

#### 1. Visible Address

# Sec. 32-176. - Size of numbers generally; style, location to be approved.

In all instances the figures used for address numbers on residences, multi-family residences, commercial, and manufacturing buildings in the City of Chattanooga shall be of sufficient size to be readily seen from the middle of the street, not less than two and one-half (2½) inches high in any case and made of reflective material. Except as otherwise provided in § 2-172, such numbering shall be installed in at least one (1) of the following approved locations:

- (1)Address numbering on structure within five (5) feet of the front door;
- (2)Curb numbers painted directly onto the street curb in front of the building in a uniform manner and color approved by the City Engineer;
- (3)Marked with a reflective address numbering stake installed in open view no more than 10 feet from the right front property corner when viewed from the street;
- (4)On the mailbox, as long as it is on the property standing alone, with numbers at least two and one-half (2½) inches in height;
- (5)Any awning over the front doorway of a commercial or manufacturing building shall contain address numbering; or
- (6) Any alternative methods authorized and approved in the sole discretion of the City Engineer.

Reflective street numbers shall be furnished and placed on the curb or in front of the building at the expense of the property owners of such buildings. The style of the numbers and the manner of placing them, including their location upon the building, shall be subject to the approval of the City Engineer. Whenever multiple buildings are located on property designated with a single street address, each building shall be uniquely identified by numbering and/or signage approved by the City Engineer.

# 2. Two means of egress from a building.

Exit doors required. Not less than two exit doors conforming to this section shall be provided for each dwelling unit. The required exit doors shall provide for direct access from the habitable portions of the dwelling to the exterior without requiring travel through a garage. Access to habitable levels not having an exit in accordance with this section shall be by a ramp or a stairway.

**Exception:** Travel through a garage is allowed when the exterior wall of the garage has an side-hinged, exit door

The required exit door shall be a side-hinged door not less than 3 feet (914 millimeters) in width and 6 feet 8 inches (2032 millimeters) in height. Other doors shall not be required to comply with these minimum dimensions.

**Exception:** The second means of egress exit door shall be a side-hinged door or a side sliding door not less than 2 feet 8 inches in width and 6 feet 8 inches in height.

## 3. Emergency and rescue openings

Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) measured from the finished floor to the bottom of the clear opening. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3 of the 2012 International Residential Code. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2 of the 2012 IRC. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way. Exception: Basements used only to house mechanical equipment and not exceeding total floor area of 200 square feet (18.58 m2).

Minimum opening area. All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet (0.530 m2).

Exception: Grade floor openings shall have a minimum net clear opening of 5 square feet (0.465 m2). R310.1.2 Minimum opening height. The minimum net clear opening height shall be 24 inches (610 mm).

Minimum opening width. The minimum net clear opening width shall be 20 inches (508 mm). Operational constraints. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge.

#### 4. Guardrail

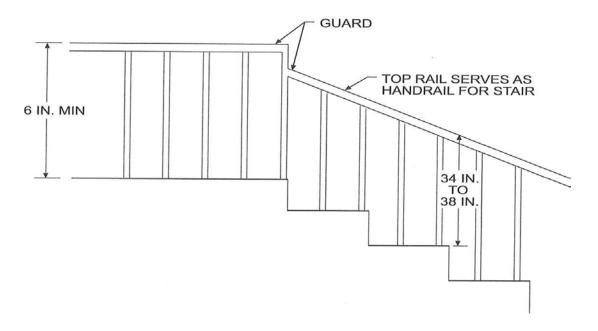
Guardrails shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.

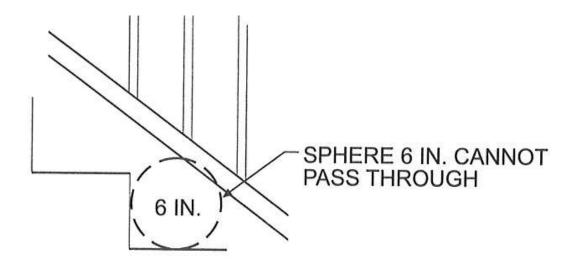
Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914 mm) high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads.

Required guards shall not have openings from the walking surface to the required guard height which allow passage of a sphere 4 inches (102 mm) in diameter.

#### Exceptions:

- 1. The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a guard, shall not allow passage of a sphere 6 inches (153 mm) in diameter.
- 2. Guards on the open side of stairs shall not have openings which allow passage of a sphere 43/8 inches (111 mm) in diameter.





