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TOPIC: Carbon Monoxide Detection
CODE: 2022 Oregon Structural Specialty Code (OSSC)

I. Purpose

Identify scoping and application of 2022 OSSC section 3403.8 and 915 **Carbon Monoxide Detection** in Group R, E, and I-1, I-2, & I-4. Clarification on the installation of Carbon monoxide Detection in existing buildings related to the charging statement in section 3403.8 “when a building permit is required”. Provide clarity on the use of Detection vs Alarms related to sections 3403.8 and 915.

II. Background

3403.8 Carbon Monoxide Detection; Where a building permit is required... Carbon monoxide alarms shall be installed in accordance with section 915.

Scoping for groups R, I, E. from section 3403.8

Group R occupancies where a building permit is required for the alteration, repair or reconstruction.

Group I (1, 2, & 4) where building permit is required for the addition, alteration, change of occupancy or relocation.

Group E where building permit is required for work in classrooms of group E occupancies.

Definitions:

Alteration: Any construction or renovation to existing structure other than repair or addition.

Repair: The reconstructions, replacement or renewal of any part of an existing building for the purpose of its maintenance or to correct damage.

Reconstruction: As it relates to the state building code, is the systematic process, or act or manner of constructing or assembling an existing building in part or in whole and any system, device or equipment regulated by the state building code.

Carbon Monoxide Alarm (CMA): a single or multi station alarm intended to detect carbon monoxide gas and alert occupants by distinct audible signal. it incorporates a sensor, control components and an alarm notification appliance in a single unit.

Carbon Monoxide Detector (CMD): A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm unit.

3403.8 exc.3 The use of CO Alarms (battery operated) is allowed when installed per section 915, and the code in effect at time of construction did not require Carbon Monoxide Detection to be provided.

Section 915

Installation of Carbon monoxide detection

915.1.2 Carbon monoxide detection shall be provided where Fuel burning appliances and fireplaces located in sleeping units and classrooms.

915.1.3 Fuel burning forced air furnaces serving sleeping units and classrooms served by require CMD.

915.1.3 Exc. CMD is not required in sleeping units and classrooms if the first room or area served by the furnace has CMD and alarm signal is transmitted to approved location.

915.1.4 Fuel burning appliances located outside of sleeping units and classrooms CMD shall be provided in sleeping rooms and classrooms in a building containing fuel burning appliances or fuel burning fireplaces.

915.1.4 Exc. CMD shall not be required in sleeping units and classrooms where there are not communicating openings or where CMD is provide in an approved location between fuel burning appliances and sleeping units and classrooms or on the ceiling of room containing fuel burning appliance.

915.2.1/2 CMD shall be installed in dwelling units/ sleeping units within 15 feet of bedroom door or in bedroom with attached bath where fuel burning appliance is in either space or served by forced air furnace.

915.2.3 Group E CMD shall be installed in classrooms signals shall be transmitted to approved on site location this requirement ids exempted by and occupant load of < than 30.

915.2.4 Three or more dwelling units In addition to the locations required by 915.2.1 CMD shall be installed in any enclosed common areas within building contain three or more dwelling units

915.3 Carbon Monoxide detection Carbon Monoxide detection required by sections 915.1-915.2.3 shall be provided with CMA complying with section 915.4 or CMD system complying with 915.5.

Note: BCD has clarified that areas identified in section 915.2.4 is included in sections listed in 915.3 for use of CMA.

III. Policy

The above scoping and code sections for (Group R, I, & E) applies to the application of Carbon monoxide detection installation in existing buildings. However, the issuance of a building permit for the replacement of only devices on an existing system or the replacement of only an alarm panel will not trigger the application of 3403.8. If both the devices and alarm panel are to be replaced section 3403.8 shall be enforceable, and Carbon Monoxide Detection will be required.

Any devices connected to a CMD systems specified in 915.5 shall be included is the fire alarm plan review. Stand-alone single or multi station CMA that are not connected to low voltage-premises power supply shall have required location specified by plan lay out or call-out.