

Installation Instructions

HR12/G2 BioBlend®-HR12 Wood Handrail, No Insert - Stock Length

Please read all instructions before installing.

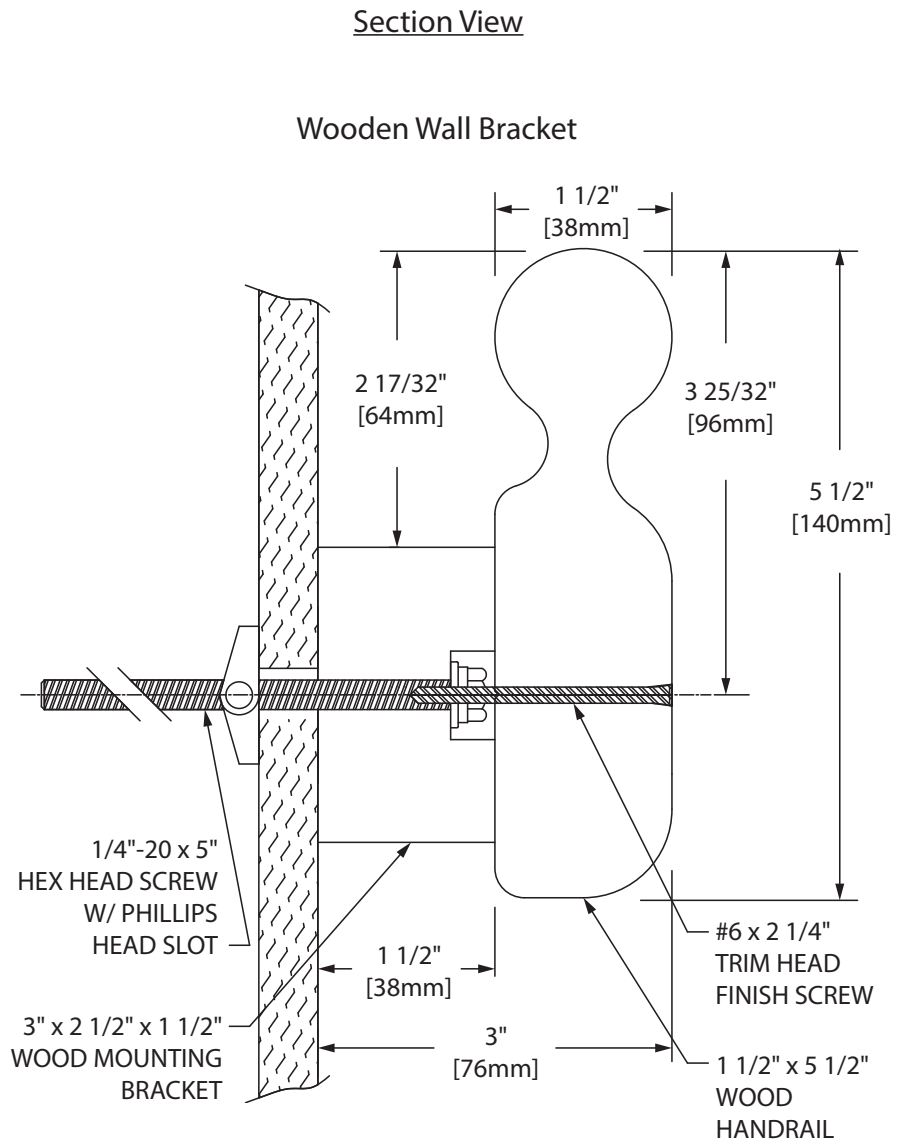
Material must be stored, installed and used in environmentally controlled conditions.

Important

1. Install product in environmentally controlled conditions.
2. Acclimate materials 24 hrs before installation. Maintain temperature controlled environment after installation.
3. Installers should be familiar with the installation of fine finished wood products.
4. Install in accordance with manufacturer's installation instructions. Failure to do so will void the warranty.

Installation tips

1. Wood is a natural material, therefore component color may vary. Sort the parts by color (light to dark) before use.
2. When storing straight lengths of material, lay product flat on supported surface. Do not lean the rails or lay them on unsupported parallel saw horses.



