

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*****