



## Division 11. Equipment

### 11 10 00. Vehicle and Pedestrian Equipment

#### *11 13 00. Loading Dock Equipment*

1. All loading docks shall be provided with scissors lifts and/or dock levelers to accommodate a variety of campus and other non-standard bed height delivery vehicles.
2. Scissors lifts shall be flush with ground when lowered and raised to a height of approx. 4 feet at the dock to accommodate trucks. The campus standard for Scissor lifts is Autoquip model # PLT-6080 S. Provide a small curb in the recess in the pavement base to reduce debris accumulation under the lift.
3. Buildings with greater delivery demands, as determined by the campus, shall be provided with 2 bays, as well as a person-door, which includes a laminated glass vision panel and is secured with an access control device. Single bay designs should also provide a person-door.
4. A large and open interior area shall be required for staging delivered materials with support rooms around the perimeter for other needs.
5. Adequate turnaround area shall be provided for appropriate standard delivery vehicles. Refer to *Division 11 82 26 Waste Compactors and Destructors* for required clearance for waste removal vehicles.
6. A minimum of one appropriately signed service vehicle parking stall shall be provided adjacent to dock area. Coordinate through the UW Project Manager as to the needs of campus.
7. Communication between the delivery person and the building's receiving staff shall be provided. This can be accomplished via telephone or intercom.
8. A hose bib shall be provided on the dock to facilitate wash down of the dock and adjacent exterior areas, such as where compactors and waste containers are located. A trench drain shall provide a means to keep this area free of ponding water. Hose bib and trench locations shall be reviewed with the UW Project Manager.
9. Secured storage shall be provided when biological and radioactive wastes need to be picked up.
10. Secure space shall be provided for cylinder storage as needed with required tie backs.
11. Any bollards used in the loading dock areas shall be the color red with two or three horizontal reflective white stripes at the top.
  - 11.1. Identify all bollard locations on the 35% plans and include a detail drawing.
  - 11.2. See *Division 32 90 00* for more information



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## 11 15 00. Security, Detention, and Banking Equipment

### 11 18 00. Security Equipment

1. All exterior doors of new buildings shall have electric locks for the purpose of remote locking and unlocking. In addition, a maximum of two doors shall be provided with access control devices for programmed after-hours access by the building occupants and other authorized persons.
2. Access control devices shall be provided on interior doors as noted in *Division 28 11 00 Electronic Access Control for New Construction* or as determined by the building occupants, the UW Project Manager, and approved by UW Police.
3. Access control systems for all UW buildings shall be by Andover, the campus standard.
4. Refer to *Division 27 05 05 General Requirements for Communications* for supportive electrical requirements regarding the above and the campus “Code Blue” emergency phone system. Code Blue phone locations shall be determined by UW Police during the design phase. These will be primarily within parking ramps.
5. Provide security cameras or at a minimum, the infrastructure to support them, at all exterior doors of new buildings and point of sale locations, as well as all loading docks.

## 11 20 00. Commercial Equipment

### 11 24 00. Maintenance Equipment

#### 11 24 13. Floor and Wall Cleaning Equipment

All floor and wall equipment shall be coordinated with UW Custodial Staff and the UW Project Manager.

#### 11 24 23. Window Washing Equipment

1. All interior and exterior glass shall be made accessible for window washing either by a lift or through the use of commercial window washing equipment.
2. If lifts are required, doorways and halls shall be sized to accommodate the movement of the lift and a storage space shall be determined during the design phase.
3. If windows cannot be reached from the ground, davits shall be provided on the roof to secure whatever equipment will be used.
4. A Bosun’s chair is the campus preferred method of equipment used for window washing, although, at times, this work will be bid out to commercial firms. Tie downs shall be designed to accommodate this range of apparatus. Spacing of davits shall be determined during the design phase and coordinated with the UW Project Manager and Campus Services.
5. Access to power and domestic cold water shall be provided at the rooftop for window washing. In addition, exterior grade convenience outlets shall be provided at rooftop for auxiliary uses. All interior and exterior windows shall be cleaned by the contractor prior to the turn-over of the building.



6. The first operation of the window washing equipment shall be completed by the installing contractor with the owner's selected representatives present for training.

## **11 50 00. Educational and Scientific Equipment**

### ***11 51 00. Library Equipment***

The existing UW standard for stack areas in libraries shall be 92 inch high shelving units with 36 inch wide aisles. For greater accessibility the standard for reference and current periodical areas/reading rooms shall be 42 inch wide aisles. Overall height for these areas shall be determined by occupant needs. All size and spacing for new facilities shall be reviewed with UW Library staff.