### 5. Handrails

Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers.

Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

#### **Exceptions:**

- 1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread.
- 2. When handrail fittings or bendings are used to provide continuous transition between flights, transitions at winder treads, the transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height.

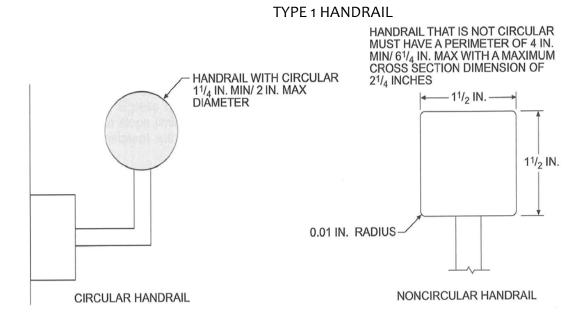
Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 11/2 inch (38 mm) between the wall and the handrails.

#### **Exceptions:**

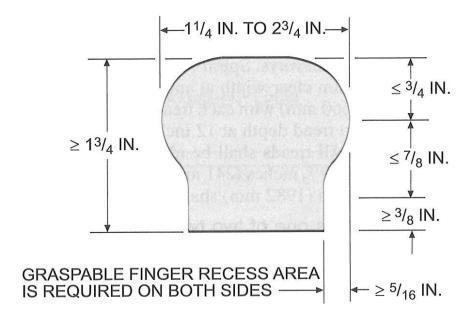
- 1. Handrails shall be permitted to be interrupted by a newel post at the turn.
- 2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.

All required handrails shall be of one of the following types or provide equivalent graspability.

- 1. Type I. Handrails with a circular cross section shall have an outside diameter of at least 11/4 inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 61/4 inches (160 mm) with a maximum cross section of dimension of 21/4 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).
- 2. Type II. Handrails with a perimeter greater than 61/4 inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3/4 inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least 3/8 inch (10 mm) to a level that is not less than 13/4 inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 11/4 inches (32 mm) to a maximum of 23/4 inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).



# TYPE II HANDRAIL HANDRAIL PERIMETER $> 6^{1}/_{4}$ IN.



#### 6. Smoke Alarms

Smoke alarms shall be installed in the following locations:

- 1. In each sleeping room.
- 2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
- 3. On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

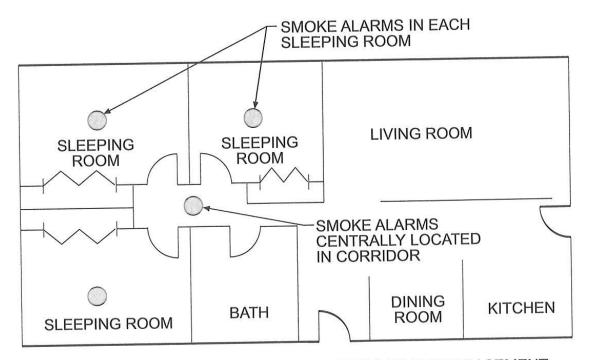
Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive

power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

#### Exceptions:

1. Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power.

Where more than one smoke alarm is required to be installed within an individual dwelling unit, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

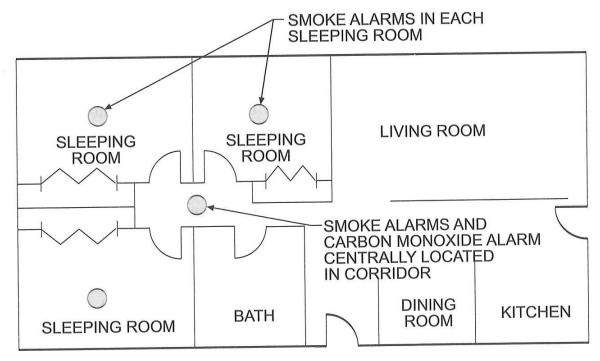


SMOKE ALARMS REQUIRED ON EACH STORY, INCLUDING BASEMENT

#### 7. Carbon Monoxide Alarms

Carbon monoxide alarms. An approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in a dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

Carbon monoxide detection systems that include carbon monoxide detectors and audible notification appliances, installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720, shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075. Where a household carbon monoxide detection system is installed, it shall become a permanent fixture of the occupancy, owned by the homeowner and shall be monitored by an approved supervising station.



