



Menu



3.4 Aesthetic



- a) Tolerances for defects shall be in accordance with AWI 300 - Materials Standard.
- b) Where matching of "rustic" styles or finishes and/ or reclaimed materials is specified, number of permitted natural characteristics shall be as agreed to between owner/design professional and manufacturer/supplier.
- c) Residual marks, including adhesive and filler residue, on exposed and semiexposed surfaces shall be removed.
- d) Fasteners shall be concealed
- e) Fastener holes in pre-finished Product 4.8 mm [.188"] or smaller shall be filled by the installer with matching filler (putty) furnished by the manufacturer/supplier.
- f) Plugs are permitted provided they are sanded flush and compatible for color, grain, and grain direction.
- g) Fastener holes in Product larger than 4.8 mm [.188"] shall be filled by the installer with plugs furnished by the manufacturer/supplier.
- h) Unless otherwise indicated within this standard, Product shall be installed free of open joints, visible machine marks, cross sanding (excluding turned surfaces), tear-out, nicks, chips, scratches, layout lines, pencil lines, and/or natural defects exceeding the quantity and/or size limits defined in the AWI 300 - Materials Standard (latest edition).
- i) Exposed surfaces of all materials shall be free of tooling and chatter marks and sanded to a minimum of:

Premium

Custom

Economy

j) Wood selected to make up components shall be joined and glued. Joinery shall be inconspicuous.

k) Reveals shall be consistent between like parts throughout the system.

l) Profiles used for the same purpose, within the scope of this standard, shall be consistent throughout a project.

m) Telegraphing is not permitted.

3.4.1 Transparent Finish

a) Shall be finished with a finishing technology (See AWI Finishing Standard, latest edition) of the manufacturer/supplier's choice.

b) Exposed faces:

Premium	Custom	Economy
Shall be well-matched for color and grain between like and adjacent components of the same material	Shall be compatible for color and grain between like and adjacent components of the same material	Shall be compatible for color between like and adjacent components of the same material

3.4.2 Opaque Finish

a) Shall be finished with a finishing technology (See AWI Finishing Standard, latest edition) of the manufacturer/supplier's choice.

b) All defects in exposed faces shall be repaired, filled, and sanded before painting.

3.4.3 Stringers, Glued up

a) Exposed plies within stringers shall be of similar thickness.

b) Face plies shall be consistent between like parts within the stair.

c) Butt joints of plies in a stringer shall be staggered.

d) Stringer plies shall be glued and clamped to provide tight and flush joints.

e) For edge gluing requirements see Exceptions to Material Requirements, Exposed Stringers and Skirt Boards.

3.4.4 Treads (Including Winders)

a) Nosing projections and profiles shall be consistent throughout the stairway.

b) Grain shall run parallel to the leading edge of the tread.

3.4.4.1 Treads, Returned

a) Tread ends shall:

Premium	Custom	Economy
Be returned to match the leading edge of the tread and conceal all exposed end grain, including end grain of the return	Be returned to match the leading edge of the tread and conceal end grain of the tread	Have profiled ends match the leading edge of the tread

b) Shall be securely attached to ensure a tight fit to the end of the tread. Gaps shall not exceed 20 percent of the joint perimeter and shall not exceed:

Premium	Custom	Economy
.4 mm [.016"]	.4 mm [.016"]	.8 mm [.031"]

c) Shared surfaces of tread and return shall be sanded flush.

d) Grain orientation of curved returns shall:

Premium	Custom	Economy
Minimize exposed end grain on the edge	Minimize exposed end grain on the edge	Be at the option of the manufacturer/supplier

e) Returned ends of winders in curved stairways shall:

Premium	Custom	Economy
Have both edges of the return concentric with curve of stair	Have both edges of the return concentric with curve of stair	Be at the option of the manufacturer/ supplier

3.4.4.2 Treads, Spiral (Unsupported by Riser)

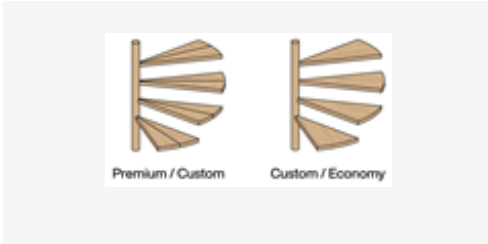
a) Grain direction shall (See Figure 98):

Premium	Custom	Economy
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Run parallel to the leading and trailing edge of the tread

Be at the option of the manufacturer/ supplier

Be at the option of the manufacturer/ supplier



3.4.4.3 Treads and Landings, Plank (Slab)

a) Exposed end grain is permitted.