RECOMMENDED TOOLS

Safety Glasses, Tape Measure, Level, Chalk Line, Power Drill/Nailer, Drill Bits, Socket or Hex Drive Set, Phillips Head Screwdriver and a Radial Arm Saw or Power Miter Box with Carbide Tipped 60-80 Tooth Blade

IPC.682/REV.2

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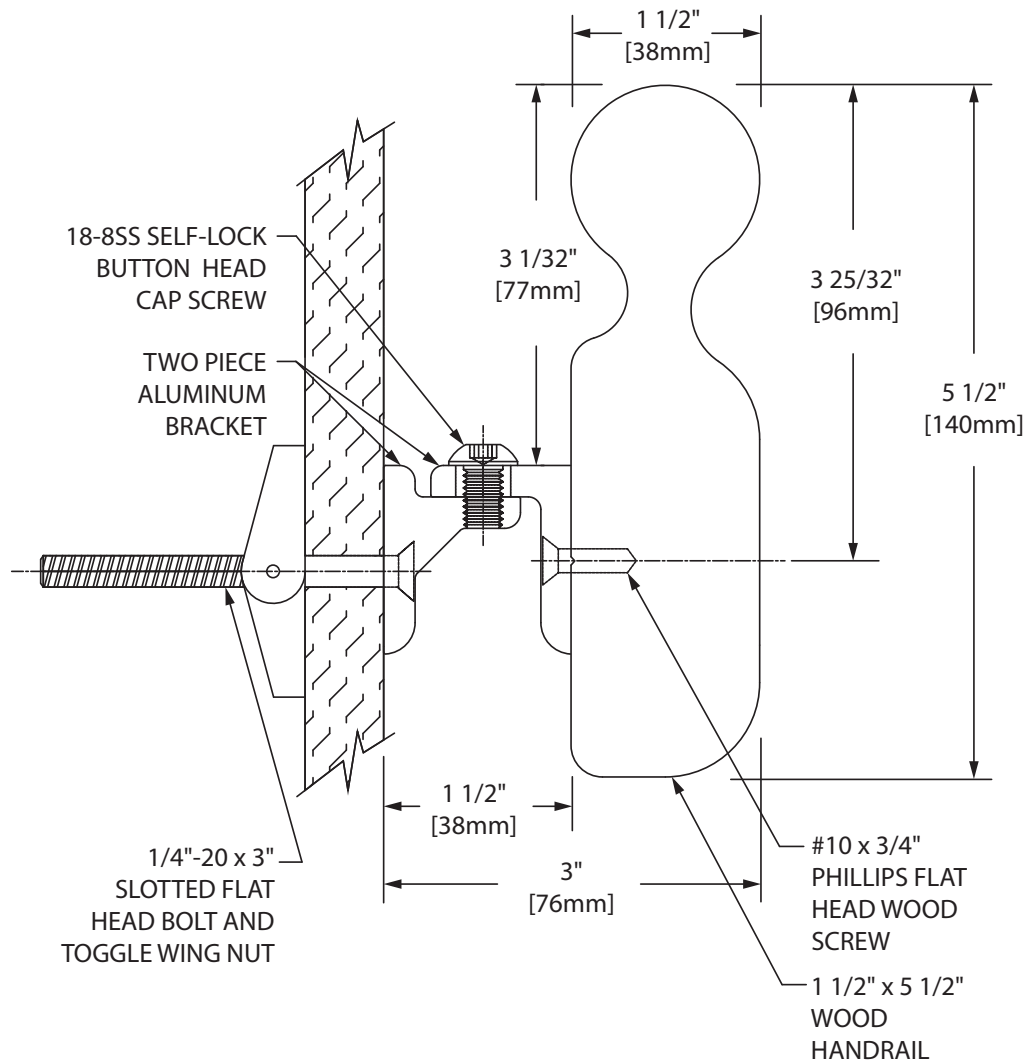
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Section View Cont.

