

All guidelines apply to both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.

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1.0 **GENERAL**

1.1 **Related UBC Guidelines**

- .1 Section 06 40 00 Architectural Woodwork
- .2 Section 12 20 00 Window Coverings and Blinds;
- .3 Section 12 30 00 Fabricated Casework;
- .4 Section 12 35 53 Laboratory Casework;
- .5 Section 27 05 28 Pathways for Communications Systems – 1.20.3.
- .6 Contact Facilities Planning for area specific furnishing standards. Phone: 604-822-3059
- .7 [Learning Space Design Guidelines](#)
- .8 [UBC LEED Implementation Guide](#)
- .9 [UBC Guidelines for Seismic Protection of Building Contents](#)

1.2 **Coordination Requirements**

- .1 UBC Facilities Planning, UBC Vancouver at 604-822-3059, UBC Okanagan at 250-807-8182.
- .2 UBC Information Technology (IT)
- .3 Electrical Consultant

2.0 **DESIGN REQUIREMENTS**

2.1 **General**

- .1 Contact Facilities Planning for furnishings guidelines. UBC Vancouver at 604-822-3059, UBC Okanagan at 250-807-8182.
- .2 Ensure all products comply with CSA Standards, latest edition of the BC Building Code, and BC Fire Code.
- .3 Ergonomics: Furniture should meet current ANSI/BIFMA and CSA standards. Contact UBC Workplace Health Services, Human Resources for UBC's Policy and Procedures regarding Ergonomics; phone: 604-822-9040.
- .4 Quality assurance: Specify durable materials for long-term, institutional use. Furniture (hard goods) shall have a standard minimum 5-year written manufacturer's warranty on all components. Upholstered furniture (soft seating) shall have a standard minimum 3-year written manufacturer's warranty. Learning Spaces furniture shall have a minimum standard 10-year written manufacturer's warranty. Residential quality furniture is not permitted due to concerns over fire safety and durability standards.
- .5 Environmental: Specify products with reduced environmental impact. Consider items with certifications such as Greenguard, Cradle-to-Cradle (C2C), Green Seal, and FSC Chain of Custody. Specify locally manufactured products whenever possible (within 500km radius).
- .6 Coordinate layouts with furniture placement with electrical and communications outlets.
- .7 Seismic Restraint: Design for the seismic restraint of shelves, cabinets, fixtures and vending machines, according to BC Building Code Part 4 and CSA S832-06 'Seismic Risk Reduction of Operational and Functional Components (OFCs) of Buildings'.
 - .1 Lobby Areas to include seismic restraint for vending machines.
 - .2 Seismic restraint of artwork (where provided) is required.

2.2 Office Spaces:

- .1 Office furniture: Design desks and workstations to support the work tasks of the user(s). Configurations may include a lockable box/file pedestal and/or a lockable 2-drawer file pedestal (keyed alike); a task light; a tack board; overhead storage or shelving; an adjustable keyboard tray with provision for computer mouse; an adjustable task chair; and one or two guest chairs as required.
- .2 Office shelving: Typical enclosed offices shall have wall-mounted or freestanding shelving to meet user requirements. Install wall-mounted shelves utilizing slotted vertical standards securely fastened to reinforced walls, laid out in +/-800 mm bays, complete with +/-300 mm deep adjustable shelves. Alternately, provide freestanding bookcases securely fastened to the wall.
- .3 Filing: File cabinets shall meet current ANSI/BIFMA and CSA standards. Securely fasten filing cabinets that are 3-drawers high or taller to walls and adjacent cabinets (where present).
- .4 Seismic: Securely fasten all taller loose furniture such as shelving and cabinets to floors or walls to meet seismic requirements as per 2.1.7.
- .5 Where feasible, re-use or re-furbish existing furniture. Alternately, specify new furniture that is durable and provides an extended service cycle that will also provide future opportunities to be repurposed or recycled.

2.3 Conference Rooms

- .1 Seating in Meeting and Conference Rooms should be upholstered and height-adjustable with fixed arms. Specify to meet user requirements.
- .2 Tables shall be easily movable.
- .3 Table edges should be durable and scratch resistant.

2.4 Millwork:

- .1 Manufacture and/or install architectural millwork and case goods to AWMAC standards in effect at time of award of contract.
- .2 Custom built-in tables and other millwork to have 3mm edge banding to match the finished countertop.
- .3 Refer to Section 12 30 00 Fabricated Casework for further detail.

2.5 Learning Spaces:

- .1 Contact Facilities Planning UBC Vancouver at 604-822-4175, UBC Okanagan at 250-807-8182 for current classroom furniture standards furnishings guidelines.
- .2 Coordinate design of learning spaces with the Learning Space Design Guidelines.
- .3 All Learning Spaces furniture shall have a minimum standard 10-year written manufacturer's warranty.
- .4 Provide designs suitable for appropriate quantities of left-handed people.