3.4.5 Risers

a) Shall be a minimum of:

Premium	Custom	Economy
19.1 mm [.750"] thick	19.1 mm [.750"] thick	12.7 mm [.500"] thick

3.4.5.1 Risers, Curved (Bowed) or Starting Steps

a) Telegraphing caused by kerfing is not permitted.

b) Where available material lengths require construction to be of multiple components, joints in face material shall be inconspicuous.

3.4.6 Guard and Handrail Components

3.4.6.1 Newels

a) At connections to stair components other than rails, gaps shall not exceed:

Premium	Custom	Economy
.8 mm [.031"]	.8 mm [.031"]	1.6 mm [.063"]

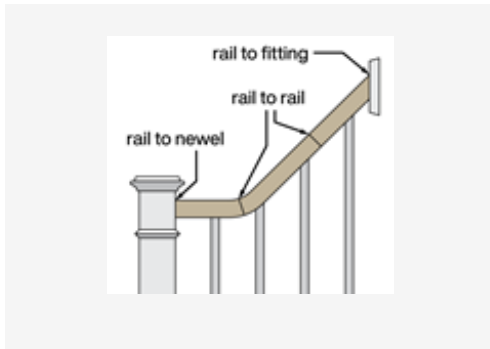
3.4.6.2 Handrails

a) All rail to rail and rail to fitting joints shall be sanded and/or sculpted for seamless profile alignment to the following flushness tolerances:

Premium	Custom	Economy
.4 mm [.016"]	.4 mm [.016"]	.8 mm [.031"]

b) At rail to newel, rail to rail, and rail to fitting, gaps (See Figure 102) shall not exceed 20 percent of the joint perimeter and shall not exceed:

Premium	Custom	Economy
.4 mm [.016"]	.4 mm [.016"]	.8 mm [.031"]



3.4.7 Fittings

3.4.7.1 Fittings, Transparent Finish

a) Fitting material shall be:

Premium	Custom	Economy
Compatible for color within fitting	Compatible for color within fitting	At the option of the manufacturer/supplier
Compatible for color with adjacent components	Compatible for color with adjacent components	

b) Finger joints are:

Premium	Custom	Economy
Not permitted	Not permitted	Permitted at lower plys of vertical drops of goosenecks

c) Countersunk metal splines are permitted, provided the slots have been filled and sanded flush.

3.4.7.2 Fittings, Opaque Finish

a) Shall be closed-grained wood.

b) Plugs at joints are permitted provided they are sanded flush.

c) Countersunk metal splines are permitted, provided the slots have been filled and sanded flush.

3.4.8 Guard, In-Fill

3.4.8.1 Wood Balusters and Wood In-Fill Joinery, Transparent and Opaque Finish

a) At round end (no shoulder) in drilled holes, gaps shall not exceed:

Premium	Custom	Economy
.4 mm [.016"]	.8 mm [.031"]	1.6 mm [.063"]

b) At round or square end (with shoulder), where not in plow, gaps shall not exceed:

Premium	Custom	Economy
.4 mm [.016"]	.8 mm [.031"]	.8 mm [.031"]

c) At square end in plow with fillet, gaps shall not exceed:

Premium	Custom	Economy
.8 mm [.031"]	.8 mm [.031"]	1.6 mm [.063"]

d) All joints in wood in-fill panels and panel systems shall be smooth and flush.

3.4.8.2 Balusters and Newels, Metal

a) Metal balusters and newels with shoes shall have:

Premium	Custom	Economy
Epoxy shoe centered on baluster or newel and fit to match pitch of stair	Epoxy shoe centered on baluster or newel and fit to match pitch of stair	Shoes at the option of the manufacturer/ supplier
Set screws not permitted	Set screws not permitted	Set screws are permitted at the option of the manufacturer/ supplier

b) Metal balusters and newels without shoes shall be:

Premium	Custom	Economy

Mortised to fit end of baluster or newel

Mortised to fit end of baluster or newel

At the option of the manufacturer/ supplier

3.4.8.3 Cable In-Fill

- a) All fitting and hardware components shall have compatible finish.
- b) Exposed cable ends are not permitted.
- c) All sections of cable in-fill shall be tensioned equally.
- d) Where cables pass through wood posts at vertical or horizontal transitions, post protectors shall be used.
- e) Spreader bars shall be spaced equally and securely attached.
- f) Bushings shall be used to isolate reactive materials and prevent electrolysis.

