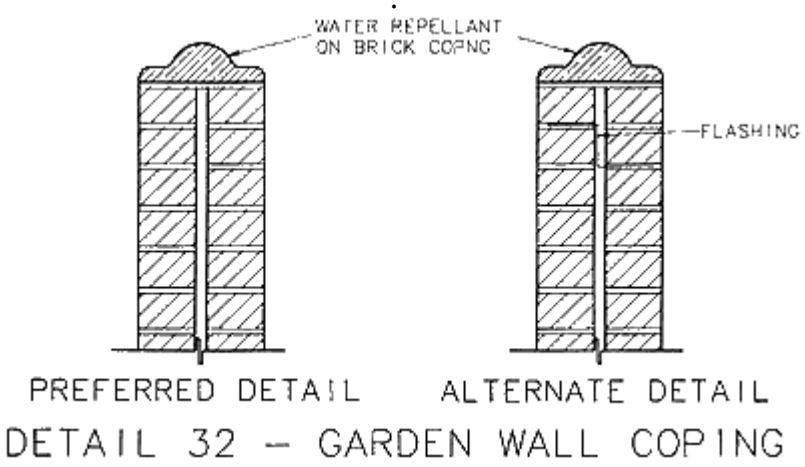


DETAIL 30 – CORNER FLASHING



DETAIL 31 – METAL COPING

Note: This same detail may be used with metal studs as backup instead of concrete block.



DETAIL 32 – GARDEN WALL COPING

Note: It is conservative to provide vertical control joints at approximately 20'-0" to 25'-0" O.C.
If flashing is installed, corners require the flashing to be lapped.

Go Back to Information about Brick.
