

WHI 90-Minute Rated Veneered Door Frame

Installation Instruction 106



Eggers Industries

Date: July, 2016

DOOR REQUIREMENTS:

Consult the door manufacturer to make sure that the doors are qualified for the hardware to be installed, and particularly if for use in door pairs.

POSITIVE PRESSURE REQUIREMENTS:

Positive pressure openings require the use of a Category G edge sealing system as specified by the wood door manufacturer. To meet smoke control requirements of UBC 7-2-2 (1997), Category H smoke and draft control gasketing must be used as specified by the wood door manufacturer. Edge seal and smoke control gasketing are furnished by the door supplier.

WALL REQUIREMENTS:

- Two-hour rated, wood or steel framed wall or masonry wall
- Minimum thickness: 5 inches
- Framing: 2" X 4" nominal dimension lumber or 2-1/2" X 0.019" (25 gauge) minimum steel framing
- Rough opening size for 1" thick frames:
 - (3 ± 1)" wider than net opening width for door
 - (1-1/2 ± 1/2)" higher than net opening height for door

Note:

1. Dimensions are based on those to webs of buck framing members.
2. For masonry, a 2" X 3" nominal dimension lumber buck frame shall be attached to masonry with 3/8" expansion masonry anchors, spaced 26" on centers maximum.

ROUGH OPENING PREPARATION: See Figure 1

Two inch wide by 12" long by 0.036" (20 gauge) steel plates shall be supplied with the frame. These plates are for supplementary anchoring at each door hinge and strike plate, along the header or jambs of the frame. Plates shall be approximately centered at each hinge or strike plate elevation with approximately 1" lap over the web of the buck framing on the side of the wall that hinges are to be installed. Secure each plate to the buck framing with three suitable fasteners about 5" apart. Use 3/8" long, #6 pan head framing screws for steel buck framing. Use 1" long type 'S' or 'W' drywall screws for wood buck framing. Alternatively, 3-penny box nails may be used through predrilled holes in the steel plate for wood buck framing.



Stile and Rail Doors, Door Frames
Veneered Components, Plywood

Two Rivers Division
One Eggers Drive
Two Rivers, WI 54241
Phone: 920.793.1351
Fax: 920.793.2958

Flush Doors, eiDoor®

Neenah Division
164 North Lake Street
Neenah, WI 54956
Phone: 920.722.6444
Fax: 920.722.0357

Architectural Veneer Faces,
Custom Wood Products, Plywood

Kentucky Division
2125 Lake Jericho Road
Smithfield, KY 40068
Phone: 502.845.0154
Fax: 502.667.1051

FRAME DESIGN LIMITATIONS:

- Minimum jamb depth: 5"
- Minimum rabbet for door: 1-7/8"
- Minimum stop height: 5/8"
- Minimum soffit: 1"
- Maximum sizes: (inches)

For swinging doors	Net Opening		Overall	
	Width	Height	Width	Height
Singles	48	96	50	97
Pairs	96	96	98	97

Hinges: Size and spacing to be in accordance with Table 2-8(a) of NFPA 80, mortise type only.

Strikes: Per templates for labeled latch sets, (including cylindrical, mortise or unit type), rim exit device, vertical rod fire exit device, flush bolts and/or dead bolts.

FRAME INSTALLATION: See Figures 2 through 5

Remove the frame from the carton and become familiar with the components by checking each component versus the shipping list. Obtain any hardware item not supplied with your purchase (but required by these instructions) at your local door/frame hardware or building materials dealer.

In the event your frame was supplied without casing trim, you may install any wood, plastic or metal casing trim obtained from your local dealer.

In the event your frame was supplied without the required screws, they may be obtained from your local hardware dealer.

To reduce soiling and staining of the frame finish and for ease of installation, it is recommended that all holes for fasteners through the frame be predrilled before the fasteners are installed. Use 5/32" drill bits for #10 screws or 3/32" drill bits for #6 screws. Pilot holes from 65-70% of the fastener shank diameter are best.

If needed, up to 3/4" may be sawed from the bottom of each jamb to fit the rough opening. Use caution to make sure that this does not require trimming the bottom of the door. Some doors may not be trimmed at the bottom.

Align the header section to the top of each jamb section. Drive the 2-1/4" long, #6 screws through predrilled holes at each end of the header to the top of each jamb.