Optional Aluminum Wall Bracket



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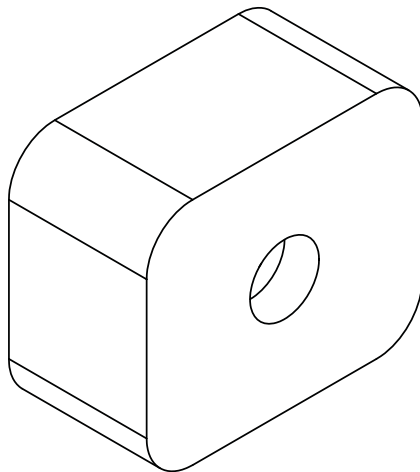
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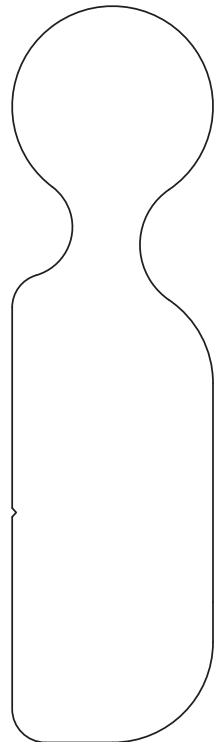
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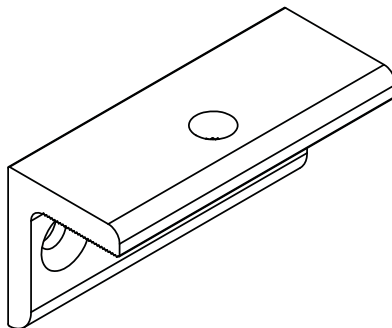
Components



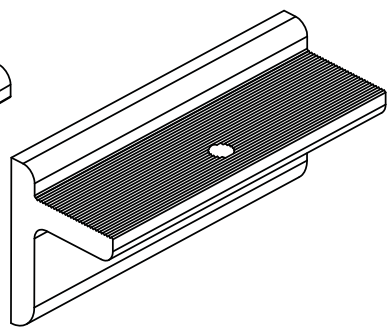
BRKFO
NORTHERN HARDWOOD
WALL BRACKET



HR12-A
NORTHERN HARDWOOD
HANDRAIL



BRK-ALUMH
ALUMINUM
HANDRAIL BRACKET



BRK-ALUMW
ALUMINUM
WALL BRACKET

Fasteners

Wall Condition	Specified Fasteners	Inpro part #
Gypsum Wall	1/4"-20 x 5" Phillips Hex Head Toggle Bolt, Lockwasher and Toggle Wing Nut	HWK-801D
Alum Bracket Hardware	#10x3/4" Phillips Flat Head Screw, 1/4-20x3" Slotted Flat Head Bolt, Wing Nut, 18-8SS Cap Screw	HWK-BRKALUM-D

