

connections shall be *approved* by the fire protection subcode official.

**Exception:** Fences, where provided with an access gate equipped with a sign complying with the legend requirements of this section and a means of emergency operation. The gate and the means of emergency operation shall be *approved* by the fire protection subcode official and maintained operational at all times.

**[F] 912.6.1 Locking fire department connection caps.** The fire protection subcode official is authorized to require locking caps on fire department connections for water-based *fire protection systems* where the responding fire department carries appropriate key wrenches for removal.

**[F] 912.6.2 Clear space around connections.** A working space of not less than 36 inches (914 mm) in width, 36 inches (914 mm) in depth and 78 inches (1981 mm) in height shall be provided and maintained in front of and to the sides of wall-mounted fire department connections and around the circumference of free-standing fire department connections.

**[F] 912.6.3 Physical protection.** Where fire department connections are subject to impact by a motor vehicle, vehicle impact protection shall be provided in accordance with Section 312 of the *International Fire Code*.

**[F] 912.7 Signs.** A metal sign with raised letters not less than 1 inch (25 mm) in size shall be mounted on all fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: "AUTOMATIC SPRINKLERS," "STANDPIPES," or "TEST CONNECTION," or a combination thereof as applicable. Where the fire department connection does not serve the entire building, a sign shall be provided indicating the portions of the building served.

**[P] 912.8 Backflow protection.** The potable water supply to automatic sprinkler and standpipe systems shall be protected against backflow as required by the plumbing subcode (N.J.A.C. 5:23-3.15).

**912.9 Projection.** Where the fire department connection will otherwise project beyond the property line or into the public way, a flush-type fire department connection shall be provided.

**SECTION 913  
FIRE PUMPS**

**[F] 913.1 General.** Where provided, fire pumps for fire protection systems shall be installed in accordance with this section and NFPA 20.

**Exception:** Pumps for automatic sprinkler systems installed in accordance with Section 903.3.1.3, or Section P2904 of the *International Residential Code*.

**[F] 913.2 Protection against interruption of service.** The fire pump, driver and controller shall be protected in accordance with NFPA 20 against possible interruption of service through damage caused by explosion, fire, *flood*, earthquake,

rodents, insects, windstorm, freezing, vandalism and other adverse conditions.

**913.2.1 Protection of fire pump rooms.** Fire pumps shall be located in rooms that are separated from all other areas of the building by 2-hour *fire barriers* constructed in accordance with Section 707 or 2-hour *horizontal assemblies* constructed in accordance with Section 711, or both.

**Exceptions:**

1. In other than high-rise buildings, separation by 1-hour *fire barriers* constructed in accordance with Section 707 or 1-hour *horizontal assemblies* constructed in accordance with Section 711, or both, shall be permitted in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Separation is not required for fire pumps physically separated in accordance with NFPA 20.

**[F] 913.2.2 Circuits supplying fire pumps.** Deleted.

**[F] 913.3 Temperature of pump room.** Suitable means shall be provided for maintaining the temperature of a pump room or pump house, where required, above 40°F (5°C).

**[F] 913.3.1 Engine manufacturer's recommendation.** Temperature of the pump room, pump house or area where engines are installed shall never be less than the minimum recommended by the engine manufacturer. The engine manufacturer's recommendations for oil heaters shall be followed.

**[F] 913.4 Valve supervision.** Where provided, the fire pump suction, discharge and bypass valves, and isolation valves on the backflow prevention device or assembly shall be supervised open by one of the following methods:

1. Central-station, proprietary or remote-station signaling service.
2. Local signaling service that will cause the sounding of an audible signal at a *constantly attended location*.
3. Locking valves open.
4. Sealing of valves and *approved* weekly recorded inspection where valves are located within fenced enclosures under the control of the owner.

**[F] 913.4.1 Test outlet valve supervision.** Deleted.

**[F] 913.5 Acceptance test.** Acceptance testing shall be done in accordance with the requirements of NFPA 20.

**SECTION 914  
EMERGENCY RESPONDER SAFETY FEATURES**

**[F] 914.1 Shaftway markings.** Vertical *shafts* shall be identified as required by Sections 914.1.1 and 914.1.2.

**[F] 914.1.1 Exterior access to shaftways.** Outside openings accessible to the fire department and that open directly on a hoistway or shaftway communicating between two or more floors in a building shall be plainly marked with the word "SHAFTWAY" in red letters not

less than 6 inches (152 mm) high on a white background. Such warning signs shall be placed so as to be readily discernible from the outside of the building.