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Orient, position, align and square the assembled frame within the rough opening in the wall. See Figure 2. Position wood shims at about 2" from the top and bottom to fill the opening between the hinge jamb and wall buck framing. Drive a 2-1/4" long, #6, trim head screw immediately above or below each set of wood shims through the door rabbet of the frame. Do not completely tighten these screws until you are sure the wood shims have been adjusted to have the head within the width of the rough opening and with the hinge jamb in plumb. Tighten the two screws, then drive additional 2-1/4", #6 trim screws through the frame on the opposite side of the stop to the buck framing at the same elevation.

Install the door to the frame at top and bottom hinges only. Close the door to check and adjust for alignment of the door from the frame stops and for 1/8" maximum clearance for wood doors or 3/16" maximum clearance for steel doors from the header and both jambs. In the case of door pairs, both doors should be similarly installed to adjust for 1/8" clearance for wood doors or 3/16" clearance for steel doors between the meeting edges and for 1/8" maximum offset along the meeting edges. When alignment is satisfactory, install wood shims, 26" on center maximum, between buck framing and along both jamb and header sections. Drive and tighten 2-1/4" long #6, trim head screws through the frame on each side of the stop soffit to the buck framing, adjoining each set of wood shims. Recheck clearances and readjust if necessary. Install the remaining hinges with the hinge screws provided, except replace one screw at each hinge with a 2-1/4" long #10 screw, driving this screw through the 2" X 12" X 20 gauge steel plates, previously attached to the buck framing. See Figure 4.

If stops were supplied loose, they should be attached with spiral nails or trim head screws, spaced 12" on center, through the predrilled holes at this time. Preposition the stops on the frame to allow for any required labeled gasketing with the doors in the closed position.

For flushbolt or latchset strikes, cut to length and insert 1/8" inside diameter steel screw sleeves through the 7/16" diameter predrilled holes in the frame. The screw sleeves span the distance between the strike and the buck framing or the 2" X 12" X 20 gauge steel plate previously installed to the buck framing. Install the strikes with #10 screws, 2-1/4" long minimum through the steel sleeves.

Surface strikes used for rim exit devices and vertical rod fire exit devices are sometimes installed to the soffit. These strikes require that 7/16" diameter holes be predrilled through both the stop and the frame. Steel screw sleeves and 3" long, #10 screws are used to install strikes to the soffit.

Dead bolt strikes (mortise type) closer and surface brackets for closer arms do not require the 7/16" diameter holes nor the steel screw sleeves. It is recommended that holes for the screws be predrilled. If mounted to the soffit, screws should extend through



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the stop and penetrate the frame by ½” minimum. If mounted to the face of the frame, a 16-gauge steel mounting plate may be cut up to 2” high by the width of the bracket or closer body. The steel mounting plate may be surface attached to the face of the frame with not less than two, #8, ¾” long screws through predrilled holes in the plate. The closer or closer arm bracket may then be screw attached to the mounting plate, using self-tapping screws provided with the closer.

Check and adjust hardware to make sure door(s) are self-closing and self-latching.

Break or saw off any wood shims that extend beyond the frame or wall on each side of the assembly. Mix a setting type joint compound according to the directions on each bag. Fill the area between sets of wood shims, frame and buck framing on each side of the wall to a minimum depth of 1”. See Figure 3. This may be accomplished with joint finishing tools. A caulking tube and gun may simplify this installation. For installation in masonry, extend the joint compound over the buck framing to bridge the frame to the masonry. See Figure 5. After the joint compound has hardened, install the casing trim on each side of the wall to the buck framing and to the frame with suitable fasteners, spaced 24” on center maximum. Use 1-5/8” or 2-1/4” long, #6 trim head screws for installation of casing trim to wood or steel buck framing of the frame. As an alternate 6 penny finishing nails may be used for installation of casing trim to wood buck framing. Casing trim fastener length should be selected to penetrate the frame or wood buck by ½” minimum. If desired, the screw and nail heads may be covered using a veneer color matched caulking or putty stick. If the frame has a natural wood veneer, it may be stained and finished with a clear varnish or drying oil.

CONGRATULATIONS! You may now enjoy the safety and appearance of a 90 minute rated frame.



