

Architectural Woodwork Standards

SECTION - 8 WALL SURFACING

SECTION 8 ♦ WALL SURFACING (Including Wood Veneer, Stile and Rail Wood, Decorative Laminate, Solid Surface, and Solid Phenolic Products)

GENERAL

1 INFORMATION

1.1 GRADES

- 1.1.1 These standards are characterized in three Grades of quality that might be mixed within a single project. Limitless design possibilities and a wide variety of lumber and veneer species, along with overlays, high-pressure decorative laminates, factory finishes, and profiles are available in all three Grades.
- 1.1.2 **ECONOMY GRADE** defines the minimum quality requirements for a project's workmanship, materials, or installation and is typically reserved for woodwork that is not in public view, such as in mechanical rooms and utility areas.
- 1.1.3 **CUSTOM GRADE** is typically specified for and adequately covers most high-quality architectural woodwork, providing a well-defined degree of control over a project's quality of materials, workmanship, or installation.
- 1.1.4 **PREMIUM GRADE** is typically specified for use in those areas of a project where the highest level of quality, materials, workmanship, and installation is required.
- 1.1.5 **MODIFICATIONS** by the contract documents shall govern if in conflict with these standards.

1.2 BASIC CONSIDERATIONS

- 1.2.1 **ACCEPTABLE REQUIREMENTS** of lumber and/or sheet products used within this woodwork product section are established by Sections 3 and 4, unless otherwise modified herein.
- 1.2.2 **CONTRACT DRAWINGS** and/or **SPECIFICATIONS**, furnished by the design professional, shall clearly indicate or delineate all material, fabrication, installation, and applicable building code/regulation requirements.
- 1.2.3 **EXPOSED SURFACES**
 - 1.2.3.1 All visible surfaces of architectural wall surfacing.
- 1.2.4 **SEMI-EXPOSED SURFACES** - N/A
- 1.2.5 **CONCEALED SURFACES**
 - 1.2.5.1 All non-visible surfaces attached to and/or covered by another.
 - 1.2.5.2 All non-visible blocking or spacers used for attachment.
- 1.2.6 **GRADE LIMITATIONS**
 - 1.2.6.1 **SOLID-SURFACE** wall surfacing is offered only in **CUSTOM** and **PREMIUM GRADE**.
 - 1.2.6.2 **SOLID-PHENOLIC CORE** wall surfacing are offered only in **PREMIUM GRADE**.
- 1.2.7 **FIRE-RATED OPTIONS** and **CONSIDERATIONS**
 - 1.2.7.1 **INTUMESCENT COATINGS** for either opaque or transparent wood finishes are formulated to expand or foam when exposed to high heat, and create an insulating effect that reduces the speed of the spread of flame. Improvements are continually being made to these coatings.
 - 1.2.7.1.1 Consequently, the specifier must ascertain whether they will be permitted under the code governing the project, the relative durability of the finish, and the effect of the coating on the desired color of the finished product.
 - 1.2.7.2 **FIRE-RETARDANT TREATED LUMBER** might affect the finishes intended to be used on the wood, particularly if transparent finishes are planned.
 - 1.2.7.2.1 The compatibility of any finish should be tested before it is applied.

GENERAL

1.2 BASIC CONSIDERATIONS (continued)

1.2.7 FIRE-RATED OPTIONS and CONSIDERATIONS (continued)

1.2.7.3 **BUILT-UP CONSTRUCTION**, using a veneer applied to a fire-retardant core in lieu of solid lumber, is often advisable where a fire rating is required.

1.2.7.3.1 The fire rating of the core material determines the rating of the assembled panel. Fire-retardant veneered panels must have a fire-retardant core. Particleboard and medium-density fiberboard (MDF) cores are typically available with a Class I (Class A) rating and can be used successfully with veneer or fire-rated high-pressure decorative laminate faces.

1.2.7.4 **CLASS I FIRE-RATED ARCHITECTURAL WALL SURFACE ASSEMBLIES** are available in veneered wood and HPDL; however, there are misconceptions as to what constitutes a Class I Fire-Rated assembly.

1.2.7.4.1 Wall surfacing certified as a fire-rated assembly (versus having simply been built with a fire-rated surface) shall be specified as a "Class I Fire-Rated Wall Surface Assembly."

1.2.7.4.2 The term "Class I Fire-Rated Wall Surface Assembly" shall mean that the entire wall panel assembly - including surface materials, backer, core, and adhesive - has been tested and is certified as a Class I Fire Rating by an authorized organization, such as Underwriters Laboratories, and must be manufactured by an approved company of the certifying agency.

1.2.7.4.3 Manufacturers of "Class I Fire-Rated Wall Surface Assemblies" require specific methods of installation and trimming in order to label and certify their product.

1.2.7.4.4 Architects/specifiers/design professionals desiring to use Class I Fire-Rated Wall Surface Assembly should coordinate such with an approved manufacturer during the design stage.

1.2.8 Some **HPDLs** utilize a **WHITE BACKGROUND** paper to achieve the high fidelity, contrast, and depth of color of their printed pattern, while leaving a white line at exposed edges, which is extremely noticeable with darker colors.

1.2.9 WOOD SPECIES SELECTION

1.2.9.1 The first step in selection starts by looking at "hand samples"; pieces of veneer or lumber representing a particular species, but not necessarily a particular tree or log.

1.2.9.1.1 Wood is a natural material (unlike a manufactured product), which varies from tree to tree in its color and texture.

1.2.9.1.1.1 Soil conditions, microclimates, adjacent vegetation and wildlife, genetic heredity, and forestry practice all affect each log.

