### Things you should know about exits and exit routes



Exits and exit routes were not always considered as important as they are today. In 1911, the Triangle Shirtwaist Fire, in a downtown Manhattan garment factory, killed 146 workers due to several unsafe work conditions, including the building's exits not being clearly marked, and most doors were bolted shut prior to the fire to keep the workers from leaving.

Today, many of us take for granted that there are safe and efficient ways to get out of a building, and we can normally look for the familiar Exit sign when we need to leave. But an exit is just one of three distinct means of egress necessary to ensure that we can safely leave a building during an emergency. For decades, national and international fire safety codes have defined a means of egress as a "continuous and unobstructed path of travel from any point in a building or structure to a public way," and they still do. Federal OSHA and Oregon OSHA, however, replaced means of egress with exit route within rules, but kept much of the original definition.

#### What are the parts of an exit route?

There are three distinct parts to an exit route (or means of egress):

- 1. An **exit access** is the part of an exit route that leads to an exit.
- 2. An **exit** is the part of an exit route that is generally separated from other areas in a building to provide a protected way of travel to an exit discharge.

3. An **exit discharge** is the part of an exit route that leads directly outside - or to a street, walkway, refuge area, public way, or open space with access to the outside.

There are three other important terms associated with exit routes:

- **High hazard area** An area in a workplace that has materials, processes, or contents that are likely to burn quickly or explode.
- Occupant load The total number of persons that may occupy a workplace or portion of a workplace at one time. See National Fire Protection Association (NFPA) 101-2009, Life Safety Code, or IFC-2009, International Fire Code, for information about how to calculate occupant load.

#### Refuge areas:

- Space along an exit route protected from fire in other areas of the building by a barrier with at least a one-hour, fire-resistance rating.
- A floor in a building with at least two spaces separated from each other by smoke-resistant



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partitions; the building must be protected by an automatic sprinkler system that complies with 29 CFR 1910.159, Automatic Sprinkler Systems.

#### What fire codes cover exit routes?

See NFPA 101-2009, Life Safety Code; or International Fire Code, IFC-2009.

**Note:** The most current editions of above listed codes are also acceptable.

# What are Oregon OSHA's requirements for **exit routes**?

There must be permanent, unobstructed exit routes to depart work areas safely during emergencies. There must be two or more exit routes depending on the size and layout of the work area and number of people involved. A single exit route is acceptable only if all workers can get through it safely during an emergency. Locate multiple exit routes apart from each other.

#### Indoor exit routes must ...

- Not pass through or into lockable rooms or dead ends.
- Be mostly level or have stairs or ramps.
- Minimize danger to employees during emergencies.
- Be free of highly flammable furnishings and decorations.
- Not require employees to travel toward materials that burn very quickly, emit poisonous fumes, or are explosive, unless those materials are effectively shielded from the exit route.
- Have adequate lighting.
- Use only side-hinged exit doors to connect any room to an exit route. Such a door must swing out if the room can hold more than 50 persons or has highly flammable or explosive materials in it.

- Be able to handle the maximum-permitted occupant load for each floor. The capacity of a path to the exit must not decrease as people move toward the exit.
- Be at least 6 feet 8 inches high at all points, and at least 28 inches wide at all points between handrails, and wider if needed, to handle the occupant load. Objects that project into the exit route must not reduce the minimum height and width of the exit route.
- Have properly working safeguards to protect employees during an emergency (e.g., sprinkler systems, alarm systems, fire doors, exit lighting).

# Outdoor exit routes must meet the applicable requirements for indoor exit routes and ...

- Be covered if accumulation of snow or ice is likely
- Be reasonably straight, smooth, solid, and substantially level.
- Have no dead ends longer than 20 feet.

# Exit routes must be maintained during construction, repairs, or alterations

- During new construction, employees must not occupy a workplace until the exit routes are completed and ready for employee use.
- During repairs or alterations, employees must not occupy a workplace unless the exit routes are available and existing fire protections are maintained

   or until alternate fire protection is made available that provides an equivalent level of safety.
- Employees must not be exposed to hazards of flammable or explosive substances or equipment used during construction, repairs, or alterations.



# What are Oregon OSHA's requirements for **exits**?

#### Each exit must ...

- Open from the inside without keys, tools, or special knowledge. Devices that lock only from the outside are acceptable. There must be nothing on an exit door that could hinder its use during an emergency.
- Lead directly outside or to a street, walkway, refuge area, or to an open space with access to the outside.
- Be clearly visible and must have a distinct sign reading "Exit." Where necessary, install additional directional signs to exits. If workers could mistake a "non-exit" for an exit, mark the non-exit, "Not an Exit" or mark it to indicate its real use.
- Have reliable light on or from exit signs to allow them to be effective during emergencies.

# Special circumstances - counterweights and cold storage facilities

 There must be an enclosure or guard around counterweights that are near enough to passageways or work areas to cause a hazard. The guard or enclosure need only be sufficient to protect workers from contact with the counterweight when it moves.  The doors on walk-in refrigerators, coolers, and freezers must have latches or closer devices that open from the inside without a key or special knowledge or effort.

### The fire-retardant properties of paints or solutions must be maintained

Fire-retardant paints or solutions must be applied as often as necessary to maintain their fire-retardant properties.

#### **Employee alarm systems must be operable**

The employee alarm system must have a distinctive signal to warn employees of fire or other emergencies unless employees can see or smell a fire or other hazard. The employee alarm system must comply with 29 CFR 1910.165, Employee Alarm Systems.



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