

## Material Lifts

The Safety Code for Elevators and Escalators ASME A17.1 – 2004 defines a material lift as follows:

A hoisting and lowering mechanism normally classified as an elevator, equipped with a car which moves within a guide system installed at an angle of greater than 70 deg from horizontal, serving two or more landings, for the purpose of transporting materials which are manually or automatically loaded or unloaded. Material lifts without an automatic transfer device are Type A or Type B. On Type A material lifts no persons are permitted to ride. On Type B material lifts authorized persons are permitted to ride.

Following is an overview of the general requirements and **is not** a complete list of requirements. The specific requirements for these lifts are found in the Safety Code for Elevators and Escalators ASME A17.1 – 2004. The relevant code section is in parenthesis following the text.

### Type A Material Lift

- 1.) Material lifts shall be operated by authorized personnel only. (7.4.1)
- 2.) Hoistway construction and enclosures shall meet the same requirements as elevators:
  - a.) Where fire-resistive construction is required, hoistways shall be enclosed in conformance with the requirements of the building code.
  - b.) Where fire-resistive construction is not required by the building code, hoistways shall be fully enclosed. Enclosures and doors shall be unperforated to a height of 79” above each floor or landing. The enclosure shall be unperforated, adjacent to, and for 6” on either side of any moving equipment that is within 4” of the enclosure.
  - c.) When required by the building code, hoistways shall be provided with a means to prevent smoke accumulation. (7.4.3; 2.1)
- 3.) Pits shall meet the same requirements as elevators: (7.4.4)
  - a.) Permanent provisions shall be made to prevent accumulation of ground water in the pit. (2.2.2.3)
  - b.) A fixed vertical ladder shall be provided for access to any pit exceeding 35” below the sill of the pit access door. (2.2.4.2)
  - c.) Permanent lighting shall be provided with the switch located to be accessible from the pit access door. (2.2.5)
  - d.) A stop switch shall be provided and located so as to be accessible from the pit access door. (2.2.6)
- 4.) Other than an emergency stop switch, no switches or controls are allowed inside the car. Door restrictors are not required. (7.4.14; 7.4.15; 7.5.12)

- 5.) The car enclosure width shall not exceed 48". The car enclosure height shall not exceed 90". Enclosures that incorporate glass in their construction are prohibited on material lifts. (7.5.1.1)
- 6.) Each door or gate shall be equipped with a contact that will prevent the operation of the driving machine, unless the door or gate is closed. (7.5.1.2)
- 7.) In addition to the capacity and data plates required for all elevators, a sign specifying the type of loading (see 2.16.2.2) shall be installed in the car enclosure. For Type A Material Lifts, the class of loading shall not include Industrial Truck Loading: Class C1 and C2. Also, a sign reading "NO RIDERS PERMITTED" or equivalent shall be provided. (7.5.3)
- 8.) Operating devices for inspection shall be provided on the top of the car. (7.5.12; 2.26.1.4)
- 9.) An emergency stop switch shall be provided to stop operation of the material lift, and the door and gate operation (if power operated). (7.5.12.1.5)

### **Type B Material Lift**

- 1.) Type B Material Lifts shall meet the general requirements for material lifts found in section 7.4 and are limited as follows:
  - (a) Access to and usage of Type B Material Lifts is restricted to authorized personnel.
  - (b) The rated speed is not to exceed 30 ft/min.
  - (c) There is penetration of only one floor.
  - (d) Travel does not exceed 200 inches.
  - (e) They are operated only by continuous-pressure control devices.
  - (f) They shall not be accessible to the general public.
  - (g) The upper limit of travel shall be:
    - (1) level with the penetrated floor; or
    - (2) level with the top landing where no floor is penetrated.

There are many more limitations and requirements that apply to Type B Material Lifts found in Chapter 7 of A17.1 – 2004. Please contact your elevator service company or DBS if you have specific questions regarding this type of lift.

**The information above is meant to provide a general overview of material lift requirements for building owners or managers and is not intended to be a complete listing of everything required by A17.1 – 2004.**