1.2.9.2 Rather than simply choosing an appropriate wood for its color, one should also consider the size and availability of the species.

1.2.9.2.1 A species that grows in smaller diameter, with shorter logs, lends itself to furniture and smaller projects, whereas an abundant species that grows in large diameter lends itself more to larger public spaces.

1.2.9.2.1.1 Many projects have run into difficulties because the species availability was not compatible with the project's needs.

1.2.9.3 For **OPAQUE** finish, medium-density fiberboard (MDF) is suggested for cost savings and an optimum paintable surface.

1.2.9.3.1 Close-grain hardwood is allowed; however, extra preparation might be required by the finisher, as there might be grain show-through, split veneer joints, and other wood characteristics not present in MDF.

GENERAL

1.2 BASIC CONSIDERATIONS (continued)

1.2.10 WOOD-VENEER WALL SURFACING

1.2.10.1 Requires the **DESIGN PROFESSIONAL** to specify the desired:

1.2.10.1.1 **SPECIES** of veneer

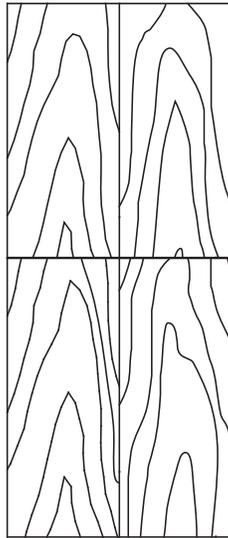
1.2.10.1.2 Method of **SLICING** (plain, quarter, rotary, or rift)

1.2.10.1.3 **MATCHING OF VENEER LEAVES** (book, slip, or random)

1.2.10.1.4 **MATCHING OF VENEER LEAVES WITHIN A PANEL FACE** (running, balanced, or center-balanced)

1.2.10.1.5 **MATCHING BETWEEN PANELS** (non-sequenced, sequenced, or blueprint)

1.2.10.1.6 **END-MATCHING**



1.2.10.1.7 **GRAIN DIRECTION**, if other than vertical

1.2.10.1.8 **FIRE-RETARDANT** rating, if required

1.2.10.1.9 For **SELECTED FLITCHES**, the sources, gross footage of flitches, and cost per square foot

1.2.10.2 **FIGURE** is not a function of a species grade, and any special desires must be specified.

1.2.10.3 **VENEER SLICING** establishes the grain pattern appearance - see **SECTION 4**.

1.2.10.4 **VENEER FLITCH** establishes control of the specific characteristics of the wood veneer.

1.2.10.4.1 A flitch comes from one half of a log (usually 10" [254 mm] to 12" [305 mm] in diameter) sawn open through the center. This half log (cant) is then sliced into thin pieces of veneer (called leaves) and kept in order to form a flitch. When stacked back in order after slicing, the outline of the original log is clearly visible.

1.2.10.4.1.1 Each flitch will be different and will have a distinct identity number called a "flitch number".

1.2.10.4.2 In reviewing flitches, a veneer supplier will show you "live samples". These will be three leaves of veneer pulled from each flitch; one from near the top, one from the middle, and one from near the bottom. By reviewing these three full-length leaves of veneer, you will have a pretty good idea of the color, grain, and character that will appear in that flitch. The live samples will have the flitch number and the total square footage of that flitch written on them.

GENERAL

1.2 BASIC CONSIDERATIONS (continued)

1.2.10 WOOD-VENEER WALL SURFACING (continued)

1.2.10.4 VENEER FLITCH (continued)

1.2.10.4.2 In reviewing flitches (continued)

1.2.10.4.2.1 When a specific flitch is chosen for a project, its source, number, total square footage, and cost allowance need to be included within the project specifications.

1.2.10.4.3 The rule of thumb is that you need 3 sq ft (2787 sq cm) of raw veneer for each square foot of required finished panel. For example, if your project requires 10,000 sq ft (9290304 sq cm) of veneer paneling, you should specify 30,000 sq ft (27870912 sq cm) of raw veneer.

1.2.10.4.3.1 This means finding enough acceptable flitches that total 30,000 sq ft (27870912 sq cm) and incorporating those flitch numbers into the specifications.

1.2.10.4.4 The length of a flitch in relation to a project's requirements is important. The flitch needs to be at least 6" (152 mm) longer than the panel requirements.

1.2.10.4.4.1 On the other hand, choosing a 13' (3962 mm) flitch for a 7' (2134 mm) panel height requirement creates excessive waste and increased cost.

1.2.10.5 **MATCHING of WOOD VENEER LEAVES WITHIN A PANEL FACE:** Just as the different veneer-cutting methods can alter grain characteristics, matching can alter the appearance or match of a given panel or an entire installation. There is a wide choice in the types of matches available in hardwoods, and basically, the method of cutting has no bearing in matching. See Section 4 for further information.

1.2.10.6 MATCHING of PANELS WITHIN A ROOM

1.2.10.6.1 Most plywood distributors maintain an extensive inventory of Architectural Grade flitch stock in all the principal species.

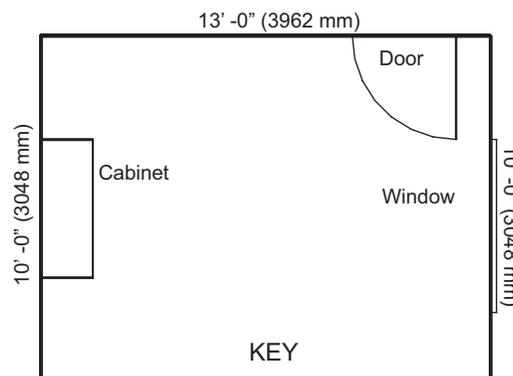
1.2.10.6.1.1 Architectural plywood denotes the use of specially selected veneers and/or special preparation of the faces, normally at an increase in cost.

