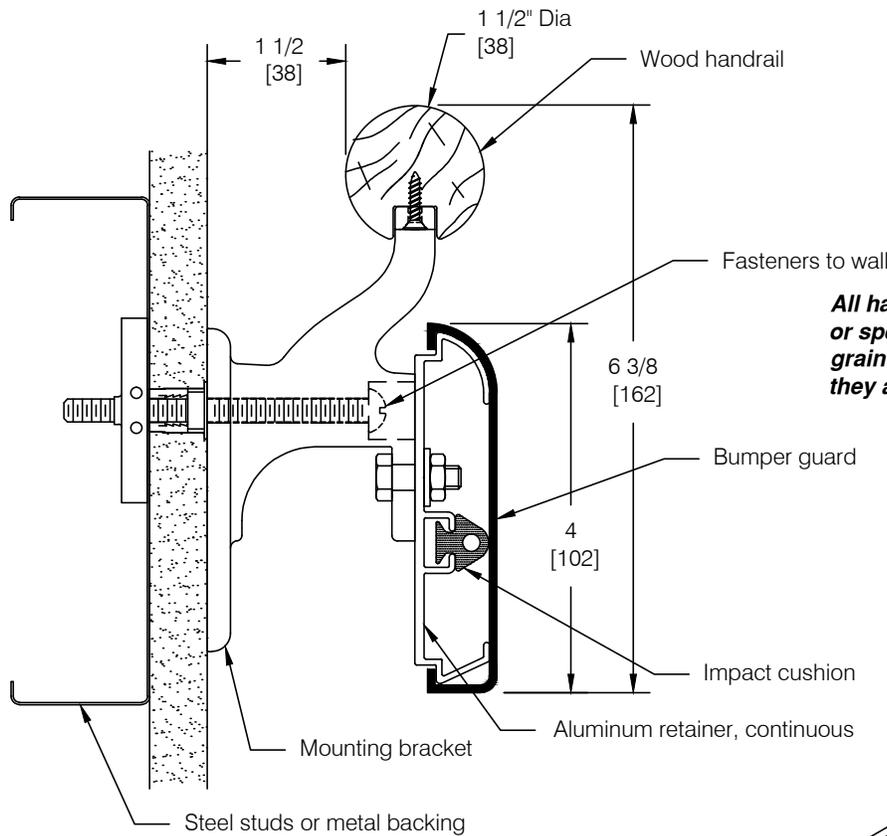
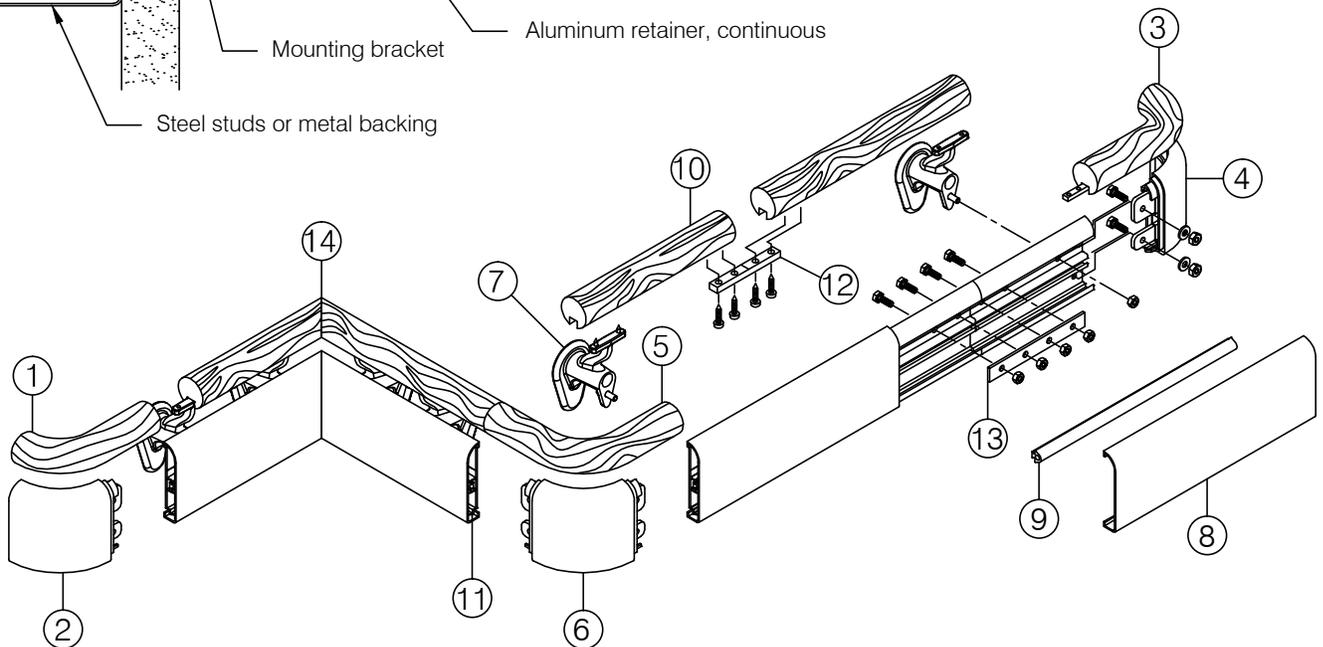


