Chapter 8 — Flash Coving
A. TOOLS

In addition to the normal tools (knives, dividers, recess scribers, straightedges, rollers, trowels, etc.), other tools are also needed for flash cove work:

1. Chalk line – to set cap strip on straight line
2. Carpenter’s square
3. Throwaway brushes – to spread adhesive on cove stick and wall
4. Heat gun – to warm vinyl so it is more pliable and less likely to break (particularly with heavier material)
5. Patching compounds – to patch juncture of wall and floor or repair wall if former flash cove installation is removed
6. Cloths and cleaner – to clean adhesive residue from surface of material
7. Felt paper, such as Armstrong® S-153 Scribing Felt to pattern scribe (templates or full patterns)
8. Miter box and saw – to fit cove stick and cap strip

B. INTRODUCTION

Armstrong® floors should not be used as wall covering or wall surfacing. Most Armstrong® sheet floors can be flash coved (integral cove). Most building codes consider flash coving in the same category as baseboard trim with respect to fire rating. Consult applicable codes for the particular project to determine the interpretation of allowable height for flash cove (max. 8”).

Flash coving is an extension of the sheet flooring up the wall to form a wall base. This can be accomplished by either one-piece flash coving, border flash coving, or two-piece flash coving. All seams in the flash cove area should be treated the same as seams throughout the rest of the installation.

Adhesive:

Vinyl-backed commercial flooring must be adhered with S-580 Flash Cove Adhesive in flash cove areas. Linoleum, fiberglass-backed and felt-backed flooring can be adhered with either the field adhesive or S-580 in flash cove areas. Apply two coats of S-580 with a brush or roller 4” onto the floor as well as up the entire cove area. Allow adhesive to dry to a pressure-sensitive state between applications. The S-580 has unlimited working time.

Nail or cement a cap or binder strip to the wall at the desired height. Install a cove stick at the juncture of the wall and floor to support the material where it coves up the wall (Fig. 1). If there is no support behind the material, it can be punctured. Commonly used cove stick radius is 1-1/4” to 1-1/2”. Minimum cove stick radius to be used is 3/4”.

Prepare the subfloor the same as for a flat installation with the exception of the wall preparation.

C. TYPES OF WALLS

1. Concrete

If concrete walls are not equipped with a wood ground strip of suitable height for nailing the cap strip and other metal parts, install them with contact adhesive. The concrete should run all the way down to the floor line. It should be smooth, even, free from imperfections that might show through, and thoroughly dry.
2. Plaster or Wallboard

If walls are sound, rigid and not springy, the metal cap strip may be nailed to the studs. If the walls are springy or the studs are spaced too far apart, insert a wood ground strip at least 1" wide and thick enough to be flush with the surface of the plaster or wallboard. The top of the wood ground strip should be 1/8" below the top of the cap strip.

The plaster or wallboard below the wood ground strip should extend all the way to the floor line. It should be smooth, even, free from imperfections that might show through, and thoroughly dry.

If the plaster or wallboard does not extend to the floor, extend it with patching plaster or with a suitable wallboard so that it is flush with the face of the wall. Fill all openings between the wood ground strip and wallboard or plaster with patching plaster. Finish smooth and level and allow to thoroughly dry before flash coving the material.

NOTE: If you are using end stops and metal corners, install them before the cap strip.

D. FITTING

1. Cap Strip

Nail the cap strip to the wall with flathead nails long enough to penetrate into the studs and drive through the middle of the nail slots. The cap strip can also be cemented to the wall with a contact adhesive. The top of the cap strip would be flush with the tops of the corner pieces and end stops if they are used. Otherwise, in each corner, measure the height the material is to be flashed and strike chalk lines between these points for the top of the cap strip. If metal corners are not used, miter the cap strip using a miter box and hacksaw.