1.2.10.6.2 Panels shall be laid out and installed in a **RUNNING MATCH**.

1.2.10.6.2.1 If **BALANCED-MATCH** for the layout and installation is specified, all panels in an elevation shall be of the same width.

1.2.10.6.3 Panels might be of a different size in the same elevation.

1.2.10.6.4 The basic varieties of sequence-matched architectural panels and examples of their room layout are as follows (based on the following typical room key):



GENERAL

1.2 BASIC CONSIDERATIONS (continued)

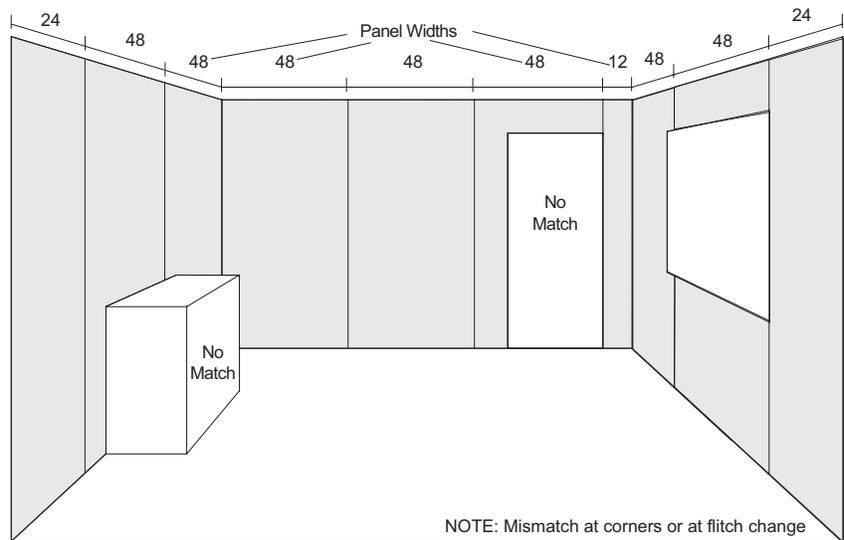
1.2.10 WOOD-VENEER WALL SURFACING (continued)

1.2.10.6 MATCHING of PANELS WITHIN A ROOM (continued)

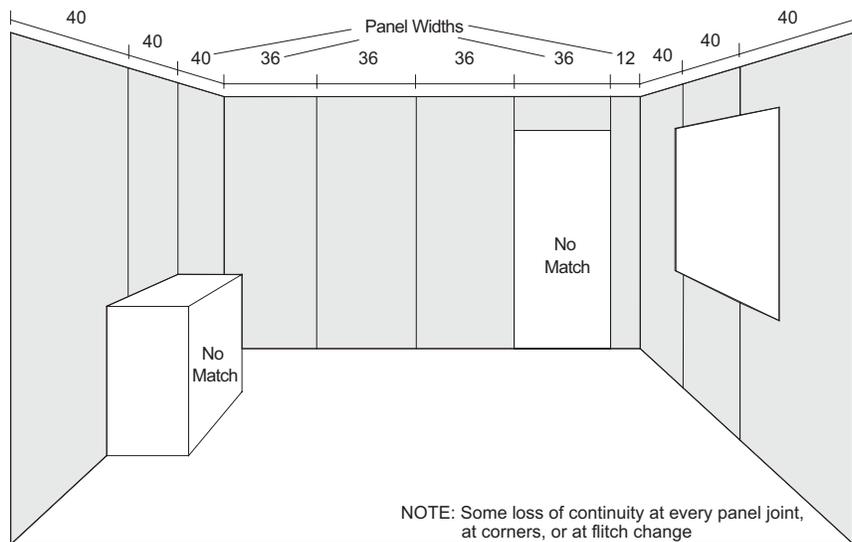
1.2.10.6.5 **PREMANUFACTURED PANEL SETS**, with full or selectively reduced width utilization, composed of a specific number of sequence-matched and numbered panels based on a per room basis for net footage selected from a manufacturer's available inventory. Paneling used from room to room may vary in color and grain characteristics.

1.2.10.6.5.1 Premanufactured sequence-matched panels are usually only available in 48" x 96" or 120" (1219 mm x 2438 mm or 3048 mm) sheets in sets varying from 6-12 panels. If more than one set is required, matching between sets cannot be expected. Similarly, doors or components often cannot be fabricated from the same set, resulting in possible mismatch.

1.2.10.6.5.2 **FULL WIDTH** panel utilization.



1.2.10.6.5.3 **SELECTIVELY REDUCED** panel utilization.