- .5 If specifying upholstery, ensure it is durable and easy to clean.
- .6 Specify frame finishes for durability.

2.6 Drapery (previously in Section 09 00 10)

- .1 Where drapery is required to be fire retardant, use only inherently permanent fire retardant fabrics. (Fabrics manufactured utilizing Trevira and/or Avora polyester fibers are considered inherently fire retardant).

2.7 Laboratories

- .1 Refer to Section 12 35 53, Laboratory Casework for additional information.
- .2 Laboratory chairs and stools shall be durable, easy-to-clean seats in a non-absorptive material. Where appropriate and applicable, consider ergonomic task seating.

2.8 Libraries

- .1 Contact Facilities Planning for furnishings guidelines -UBC Vancouver at 604-822-3059 and UBC Okanagan at 250-807-8182.
- .2 Provide seismic restraint by means of metal gussets, struts and/or angles securely fixed to the building structure
- .3 Tables shall be easily movable.
- .4 Edges of tables and other furniture shall be durable and scratch resistant.
- .5 Coordinate layouts with electrical and communications outlets.

*****END OF SECTION*****

1.0 **MATERIALS AND DESIGN REQUIREMENTS**

1.1 **Window Coverings**

- .1 Provide blinds on all windows, either horizontal or vertical, of standard manufacture.
- .2 Use heavy duty commercial quality for offices or labs. Not to be used for classrooms. Curtains, drapes or interior shutters are not to be used except in special circumstances.
- .3 Preferred blinds are 25 mm horizontal or 90 mm vertical.
- .4 For renovation work, match blinds of remainder of building where appropriate. Blinds to be aluminum, clear anodized or paint finish.
- .5 Demonstrate blind operation to UBC Building Operations Store in fully raised position during construction.

1.2 **Black-Out Blinds**

- .1 Opaque fabrics to be used for black-out blinds; demonstrate suitability to exterior light conditions and building orientation.
- .2 Side tracks to secure from lateral loads and light-seal blinds, and prevent rattle.
- .3 Demonstrate blind operation to UBC Building Operations Store in fully raised position during construction.
- .4 Black-out blinds are to be fully coordinated to operable windows.
- .5 Blinds density to suit exterior orientation and light.
- .6 Roller type blinds to be specified with chain operator (no cranks).
- .7 Provide side tracks to secure blinds from lateral loads and shall not rattle in tracks.
- .8 Alcoves for blinds to be painted wood trim or pre-finished metal.

1.3 ***Motorized Coverings and Blinds***

- .1 *Motorized coverings and blinds shall be provided in AV-enabled spaces at the following locations to improve the user experience in academic or administrative spaces:*
 - .1 *Window size is 60" wide by 60" high or larger, or*
 - .2 *Manual operation is inhibited due to location.*
- .2 *UBC IT Audio Visual or Facilities Planning may determine that motorized coverings or blinds shall be provided despite the minimum requirements such as for security reasons.*
- .3 *Coordinate requirements for power supply conduit and wiring, and integration conduit required for motorized coverings and blinds with Division 26.*
- .4 *Battery powered motorized coverings or blinds is not permitted.*

- .5 *Wall switch shall be provided to control the motorized coverings and blinds separately from the AV system. Switches shall be grouped together where multiple are required.*
- .6 *Integration with a third-party AV control system shall be provided via RS-232 or LAN connection.*
- .7 *Motorized blinds are required to have a local disconnecting means for power. This is required to allow maintenance personnel to work on blinds without involving an electrician to operate a panelboard or hardwired connection. An acceptable disconnecting means for 120VAC systems is a cord connected end into a receptacle. For blinds operating at voltages below 120VAC a cable connector that can be unplugged/plugged without any special tools is acceptable.*

*****END OF SECTION*****

1.0 **GENERAL**

1.1 **Related UBC Guidelines**

- .1 Section 12 00 00 Furnishings
- .2 [UBC Guidelines for Seismic Protection of Building Contents](#)

2.0 **MATERIALS AND DESIGN REQUIREMENTS**

- 2.1 On all shelving designed for use as chemical storage a 50 mm clear acrylic plastic lip must be installed on the shelf edge.
- 2.2 Provide seismic restraint for all cabinets and shelving.
- 2.3 Demonstrate blind operation to UBC Building Operations Store in fully raised position during construction.

