

Wood Column Installation Instructions

ACCLIMATING INTERIOR WOOD PRODUCTS

Columns for interior use must be finished immediately upon receipt.

Interior wood products need special care during storage and installation. Certain times of the year, we are especially concerned with the possibility of rapid changes in the moisture content (MC) of wood products. For example, this rapid change is likely to occur when shipping wood products from our extremely humid and damp winter climate to extremely cold dry climates. Extreme dryness may create problems with finished woodwork just as serious as those created by excessive moisture. Under normal conditions the moisture content of interior woods is in the 7 to 10% range when it leaves our production plant. The relative humidity in most interior spaces in the U.S. averages 30 to 40%. If this is true at your job site as well, this will keep MC levels in wood in acceptable ranges. If the humidity levels are above 50% or below 25%, it will adversely affect architectural woodwork. A rapid loss of moisture can cause checking or splitting; this could even happen at the glue seams making them appear open. On the other hand, it is also mandatory that architectural woodwork not be placed in damp buildings. This will cause wood to warp, swell, or have adhesive failure. Because of the nature of round columns there is no room for eccentric movements caused by major moisture changes. Subsequent dimensional changes are, and always have been, an inherent natural property of wood. These changes cannot be the responsibility of the manufacturer for products made of wood.

Columns, caps and bases must be stored in a dry, well ventilated area that is not exposed to the before-mentioned climate conditions. Be aware that home heating systems may cause dry air as well as cold dry conditions outside.

FINISHING INTERIOR COLUMNS

Using wood columns for interior decoration may require a little extra care and preparation in order to achieve the most aesthetically pleasing results. All wood, by its very nature, will have some imperfections and therefore will require some filling and final sanding before applying finish. Hardwoods typically are stained and/or sealed with urethanes or lacquers; softwoods are typically primed and painted, and may also be sealed for a durable, medium-to high-gloss finish. The finishing materials chosen will be determined by the desired result. (Note: use of waterborne finishing products, such as latex primer and paint, may “pop” the grain, requiring extra sanding steps during the finishing process.)

SURFACE PREPARATION

Suspend columns between two sawhorses using a 2x4 (or similar) through the column center. In a small bowl or similar container, dilute a small amount of Famowood Wood Filler with Famowood Wood Filler Thinner, lacquer thinner or acetone. This will soften the texture and make it easy to apply with your fingers to fill small cracks. For larger imperfections, dilution would not be necessary. (Famowood comes in many colors to match the most popular wood types, which is helpful in maintaining the best finish with stained wood materials.)

After the wood filler dries, sand it smooth with 100 to 120 grit sandpaper. You may detect places you missed. Keep puttying and sanding as needed. When you have touched up all the imperfections, final sanding should be done with 220 to 320 grit sandpaper.

Follow the same surface preparation steps for wood caps and bases as well. Take your time as these parts are often tricky to prep adequately.

APPLICATION OF FINISHES

Please follow the instructions of the manufacturer of the finishes you have chosen. This is critical to be sure that the finish will be durable and pleasing. If the wood shows any imperfections after the initial coat is applied, you may need to do a little more surface preparation at this point.

If the columns are not going to be installed at this time, you should make certain you keep the finishing materials you've used properly stored, since they may be needed for touch-up work after the final installation.

WHAT YOU NEED FOR AN EFFECTIVE INSTALLATION

COLUMNS ARE NOT TO BE USED IN A FREE STANDING APPLICATION. AN INTERNAL STRUCTURAL SUPPORT WILL BE REQUIRED ON FREE STANDING APPLICATIONS.

If this column is installed where it could collect water or debris, the top of the column and cap MUST be flashed (covered) to prevent such collection. Use lead, copper, aluminum, galvanized, etc. flashing cut slightly larger than the cap, and fold the edges down over the cap. It is not permissible at any time to fill the interior of the column shaft with sand, concrete or any other material.

- Fiberglass capitals are standard on all exterior applications except in smaller sizes where polyurethane caps are sometimes used (Fig. 2-1).
- Wood capitals are available for interior applications (Fig. 2-2).
- Composition plaster capitals and plugs are available for interior use (Fig. 2-3)
- Most exterior ornamental capitals are FRP.

SHAFT

Shafts should always be ordered for their specific application—interior or exterior. Remember that split shafts cannot be load bearing. (Fig. 2-4)

YOUR SELECTION OF STANDARD OR SPECIAL-ORDER BASE & PLINTH SET:

- One-piece fiberglass bases with integrated plinths are standard with American Porch columns. Polyurethane bases with integrated plinths are sometimes used in smaller sizes (Fig. 2-5)
- Wood bases with wood plinths are standard on American Porch interior columns (Fig. 2-6)
- Wood bases with separate aluminum plinths or Hi-Moly plates are available by special order (Fig. 2-7)