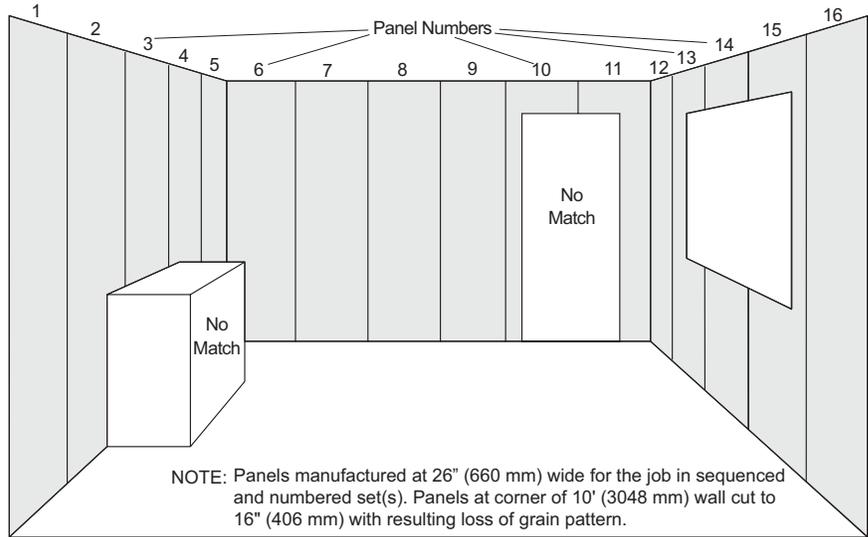
GENERAL

1.2 BASIC CONSIDERATIONS (continued)

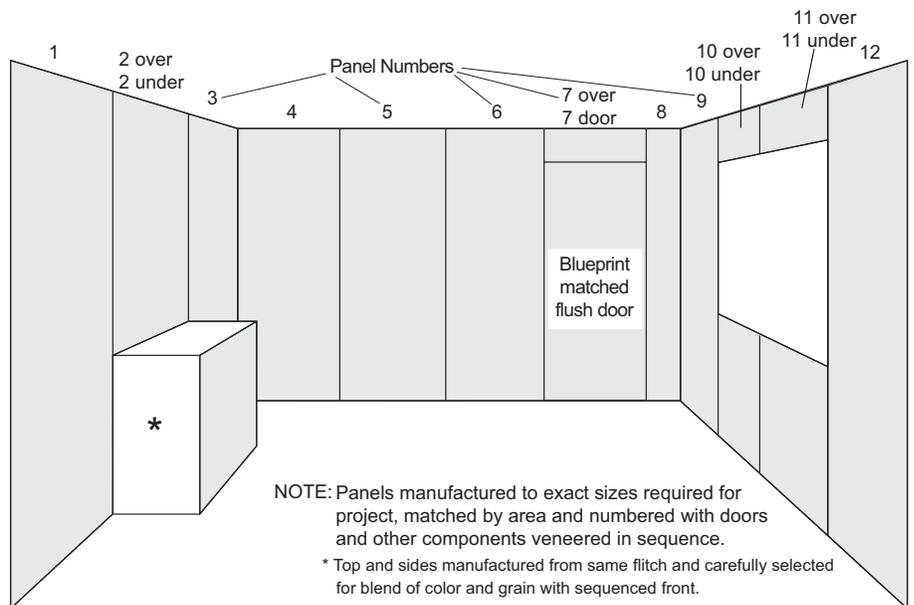
1.2.10 WOOD-VENEER WALL SURFACING (continued)

1.2.10.6 MATCHING OF PANELS WITHIN A ROOM (continued)

1.2.10.6.6 **MADE-TO-ORDER, SEQUENCE-MATCHED PANELS** are manufactured to exact sizes based on the project's net footage and height needs. The customer may request flitch samples from which to select the flitch to be employed, or the supplier may make the flitch selection if so requested; either way, the flitch shall be large enough to do the job.



1.2.10.6.7 **MADE-TO-ORDER, BLUEPRINT-MATCHED PANELS** and **COMPONENTS** are manufactured to the exact sizes the manufacturer determines from the blueprints, clipping and matching each individual face to the project's specific needs. Each face will be matched in sequence with adjacent panels, doors, transoms, and cabinet faces as needed to provide for continuity. Again, unless specified otherwise, running match will be furnished.



GENERAL

1.2 **BASIC CONSIDERATIONS** (continued)

1.2.10 **WOOD-VENEER WALL SURFACING** (continued)

1.2.10.6 **MATCHING of PANELS WITHIN A ROOM** (continued)

1.2.10.6.7 **MADE-TO-ORDER, BLUEPRINT-MATCHED PANELS** (continued)

1.2.10.6.7.1 Project specifications should require a single source supplier.

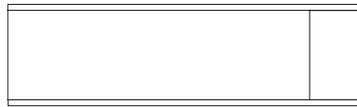
1.2.10.6.7.2 Components such as doors, windows, and cabinets plus overall room dimensions are the variables that determine panel width. Balanced-match panels (e.g., 3, 4, 5, 6, or 7 leaves per panel) should be specified rather than center-balanced-match panels (e.g., 4 or 6 leaves per panel) because the former will decrease the leaf-width variable from panel to panel. Therefore, grain continuity is maximized, which enhances the overall aesthetics.

1.2.10.7 **EDGEBANDING** options:

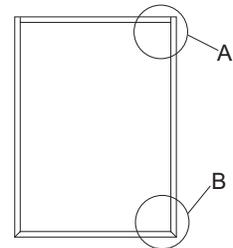
1.2.10.7.1 **VENEER** banded with wrap example:



1.2.10.7.2 **INSET SOLID WOOD** banded:

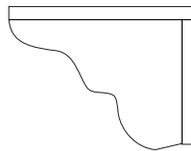


1.2.10.7.3 **APPLIED SOLID WOOD** banded with corner joint options:

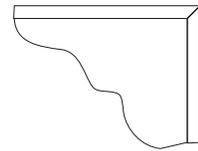


1.2.10.7.4 **APPLIED SOLID WOOD** banding joint options:

1.2.10.7.4.1 Unless specified otherwise, choice is the manufacturer's option.

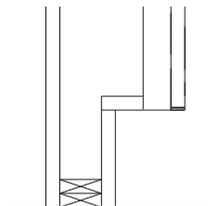


A - Lapped



B - Mitered

1.2.10.7.5 **NOTE:** For durability, the bottom edge of veneered wall surfacing is edgebanded and finished.



