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Department of Housing and Community Development
Manufactured Housing Manufacturers
Notice of Approved Rulemaking – Effective July 1, 2012
Carbon Monoxide Alarm Installation

Recently, the Department of Housing and Community Development developed regulations for installation of carbon monoxide (CO) alarms in new and existing manufactured homes and multifamily manufactured homes. The regulations have been approved and become effective July 1, 2012.

These new regulations provide for the installation of CO alarms in all new, existing (*unsold inventory*) and used manufactured homes, mobilehomes and multifamily manufactured homes as follows:

- The requirements of section R315 of the California Code of Regulations, Title 24, Part 2.5, California Residential Code (CRC), is incorporated by reference (*See attached*) and applies to the design, construction and installation of approved carbon monoxide alarms in 1) New manufactured homes, 2) New multifamily manufactured homes containing only two dwelling units, 3) Existing manufactured homes on dealer lots or in inventory, and 4) Used manufactured homes and mobilehomes – if such units contain either a fuel-burning appliance(s) or are designed for an attached garage. Effective date is July 1, 2012.
- The requirements of section 420.4 of the California Code of Regulations, Title 24, Part 2, California Building Code (CBC), is incorporated by reference (*See attached*) and applies to the design, construction and installation of approved carbon monoxide alarms in multifamily manufactured homes containing more than two dwelling units – if such units contain either a fuel-burning appliance(s) or are designed for an attached garage. Effective date is July 1, 2012, for new units, January 1, 2013, for existing and used units.

Note – CO alarms in new manufactured homes and multifamily manufactured homes must be both hard wired and interconnected (*if more than one device is installed*), in accordance with the referenced sections. However, for new manufactured homes and multifamily manufactured homes where construction is complete; remain unsold to a first user; and exist either at a manufacturing plant, or dealer lot – CO alarms are permitted to be solely battery operated or plug-in type with battery back-up.

If you have questions or need more information, please contact Kevin Cimini via email kcimini@hcd.ca.gov or by telephone 916-326-2651.

Thank you,
Ruth Ibarra

[F] **418.6 Finished products.** Storage rooms for finished products that are flammable or combustible liquids shall be separated from the processing area by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.

SECTION 419 LIVE/WORK UNITS

419.1 General. A live/work unit is a *dwelling unit* or *sleeping unit* in which a significant portion of the space includes a non-residential use that is operated by the tenant and shall comply with Sections 419.1 through 419.8.

Exception: *Dwelling* or *sleeping units* that include an office that is less than 10 percent of the area of the *dwelling unit* shall not be classified as a live/work unit.

419.1.1 Limitations. The following shall apply to all live/work areas:

1. The live/work unit is permitted to be a maximum of 3,000 square feet (279 m²);
2. The nonresidential area is permitted to be a maximum 50 percent of the area of each live/work unit;
3. The nonresidential area function shall be limited to the first or main floor only of the live/work unit; and
4. A maximum of five nonresidential workers or employees are allowed to occupy the nonresidential area at any one time.

419.2 Occupancies. Live/work units shall be classified as a Group R-2 occupancy. Separation requirements found in Sections 420 and 508 shall not apply within the live/work unit when the live/work unit is in compliance with Section 419. High-hazard and storage occupancies shall not be permitted in a live/work unit. The aggregate area of storage in the nonresidential portion of the live/work unit shall be limited to 10 percent of the space dedicated to nonresidential activities.

419.3 Means of egress. Except as modified by this section, the provisions for Group R-2 occupancies in Chapter 10 shall apply to the entire live/work unit.

419.3.1 Egress capacity. The egress capacity for each element of the live/work unit shall be based on the *occupant load* for the function served in accordance with Table 1004.1.1.

419.3.2 Sliding doors. Where doors in a *means of egress* are of the horizontal-sliding type, the force to slide the door to its fully open position shall not exceed 50 pounds (220 N) with a perpendicular force against the door of 50 pounds (220 N).

419.3.3 Spiral stairways. *Spiral stairways* that conform to the requirements of Section 1009.9 shall be permitted.

419.3.4 Locks. Egress doors shall be permitted to be locked in accordance with Item 4 of Section 1008.1.9.3.

419.4 Vertical openings. Floor openings between floor levels of a live/work unit are permitted without enclosure.

419.5 Fire protection. The live/work unit shall be provided with a monitored fire alarm system where required by Section 907.2.9 and an *automatic sprinkler system* in accordance with Section 903.2.8.

419.6 Structural. Floor loading for the areas within a live/work unit shall be designed to conform to Table 1607.1 based on the function within the space.