**[F] 914.1.2 Interior access to shaftways.** Door or window openings to a hoistway or shaftway from the interior of the building shall be plainly marked with the word “SHAFTWAY” in red letters not less than 6 inches (152 mm) high on a white background. Such warning signs shall be placed so as to be readily discernible.

**Exception:** Markings shall not be required on shaftway openings that are readily discernible as openings onto a shaftway by the construction or arrangement.

**[F] 914.2 Equipment room identification.** Fire protection equipment shall be identified in an *approved* manner. Rooms containing controls for air-conditioning systems, sprinkler risers and valves or other fire detection, suppression or control elements shall be identified for the use of the fire department. *Approved* signs required to identify fire protection equipment and equipment location shall be constructed of durable materials, permanently installed and readily visible.

**SECTION 915  
CARBON MONOXIDE DETECTION**

**[F] 915.1 General.** Carbon monoxide detection shall be installed in new buildings in accordance with Sections 915.1.1 through 915.6.

**[F] 915.1.1 Where required.** Carbon monoxide detection shall be provided in the locations specified in Section 915.2 where any of the conditions in Sections 915.1.2 through 915.1.6 exist.

**[F] 915.1.2 Fuel-burning appliances and fuel-burning fireplaces.** Carbon monoxide detection shall be provided in *dwelling units, sleeping units, classrooms* or any other occupiable space(s) that contain a fuel-burning appliance or a fuel-burning fireplace.

**[F] 915.1.3 Fuel burning, forced-air furnaces.** Carbon monoxide detection shall be provided in *dwelling units, sleeping units, classrooms* or any other occupiable space(s) served by a fuel-burning, forced-air furnace.

**Exception:** Carbon monoxide detection shall not be required in *dwelling units, sleeping units, classrooms or any other occupiable space(s)*, if a carbon monoxide detector is provided in the first room or area served by each main duct leaving the furnace, and the carbon monoxide alarm signals are automatically transmitted to an approved location.

**[F] 915.1.4 Fuel-burning appliances outside of dwelling units, sleeping units, classrooms or any other occupiable space(s).** Carbon monoxide detection shall be provided in *dwelling units, sleeping units, classrooms* or any other occupiable space(s) located in buildings that contain fuel-burning appliances or fuel-burning fireplaces.

**Exceptions:**

1. Carbon monoxide detection shall not be required in *dwelling units, sleeping units, class-*

rooms or any other occupiable space(s) without communicating openings between the fuel-burning appliance or fuel-burning fireplace and the *dwelling unit, sleeping unit* or classroom.

2. Carbon monoxide detection shall not be required in *dwelling units, sleeping units, classrooms* or any other occupiable space(s) where a carbon monoxide detector is provided in one of the following locations:

- 2.1. In an *approved* location between the fuel-burning appliance or fuel-burning fireplace and the *dwelling unit, sleeping unit, classroom* or any other occupiable space(s).

- 2.2. On the ceiling of the room containing the fuel-burning appliance or fuel-burning fireplace.

**[F] 915.1.5 Private garages.** Carbon monoxide detection shall be provided in *dwelling units, sleeping units, classrooms* or any other occupiable space(s) in buildings with attached *private garages*.

**Exceptions:**

1. Carbon monoxide detection shall not be required in *dwelling units, sleeping units, classrooms* or any other occupiable space(s) without communicating openings between the *private garage* and the *dwelling unit, sleeping unit* or classroom.

2. Carbon monoxide detection shall not be required in *dwelling units, sleeping units, classrooms* or any other occupiable space(s) located more than one *story* above or below a *private garage*.

3. Carbon monoxide detection shall not be required where the *private garage* connects to the building through an *open-ended corridor*.

4. Where a carbon monoxide detector is provided in an *approved* location between openings to a *private garage* and *dwelling units, sleeping units, classrooms* or any other occupiable space(s).

**[F] 915.1.6 Exempt garages.** For determining compliance with Section 915.1.5, an *open parking garage* complying with Section 406.5 or an enclosed parking garage complying with Section 406.6 shall not be considered a *private garage*.

**[F] 915.2 Locations.** Where required, carbon monoxide detection shall be installed in the locations specified in Sections 915.2.1 through 915.2.4.

**[F] 915.2.1 Dwelling units.** Carbon monoxide detection shall be installed in *dwelling units* outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, carbon monoxide detection shall be installed within the bedroom.