CARBON MONOXIDE ALARMS REQUIRED OUTSIDE EACH SLEEPING AREA

#### 8. Fall Protection

In dwelling units, where the opening of an operable window is located more than 72 inches (1829 mm) above the finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches (610 mm) above the finished floor of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4-inch-diameter (102 mm) sphere where such openings are located within 24 inches (610 mm) of the finished floor.

#### **Exceptions:**

- 1. Windows whose openings will not allow a 4 inch-diameter (102 mm) sphere to pass through the opening when the opening is in its largest opened position.
- 2. Openings that are provided with window fall prevention devices that comply with ASTM F 2090.
- 3. Windows that are provided with window opening control devices. Window opening control devices shall comply with ASTM F 2090.

## 9. Minimum Bathroom Fixtures

Every dwelling unit shall be provided with a water closet, lavatory, and a bathtub or shower.

#### 10. Hot and Cold Water

Each dwelling shall have an approved automatic water heater or other type of domestic water-heating system sufficient to supply hot water to plumbing fixtures and appliances intended for bathing, washing or culinary purposes. Storage tanks shall be constructed of non corrosive metal or shall be lined with non corrosive material.

## 11. & 12. Kitchen and Bathroom Receptacles.

Kitchen receptacles. All 125-volt, single-phase, 15- and 20-ampere receptacles that serve countertop surfaces shall have ground-fault circuit-interrupter protection for personnel.

Bathroom receptacles. All 125-volt, single-phase, 15- and 20-ampere receptacles installed in bathrooms shall have ground-fault circuit-interrupter protection for personnel

# 13. Swimming Pools

- (a) The pool shall be completely enclosed with a wall, fence or other substantial structure not less than four (4) feet in height and with maximum two (2) inch mesh or two (2) inch vertical openings, or otherwise constructed as to be difficult to climb.
- (b) GFCI protection. All 15- and 20-ampere, single phase, 125-volt receptacles located within 20 feet (6096 mm) of the inside walls of pools and outdoor spas and hot tubs shall be protected by a ground-fault circuit-interrupter. Outlets supplying pool pump motors from branch circuits with short-circuit and ground-fault protection rated 15 or 20 amperes, 125 volts through 240 volts, single phase, whether by receptacle or direct connection, shall be provided with ground-fault circuit-interrupter protection for personnel.
- (c) Pool lights must be GFCI protected.
- (d) Pools built after January 1, 2011, shall have a pool alarm per Tennessee Code Annotated 68-14-801 through 807

# 14. Spa/Jacuzzi

(a) GFCI protection. All 15- and 20-ampere, single phase, 125-volt receptacles located within 20 feet (6096 mm) of the inside walls of pools and outdoor spas and hot tubs shall be protected by a ground-fault circuit-interrupter. Outlets supplying pool pump motors from branch circuits with short-circuit and ground-fault protection rated 15 or 20 amperes, 125 volts through 240 volts, single phase, whether by receptacle or direct connection, shall be provided with ground-fault circuit-interrupter protection for personnel. Indoor GFCI protection. All 125-volt receptacles rated 30 amperes or less and located within 10 feet (3048 mm) of the inside walls of spas and hot tubs installed indoors, shall be protected by ground-fault circuit-interrupters.

(b) Disconnecting means. One or more means to simultaneously disconnect all ungrounded conductors for all utilization equipment, other than lighting, shall be provided. Each of such means shall be readily accessible and within sight from the equipment it serves and shall be located at least 5 feet (1524 mm) horizontally from the inside walls of a pool, spa, or hot tub unless separated from the open water by a permanently installed barrier that provides a 5-foot (1524 mm) or greater reach path. This horizontal distance shall be measured from the water's edge along the shortest path required to reach the disconnect.

# 15. Heating and Ventilation and Air Conditioning

Every dwelling unit shall be provided with heating facilities capable of maintaining a minimum room temperature of 68°F (20°C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in all habitable rooms at the design temperature.

Natural ventilation shall be through windows, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants.

# 16. Fire Escape Plan

Floor plans identifying the locations of the following:

- 1. Exits.
- 2. Primary evacuation routes.
- 3. Secondary evacuation routes.
- 4. Exterior areas for assisted rescue.

Visit the National Fire Prevention Association web site for assistance.

http://www.nfpa.org/public-education/by-topic/safety-in-the-home/escape-planning/basic-fire-escape-planning