2. Cove Stick

Cove sticks are made of wood, plastic, or wax. On concrete floors, adhere the cove stick to the wall and floor. Most latex adhesives will work. The cove stick can also be adhered over wood floors or nailed. Sink the nail heads flush so they will not show through the finished installation. Cut corners with a miter box and saw.

3. Material

After the floor preparation is finished and the cap strip and cove stick are installed, you are ready to fit the material. To install a one-piece cove installation without seams, cut in scribing felt or paper to the edges of the cove stick. Butt the edges of the felt pieces together and secure them to the floor.

Cut template #1 from scrap material using the measurements as shown in Fig. 2. Template sizes may vary according to the height the material is being flash coved. To make template #2, first draw a 4" square on a scrap piece of material. Draw a diagonal line from one corner of the square to approximately 1" beyond the opposite corner. To mark the point on this template, set your dividers using the same radius as the cove stick and swing arcs touching the edge of the squared piece and the diagonal center line. This point will be left on the template and will be used to mark the inside corners. The completed templates are shown in Fig. 3.

Place template #1 in the inside corner and under the cap strip (Fig. 4). With the template pressed firmly into the cove stick, trace around the part of the template which is on the felt paper. The desired fit is a net fit. Fitting the materials too tightly may create buckling on the wall. Repeat this process for the other side of the inside corner and all other inside corners. When marking the inside corners, make an allowance for one piece of material fitting against the other by inserting a scrap piece between the wall and the template. Make the allowance on the side of the inside corner.
that will go into place last. With template #1, mark several places along each wall to record the height of the cap strip. Scribe door trims with the dividers and mark the side of the trim with template #1 (Fig. 5). For outside corners, mark the cap strip on both sides of the corner (Fig. 6).

Allow a 1/2" to 3/4" overhang on the side opposite the one where the fill piece will be fit for the corner. The fill piece would usually go on the side of the corner that is least noticeable. Along the wall at which the fill piece is to be fit, straightedge a line on the felt paper 1/2" to 3/4" from the wall and parallel to the wall (Fig. 7). Draw a line onto the felt extending the 45° angle of the outside corner miter of the cove stick (Fig. 8).

Mark all lines on the scribing felt. Make crosslines at the seams of the felt to help align the pieces later. Lay out the material to be installed in a larger area and place the felt pattern over it. Be sure any pattern in the material is squared to the room.

Place template #1 on the lines made on the felt and trace around the part of the template that was in the inside corner (Fig. 9). Repeat the process for the other side of the corner.

Lay template #2 on the two lines and draw around it with a pencil. This will mark the inside corner (Fig. 10). Do this for all inside corners and other areas marked with template #1.

Connect all the marks with a straightedge, showing where the material will fit under the cap strip (Fig. 11). Transfer any door trims or other areas marked with the dividers. At outside corners, mark the piece to extend beyond the corner with a pencil. Using a straightedge, extend the line of the 45° angle approximately 3" onto the vinyl.

On the vinyl, draw a stop cut line parallel to the 45° line and on the side of the 45° line where the fill piece will eventually be installed. The stop cut line should be 1/2" to 3/4" from the 45° line and approximately 3" long. Position
the inside edges of a framing square on the vinyl slightly beyond the straightedged line (seen in Fig. 7) and approximately 3/4" beyond the template location created (from Fig. 6). Cut on the inside edge of the square from the 45° line to the corner of the square. Continue the cut along the other arm of the square until reaching the intersecting line representing the coved area of the adjoining wall (Fig. 12). Hold the knife straight. It is important that these two cuts are square. The fill piece will be squared to butt into this area.

Complete the outside corner procedure by cutting along the stop cut line from the first cut made (Fig. 12) and along the lines created by template positioning (Fig. 6). The finished area should look like Fig. 13. Retain the “L”-shaped piece removed to use as a template when making the fill piece later. After all lines have been transferred from the scribing felt, you are ready to cut out the material. Make a small safety cut at the base of the inside corner to prevent tearing (Fig. 14). Tape any areas of stress where tears might occur and prepare the room to place the material in it.