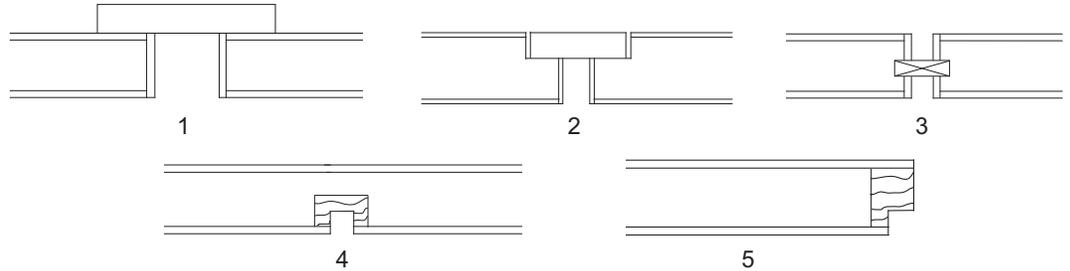
GENERAL

1.2 BASIC CONSIDERATIONS (continued)

1.2.10 WOOD-VENEER WALL SURFACING (continued)

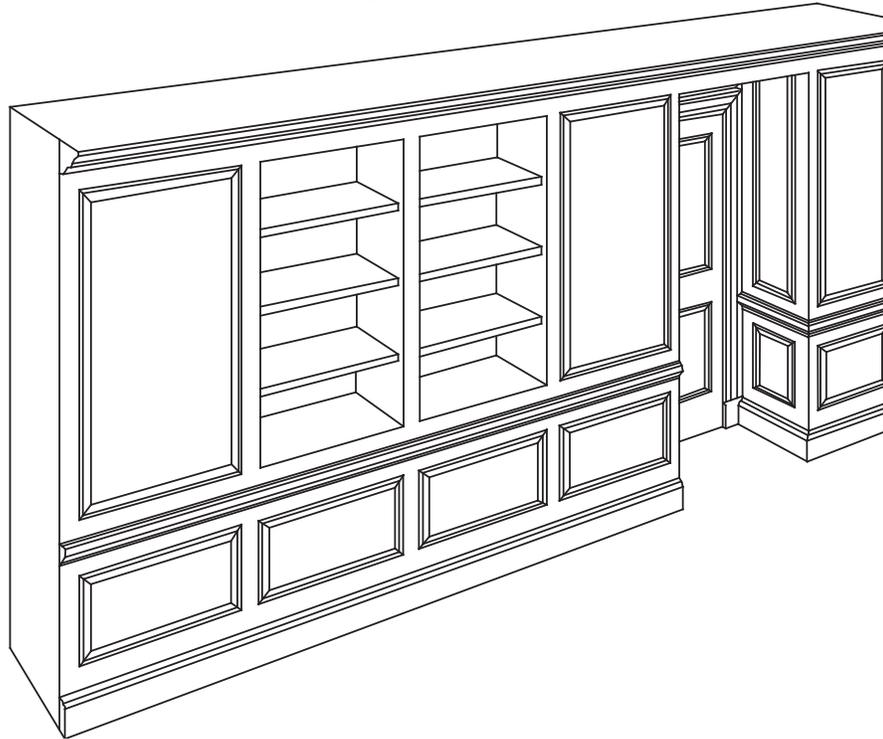
1.2.10.7 EDGE-BANDING options (continued)

1.2.10.7.6 REVEALS and REVEAL JOINT options:



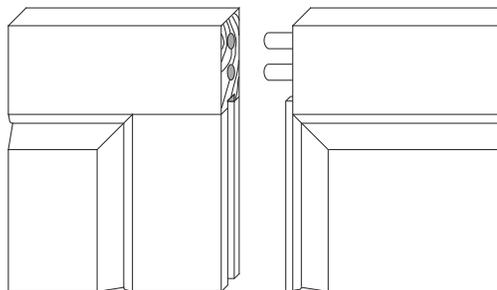
1.2.11 STILE and RAIL WOOD WALL SURFACING