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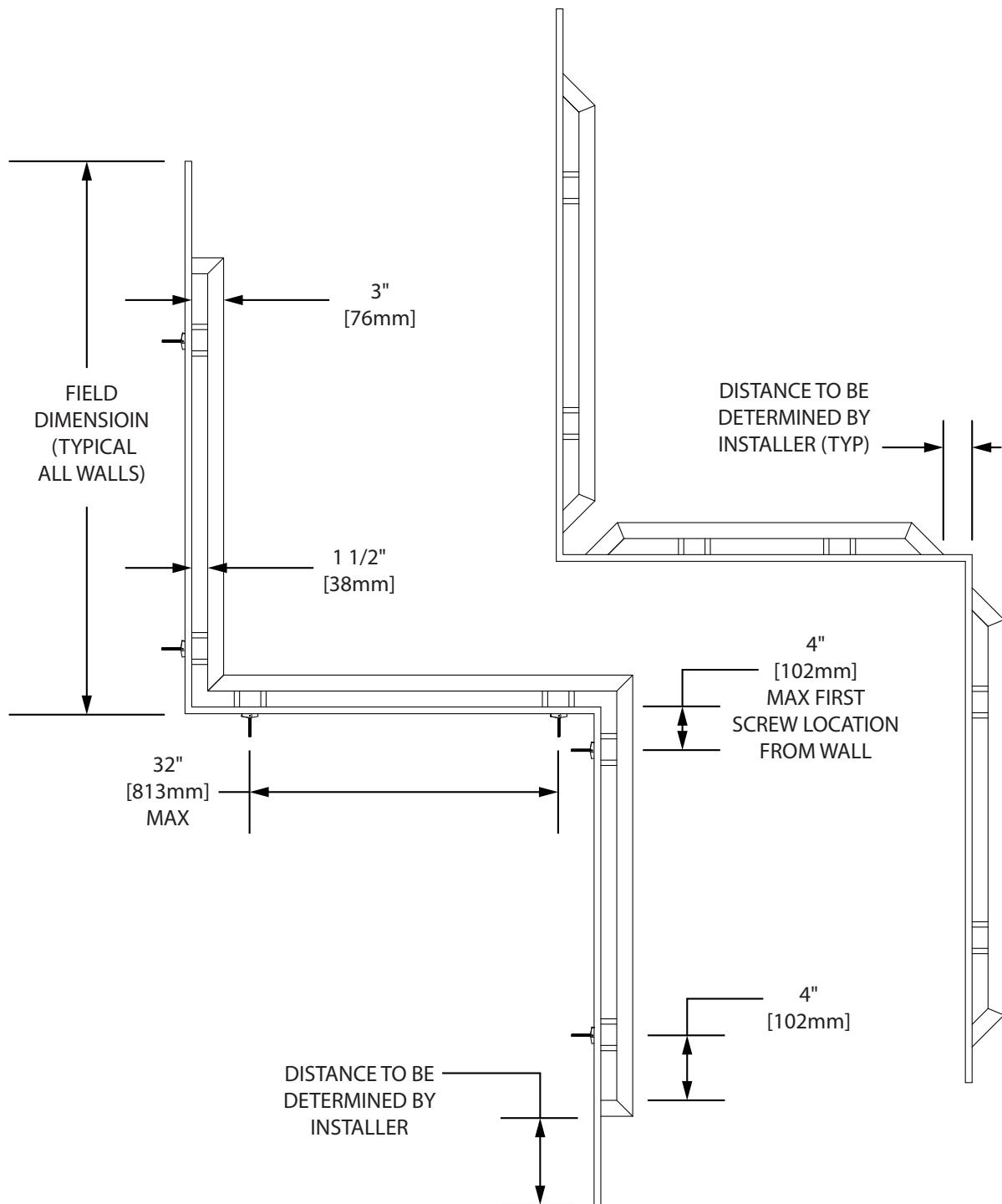
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Layout View