Spread the adhesive on the floor, over the cove stick and up the wall before the material is placed in the room. Use a brush or roller to spread the adhesive on the walls. After the adhesive is spread, place the material in the room. On most flash coving jobs, you will need at least two people to get the material into place. The material should be locked in at a few key places just inside the door before walking on it. You can sometimes use furring strips or slats under the material as a slip sheet to keep the material out of the adhesive until it is in place. Start tucking in the inside corners, lap the second side over the first, and push the corner into place (Fig. 15).

After the flooring is completely seated, start tucking the material under the cap strip. Start in the center of a wall and work to each end, using a heat gun to make the material more pliable and to prevent breakage. Place the side with the allowance against the other piece at the inside corner last. Push the corners into place and roll the material on the wall with a hand roller. Roll the entire floor with a 100-lb. roller.
E. MITERED OUTSIDE CORNER

When installing Commercial Vinyl-Backed products, there are advantages to using the mitered outside corner. The mitered outside corner must be used when installing Linoleum, Possibilities and Corlon.

To finish the outside corner, mark the section extending beyond the corner with a recess scriber set for an outside scribe (Fig. 16). Place a piece of scrap against the wall for the knob of the scriber to ride against. This will make an allowance for the fill piece to miter to the one being marked. Scribe the vertical section to the top of the cove stick.

Take the #1 template and position it along the 45° line on the vinyl, then curve the end up the radius of the cove stick until it joins the bottom of the scribe line just completed. Draw a line along the template (Fig. 17). Holding a knife at a 45° angle to the corner, cut down from the top of the scribe line and follow the line just created down the miter of the cove stick and stop the cut at the bottom of the cove stick. Remove the scrap but do not cut the section that is flat on the floor (Fig. 18). This will be double-cut when the fill piece is in place.

To create the fill piece, use the "L"-shaped template saved earlier (from Fig. 13). Place it on a piece of extra vinyl. If you are using patterned material, pick up the pattern match from the "L" template. Position the inside corner of a framing square against the "L" template. Mark the length of the fill piece 1-1/2" longer than the pointed end of the template. Mark the height of the fill piece by moving the template along the arm of the square (Fig. 19). Remove the template and, being sure not to allow the square to move, cut along the inside edges of the square. Complete the cuts along the marks identifying the top and length of the fill piece.

Warm the fill piece and put it in place. Use the recess scribe set for an outside scribe, and scribe the vertical section from the top of the cove stick (Fig. 20). Position the #1 template along the 45° line on the vinyl and curve the end up the radius of the cove stick until it joins the bottom of the scribe line just completed. Draw a line along the template (Fig. 21).
Holding a knife at a 45° angle to the corner, cut down from the top of the scribe line and follow the line just created down the miter of the cove stick (Fig. 22). Stop the cut at the bottom of the cove stick. Remove the scrap, but do not cut the section that is flat on the floor. Remove the fill piece and spread adhesive on the wall and floor. Warm the fill piece, put it into place and roll thoroughly. Position a straightedge on the 45° angle line on the vinyl and double-cut through the vinyl from the bottom on the cove stick to the edge of the fill piece (Fig. 23).

Remove both pieces of scrap and make sure enough adhesive is under the seam to hold it in place. With the vinyl surface of a scrap piece of material, you can burnish the miter on the wall and around the cove stick cut. You can also use fine sandpaper on the outside corners to remove burrs caused by the recess scriber. The finished area should look like Fig. 24.

**F. V-PLUG OUTSIDE CORNER WITH POINT**

When installing lighter materials such as rotovinyl, there are advantages to using the V-Plug outside corner. Install the cap strip and cove stick as described under Mitered Outside Corners. Cut the scribing felt into the room close to the cove stick (Fig. 25). The cove stick at the outside corner is slightly rounded at the point and flattened on the miter.