*****END OF SECTION*****

1.0 **GENERAL**

1.1 **Related UBC Guidelines**

- .1 Section 06 40 00 Architectural Woodwork
- .2 Section 11 53 13 Fume Hoods
- .3 [UBC Guidelines for Seismic Protection of Building Contents](#)

1.2 **Co-ordination Requirements**

NOTE: Shall have an overall coordination of Documents for Section 11 53 33 Emergency Safety Appliances, Section 11 53 13 Fume Hoods, Section 12 35 53 Laboratory Casework, and Section 23 38 16 Fume Hood Exhaust Systems.

- .1 Design Development Report issued to Consultant defining in detail the laboratory function, requirements, and systems to be provided.
- .2 Early in process, review design intent and additional requirements with UBC Risk Management Services.

1.3 **Description**

- .1 Casework for laboratories designated for biohazard containment levels:
 - .1 Containment Level 1.
 - .2 Containment Level 2.
 - .3 Containment Level 3.
 - .4 Containment Level 4.
- .2 Whenever project permits, conform to the most stringent requirements, to allow flexibility of use.

1.4 **Performance Standards**

- .1 Conform to function-specific requirements, including as applicable:
 - .1 Laboratory Bio-Safety Guidelines published by Laboratory Centre for Disease Control, Health Protection Branch, Health Canada.
 - .2 Containment Standards for Veterinary Facilities, Agriculture & Agri-Food Canada, Publication 1921/E.
 - .3 Canadian Nuclear Safety Commission Standard R-52, Design Guidelines for basic and intermediate level radioisotope laboratories.
- .2 Seismic
 - .1 Restraints and anchorage engineered to BC Building Code, Table 4.1.9.1.D.
 - .2 Provide edges to shelving and similar features to minimize spillage including during seismic activity.
 - .3 Provide marine edging or similar at countertops to contain spillage.
- .3 Finishes
 - .1 Select finishes to suit required resistance to:
 - .1 Chemicals including acids, alkalis, solvents, and reagents.
 - .2 Heat.
 - .3 Moisture, humidity.
 - .4 Abrasion.
 - .5 Impact.
 - .6 Radioisotope chemistry.

1.5 Quality Control and Assurance

- .1 Submittals
 - .1 Before Start of Work
 - .1 List of all proposed materials for review, and color samples for selection plus for final approval.
 - .2 Shop Drawings.
 - .3 Sample mock-up.
 - .2 At Completion
 - .1 Maintenance data shall be itemized list c/w each finish type, color formulation.
 - .2 Maintenance material shall be determined.
- .2 Quality Assurance
 - .1 Professional Engineer registered in BC, engaged by manufacturer, to seal shop dwgs and carry out site reviews, confirmed by Letters of Assurance, for seismic restraints including anchorage.
- .3 Warranties
 - .1 Two (2) Year manufacturer's warranty to include replacing and refinishing due to defects or faulty workmanship.

2.0 MATERIALS

2.1 Performance Requirements

- .1 General
 - .1 Select manufacturer recognized as specializing in the manufacture and installation of Laboratory Casework and fittings of the type required for project.
 - .2 Metal casework pre-fabricated and factory-finished systems.
 - .3 Tops to be continuous with no open seams, integral with backsplash, sealed joints to walls etc.
 - .4 Rounded edges (mandatory when positive pressure suits are worn).
 - .5 Minimize joints generally, and seal.
 - .6 Maximize spacing of legs to maximize free under counter space and flexibility.
 - .7 Provide under slung relocatable modular units (e.g. drawer / shelf units), generally 12" free of floor.
 - .8 Design for vibration control.
- .2 Environmental
 - .1 Manufacture
 - .1 Avoid adhesives, preservatives, hardeners, and synthesizing agents and finish coatings that contain formaldehyde and high V.O.C. content.
 - .2 Life Cycle Costing
 - .1 15-year.
 - .2 Provide adjustable modular components to facilitate changes in lab procedures.
 - .3 Disposal
 - .1 Minimize use of packing materials such as cardboard for shipping and if used, recycle. Use blanket wraps for shipping whenever feasible.

2.2 Prescriptive Requirements

- .1 Materials
 - .1 Products (UBC Mandatory, approved, or not approved for UBC projects -typical).
 - .2 Laboratories: "No-Wood" policy within laboratories, including casework, trim, wood doors and frames, etc. unless approved by UBC Risk Management Services.

- .2 Components
 - .1 Worktop Material
 - .1 Solid cast epoxy resin.
 - .2 Stainless steel preferred (mandatory for Containment Level 4 labs).
 - .3 Resin-impregnated natural stone.
 - .4 Laboratory grade plastic laminate.
 - .5 Other.

- .3 Execution
 - .1 Installation shall be by manufacturer-trained and certified installer.

*****END OF SECTION*****