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FIG. 1

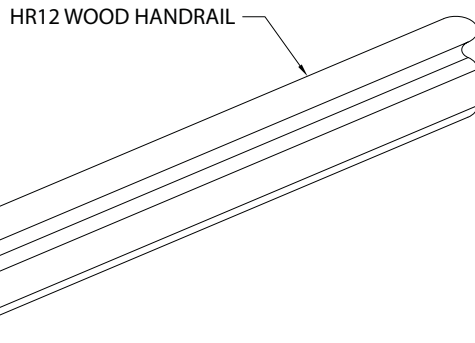


FIG. 2a

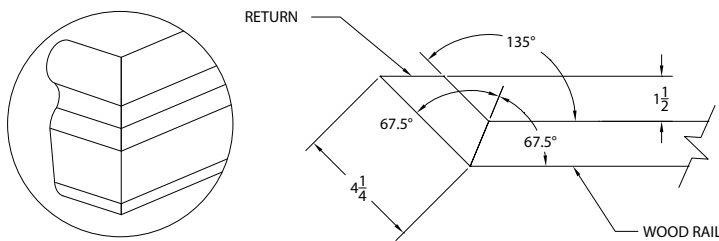


FIG. 2b

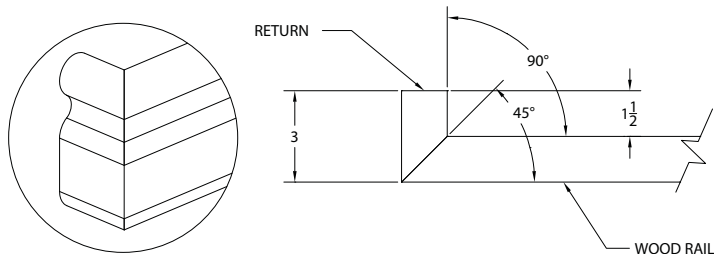
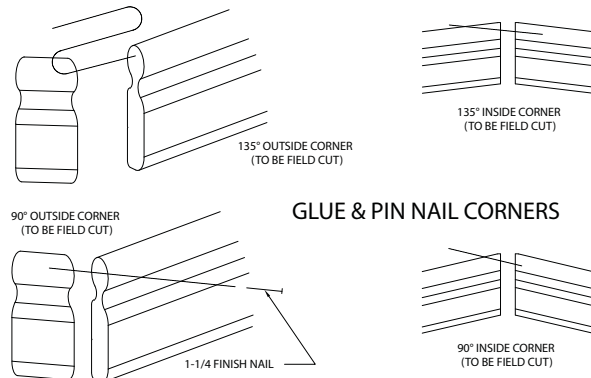


FIG. 2c



Note: All boxes and components are marked to coincide with the floor plan drawings. Layout and identify the components needed for each section to be installed. Handrails ship in 8'-16' (2.44m - 4.88m) lengths.

1. Determine height of handrail on wall. Measure 3-1/32" (77mm) below that point and snap chalk line. Cut the handrail to required length, leaving 3" (76mm) allowance for 135° returns, 1-1/2" (38mm) allowance for 90° returns, 1-1/2" (38mm) for inside corners and 3" (76mm) for outside corners. SEE FIG. 1

2. Inside corners, outside corner and returns:

a. 135° Returns: Return piece is to be cut so the front of a piece is 4-1/4" (108mm) long with a 45° cut on the side that meets the wall and a 67-1/2° angle on the side that mates with the rail length. Glue returns and pin nail to the rail length. SEE FIG. 2a

b. 90° Returns: Return piece is to be cut so the front of a piece is 3" (76mm) long with a straight cut on the side that meets the wall and a 45° angle on the side that mates with the rail length. Glue returns and pin nail to the rail length. SEE FIG. 2b

c. Inside and outside corners: Miter cut the rail in the proper direction. Inside corners: Join the two miter cut pieces of rail before mounting them to the wall. Apply glue to the mating surfaces and pin nail the two pieces together with four 1-1/4" finish nails. Wipe off excess glue with damp cloth. Outside corners: Attach one section to the wall (See steps 3 and 4 for installation). Apply glue to the mating surface and pin nail the two pieces together with four 1-1/4" finish nails. Wipe off excess glue with damp cloth. SEE FIG. 2c