### ***11 52 00. Audio-Visual Equipment***

Refer to *Division 13 05 02 Auditoriums and Lecture Halls* and *Division 27 05 05 General Requirements for Communications* for additional information regarding design of these spaces. Specification of audio visual equipment shall be written in such a way as to allow for upgrades/changes in selection during the construction period. In this way, the most current equipment is installed at the time of move in. Such equipment may include: digital audio, video cameras, video projectors, projection screens, video source and signal processing equipment, among others. The selection of all equipment shall be thoroughly reviewed and approved prior to specification and shall be reviewed again at the shop drawing stage to determine that the specified equipment is still required and if an upgrade is available within the budget. Orders must be placed in time for full installation, training, and debugging to occur prior to the turnover of the building.

#### **11 52 13. Projection Screens**

1. Whenever possible, white painted surfaces shall replace mechanized projection screens as a projection surface.
2. When projection screens are desired, room size and use patterns shall determine whether they are manual or motorized. The AE team shall prepare a sight-line drawing in plan and elevation to show projector locations to the screen(s) and cone(s) of sight from areas within the room, ensuring room obstacles, such as columns, are avoided.

### ***11 53 00. Laboratory Equipment***

#### **11 53 13. Laboratory Fume Hoods**

This is a DFD Standard Specification. Use this specification section for all applicable laboratory fume hoods. It can be obtained from the DOA website or from UW Facilities Planning & Management.

#### **11 53 33. Emergency Safety Appliances**

1. All projects shall include a minimum of one Automated External Defibrillator (AED) to be located such that it is easily seen and accessed.
2. When applicable, locate emergency equipment in a consistent area from lab to lab and floor to floor.
3. A swing-arm and deck-mounted (preferred) or hose-connected wall-mounted/dismountable eyewash may be located within reach of a sink to facilitate weekly flushing. Alternatively, an ADA compliant pull-down eyewash may be used,



but shall capture full water flow in a plumbed drain. This is required for weekly flushing specified by ANSI Z358.1.

4. Where chemicals may be used, eyewashes shall be provided in all mechanical spaces as requested by UW EH&S.
5. Height and placement of all eyewashes shall meet ADAAG standards.
6. If a vacuum breaker is required in an eyewash or shower line, it shall be located after the shutoff valve (normally not pressurized). Refer to *division 22 Plumbing*.
7. Emergency showers shall be provided with a floor drain in the vicinity.

#### **11 53 53. Biological Safety Cabinets (BSC)**

Use standard UW specifications for biological safety cabinets and animal transfer stations. Always check with FP&M to be sure the specs are in their most-current form. SEE DIVISION 11 DETAILS 1, 2, & 3 AT END OF DIVISION.

## **11 70 00. Medical Equipment**

### ***11 71 00. Automated external defibrillators-AEDs in Campus Buildings***

1. Public Access Defibrillation. Automatic external defibrillators (AED's) are lightweight, portable devices that provide an electrical shock capable of restoring the normal heart rhythm of cardiac arrest victims. Immediate, on-site access to this device for people who suffer a cardiac arrest has been found to greatly improve their chance of survival. Wisconsin Statutes allow for the purchase, maintenance and use of AED's in the public setting. Such places may include, but are not limited to, long-term care facilities, rural health or dental clinics, athletic facilities, schools, factories, churches, day care centers and other community facilities.
2. The purchase, placement, use and maintenance of AEDs at the University of Wisconsin-Madison shall conform to the requirements established in the policy established by UW-Safety. No work unit is permitted to purchase or install an AED without approval by the process established herein.
3. The appropriate procedures for a work unit to place an AED unit in a building, department or vehicle are:
  - Determine whether the placement meets the criteria.
  - Designate a Work Unit AED Coordinator to administer and maintain the program.
  - With the assistance of EH&S, select an AED unit, an appropriate location and complete a "Work Unit Plan to Use an AED".
4. Placement criteria for AEDs at UW-Madison are established by the Environment, Health & Safety Department using the information listed below. In general, funding for AEDs including installation and signage will be the responsibility of the work unit.
  - Work units are encouraged to contact EH&S to obtain more specific information on AEDs as applicable to their operations.
  - The selection of manufacturer and model of AED will be based on standardization of units by campus location whenever possible. EH&S in consultation with UW University Health Services, will specify an appropriate model for consistency. However, the work unit will be responsible to purchase the AED model.



5. **Maintenance and Inspection Requirements for AEDs**  
 Continuous equipment maintenance is an important element in ensuring a successful program. Equipment is maintained through the following processes:
  - At UW-Madison campus locations, the Physical Plant (PP) will be responsible to conduct initial installation and maintenance of all AEDs in accordance with manufacturer’s requirements. For those AEDs not meeting the placement criteria described herein or for auxiliary operations, the work units may be responsible for funding maintenance costs through the PP maintenance plan.
  - For Non-University campus locations, maintenance and inspections will be managed by the AED Coordinator or as part of the EH&S fire extinguisher inspection program. The AED Coordinator can designate one or more individuals to install the AED(s) and to conduct maintenance and/or inspections. The “AED Monthly Inspection Form” must be used. All records of inspections shall be maintained by the AED coordinator. Installations will be conducted in accordance with “Specific AED Placement Criteria.”
  