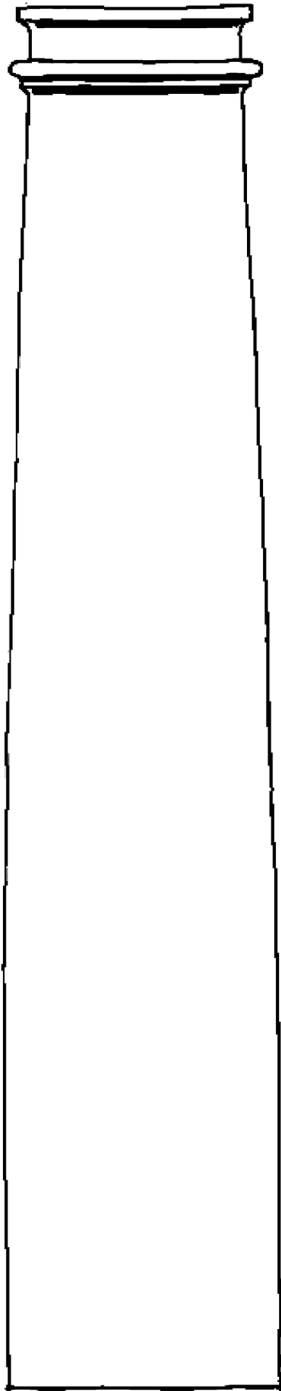


FIGURE 2-4



FIGURE 2-1



FIGURE 2-2

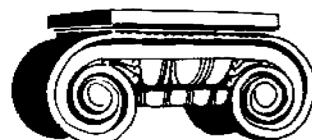


FIGURE 2-3



FIGURE 2-5



FIGURE 2-6

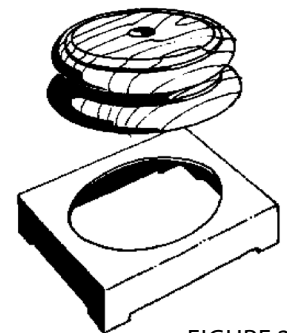


FIGURE 2-7

RECESSED OR VENTED SOFFIT

Columns must always have adequate ventilation. This can be supplied in two (2) ways: a ventilated plinth (Fig. 3-8) and soffit (Fig. 3-9), or a ventilated plinth and recessed soffit (Fig. 3-10).

This ventilation must be provided by the installing contractor. American Porch will warranty only columns that have been installed with a ventilated plinth and recessed or ventilated soffit as shown.

NOTE: Aluminum plinths, polyurethane bases, or fiberglass bases or wood plinths with Hi-Moly plates must be used as a barrier against concrete or brick.

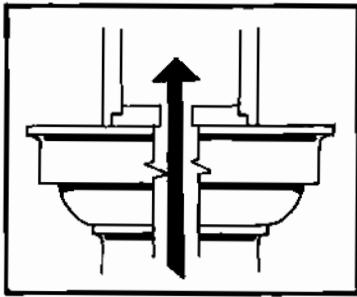


FIGURE 3-8

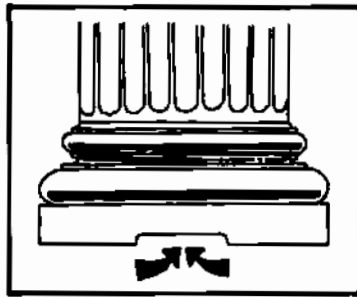


FIGURE 3-9

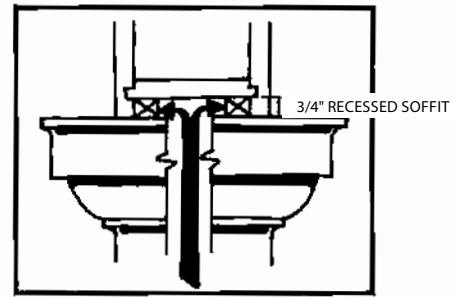
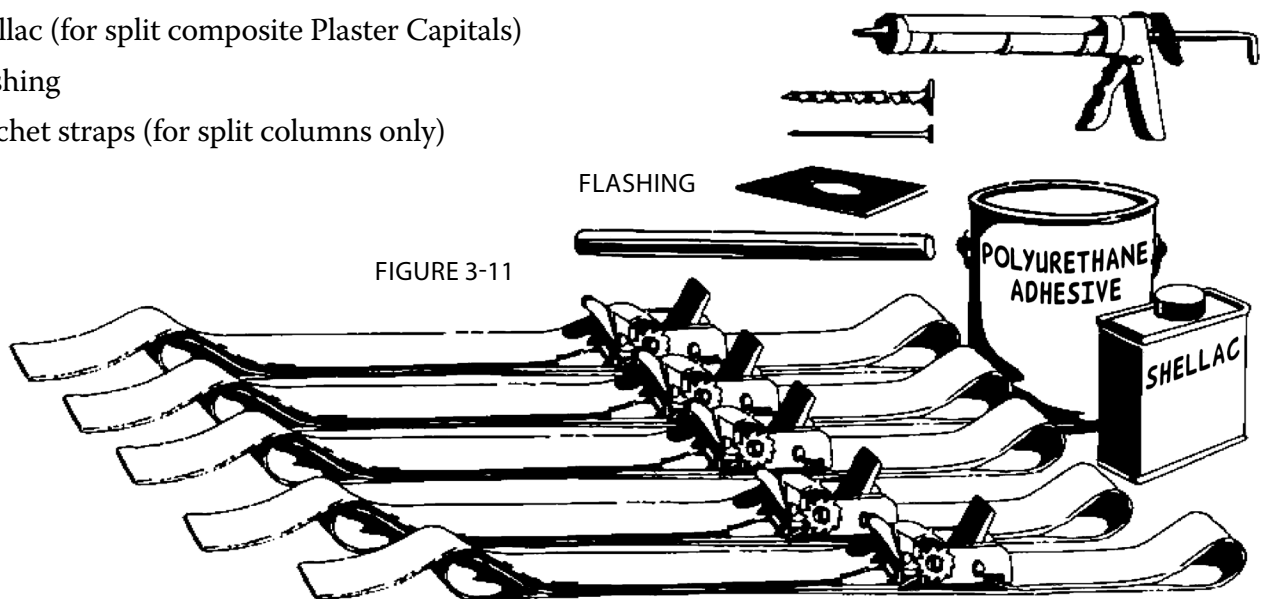