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FIG. 3a

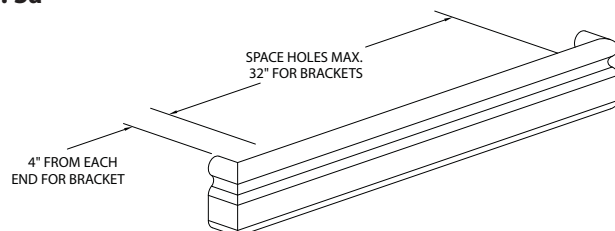


FIG. 3b

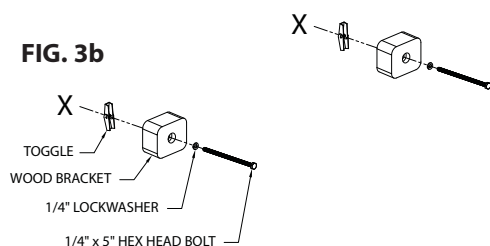


FIG. 4

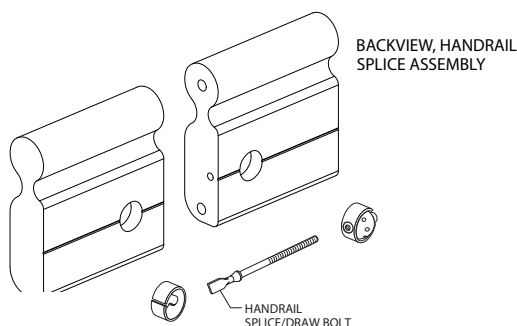
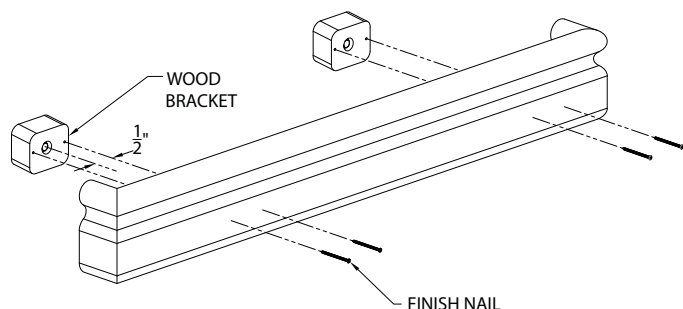


FIG. 5



3. Locate the top edge of the bracket on the chalk line and transfer the bracket holes to the wall. Brackets should be 4" (102mm) from each return/corner and 4" (102mm) on either side of a draw bolt joint and spaced a maximum of 32" (813mm). Drill holes with a 3/4" (19mm) drill bit for toggle bolts (metal studs), 5/32" (4mm) drill bit for wood screws (wood studs) or 1/2" (13mm) drill bit for lead anchors (masonry construction). SEE FIG. 3a & 3b

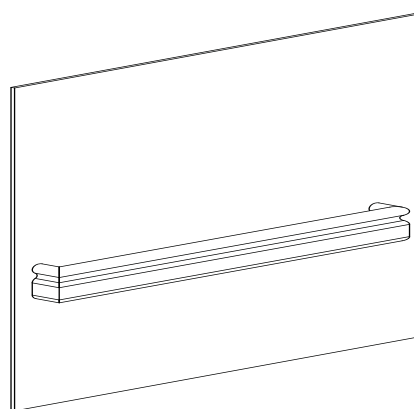
4. Level and mount brackets to wall. Tighten fasteners to secure.

5. Join longer sections of the handrail with draw bolt splices and dowels, before mounting rail to the mounting brackets. Use the draw bolt jig and bits to drill holes for the draw bolt assembly in the rail sections. Apply glue to both surface pieces to be joined and into the dowel holes. Insert dowels into holes and the unassembled parts of the draw bolt into the holes. Tighten the draw bolts with tightening tool. SEE FIG. 4

6. Apply small amount of construction adhesive (installer supplied) between the bracket and back side of handrail. Attach handrail to brackets by pre-drilling two 1/8" (3mm) holes through the handrail and into the mounting bracket. Holes should be 1/2" (13mm) on each side of the center of the bracket. Fasten the handrail to the brackets and drive the head of the screw until it is just below the surface of the wood. As an option, attach the handrail with a power nailer and two 2-1/4" (58mm) finish nails per bracket. SEE FIG 5

7. Fill any holes in the wood with the putty from the touch up kit. Clean up any wood glue with a damp cloth. Remove any surplus materials and debris upon completion of the installation. SEE FIG. 6

FIG. 6



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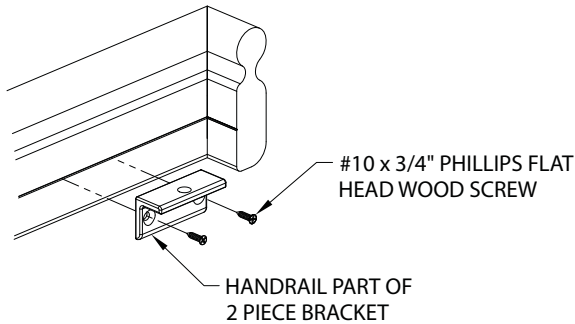
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Aluminum Two-Piece Bracket Installation

FIG. 7a



1. Attach the handrail part of the two piece bracket to the back of the handrail into the "v-groove" with $\frac{3}{4}$ " screws (2 per bracket). NOTE: FASTENERS ARE SELF DRILLING, DO NOT DRILL PILOT HOLES. Brackets should be 4" (102mm) from each end and spaced a maximum of 32" (813mm). SEE 7a & 7b

2. Hold the handrail with the handrail brackets attached, up to the chalk line and mark each bracket location on the wall.