1.2.11.1 Example of stile and rail wall surfacing:



1.2.11.2 Examples of JOINT and TRANSITION options:

1.2.11.2.1 Loose PLANT JOINTS of built-up sections:



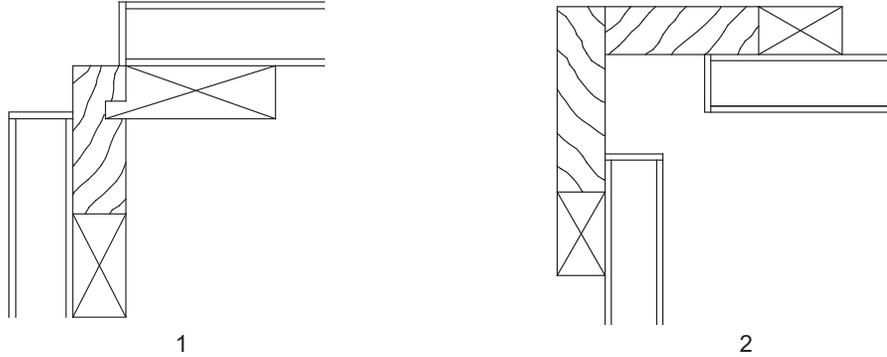
GENERAL

1.2 BASIC CONSIDERATIONS (continued)

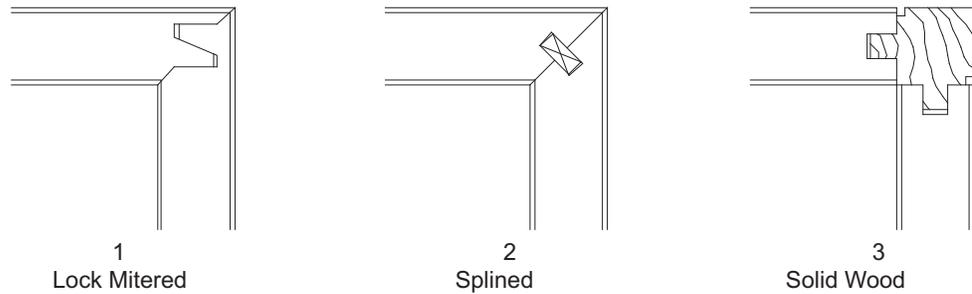
1.2.11 STILE and RAIL WOOD WALL SURFACING (continued)

1.2.11.2 Examples of JOINT and TRANSITION (continued)

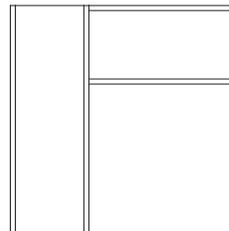
1.2.11.2.2 SOLID WOOD REVEAL CORNERS:



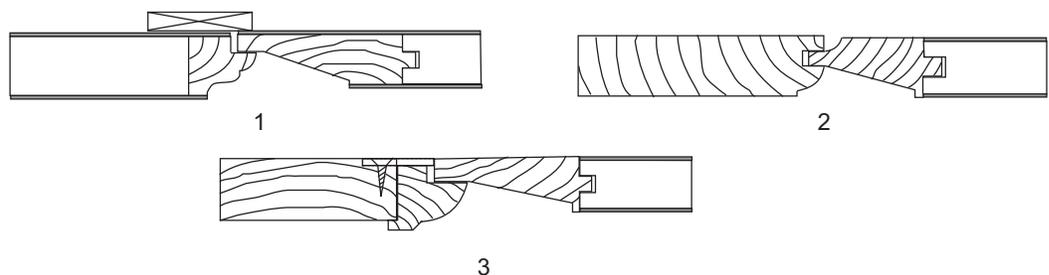
1.2.11.2.3 SHOP-PREPARED OUTSIDE CORNERS:



1.2.11.2.4 CUT TO FIT INSIDE CORNER:



1.2.11.3 Examples of STILE/RAIL and PANEL buildups:



1.2.12 DECORATIVE LAMINATE WALL SURFACING

1.2.12.1 **HIGH-GLOSS HPDL** might telegraph minor core and surface imperfections.

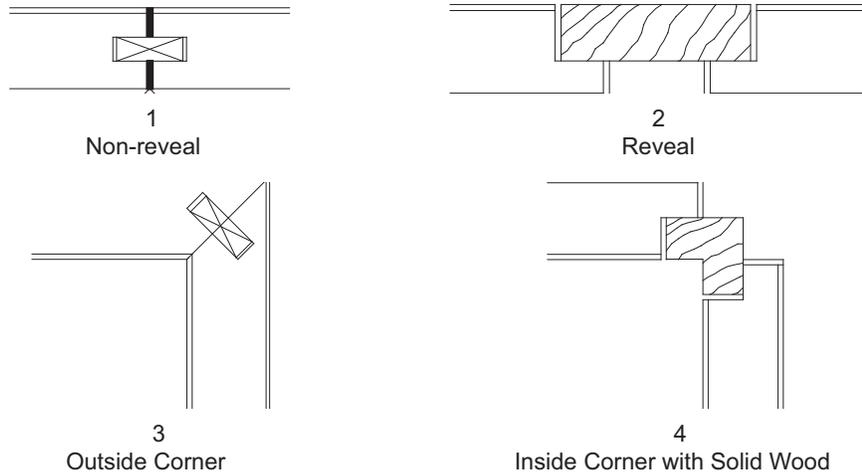
1.2.12.2 **HPDL** panels and doors are not recommended for exterior use due to the potential differentials in humidity between the faces.

GENERAL

1.2 BASIC CONSIDERATIONS (continued)

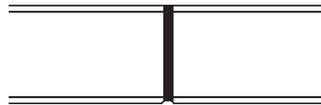
1.2.12 DECORATIVE LAMINATE WALL SURFACING (continued)

