

## Division 6 – Wood, Plastics and Composites

- 06.1. Products shall be free of urea-formaldehyde binders, copper or arsenic. Avoid over harvesting, poor forestry practices and toxic treatment by specifying products from sustainable sources, such as FSC Certified Wood or regionally manufactured from abundant species. Specify that field-use adhesives shall not contain urea formaldehyde or excess VOCs as indicated for specific purpose. Specified materials should meet or exceed the latest version of the USGBC's LEED rating system.
- 06.2. Rough Carpentry and Miscellaneous Rough Carpentry
  - a. In new non-combustible, construction, always provide and install fire-treated lumber unless otherwise directed by the Department of Design and Construction or BCOM. Confirm treatment manufacturer's requirements regarding appropriate use, detailing, and environmental limitations.
  - b. Back up all wall and ceiling-mounted accessories with wood blocking (especially wall-mounted door stops, grab bars, shelving standards, window treatment hardware, and Laboratory, Kitchen & Bathroom wall cabinetry). Install only true, straight pieces.
  - c. All lumber in contact with masonry, concrete or roof termination details shall be 'ground contact' preservative treated (PT) to meet American Wood Protection Association (AWPA) standards. All fasteners, anchors, plates and hardware shall be or stainless steel to withstand the corrosiveness of preservative treatments. Preference is that where preservative-treated wood is used, provide a separation membrane between wood materials and metals, such as a .030 inch thick high-temperature "peel and stick" membrane or similar flashing type material. PT lumber shall not be used as a finished product.
  - d. At exterior construction fasteners shall be stainless steel.
  - e. Provide a minimum ¾" Plywood sheathing for all roof/sub-floor decks (no Oriented Strand Board (OSB) or composites).
- 06.3. Heavy Timber Construction
  - a. Solid Timber framing is not desired on campus and shall not be used without prior approval of the Department of Design and Construction.
  - b. Attachment / bolting of all heavy timber members shall meet the spacing requirement of Virginia Code and National Design Specification for Wood Construction.
- 06.4. Finish Carpentry
  - a. Fabricators and installers shall be Architectural Woodwork Institute (AWI) members and shall provide their licensed participant certificates. All casework and installation shall carry appropriate labels and certifications to comply with AWI's certification program.
  - b. All casework to be AWI either Custom or Premium grade. It is important to be conscious of when to specify custom or premium grades. For millwork that will receive a lot of wear and tear over the years such as in public areas, premium grade is preferred. The A/E shall coordinate the casework grades with the Contractor early on to ensure cost estimates reflect the proper selections.
  - c. Countertops may include non-wood products such as recycled glass cast concrete, recycled content synthetic cast slabs, regionally quarried stone, bio based materials, and recycled plastic solid surfacing or plastic laminates. Plastic Laminate shall be used minimally and shall be avoided as countertop surfaces in wet environments and areas of heavy traffic. When used Plastic Laminate surfaces shall have a 3mm PVC edge band as a minimum. Counter tops may be fabricated off site, but back and end splashes should be shipped loose for field installation. Consider the location, use and susceptibility to wear when making material selections. Provide auxiliary support under counters to withstand the weight of people sitting on the counter.