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FIGURE 1

INSTALL 20GA.
METAL PLATES
TO METAL STUD

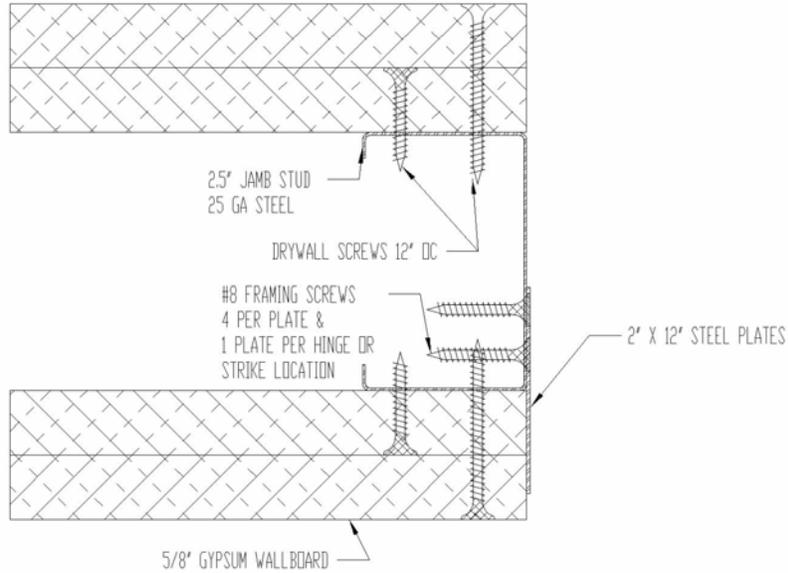


FIGURE 2

INSTALL SHIMS AND
SCREW ATTACH
FRAME TO STUD

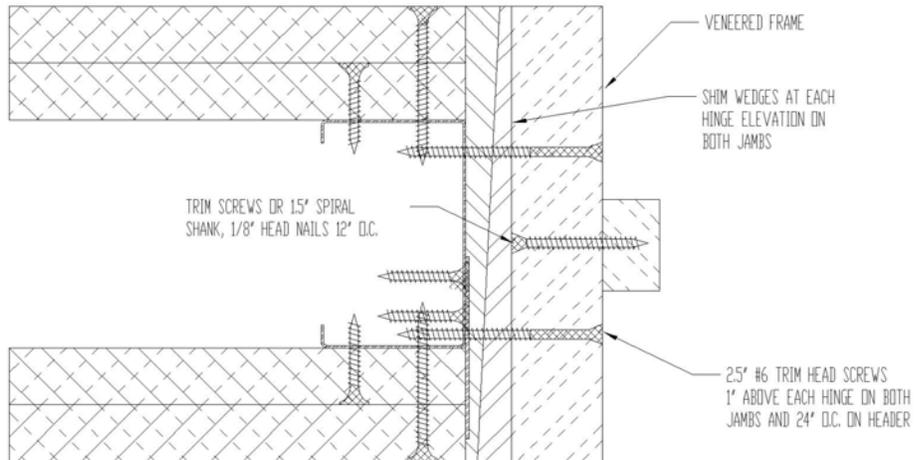