3.4.8.4 Glass In-Fill/Guards

- a) All hardware components shall have compatible finish.
- b) All glass shall be compatible in appearance.

3.4.8.5 Metal In-Fill/Guards

- a) At round end in drilled holes, gaps shall not exceed:

Premium	Custom	Economy
.8 mm [.031"]	.8 mm [.031"]	1.6 mm [.063"]

- b) Where not in plow and without shoes, gaps shall not exceed:

Premium	Custom	Economy
1.6 mm [.063"]	1.6 mm [.063"]	2.4 mm [.094"]

- c) Where in plow, gaps shall not exceed:

Premium	Custom	Economy
1.6 mm [.063"]	1.6 mm [.063"]	2.4 mm [.094"]

d) Metal in-fill balusters with shoes shall have:

Premium	Custom	Economy
Epoxy shoe centered on baluster or newel and fit to match pitch of stair	Epoxy shoe centered on baluster or newel and fit to match pitch of stair	Shoes at the option of the manufacturer/supplier
Set screws not permitted	Set screws not permitted	Set screws are permitted at the option of the manufacturer/supplier

e) Metal in-fill balusters without shoes shall be securely attached and:

Premium	Custom	Economy
Mortised to fit ends	Mortised to fit ends	Mortised at the option of the manufacturer/supplier

3.4.9 Well-Hole Trim

a) Outside corners shall be mitered (See Figure 100).

b) Moulded components at inside corners shall be (See Figure 100):

Premium	Custom	Economy
Coped	Coped	Mitered or coped

c) S4S at inside corners shall be butted (See Figure 100).

d) Joinery of well-hole trim requires (See Figure 100):

Premium	Custom	Economy
Exposed trimmed ends shall be miter returned	Exposed trimmed ends shall be profiled or miter returned	Exposed trimmed ends at the option of the installer
Multiple joints in running trim shall not be within 1219 mm [48"] of another joint in the run, including corners	Multiple joints in running trim shall not be within 914 mm [36"] of another joint in the run, including corners	Multiple joints in running trim shall not be within 610 mm [24"] of another joint in the run, including corners

e) Fasteners and fastening include the use of finish nails, trim screws, staples, pins, and/ or construction adhesive for inconspicuous fastening. Staples with a crown exceeding 4.8 mm

[.188"] wide are not permitted.

f) Exposed fasteners shall be inconspicuous.

g) Exposed fasteners shall be countersunk through the exposed material surface, kept to a minimum, and shall be:

Premium	Custom	Economy
Set in quirks and reliefs where possible	Set in quirks and reliefs where possible	Fastened in placement at the option of the installer



3.4.9.1 Nosing, Well-Hole

a) Nosing of landing tread, at the exit of a flight, shall be made to match the thickness, profile, and projection of the treads throughout stairway.

3.4.10 Staircase (Assembled Unit)

3.4.10.1 Stairs, Open-Cut Stringer

a) Stairs at open-cut stringers or skirt boards shall:

Premium	Custom	Economy
Be mitered to risers	Be mitered to risers	Attachment of risers at the option of the manufacturer/supplier

b) Treads at open-cut stringers shall:

Premium	Custom	Economy
Have tread return nosing applied with no visible fasteners	Have tread return nosing applied	Have end of tread profiled or applied tread return nosing at the option of the manufacturer/supplier
Have end of tread return nosing	Have end of tread return nosing profiled with visible end grain at	

returned with no
end grain visible

the option of the
manufacturer/supplier

- c) Brackets at open-cut stringers shall be mitered to risers.
- d) Tread returns shall be cut to eliminate end grain at the front edge.

3.4.10.2 Stairs, Closed Stringer or Open-Closed Stringer

- a) At closed stringers:

Premium	Custom	Economy
Treads and risers shall be mortised into stringers	Treads and risers shall be mortised into stringers	Butt joints are permitted

- b) Knee walls shall be capped.

[3.3 Structural](#)

[3.5 Fabrication](#)

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