6. **Training Requirements**
  - Individuals approved to use AEDs shall be trained in CPR and AED usage. The training shall be based on the American Heart Association or American Red Cross and shall be taught by an authorized instructor. Courses at a minimum must include adult CPR and AED.
  - University employees have a variety of options for training through FP&M. EMS medical personnel (i.e., EMT’s, Paramedics, Nurses, Physicians, PA’s) and certified athletic trainers are exempt from the above training requirements. Work units should contact EH&S to determine the appropriate number of employees who need to be trained in order to get AED approval. In general, two to four employees should be trained for each AED requested.
  
7. **Additional Items to be Placed with AEDs**
  - 2 pairs of Non-Latex Gloves
  - CPR barrier masks
  - Scissors to easily remove clothing
  - Disposable razor
  - Cloth/towel/gauze
  - Automated External Defibrillators (AED) policy

## **11 80 00. Collection and Disposal Equipment**

### ***11 82 00. Solid Waste Handling Equipment***

#### **11 82 13. Solid Waste Bins**

The following are specifications for campus building dumpsters.

Dumpster Bid Specifications:

<b>Quantity</b>	<b>Description</b>
1 EACH	Sloped rear loading rubbish container with poly lids Capacity (Cubic yards): 2 Lids: 2 Sidewall Steel Gauge: 12 Bottom Steel Gauge: 12 Dimensions (inches)



1 EACH	Height: 52 ½ Length: 43 ½ Width: 77 ½ Weight (pounds) with poly lids: 390 Color: Dunes Tan Sloped rear loading rubbish container with poly lids Capacity (Cubic yards): 4 Lids: 4 Sidewall Steel Gauge: 12 Bottom Steel Gauge: 12 Dimensions (inches) Height: 52 ½ Length: 90 ½ Width: 77 ½ Weight (pounds) with poly lids: 695 Color:
1 EACH	Sloped rear loading rubbish container with poly lids Capacity (Cubic yards): 6 Lids: 6 Sidewall Steel Gauge: 12 Bottom Steel Gauge: 12 Dimensions (inches) Height: 52 ½ Length: 126 ½ Width: 77 ½ Weight (pounds) with poly lids: 955 Color:

**11 82 26. Waste Compactors**

1. Provide adequate clearance for compactors to be raised and emptied by UW Waste and Recycling trucks. Typical clearance required is between 17 feet and 18 feet. Caution shall be taken to include low hanging beams in the overall clearance.
2. Consider ease of access to compactors for all custodial staff. Staff collects recyclables inside the buildings and needs clear access to compactors from the loading dock area.
3. Provide a hard hydraulic line from pump exit through the wall with a quick disconnect (Minimum two feet clearance) on the outside of the building. Hydraulic pump and controls shall be inside the loading dock area.
4. Provide dedicated power for the compactor and an appropriate location for the control panel.
5. Compactor Units: Current standards are rear-loading 6-yard compactors with detached power units as specified in the Compactor Unit Specifications below.

Compactor Unit Specifications:



New compactor units shall be interchangeable with the existing units on campus. Existing units are Galbreath PM 6R and Parker WM-6R. Interchangeability in this context means that any of the existing compactors can be used with any of the new power units and that any of the new compactors can be used with any of the existing power units.

Provide rear loading 6-yard compactors with the following specifications:

- 5.1. Detached power units.
- 5.2. Thermostat control heater for the power unit.
- 5.3. Hopper loading height of 36 inch.
- 5.4. Compactor hopper:
  - 5.4.1. Mfg. Rating: 1.0 cubic yards.
  - 5.4.2. NSWMA rating: .90 cubic yards.
- 5.5. Loading chamber opening:
  - 5.5.1. Width: 53 ½ inch.
  - 5.5.2. Length: 28 inch.
- 5.6. Ram penetration: 0 inch to 12 inch.
- 5.7. Packing force:
  - 5.7.1. Normal: 20,600 lbs.
  - 5.7.2. Maximum: 24,100 lbs.
- 5.8. Ram face:
  - 5.8.1. Width: 53 inch.
  - 5.8.2. Height: 45 inch.
- 5.9. Motor: 3hp, 1750 rpm, TEFC, 3phase 60 hertz, 208 volts with UL listed control panel.
- 5.10. Pump: 2.8 gpm.
- 5.11. Cycle time: 36 seconds.
- 5.12. Packing cylinder: two–three inch.
- 5.13. Oil reservoir: 5 gallon.
- 5.14. The opening handle shall be located on the opening lid.
- 5.15. Overall size:
  - 5.15.1. Length: 153 ¾ inch.
  - 5.15.2. Height: 54 inch.
  - 5.15.3. Width: 85 ¾ inch.