FIGURE 3-10

ASSEMBLY MATERIALS:

(Fig. 3-11)

- 2-1/2" corrosion-resistant drywall screws or finishing nails made of monel, silicon bronze, or stainless steel
- 6" noncorrosive dowels or masonry plugs and screws
- Highest-quality silicone caulk
- Polyurethane adhesive
- Shellac (for split composite Plaster Capitals)
- Flashing
- Ratchet straps (for split columns only)



STORAGE & PREFINISHING

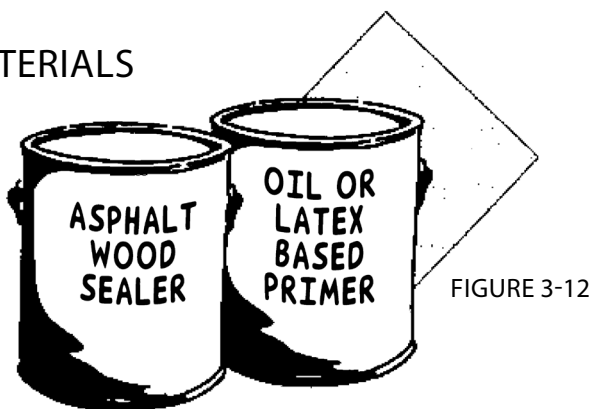
- Column shafts, capitals, and bases must be stored in a dry, well-ventilated area in moderate temperatures. Extreme wet or dry temperature variance must be avoided. Before exposure to weather, all wooden parts must be primed with a minimum of two (2) coats of a quality oil-base or acrylic-latex primer and one (1) coat of paint. Do not use alcohol-base sealers.
- Additionally, asphaltum should be applied a minimum of three (3) feet up the inside of the column shaft and inside wall of a wooden base.
- Before installing or before storing outside, apply at least two (2) coats of a quality oil-base primer to inside and outside of Composite Plaster ornamental capitals.
- If you are using split bases, shafts, and capitals, be sure to mark each set so that you can keep the matching halves together later on during assembly.
- When assembling split columns, always follow glue manufacturer's instructions. We recommend polyurethane adhesive . Proper application includes preheating wood and workspace to 70° F and maintaining for 10 hours to avoid joint failure.

Note: If a composite ornamental capital has absorbed too much moisture or has become wet before painting, the primer coats will peel. In that event, the capital will resist further attempts to paint and will deteriorate.

PREFINISHING MATERIALS

(Fig. 3-12)

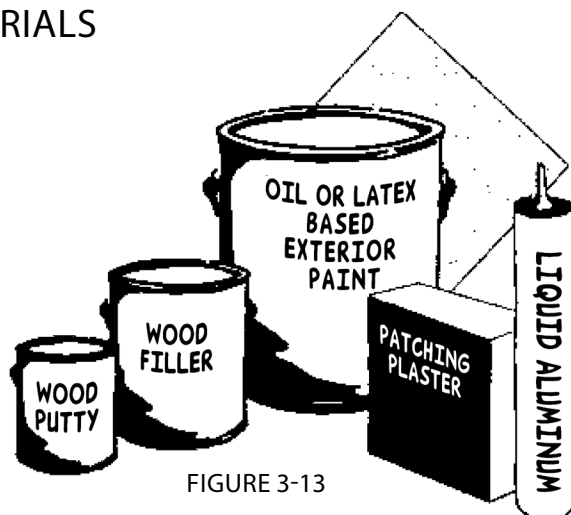
- 100-grit sandpaper
- Oil- or latex-based primer
- Asphalt wood sealer



FINISHING MATERIALS

(Fig. 3-13)

- 220-grit sandpaper
- Patching plaster
- Wood putty
- Wood filler
- Liquid aluminum
- Oil- or latex base exterior paint



INSTALLATION OF BASE WITH SEPARATE OR INTEGRATED PLINTH

1. Mark the column location desired in the side-to-side center of the soffit. Then drop a plumb line from that mark to the deck for shaft centerline (Fig 4-1).
2. It is recommended that you install non-corroding steel dowels in the deck to prevent the column from moving laterally. These should be positioned to set just inside opposite (diagonal) corners of the plinth and should protrude from the deck 1-1/2" (Fig. 4-2).
3. Position base over dowels and check for level. Most desks are pitched to ensure runoff of moisture. If necessary, scribe and trim the plinth to level (using a fine-toothed hacksaw if plinth is aluminum, or a fine-toothed wood saw if plinth is wood, polyurethane, or fiberglass). Make sure that you maintain the same amount of ventilation as supplied (Fig. 4-3)

IF YOU ARE USING AN ALUMINUM PLINTH WITH A WOOD BASE:

4. Pre-drill a minimum of four (4) holes in the plinth for attaching to the base. Then turn the base over and caulk the area where base and plinth meet. Attach plinth to base using 2-1/2" drywall screws (Fig. 4-4).
5. Reset assembly over dowels and recheck level.