BR(*)-4RWV Handrail - Standard Options



(*) **Specify wood type**
A - Ash
M - Maple
O - Oak

All hardwoods have their own "personality" or special characteristics. Variations in color, grain pattern, and texture are to be expected, they are natural aspects of these materials.



Component Part Numbers:

- | | |
|----------------------------------|-------------------------------|
| 1) BRL(*)-4RW Left return top | 8) WGV-4 Cover |
| 2) BRL-45RV Left return base | 9) B-100 Impact cushion |
| 3) BRR(*)-4RW Right return top | 10) BRTW(*)-4R Wood handrail |
| 4) BRR-45RV Right return base | 11) BRBA-4V Aluminum retainer |
| 5) IOC(*)-4RW Outside corner top | 12) SPL-4R Splice |
| 6) OBR-45RV Outside corner base | 13) SPL-4 Splice |
| 7) BR-406 Bracket | 14) Field miter inside corner |

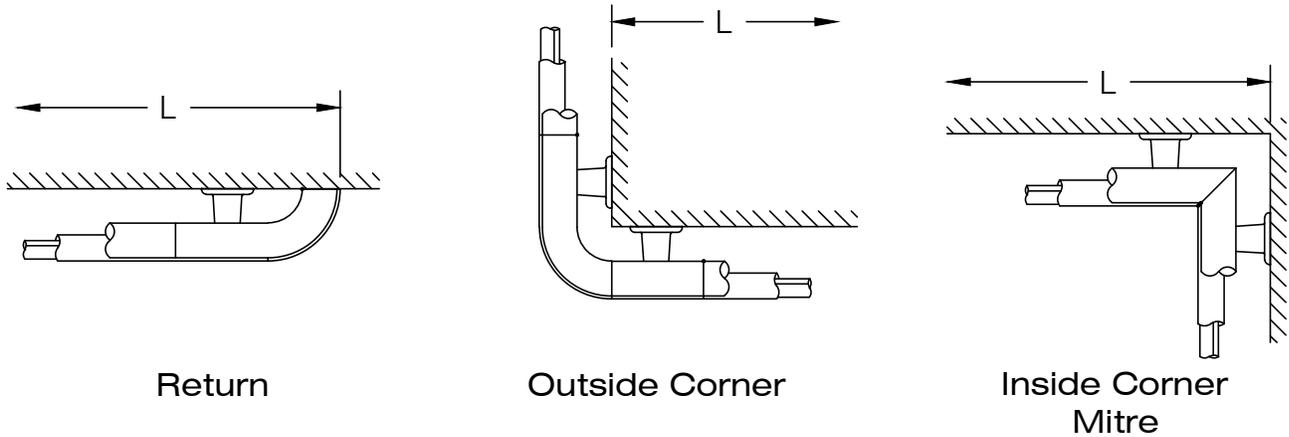


Architectural Products Division

BR-4RWV Foundation Series Installation Instructions

- Step 1:** Determine top of handrail height and snap a chalk line 3 5/16" below for centerline of mounting hardware, see **fig 1**.
Important: Store the material in a clean dry place where the temperature is maintained between 50°F (10°C) and 100°F (38°C). Walls and rooms should be maintained at a minimum of 65°F (18°C) for at least 48 hours prior to installation. Acclimate materials to normal building conditions for at least 24 hours before cutting and installing.
- Step 2:** Cut aluminum retainer. See **Cutting Adjustment Diagrams and Schedule** for adjustments to aluminum retainer length and bracket at wall returns, inside corners and outside corners. Refer to **Minimum Layout Configurations** for additional information.
Important: All cuts must be square and deburred.
- Step 3:** Layout aluminum retainer "face up", mark and drill bracket mounting holes. Use groove in retainer to locate centerline of drilling, see **fig 2 and fig 3**.
Bracket mounting holes must be spaced:
- Not to exceed 32" on center
 - 1 1/2" from end of aluminum retainer at returns and corner accessories
 - 3"- 6" from end of retainer at inside corners.
 - A minimum of 3" from end of retainer at splices and butt joints.
 - To align with metal studs or preferably with horizontal metal backer plate (by others)
- Step 4:** Locate and drill bracket mounting holes in wall construction using the aluminum retainer as a template or by careful measurement. Always have a bracket located on the handrail return and two brackets for the outside corners. Choice of hardware will dictate hole diameter.
Important: Be sure to locate aluminum to leave proper spacing for return and corner accessories as detailed in the **Cutting Adjustment Diagrams and Schedule**.