1.2.12.3 Examples of **SHOP-PREPARED** joint and transition options:

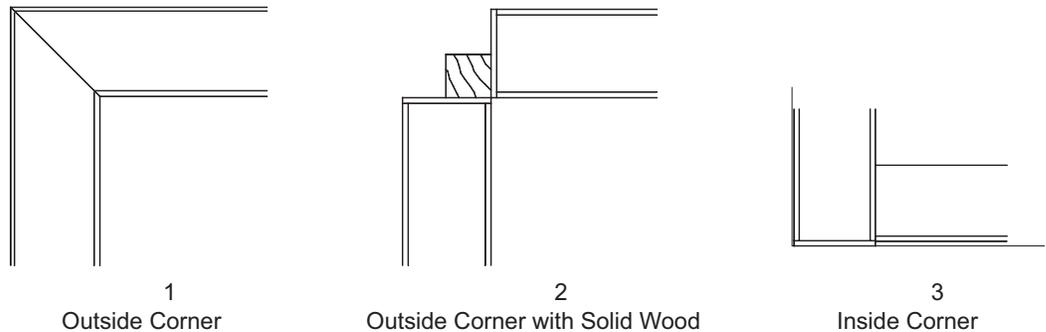


1.2.12.4 Examples of **FIELD-PREPARED** joint and transition options:

1.2.12.4.1 NON-REVEAL JOINTS:



1.2.12.4.2 CORNER JOINTS:



1.2.12.5 Requires the **DESIGN PROFESSIONAL** to specify the desired:

1.2.12.5.1 LAMINATE

1.2.12.5.1.1 Manufacturer

1.2.12.5.1.2 Pattern

1.2.12.5.1.3 Sheen

1.2.12.5.1.4 Pattern direction

1.2.12.5.1.4.1 With lack of specification, pattern direction will be vertical at panels and optional at joints.

1.2.13 SOLID-SURFACE WALL SURFACING

1.2.13.1 Is **NOT** recommended for **EXTERIOR USE** by some manufacturers. Design professionals should coordinate material applications within the manufacturer's guidelines.

GENERAL

1.2 BASIC CONSIDERATIONS (continued)

1.2.13 SOLID-SURFACE WALL SURFACING (continued)

1.2.13.2 Use of the same batch materials is important at adjacent sheets to lessen color variations.

1.2.13.3 Thicknesses are nominal and might be a fabrication concern where thickness is critical.

1.2.14 SOLID-PHENOLIC WALL SURFACING

1.2.14.1 Is recommended for **EXTERIOR APPLICATIONS**.

1.3 RECOMMENDATIONS

1.3.1 INCLUDE IN DIVISION 09 OF THE SPECIFICATIONS:

1.3.1.1 For **JOBSITE FINISHING - BEFORE FINISHING**, all exposed portions of woodwork shall have handling marks or effects of exposure to moisture, removed with a thorough, final sanding over all surfaces of the exposed portions using an appropriate grit sandpaper, and shall be cleaned before applying sealer or finish.

1.3.1.2 At **CONCEALED SURFACES** - Architectural woodwork that might be exposed to moisture, such as those adjacent to exterior concrete walls, shall be back-primed.

1.3.2 **THOROUGHLY REVIEW** Sections 3 and 4, especially Basic Considerations, Recommendations, Acknowledgements, and Industry Practices within Part 1 for an overview of the characteristics and minimum acceptable requirements of lumber and/or sheet products that might be used herein.

1.3.3 **CONTRACT DOCUMENTS** (plans and/or specifications) shall require that all structural members, grounds, blocking, backing, furring, brackets, or other anchorage which becomes an integral part of the building's walls, floors, or ceilings, required for the installation of architectural woodwork is not to be furnished or installed by the architectural woodwork manufacturer or installer.

1.3.4 **SPECIFY** requirements for:

1.3.4.1 Fire ratings

1.3.4.2 Special code compliance

1.3.4.3 Special molding profile

1.3.4.4 Special veneer figure or panel match

1.3.4.5 Special solid surface finish

1.3.5 **BLEACHED VENEERS** might cause finishing problems.

1.3.6 **COMPOSITE CORES** (e.g., particleboard, medium-density fiberboard, agrifiber, or combination core products) are recommended in lieu of veneer core, because these cores produce a smoother exposed face, vary less in thickness, and are less likely to warp.

1.3.7 **HIGH-GLOSS HPDL** might telegraph minor core and surface imperfections.

1.3.8 **HPDL** panels and doors are not recommended for exterior use due to the potential differentials in humidity between the faces.

1.4 ACKNOWLEDGEMENTS

1.4.1 Use of **HPDL-BACKED WOOD VENEERS** is permitted, if so specified or otherwise approved.

1.4.2 Use of **CONTINUOUS PRESSURE LAMINATES** (melamine and polyester-based) as an alternative to HPDL is permitted, provided they conform to the same physical properties and thickness as required for HPDL.

1.4.3 **FURRING**, when required, shall be in accordance with Title 8-803.1 of the Uniform Building Code (UBC), which currently requires furring be a maximum of 1-3/4" (44.5 mm) in thickness from the face of the wall to the back of the wall paneling. It also requires that there be fire-blocking at a maximum of 96" (2438 mm) on center or that the voids created by the furring be filled with inert material.

GENERAL

1.5 INDUSTRY PRACTICES

- 1.5.1 **STRUCTURAL MEMBERS**, grounds, blocking, backing, furring, brackets, or other anchorage that becomes an integral part of the building's walls, floors, or ceilings, that are required for the installation of architectural woodwork are not furnished or installed by the architectural woodwork manufacturer or installer.
- 1.5.2 **WALL, CEILING**, and/or opening variations in excess of 1/4" (6.4 mm) or **FLOORS** in excess of 1/2" (12.7 mm) in 144" (3658 mm) of being plumb, level, flat, straight, square, or of the correct size are not acceptable for the installation of architectural woodwork, nor is it the responsibility of the installer to scribe or fit to tolerances in excess of such.
- 1.5.3 **BACK-PRIMING** of architectural woodwork is not the responsibility of the manufacturer and/or installer, unless the material is being furnished prefinished.
- 1.5.4 **RADIUS MOLDINGS** are laminated and formed, preshaped, or machined to the radius and fabricated in the longest practical lengths to minimize field joints.
- 1.5.5 **WAINSCOT** is defined as being 48" (1219 mm) in height above the finished floor.
- 1.5.6 **WALL SURFACING** with a defined grain and/or pattern is installed vertically.