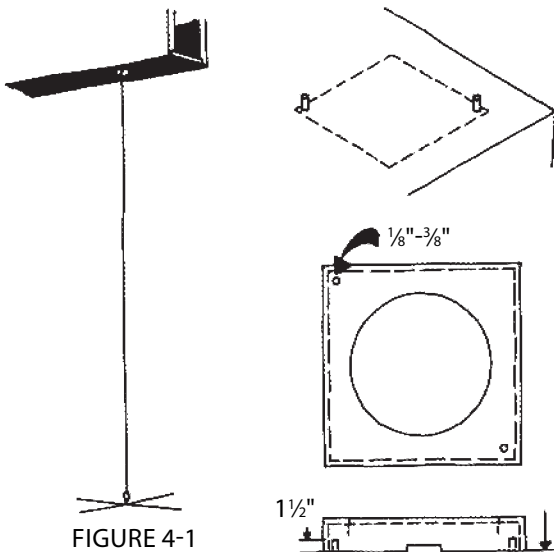


FIGURE 4-1

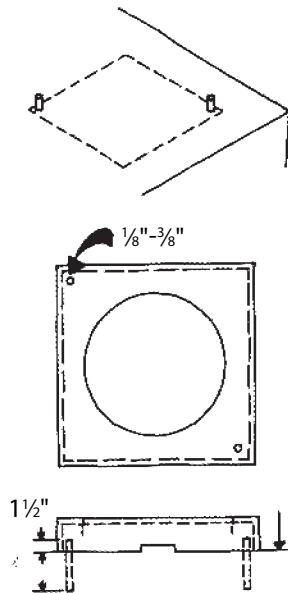


FIGURE 4-2

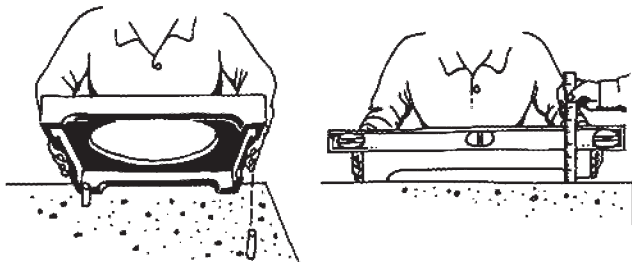


FIGURE 4-3

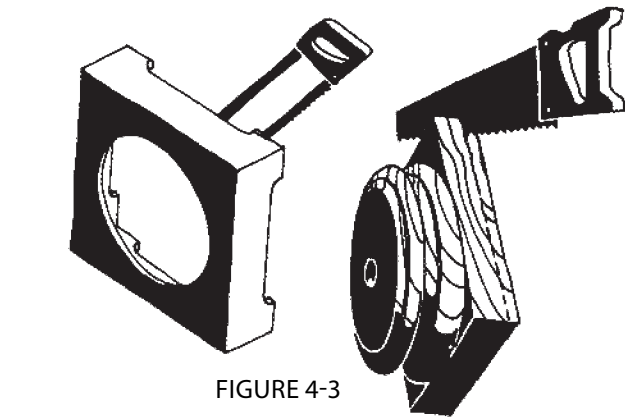


FIGURE 4-4

For Greek Doric Columns, 1/2" Hi-Moly Polymer Plates are used to attach to bottom of column shaft for proper ventilation and moisture protection.



TRIMMING SHAFT TO EXACT HEIGHT

1. Measure the entire height of the overhang opening from the soffit to the deck. Subtract the space taken up by the base and plinth assembly and the capital assembly. A good technique is to set the cap and base on the deck (Fig. 5-1) and then measure up to the soffit or beam (Fig 5-2). Be especially careful to account for the height of ornamental capitals with their wooden plugs.

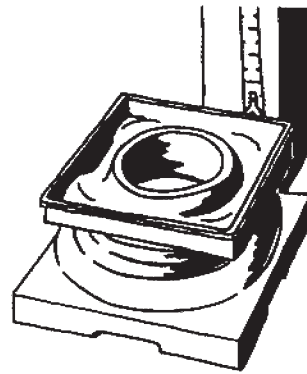


FIGURE 5-1
STACK CAP AND BASE

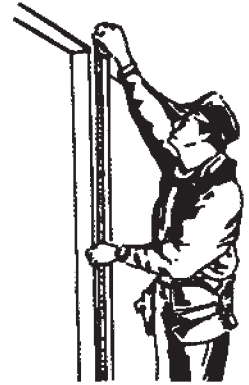


FIGURE 5-2
MEASURE TO SOFFIT

2. Trim top of shaft for the type of capital you will be installing. For fiberglass or poly caps, trim to the fillet (top molding) (Fig. 5-3). For Temple of Winds and Roman Corinthian capitals, trim column at the top of the neck ring molding (Fig. 5-4). For Ionic type capitals, trim column immediately below neck ring (Fig. 5-5).