- Step 5:** Drill clearance holes for attachment of molded accessories by inserting accessory in end of retainer. Press firmly to ensure molded part is seated squarely against the aluminum. Drill through aluminum and existing hole in accessory mounting tab using a #7 bit, see **fig 4**. This will allow a #10 fastener to pass freely through the accessory and the retainer.
- Step 6:** Mount brackets to wall with the appropriate hardware according to wall construction.
Suggested hardware:
- Drywall: Toggler® brand toggle bolts
 - Masonry: Plastic Alligator® insert
- Step 7:** Install a splice plate centered over each butt joint. Match drill splice plate and retainer using a letter "H" or 5/16" bit. Deburr all holes and secure splice plate to retainer using 1/4" hex head machine screws, see **fig 5**.
- Step 8:** Install the wood handrail. The handrail return requires one bracket for support and the splice to connect to the handrail, see **fig 7**. The outside corner handrail will require two brackets and the splices to connect to the handrail, similar to the return, see **fig 7**. All inside corners are mitered including the aluminum retainer, wood handrail and snap-on cover. Cut the handrail to the lengths required and complete the installation.
Note: For ease of installation of the handrail, the aluminum retainer may be removed after installation of returns and outside corners.
- Step 8:** Measure between wood tops. Cut wood handrail to fit accordingly. Care should be taken to select the straightest lengths of wood for the longest handrail spans. Select wood of similar grain and coloration to best match accessories and when joining sections end to end. Install splice in butt joints as shown in **fig 7**.
Note: All cuts must be square and deburred. Deburr using 120 grit sand paper being careful not to damage the finish. Due to the possible variation in wood grain and color, prior to cutting the wood handrail, match as close as possible to the installed returns and outside corners.
- Step 9:** Color the perimeter of all cut ends of wooden rails using a stain pen or touch-up stain, see **fig 6**.
- Step 10:** Measure between accessories and cut bumper cushion accordingly. Install flexible bumper cushions. see **fig 8**.
- Step 11:** Measure between accessories and cut snap-on cover accordingly. Miter cut the cover for all angles not accommodated by the molded accessories. Cut cover so that it will span aluminum retainer butt joints.
Important: All cuts must be square and deburred.
- Step 12:** Snap cover in place over aluminum retainer. Install cover to span butt joints in retainer.

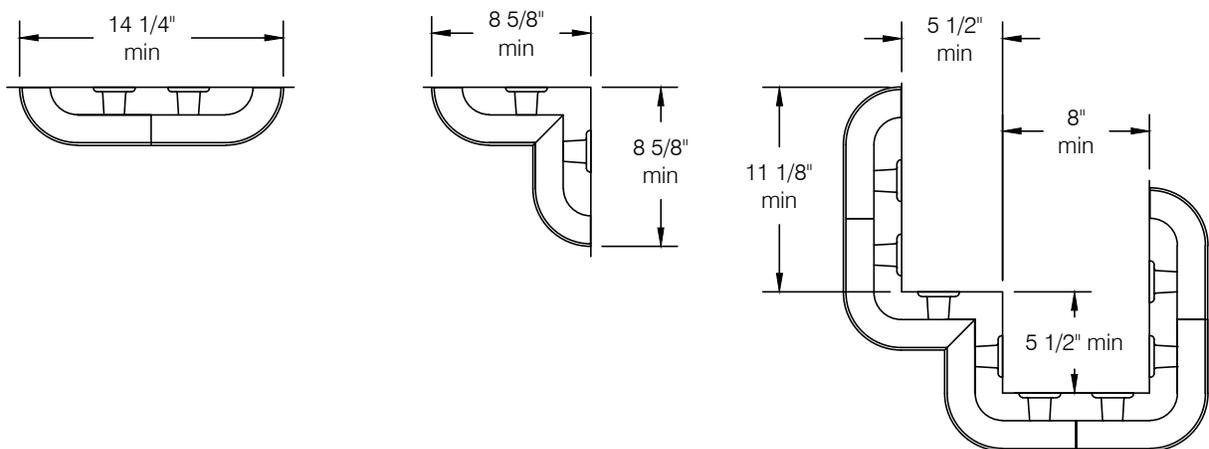
Cutting Adjustment Diagrams and Schedule



	Aluminum Retainer	Snap-on Cover	Wood Handrail
Return	L - 3 3/8"	L - 3 1/8"	L - 7 1/8"
Outside Corner	L - 1/4"	L - 0"	L - 4"
Inside Corner	Miter	Miter	Miter

Important: Wood handrail, snap-on cover, and impact bumper, to be cut to fit after aluminum and accessories have been installed.