PRODUCT

2 SCOPE

- 2.1 All interior, decorative, solid or veneered wood, laminated plastic, solid-phenolic composite, and solid-surface architectural wall surfacing or coverings.

2.2 TYPICAL INCLUSIONS

- 2.2.1 All exposed decorative solid or veneered wood paneling
- 2.2.2 All exposed decorative laminated plastic wall covering
- 2.2.3 All exposed decorative solid-surface wall covering
- 2.2.4 All wood doors required to be blueprint-matched to wood paneling, not specified otherwise
 - 2.2.4.1 If doors are specified to be furnished by others, the paneling supplier shall control matching
- 2.2.5 If installed, all furring, blocking, shims, and methods of attachment from the face of the wall out
- 2.2.6 All exposed decorative solid-phenolic composite wall surface
- 2.2.7 Class I Fire-Rated HPDL Wall Surfacing Assembly
- 2.2.8 Class I Fire-Rated Veneered-Wood Wall Surfacing Assembly

2.3 TYPICAL EXCLUSIONS

- 2.3.1 Casework soffits or filler panels
- 2.3.2 Room, closet, or access doors, unless sequence- and blueprint-matched with paneling
- 2.3.3 Any bucks or grounds
- 2.3.4 Composition or plaster wallboards or coverings
- 2.3.5 Any structural wood framing or plywood
- 2.3.6 Exposed base other than wood, HPDL, or solid surface

3 DEFAULT STIPULATIONS

- 3.1 **SOLID-WOOD WALL SURFACING** - unless otherwise specified or detailed, all work shall be **CUSTOM GRADE** of paint-grade hardwood for opaque finish.
- 3.2 **VENEERED-WOOD WALL SURFACING** - unless otherwise specified or detailed, all work shall be **CUSTOM GRADE** of paint-grade hardwood for opaque finish.
- 3.3 **DECORATIVE LAMINATE SURFACING** - unless otherwise specified or detailed, all work shall be **CUSTOM GRADE** with retention moldings at all field joints. Colors to be selected from non-premium-priced standard patterns and texture.

PRODUCT

MATERIAL, MACHINING, AND ASSEMBLY RULES (continued)

3 DEFAULT STIPULATIONS (continued)

- 3.4 **SOLID-SURFACE WALL SURFACING** - unless otherwise specified or detailed, all work shall be **CUSTOM GRADE**, 1/4" (6.4 mm) minimum thickness, directly applied, with 1/4" x 1" (6.4 mm x 25.4 mm) trim bats at vertical butt joints on continuous horizontal runs. Colors to be selected from non-premium-priced standard patterns.
- 3.5 **SOLID-PHENOLIC WALL SURFACING** - unless otherwise specified or detailed, all work shall be **CUSTOM GRADE**, 1/8" (3 mm) minimum thickness with 1/8" x 1" (3 mm x 25 mm) battens at vertical joints on continuous horizontal runs. Colors to be selected from the manufacturer's standard patterns and colors.

4 RULES - The following RULES shall govern unless a project's contract documents require otherwise.

These rules are intended to provide a well-defined degree of control over a project's quality of materials and workmanship.

Where E, C, or P is not indicated, the rule applies to all Grades equally.

ERRATA, published on the Associations' websites at www.awinet.org, www.awmac.com, or www.woodworkinstitute.com, shall **TAKE PRECEDENCE OVER THESE RULES**, subject to their date of posting and a project's bid date.

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DESCRIPTION		E	C	P
8	4.1 GENERAL			
	4.1.1	Aesthetic GRADE RULES apply only to the faces visible after installation.		
	4.1.2	LUMBER shall conform to the requirements established in Section 3.		
	4.1.3	SHEET PRODUCTS shall conform to the requirements established in Section 4.		
	4.1.4	BACKING SHEET shall conform to the requirements established in Section 4.		
	4.1.5	EXPOSED, SEMI-EXPOSED, and CONCEALED surfaces shall be as listed under 1.2 BASIC CONSIDERATIONS of this section.		
	4.1.6	For the purpose of this standard, a BALANCED PANEL is one that is free from warp that affects serviceability for its intended purpose.		
	4.1.7	FURRING shall be used as required, and:		
	4.1.7.1	It shall be in accordance with applicable codes and regulations for maximum thickness, fire blocking, and void fills.		
	4.1.8	SURFACING with a defined grain and/or pattern shall be installed with the grain or pattern direction running vertically.		
	4.1.9	WAINSCOT shall be 48" (1219 mm) in height above the finished floor.		
	4.1.10	Where MULTIPLE OPTIONS are permitted, it shall be the manufacturer's choice.		
	4.1.11	FIRE-RETARDANT requirements shall be specified.		
	4.1.12	SPECIFIC PROFILE , if required, shall be specified or drawn.		
	4.1.13	For TRANSPARENT FINISHED WOOD , if the species is not specified, use of hardwood or softwood (panel product or solid stock) of ONE SPECIES FOR THE ENTIRE PROJECT is permitted.		
	4.1.14	HOT-MELT-APPLIED HPDL edgbanding shall be primed before application for proper adhesion, unless:		
4.1.14.1	Hot-melt adhesive has been especially formulated for the primerless application of HPDL.			
4.1.15	Where GLUING or LAMINATION occurs:			
4.1.15.1	DELAMINATION or SEPARATION shall not occur beyond that which is allowed in Sections 3 & 4.			
4.1.15.2	Use of CONTACT ADHESIVE is not permitted.			
4.1.16	FIRST-CLASS WORKMANSHIP is required in compliance with these standards.			