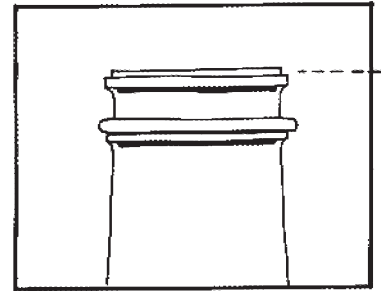


FIGURE 5-3
TRIM FLUSH WITH TOP COVE/
FILLET.

3. Then measure carefully from the top of the trimmed shaft, along with the edge of at least three staves, around the circumference of the shaft to determine the bottom trim line (Fig. 5-6). Using cardboard or other flexible material, draw a trim line completely around the shaft. By carefully following this procedure, you will ensure that the shaft top and bottom cuts remain square to the centerline of the shaft.

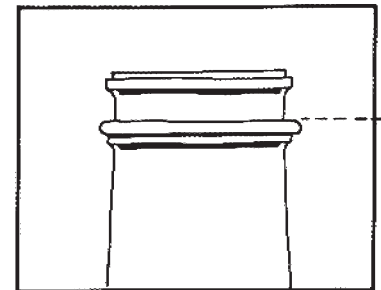


FIGURE 5-4
TRIM TO TOP OF NECK RING
FOR TEMPLE OF WINDS OR
ROMAN CORINTHIAN CAPS,
CAPITALS OR CAPITALS WITH
NECKING.

Note: Always trim split column halves together.

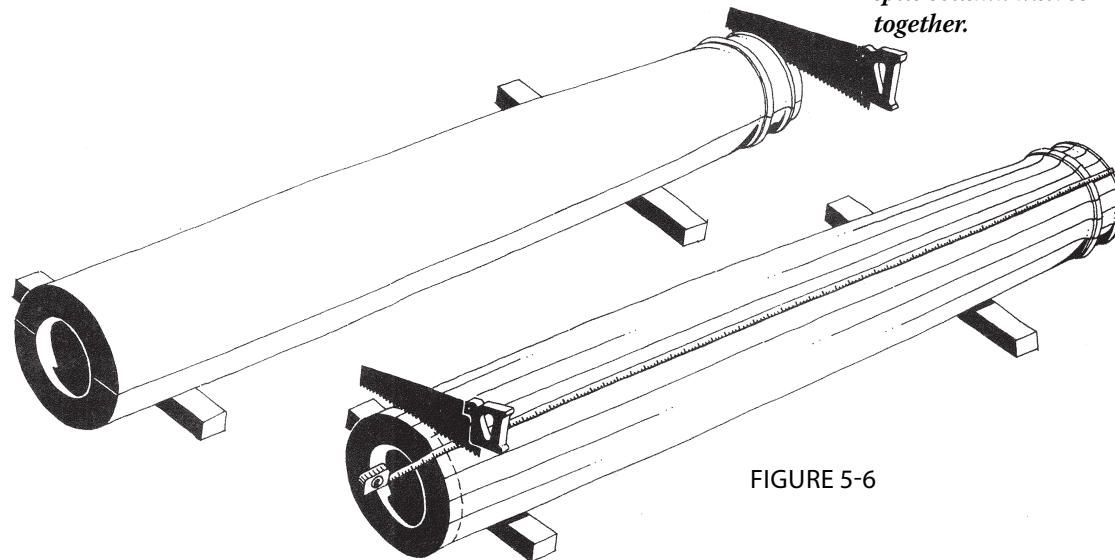


FIGURE 5-6

Note: Trimmed ends must always be resealed with at least two coats of a premium exterior paint.

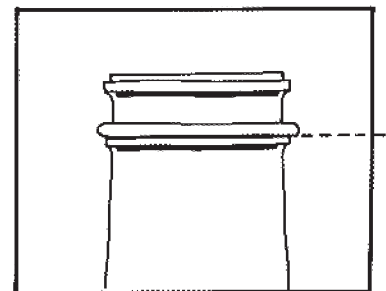


FIGURE 5-5
TRIM JUST BELOW NECK RING
FOR IONIC TYPE CAPITALS.