FIGURE 3

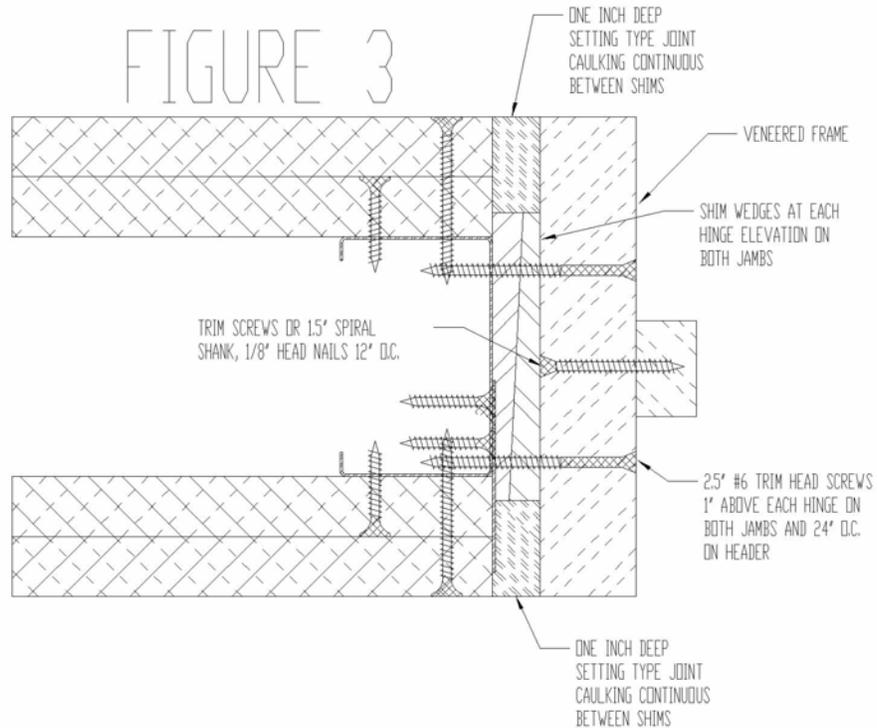


FIGURE 4

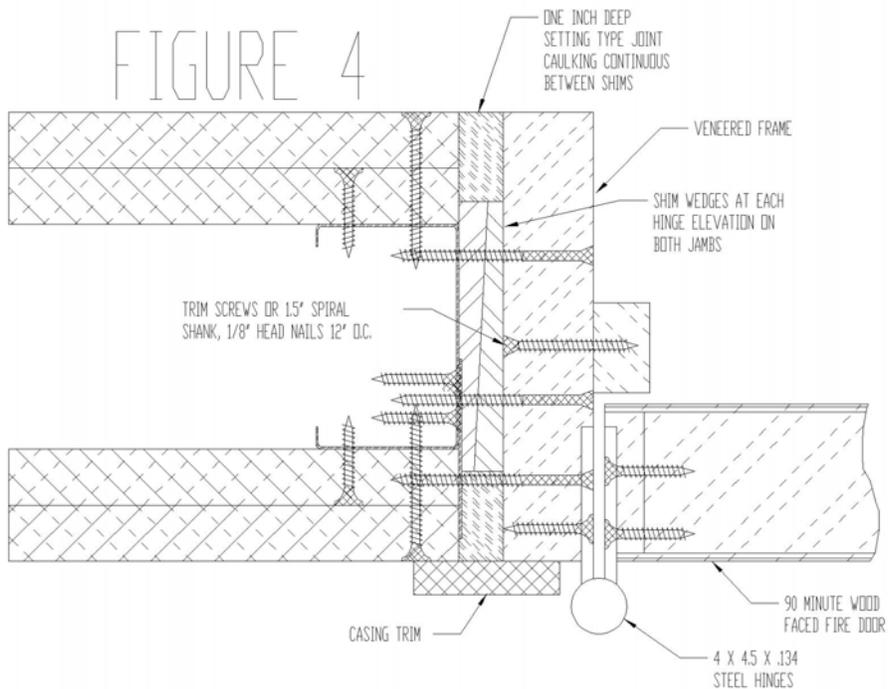
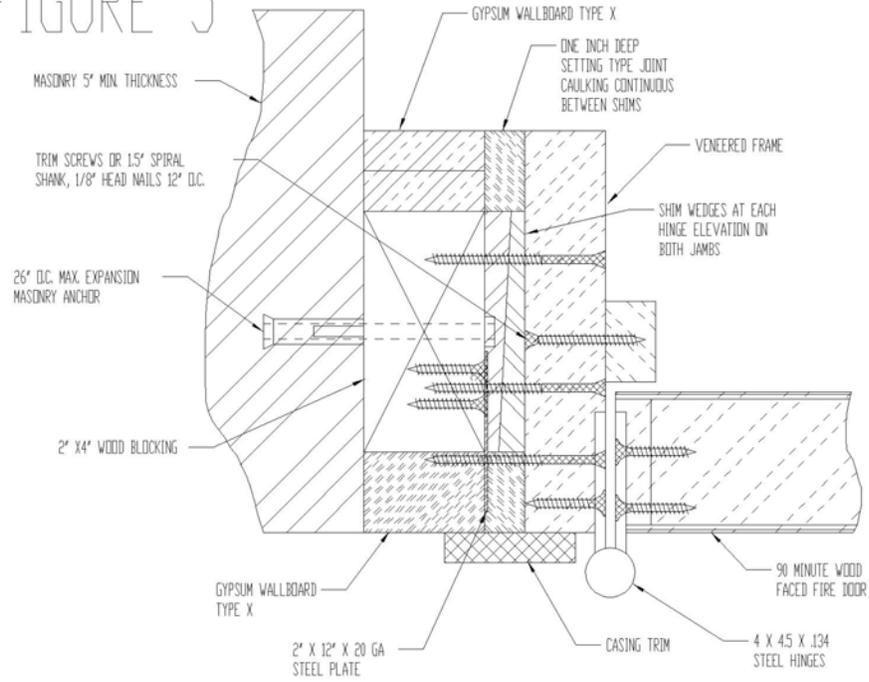


FIGURE 5



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