

### **11 52 00 AUDIO-VISUAL EQUIPMENT**

#### Audio-Visual System Infrastructure – System Description

1. Provide complete conduit system, including junction boxed and pull string for the installation of an audio-visual system in lecture theatres, classrooms and video conferencing rooms. The audio-visual systems will be provided by University of Victoria forces.
2. Provide 120 volt power for audio-visual systems and components as required and as indicated.
3. Lecture theatre audio-visual infrastructure shall include:
  - i. Conduit from lectern cabinets to central dimming controls for respective spaces.
  - ii. Conduit from lecture theatre control booth to lectern cabinet.
  - iii. Conduit from control booth to wall mounted and ceiling mounted speakers.
  - iv. Receptacle outlets at lectern cabinets, minimum 4 circuits and duplex receptacles.
  - v. Data outlets at lectern cabinets.
4. Classroom audio-visual infrastructure shall include:
  - i. Conduit from ceiling overhead projector to lectern at teaching position.
  - ii. Ceiling receptacles for overhead project.

### **11 53 00 LABORATORY EQUIPMENT**

#### **11 53 13 LABORATORY FUME HOODS**

##### Fume Hood – General

1. Design and install fume hoods to comply with recognized authorities (CSA, ASHRAE) as prescribed in Part of the BC Building Code. Perform risk assessment to determine if fume hood and/or cabinets (including bio safety) should be connected to emergency power.
2. Ductwork shall be stainless steel type 316, 18 gauge minimum, 2B finish except No. 4 finish where in exposed occupied spaces and shall be suitable for the gas and/or vapours carried from source to exhaust fan. Strong corrosive fumes may attack stainless steel and other materials may need to be specified.
3. Ducts from fume hoods shall be routed to the roof of the building as directly as possible for discharge above the re-circulation cavity boundary of the structure.
4. Horizontal ducts shall be kept to a minimum and shall be graded up in direction of air flow.
5. Exhaust fans shall have interior surfaces in contact with the air stream coated with a chemical resistant coating.
6. Canvas or any other flexible connections are not acceptable on the discharge side of the fan.
7. Provide control handles on the exterior of the fume hood for all fume hood services.
8. New fume hoods shall have flow monitors/alarms as per CSA standards.
9. Avoid sound attenuators on fume hood exhaust fans. Select fans with lower sound level instead.

#### Laboratory Fume Hoods

1. Metal under-counter storage cabinets, when part of a fume hood unit, must have a removable access panel in back to permit servicing of the plumbing pipes.
2. Solvent/chemical storage cabinets which do not have removable back panels must be installed in a manner which will allow easy removal of cabinet. In this case, the fume hood must be supported independently of the storage cabinet below. Hang fume hood with threaded rod to raise and lower with turn buckle.

## 11 80 01 EXTERIOR ACCESS FACILITIES

### Rooftop Access

1. Provide Worksafe BC / OHS approved facilities to suit safe access to all roof areas for service and maintenance (i.e. fall restraint):
  - i. Parapet walls designed as guard elements (min. 1070mm height) are encouraged to serve as permanent fall restraint facilities.
  - ii. Where permanent fall restraint is not achievable, provide alternate means or procedures for providing temporary fall restraint as outlined in Worksafe BC part 11 and OHS Regulation.
  - iii. Where fall restraint facilities are not achievable, provide WorkSafeBC approved fall arrest systems.
  - iv. The Consultant shall provide a roof plan demonstrating the ability of designed fall arrest or fall restraint systems to collectively provide full access to all roof areas.

### Exterior Wall Access

1. Provide Worksafe BC / OHS approved facilities to suit safe access to building exterior walls for routine cleaning and maintenance (i.e. window washing) personnel.
2. Design considerations shall assume suspension access (i.e. bosons chair) to all exterior windows shall be provided where safe access to the exterior of windows cannot be achieved from the interior.
3. Permanent exterior access facilities may consider capacity for swing stages or other larger access equipment.
4. Any system that spans or cantilevers over a parapet shall be provided with adequate designated bearing surfaces. Bearing on parapet flashings or similar surfaces that may be damaged is not acceptable.