Minimum Layout Configurations



BR-4RWV Foundation Series Handrail Installation Instructions

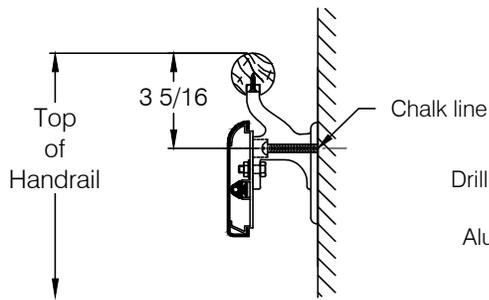


fig 1

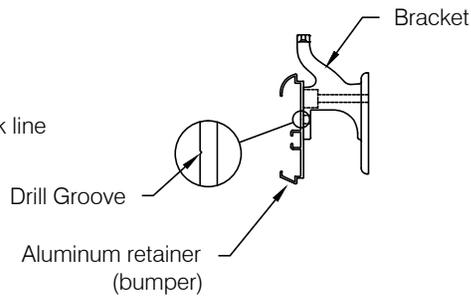


fig 2

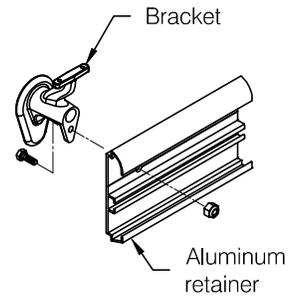
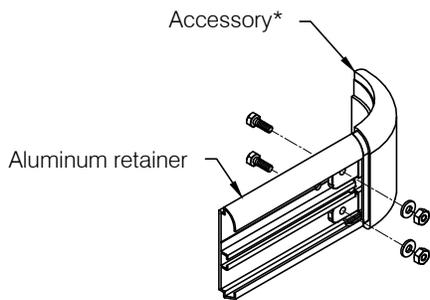


fig 3



* Wall return shown, outside corner similar

fig 4

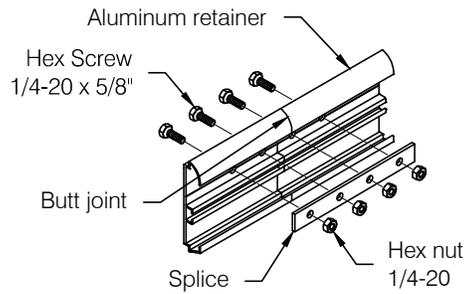


fig 5

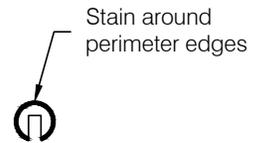


fig 6

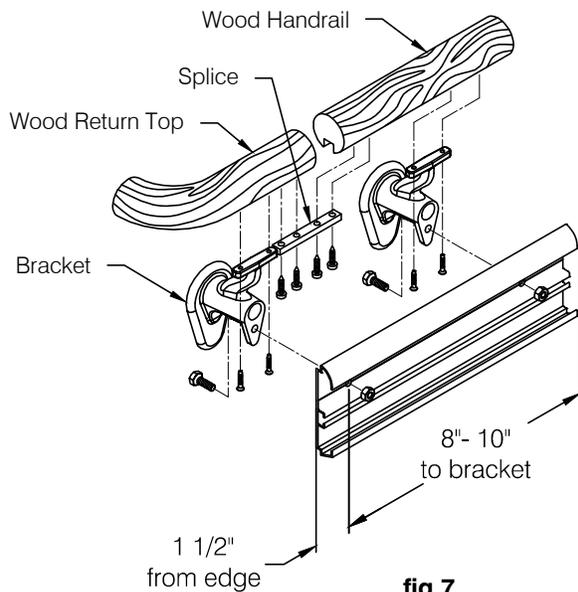


fig 7

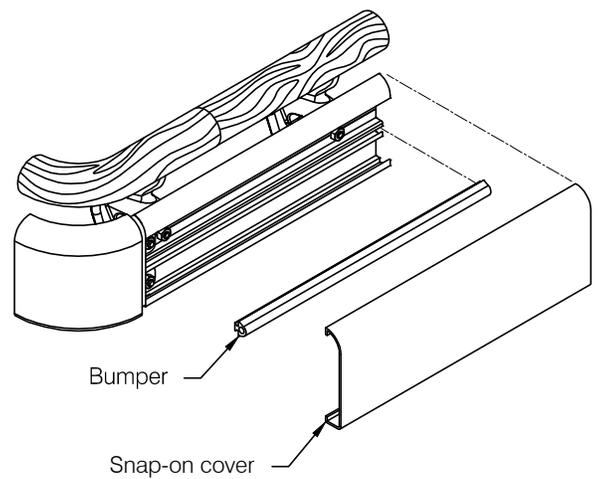


fig 8