Mark inside corners on the felt paper using the templates. Mark outside corners on the felt paper and transfer to the material. Make a dot on the miter of the cove stick at the outside corner midway between the top and bottom of the cove stick. Lay template #1 with the top right corner aligned with this dot on the cove stick and trace around it (Fig. 26). This will be used to relocate the dot on the cove stick when the felt pattern is transferred to the material.

Mark the cap strip, inside corners, fixtures and moldings on the felt paper. Lay out the material and place the felt over it, making sure any pattern on the material will be squared in the room. Transfer all corners, cap strip marks and any other lines from the felt paper to the material. Use template #2 to mark the inside corners. Connect the lines representing the cap strip. At the outside corner area, draw in the lines that represent the cap strip. Do not score or cut this section.
Lay template #1 on the felt paper to relocate the dot on the cove stick. This will locate the point halfway up the outside corner of the cove stick miter (Fig. 27). Using a straigntedge, cut from this point to the point where the cap strips intersect at the outside corner (Fig. 28).

Fig. 27

Fig. 28

Match one side of the V-Plug by placing a scrap piece of material under the side of the plug and align the pattern. Draw a line along this side and along the edge that will fit under the cap strip (Fig. 29). If the material does not have a pattern match, you can draw these two lines on a scrap piece of material at any location. Save this piece of material to make the V-Plug. After all lines and marks have been transferred from the pattern, cut out the material, make safety cuts and tape as necessary.

Spread adhesive and place material in the room as discussed under Mitered Outside Corners. The straight edge that was made now opens to form a “V” on the outside corner. Fill this section with the V-Plug.

Take a strip of scrap material and use template #2 to cut a 45° angle at each end (Fig. 30). Using a square, draw a line for the cap strip to include both sides of the corner (Fig. 31).

Fig. 29

Fig. 30

Fig. 31

Using the strip of scrap material, measure from the side that is to match to the outside corner (Fig. 32). Transfer this measurement to the material saved for the V-Plug outside corner (Fig. 33).

Fig. 32

Fig. 33

Draw a perpendicular line from the cap strip line at this point. Using the other end of the measuring strip, measure from the corner to the other side of the “V.” From this point, draw a line to the point where the other side of the “V”
intersects the perpendicular line (Fig. 34). Use template #2 to mark the point of the V-Plug (Fig. 35).

![Fig. 34](image1.png) ![Fig. 35](image2.png)

Cut out the plug and center a line on the back. Fold the material on this line and use a utility knife to skive away some of the backing (Fig. 36). This will allow the plug to conform to the corner. Spread adhesive on the area and put the plug in place. Rub the seam edges together. Apply seam treatments as recommended. The finished area should look like Fig. 37.

![Fig. 36](image3.png) ![Fig. 37](image4.png)

**G. V-PLUG OUTSIDE CORNER WITHOUT POINT**

When using the V-Plug outside corner without point, the most efficient method is to install the corner first and fit the field material to the corner. This will allow for all of the corners to be cut and fit at the same time. Install the cap strip and cove stick as described under Mitered Outside Corner.

First draw a straight line on a piece of scrap and place a mark the same distance from the line as the distance from the floor to the cap molding (Fig. 38). Place the corner of a framing square on the mark and balance points A and B on the line (Fig. 39).

![Fig. 38](image5.png) ![Fig. 39](image6.png)

Cut out plug and cut 1/2" off the point (Fig. 40).

This will bring the bottom of the outside corner halfway up the cove stick when installed.

Skive the backing at the outside corner and install the plug using the proper adhesive (Fig. 41). Warm the material
with a heat gun to make it more pliable and prevent breakage.

Knife in scribing felt, keeping it within 1/8" of the edges of the plug. Use a divider setting of approximately 1/4" to scribe the corner. Cut out the pattern and fit the field to the plug using the proper adhesive.

Fig. 40

Fig. 41