

11 53 00 – Laboratory Equipment

1. General

- A. Movable equipment such as balances, refrigeration equipment, centrifuges and other portable laboratory equipment shall be purchased by the Owner. The Consultant shall closely coordinate the electrical and plumbing tie-ins for this equipment.
- B. Fume hoods and biosafety hoods shall be purchased by the Owner and installed by the Contractor. The Consultant shall give special attention to ventilation requirements, particularly taking into consideration the types of chemicals used in the laboratories, air-velocity sensing devices and the need for emergency back-up power. Motorized elements such as fans shall be selected to withstand expected chemical exposure. Safety of the user shall be of highest priority in hood sash (and opening) design and in the design of ventilating storage cabinets. Laboratory ventilation systems must comply with the requirements of the latest edition of ANSI/AIHA Z9.5. Hood exhaust systems shall meet OESO guidelines for fire alarm and fire suppression systems.
- C. Casework generally shall comply with requirements of Division 6 with regard to wood construction and as a basis for manufactured casework. Casework designed for storage of sensitive equipment or for chemical storage shall have locks. Countertops shall be a laboratory-grade plastic laminate, epoxy resin or other chemical-resistant grade of counter, depending upon the type of chemicals being used.
- D. Safety Equipment such as eye washes, shower washes and fire extinguishers shall be supplied in laboratory areas. In some cases, wall-mounted fire blankets will be required. Eye washes and emergency showers must meet the requirements of the American National Standards Institute (ANSI) as specified in the latest edition of ANSI Z358.1.
- E. Vacuum and air connections shall be employed in laboratory areas and gas connections shall be employed where required. Vacuum breakers shall be provided on faucets. Laboratory casework shall be placed with at least 5 feet between benches to allow for wheelchair accessibility. Feeds for laboratory gas valves shall be a minimum of 3/8 inch nominal size.
- F. Refrigeration equipment used in laboratory areas shall be purchased by the Owner and installed by the Contractor. Refrigeration equipment used for critical experimentation must be placed on emergency electrical back-up service.

2. Accessibility

- A. To ensure ADA compliance in laboratories, provide at least one wheelchair-accessible sink, one wheelchair-accessible work surface and one wheelchair-accessible fume hood.