419.7 Accessibility. Accessibility shall be designed in accordance with Chapters 11A and/or 11B, when applicable.

419.8 Ventilation. The applicable requirements of the *California Mechanical Code* shall apply to each area within the live/work unit for the function within that space.

SECTION 420 GROUPS R-1, R-2, R-2.1, R-3, R-3.1 and R-4

420.1 General. Occupancies in Groups R-1, R-2, R-2.1, R-3, R-3.1 and R-4 shall comply with the provisions of this section and other applicable provisions of this code.

420.2 Separation walls. Walls separating *dwelling units* in the same building, walls separating *sleeping units* in the same building and walls separating *dwelling* or *sleeping units* from other occupancies contiguous to them in the same building shall be constructed as *fire partitions* in accordance with Section 709.

420.3 Horizontal separation. Floor assemblies separating *dwelling units* in the same buildings, floor assemblies separating *sleeping units* in the same building and floor assemblies separating *dwelling* or *sleeping units* from other occupancies contiguous to them in the same building shall be constructed as *horizontal assemblies* in accordance with Section 712.

420.4 Carbon monoxide alarms. [HCD 1, HCD 2 & HCD 1-AC]

420.4.1 Carbon monoxide alarms in new construction. *Newly constructed Group R occupancies located in a building containing a fuel-burning appliance or a building that has an attached garage shall be equipped with single station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in the California Building Code, or an enclosed parking garage ventilated in accordance with the California Mechanical Code shall not be deemed to be an attached garage.*

Exception: *Sleeping units or dwelling units that do not themselves contain a fuel-burning appliance or have an attached garage, but that are located in a building with a fuel-burning appliance or an attached garage, need not be provided with single station carbon monoxide alarms provided that:*

1. *The sleeping unit or dwelling unit is located more than one story above or below any story that contains a fuel-burning appliance or an attached garage; and*
2. *The sleeping unit or dwelling unit is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and*
3. *The building is equipped with a common area carbon monoxide detection system that includes all enclosed common area spaces.*

installed in accordance with Section 420.4.2 in existing detached single-family dwellings or sleeping units intended for human occupancy that have a fossil fuel-burning heater or appliance, fireplace or an attached garage. Carbon monoxide alarms in existing buildings are permitted to be solely battery operated or plug-in type with battery back-up in areas where no construction is taking place.

420.4.2.3.2 Carbon monoxide alarms on or after January 1, 2013. Carbon monoxide alarms shall be installed in accordance with Section 420.4.2 in all other existing dwelling units intended for human occupancy as defined in Health and Safety Code Section 13262(b) that have a fossil fuel-burning heater or appliance, fireplace or an attached garage. Carbon monoxide alarms in existing buildings are permitted to be solely battery operated or plug-in type with battery back-up in areas where no construction is taking place.

420.4.2.4 Power supply. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. In existing dwelling units where there is no commercial power supply, the carbon monoxide alarm may be solely battery operated.
2. In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with a battery backup where repairs or alterations do not result in the removal of wall and ceiling finishes.
3. In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with battery backup where repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.
4. In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with battery backup when work is limited to the installation, alteration or repair of plumbing or mechanical systems or the installation, alteration or repair of electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure.
5. Other power sources recognized for use by NFPA 720.

420.4.2.5 Interconnection. Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit, the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.

Exceptions:

1. In existing dwelling units or within sleeping units, interconnection is not required where repairs do not result in the removal of wall and ceiling finishes and no previous method for interconnection existed.
2. In existing dwelling units, carbon monoxide alarms are not required to be interconnected where no construction is taking place.
3. In existing dwelling units, carbon monoxide alarms are not required to be interconnected where repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.
4. In existing dwelling units, carbon monoxide alarms are not required to be interconnected when work is limited to the installation, alteration or repair of plumbing or mechanical systems or the installation, alteration or repair of electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure.

420.4.2.6 Alarm requirements. No person shall install, market, distribute, offer for sale, or sell any carbon monoxide device in the State of California unless the device and instructions have been approved and listed by the State Fire Marshal.

Carbon monoxide alarms required by Section 420.4.2 shall be installed and maintained in the following locations:

1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s).
2. On every level of a dwelling unit including basements.
3. Group R-1 Occupancies only.
 - a. On the ceiling of every sleeping unit or other locations within the sleeping unit in compliance with the manufacturer's installation instructions.

420.5 Licensed 24-hour care facilities in a Group R-2.1, R-3.1 or R-4 occupancy. See Section 425 for Special Provisions for licensed 24-hour care facilities in a Group R-2.1, R-3.1, or R-4 occupancy.