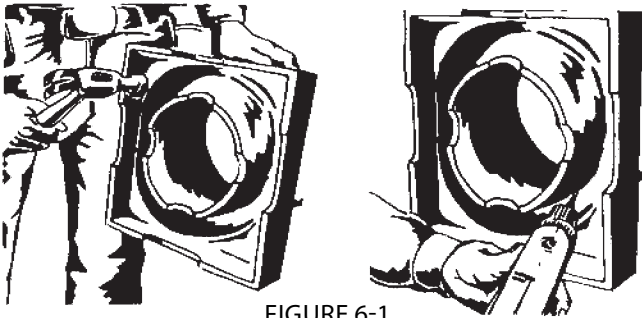


FIGURE 6-1

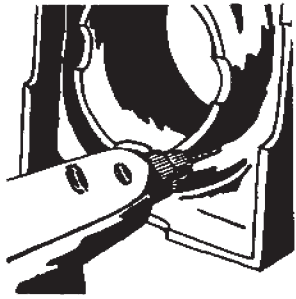


FIGURE 6-2

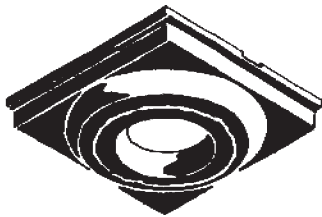


FIGURE 6-3

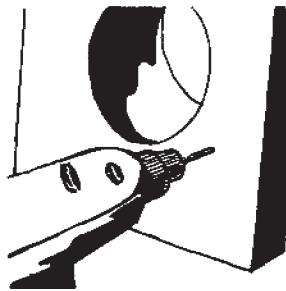


FIGURE 6-4

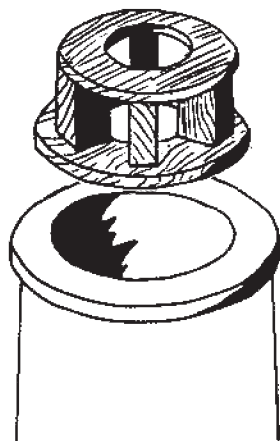


FIGURE 6-5

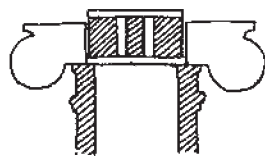


FIGURE 6-6

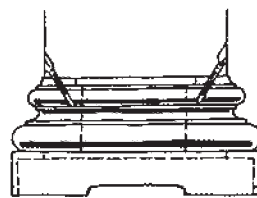
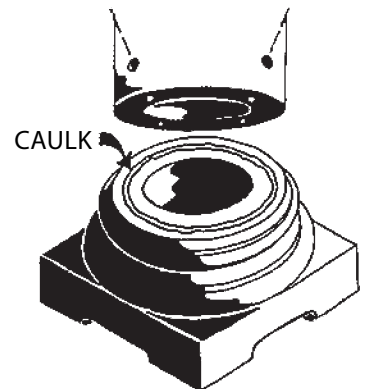


FIGURE 6-7



ATTACHING THE CAPITAL AND THE BASE

IF YOU ARE USING A FIBERGLASS CAP:

Predrill holes through the cap (Fig. 6-1). Before attaching, caulk the area where cap and shaft meet. Attach with drywall screws to shaft (Fig. 6-2).

IF YOU ARE USING A ONE-PIECE POLYURETHANE OR WOODEN CAP:

Predrill holes for drywall screws that will attach shaft to cap. This can be accomplished in two ways. Holes can be drilled through the shaft for a toenailing-type attachment (Fig. 6-3). Or, holes may be drilled through the cap for attachment with long screws to shaft (Fig. 6-4). Before attaching, caulk the area where cap and shaft meet.

IF YOU ARE USING A DECORATIVE ORNAMENTAL CAPITAL:

Remember that ornamental plaster capitals are not load bearing. Use the included plug when installing. The plug bears the weight of the structure—not the capital—and should be 1/8" taller than the capital..

1. Center plug on shaft top with the small end up (Fig. 6-5). Attach to top of shaft with screws. Caulk between plug and shaft before attachment. (Predrilling of holes should not be required.)
2. Caulk the area where the capital, plug, and shaft meet and then position the capital over the plug, centered on the shaft. (Fig. 6-6)

IF YOU ARE USING A FIBERGLASS BASE:

Use the same procedure as for attaching the capital (Figs. 6-1 and 6-2).

IF YOU ARE USING A ONE-PIECE POLYURETHANE OR WOODEN BASE:

As with the polyurethane or wooden capital, this can be accomplished two ways. Holes can be drilled through the shaft for a toenailing-type attachment (Fig. 6-7). Or, holes may be drilled through the base for attachment with long screws to shaft (Fig. 6-4). Before attaching, caulk the area where capital and shaft meet.

IF YOU ARE USING ORNAMENTAL CAPITALS:

Capitals are provided in either of two materials. FRP capitals are used for exterior applications. Composite plaster capitals with load-bearing plugs are used for interior applications, and for some larger size exterior columns where FRP capitals are not available.

INSTALLING COMPOSITE CAPITALS:

Composite capitals are not load bearing. Use the supplied plug when installing. The plug bears the weight of the structure, not the capital. (Plugs are not supplied for columns split for pilasters or for reassembly.)

1. Caulk top of shaft before attaching plug. Center plug on shaft top with the small end up (Fig. 6-5). Attach to top of shaft with screws.
2. Caulk the area where the capital, plug and shaft meet and then position the capital over the plug, centered on the shaft (Fig. 6-6).

INSTALLING FRP CAPITALS:

Capitals made of FRP must always be pre-drilled: do not attempt to nail or screw directly into the capital. Counter-sink all visible screw holes.

FRP capitals typically have a centering ring molded into the bottom of the capital. Check the fit of the ring into the top of the shaft. If capital doesn't fit or center on the shaft correctly, make any needed adjustments to the centering ring using a rasp or angle grinder. (Capitals split for pilasters or reassembly do not have centering rings.)

1. Center the capital on top of the column shaft and pre-drill through shaft into centering ring where you want screws placed to attach capital to shaft. Remove capital.
2. Caulk top of shaft before attaching capital. Place capital back on shaft, and attach with screws.
3. When assembled column is placed under the soffit, be sure to pre-drill and countersink the capital before attaching to soffit.