- d. Window sill to be solid/durable repairable material such as solid surface, 1/2" minimum thickness. Plastic laminate sills are not acceptable. Provide window sills at all gypsum wall board construction. Consider window sills at CMU partitions. The A/E shall account for expansion when detailing window sills.
- e. A/E shall specify veneer species, cut (plain, rift or quarter sliced), and the amount of figure (none, light, moderate, heavy) to use in all wood veneer millwork.
- f. Back prime all exterior trim prior to installation including priming ends.
- g. Cabinet Construction shall be frameless box construction with flush overlay door and drawers.
- h. Shelving shall be 3/4" 5-ply plywood - no particleboard. Hardwood plywood shelves with hardwood edge may be stained, or shelves may be completely covered (all six faces) with plastic laminate. Melamine surfaces and "T" edge molding is approved for spans 4' and under. Support shelves on heavy-duty adjustable steel standards and brackets unless otherwise indicated.
- i. The A/E shall specify "tamperproof" or "vandal resistant" fasteners in areas that are subject to vandalism by the general public.
- j. Casework shall use standard modular units which can be disassembled and reassembled in another location. This is to facilitate relocation of departments over time.
- k. Use frameless concealed Euro-style hinges on all cabinetry.
- l. All cabinetry shall use Euro-spaced modular shelf pin systems. Shelf pins are to be plastic or steel and 10% spare shelf pins shall be provided upon job completion.
- m. Use stainless steel pulls on all cabinet doors and drawers.
- n. All wood millwork must be delivered on site to a conditioned space and allowed to acclimate before installation.
- o. The use of PVC trim materials (i.e. Fypon) shall be reviewed with the department of Design & Construction. PVC does not perform well when painted darker colors due to excessive thermal movement.
- p. Design of acoustic wall panels shall consider the potential for damage, staining and vandalism. Panels should be located so as to not be easily accessible from adjacent walking or standing surfaces, and high enough when adjoining a seating area to not be damaged or stained by people resting their heads against the wall.
- q. Synthetic solid surfacing material shall be solid acrylic or polyester and acrylic resin based. Material shall be through-patterned and homogeneous. No coated materials or non-homogeneous materials allowed. Materials shall be 100% repairable. Specify that panel products shall not be manufactured with binder resins or adhesives that contain urea formaldehyde.
- r. For solid surface shower installations use the following:
  - i. Shower pans:
    - 1. Shower pan shall be made from solid cast polyester/acrylic blend resin, with no voids or filler materials at underside of pan.
    - 2. Pan shall have adjustable drain locations, coved side walls, with a minimum 6" high, bi-level water dam at three sides and 4" high water dam at threshold side. Water dams shall be a minimum of 1/2" thick at highest point. Lower ledge at bi-level water dams shall be a minimum of 3/4" wide.
    - 3. Shower pans shall have a textured, nonskid floor pitched toward the drain at a minimum 0.6° slope (1/8" per foot). Shower pans shall have a non-slip coefficient of friction rating of 0.30 or greater as registered by the ASTM F462 slip resistance test method.

4. Shower Pans shall be a minimum of 9/16" thick at the thinnest point of the drain orifice and a minimum of 1-1/4" thick at the perimeter.
  5. Pans shall carry a 15-year materials and workmanship warranty against cracks, breakage, and leaks.
  6. The A/E shall specify that the General Contractor shall build an in-place mockup of the shower pan installation for review and approval by both the A/E and the ODU Project Inspector. Proper shower pan installation is critical for the long term durability of the shower pan to drain connection, the weak point in the installation. The A/E shall detail the shower pan installation as part of the working drawings.
- ii. Shower walls:
1. Shower wall panels, trims and accessories shall be manufactured from solid cast polyester/acrylic blend resin.
  2. Shower wall panels shall be 3/8" thick minimum with green board behind all panels.
  3. Shower wall panels measuring 61" or less in width shall be supplied as single panels with no joints.
  4. Shower wall panels shall be manufactured and supplied at largest practical sizes so as to minimize seaming at the jobsite.
  5. Install shower wall panels with adhesive as recommended by manufacturer. Seal joints using manufacturer's recommended mildew resistant silicone sealant
  6. Shower wall panels shall be trimmed and scribed at time of installation to ensure proper fit.
  7. In Residence Halls and locker room showers, provide 1/2" thick (min.) shower corner caddy(s), except at gang showers, where shower caddies are not required.
  8. Provide 3/8" thick (min.) shower corner trim.
- s. Refer to **DIVISION 09 FINISHES** for fully tiled showers are to be used in athletic facilities.
- t. Wood Paneling shall be limited in its use as wood paneling is generally not within the scope of project budgets. Consider locations for long term durability. Avoid mounting any signage on wood paneling as the signage may change over time causing the replacement of the wood panels, which would no longer match.
- u. No plastic laminate wall paneling is allowed.
- v. Wood Base is not allowed in buildings because it gets marred and marked by cleaning equipment. Alternate materials such as tile and stone are desired in public spaces such as lobbies.
- w. Wood stairs and handrails are not to be used.
- x. Exterior wood shall be limited in scope and reviewed with Facilities Management for location and ease of maintenance. Exterior wood should be restricted to such species as ipe.
- y. Composite wood is also acceptable in exterior locations and shall match the warranty and product specifications of a Trex or similar product.