3. Position the top edge of the wall bracket on the chalk line and align it with the bracket marks. Transfer the wall bracket holes to the wall. Drill holes with a $\frac{3}{4}$ " (19mm) drill bit for toggle bolts (metal studs), $\frac{5}{32}$ " (4mm) drill bit for wood screws (wood studs) or $\frac{1}{2}$ " (13mm) drill bit for lead anchors (masonry construction). SEE FIG 7c

4. Level and mount brackets to wall. Tighten fasteners to secure it to the wall. Fasten the handrail to the wall brackets with the $\frac{5}{16}$ -18 x $\frac{1}{2}$ " button head cap screw. Tighten screw with the $\frac{3}{16}$ " Ball-Point Hex L-Key. SEE FIG. 7d

FIG. 7b

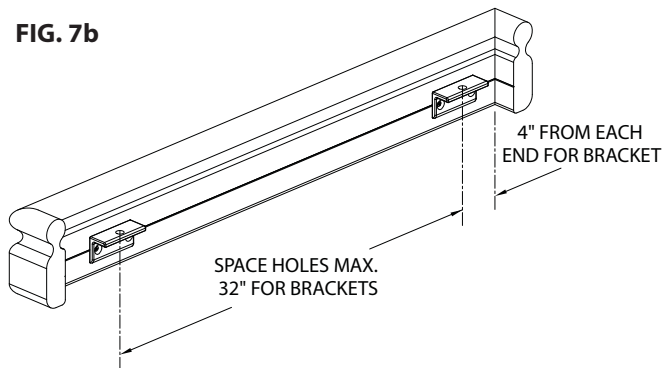


FIG. 7c

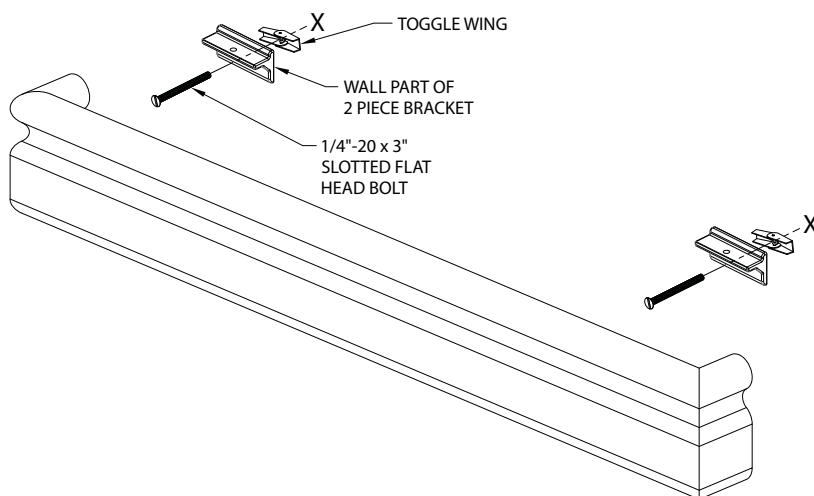
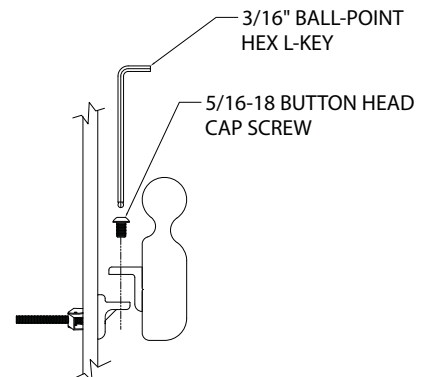


FIG. 7d



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