INSTALLING THE ASSEMBLY AND FINISHING

IF THE SOFFIT CAN BE RAISED:

1. Score a line from inside the cap, or the center hole of the plug, on a small piece of scrap lumber—a 1x4 with smaller caps or a 1x6 with larger caps (Fig. 7-1 and 7-2). Then roughly cut out a block (Fig. 7-3) and attach to the soffit where you want the capital secured (Fig. 7-4).
2. Raise up the soffit sufficiently to allow the assembly to slide in and over the pins on the deck and under the block on the soffit (Fig. 7-5)
3. Flash the capital and crimp edges of flashing down. Caulk before positioning it under the soffit (Fig. 7-6).

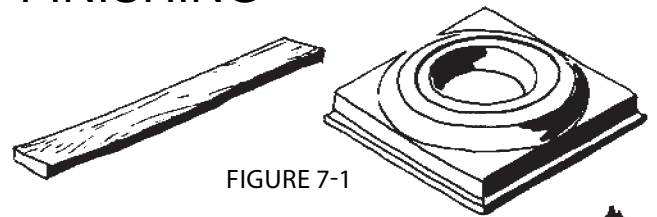


FIGURE 7-1

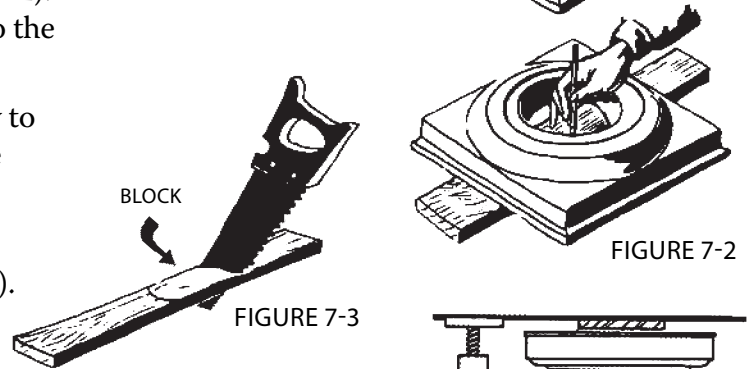


FIGURE 7-2

IF THE SOFFIT CANNOT BE RAISED:

Do not attach base to column before positioning assembly. Position base, then tip shaft/cap assembly under and onto soffit block. Secure shaft to base with toenail-type screws (Fig. 6-7)

IF THE SOFFIT CANNOT BE RAISED AND YOU ARE USING POLYURETHANE OR WOOD CAPITALS OR ORNAMENTAL CAPITALS WITH PLUGS:

1. Drill holes through soffit at an angle that will direct screws into capital (or plug, in the case of ornamental capitals). Attach (Fig. 7-7)
2. Use shims to lock the capital in place before securing with screws (Fig. 7-8).

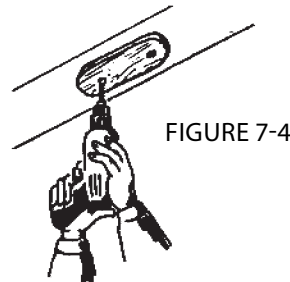


FIGURE 7-4

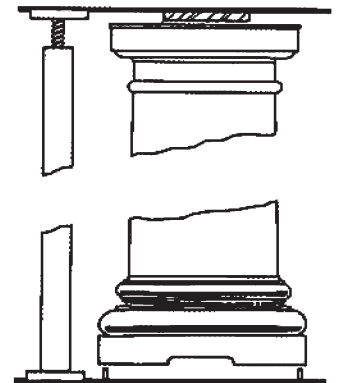


FIGURE 7-5

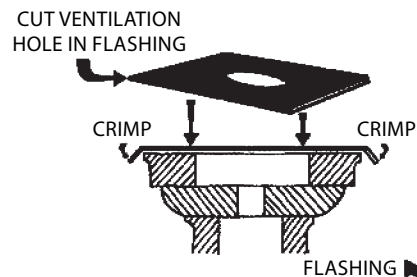


FIGURE 7-6

FINISHING:

- Seal screw and/or nail holes with silicone caulk.
- Repair all seams, scratches, and nicks with wood putty and sand smooth.
- Immediately after installation, and before exposure to the weather, apply two (2) coats of premium-quality acrylic-latex paint to all exterior surfaces. Priming of column only is NOT sufficient protection from the elements.
- Use patching plaster to fill and repair any scratches and/or nicks in composition ornamental capitals.
- FRP capitals may be touched up with automotive body filler.



Note: Always use flashing on top of the capital and below the soffit so that moisture cannot channel into the interior of the shaft.