420.6 Existing Group R Occupancies. See Chapter 34.

**SECTION R315
CARBON MONOXIDE ALARMS**

R315.1 Carbon monoxide alarms in new construction. For new construction, an approved carbon monoxide alarm shall be installed in dwelling units and in sleeping units within which fuel-burning appliances are installed and in dwelling units that have attached garages. Carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions.

R315.1.1 Carbon monoxide detection systems. 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.

R315.1.2 Power supply. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. Where there is no commercial power supply, the carbon monoxide alarm may be solely battery operated.
2. Other power sources recognized for use by NFPA 720.

R315.1.3 Interconnection. Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit, the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.

R315.1.4 Alarm requirements. No person shall install, market, distribute, offer for sale or sell any carbon monoxide device in the State of California unless the device and instructions have been approved and listed by the State Fire Marshal.

Carbon monoxide alarms required by Section R315.1 shall be installed and maintained in the following locations:

1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s).
2. On every level of a dwelling unit including basements.

R315.1.5 Multiple-purpose alarms. Carbon monoxide alarms combined with smoke alarms shall comply with Section R315, all applicable standards, and requirements for listing and approval by the Office of the State Fire Marshal, for smoke alarms.

R315.2 Carbon monoxide alarms in existing dwelling units and sleeping units. An approved carbon monoxide alarm shall be installed in existing dwellings having a fossil fuel-burning heater or appliance, fireplace or an attached garage. Carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions.

R315.2.1 Carbon monoxide detection systems. 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.

R315.2.2 Existing dwellings or sleeping units requiring a permit. When a permit is required for alterations, repairs or additions with a total cost or calculated valuation exceeding one thousand dollars (\$1,000), existing dwellings or sleeping units with a fossil fuel-burning heater or appliance, fireplace, or an attached garage shall have a carbon monoxide alarm installed in accordance with Section R315.2. Carbon monoxide alarms shall only be required in the specific dwelling unit or sleeping unit for which the permit was obtained.

R315.2.3 Existing dwellings or sleeping units not requiring a permit (no construction taking place). Pursuant to Health and Safety Code Section 17926, a carbon monoxide alarm(s) shall be installed in every existing dwelling unit or sleeping unit with a fossil fuel-burning heater or appliance, fireplace, or an attached garage as follows:

R315.2.3.1 Carbon monoxide alarms on or after July 1, 2011. Carbon monoxide alarms shall be installed in accordance with Section R315.2 in existing detached single-family dwellings or sleeping units intended for human occupancy that have a fossil fuel-burning heater or appliance, fireplace or an attached garage. Carbon monoxide alarms in existing buildings are permitted to be solely battery operated or plug-in type with battery back-up in areas where no construction is taking place.

R315.2.3.2 Carbon monoxide alarms on or after January 1, 2013. Carbon monoxide alarms shall be installed in accordance with Section R315.2 in all other existing dwelling units intended for human occupancy as defined in Health and Safety Code Section 13262(b) that have a fossil fuel-burning heater or appliance, fireplace or an attached garage. Carbon monoxide alarms in existing buildings are permitted to be solely battery operated or plug-in type with battery back-up in areas where no construction is taking place.

R315.2.4 Power supply. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. In existing dwelling units where there is no commercial power supply, the carbon monoxide alarm may be solely battery operated.
2. In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with battery back-up where repairs or alterations do not result in the removal of wall and ceiling finishes.
3. In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with battery back-up where repairs or

alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.

- 4. In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with battery back-up when work is limited to the installation, alteration or repair of plumbing or mechanical systems or the installation, alteration or repair of electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure.*
- 5. Other power sources recognized for use by NFPA 720.*

R315.2.5 Interconnection. *Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit, the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.*

Exceptions:

- 1. In existing dwelling units, interconnection is not required where repairs do not result in the removal of wall and ceiling finishes and no previous method for interconnection existed.*
- 2. In existing dwelling units, carbon monoxide alarms are not required to be interconnected where no construction is taking place.*
- 3. In existing dwelling units, carbon monoxide alarms are not required to be interconnected where repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.*
- 4. In existing dwelling units, carbon monoxide alarms are not required to be interconnected when work is limited to the installation, alteration or repair of plumbing or mechanical systems or the installation, alteration or repair of electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure.*

R315.2.6 Alarm requirements. *No person shall install, market, distribute, offer for sale, or sell any carbon monoxide device in the State of California unless the device and instructions have been approved and listed by the State Fire Marshal.*

Carbon monoxide alarms required by Section R315.2 shall be installed in the following locations:

- 1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s).*
- 2. On every level of a dwelling unit including basements.*