

1. **Design Criteria:**

- a. This section applies to architectural wood shelving, not shelving inside casework cabinets.
- b. Manufactured case goods shall not use particle board.
- c. Projects pursuing LEED certification shall consider FSC wood and rapidly renewable materials.
- d. Lab shelving shall require a lip to prevent chemicals from spilling from edge and shelving in offices shall be attached to the wall brackets.
- e. Chemical or stain resistant surface requirements must be specified.
- f. Laboratory shelving shall be moisture and chemical resistant. Review specific agents in use where shelves are located with UVM project manager.
- g. The maximum allowed lengths of adjustable wood shelving shall conform to AWI Standards for Adjustable shelf length for the applied load capacity.

2. **References**

- a. AWI (Architectural Woodworking Institute) Architectural Woodwork Standard.
- b. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- c. ASTM D3023 and C1378 for stain resistance.
- d. AWI (QCP) – Quality Certification Program; current edition at [www.awiqcp.com](http://www.awiqcp.com)
- e. HPVA HP-1 – American National Standard Hardwood and Decorative Plywood; 2009.
- f. NEMA LD 3 – High-Pressure Decorative Laminates; 2005.
- g. SEFA #3 – Recommendations for Work Surfaces.

3. **Required Submittals:**

- a. All equipment and product information.
- b. All product warranty information.
- c. Shop Drawings: Comply with AWI recommendations. Show dimensioned layout, seam locations, edge details, and connections.
- d. Verification Samples - Shelves:  $\geq 12 \times 12$  inches, fully finished or as required by the design consultant and/or owner.
- e. Verification Samples - Shelf Hardware:  $\geq 12$  inches or samples of the actual products, with the specified finish and color or a color chart if not specified for selection by the design consultant and/or owner.

Revision Date: 07/28/2021

---

4. **Products, Materials & Equipment:**

- a. Architectural Fixed Wood Shelving
  - i. AWI Quality Standard: Custom Grade.
  - ii. Wood for shelving shall be veneered MDF, MDO, close-grain hardwood plywood or solid stock.
- b. Architectural Adjustable Wood Shelving
  - i. AWI Quality Standard: Custom Grade
  - ii. Shelving Hardware – Knap & Vogt 82/182 Series double standards and brackets.
  - iii. Wood for shelving shall be veneered MDF, MDO, close-grain hardwood plywood or solid stock.
- c. Architectural Wood Shelving – Plastic Laminate Finished:
  - i. AWI Quality Standard for Material and Fabrication: Custom Grade.
  - ii. Plastic Laminate: ANSI/NEMA LD-3, Quality: Grade HGS.

5. **Installation, Fabrication, and Construction:**

- a. Fabricate shelves so they can be turned and inverted to equalize wear and sag.
- b. Shelf supports for bored holes shall either include 5mm metal pin or double 5mm plastic pins and meet or exceed the maximum shelf-load requirement of 200 lbs.
- c. The front edge of engineered wood shelving shall be edge banded.
- d. Shelves shall be designed to support a weight not to exceed 200 lbs on any one shelf. School, Library, or book shelving shall be sized to carry no more than 50 lbs per square foot. All other shelving shall be sized to carry no more than 40 lbs per square foot.
- e. Shelf deflection shall be limited to ¼” in a 36” span.
- f. Shelf cores shall be a minimum of ¾” thick.
- g. Fixed Shelves over 48 inches long shall be supported on cleats at the back or have a center support.

6. **Warranties:**

- a. Manufacturer’s standard warranties on products and equipment
- b. Installer’s standard warranty on installation