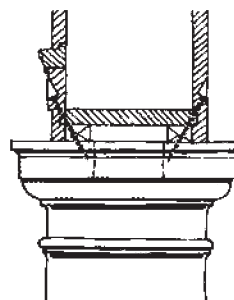


FIGURE 7-7

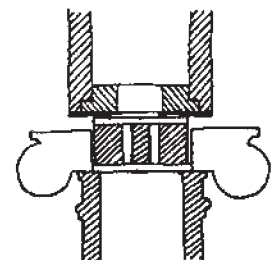


FIGURE 7-8

ASSEMBLING SPLIT PARTS

GENERAL:

- Materials must be stored in a dry place of even and moderate temperature until wood and composites are sealed with oil or acrylic-latex primer. Don't use alcohol-base sealers or primers. Sealing end grain is a must.
- Keep surfaces to be glued clean, or clean with lacquer thinner before gluing. Follow glue manufacturer's directions. Use polyurethane adhesive. Preheat wood and workspace to 70° F and maintain for at least 10 hours to avoid joint failure.
- Notch caps and bases to wrap around load-bearing post without making contact that could cause cracking during expansion and contraction. Seal cut surfaces to prevent checking and cracking.
- Top and bottom venting is critical. If necessary, drill a 1" vent hole in the column neck above the neck ring on a non visible side.
- Do not attach column shaft to anything except caps and bases. Fastening to interior blocking will cause cracking with expansion and contraction.

BASES:

1. Assemble halves using screws and polyurethane adhesive on wood or polyurethane parts. Use quality liquid aluminum with aluminum plinths. Use a web/band clamp for a minimum of 24 hours (Fig. 8-1).
2. If the plinth is aluminum, fill crack with liquid aluminum. Fill wood, fiberglass, or polyurethane bases with putty and sand smooth.

SHAFTS:

1. Because shaft halves may become slightly out of round as they absorb or lose moisture, it is important to preassemble before gluing. The seams should join together smoothly when clamped, with no more than a 1/32" variance (Fig. 8-2).
2. Cut blocks to use under band clamp opposite any areas that have expanded out of round (Fig. 8-3).
3. Caulk the area where the shaft and base meet. Then position halves of shaft on the base so that seams are oriented at a 90-degree angle to the primary view (Fig. 8-4), leaving a gap between them for gluing.
4. Thoroughly coat all four joining surfaces of the shaft with polyurethane adhesive (Fig. 8-5).
5. Position band clamps 12"-16" apart along the full height of the shaft. Use carpet strips under clamps to prevent damage and use blocks opposite areas of expansion to pull shaft into round (Fig. 8-6). Tighten clamps to 80 pounds per square inch (psi). Use a rubber mallet where necessary to get the two sides of the seam to line up.
6. Make sure there is full contact from the top to bottom in both seams. Then remove the excess glue. Let stand for a minimum of 24 hours.

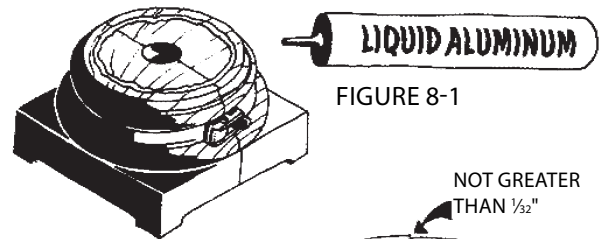


FIGURE 8-1

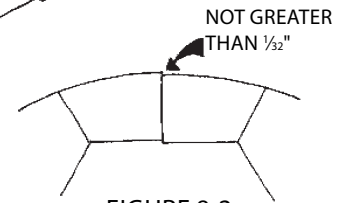


FIGURE 8-2

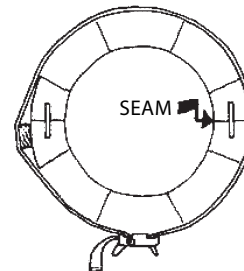


FIGURE 8-3

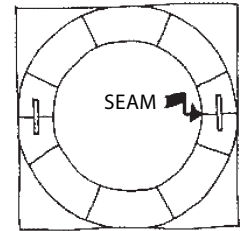


FIGURE 8-4

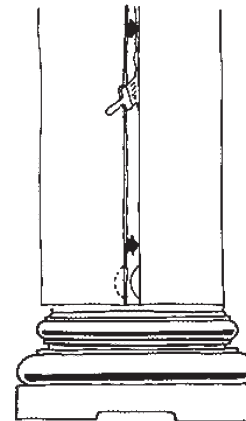


FIGURE 8-5

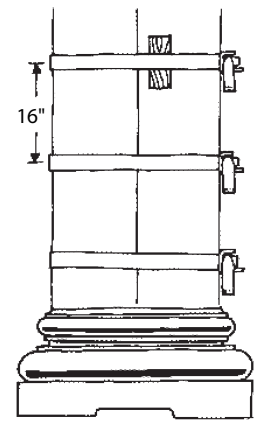


FIGURE 8-6

CAPITALS:

1. Predrill holes for screws on opposing sides of the seams and at an angle for attachment to shaft. Caulk the area where the capital and the shaft meet. Then position capital atop the shaft, leaving a gap.
2. Clean cut surfaces of capital with shellac. Then thoroughly coat all four joining surfaces of the capital with polyurethane adhesive. Push the halves together and clamp with a rope clamp. Then secure the joined halves with screws and attach to the shaft (Fig. 8-7).

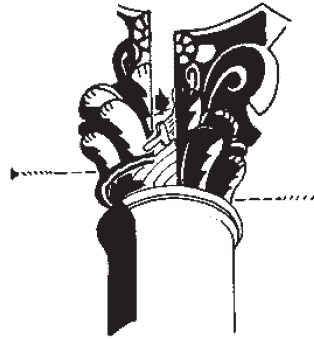


FIGURE 8-7