



OREGON FIRE CODE Interpretations and Technical Advisories

A collaborative service by local and state fire professionals, along with our stakeholders and customers, to provide consistent and concise application of Oregon's fire prevention and life safety regulations.

Date: March 14, 2016

Ruling: Interpretation No. 16-01

Subject: Aftermarket Door-Locking Hardware

Code Reference: 2014 Oregon Fire Code (OFC), Section 1030.2.1

Question(s): Can aftermarket door-locking hardware devices be installed on existing classroom egress doors?

Answer(s): **Yes.** OFC Section 1030.2.1 provides local *fire code officials* the authority to approve the use of security devices that affect the means of egress. This authority includes the installation of aftermarket door-locking hardware and other devices for intruder protection. The *fire code official* shall consider the following prior to issuing their approval:

- 1.) *The ability of required **fire-rated doors** to self-close and self-latch cannot be impaired; and, the fire door and its frame shall not be modified.*
- 2.) *The **latch component** of any locking device shall not be permanently mounted on the door and shall only be available for installation by teachers and staff.*
- 3.) *Unlatching of the door from inside the room **shall not exceed two (2) actions/operations**, one action/operation for the normal latch and one action/operation for the aftermarket door-locking device.*
- 4.) *The locking device **shall not** be considered a permanent solution. A written plan to retrofit existing door latching hardware with fire and building code compliant hardware door-locking hardware shall be developed by the school district. This plan **shall include a "sunset" date on the use of the aftermarket hardware** and the plan shall be approved by the fire code official.*
- 5.) *The school shall incorporate operational procedures and school staff training for use of the locking device(s) into their written emergency evacuation and lockdown plans, emergency drill, and employee training and response procedures as defined OFC Sections 404, 405 and 406. The training plan shall include substitute teachers, aides, and volunteers who may be left in control of a classroom or educational space. This operational procedure must be reviewed and approved by the fire code official. Local law enforcement, fire/EMS, and other authorized personnel shall be trained in the unlocking of the device.*

Issue: Many schools and universities are actively looking for ways to increase security for their facilities in the wake of today's school security threats. School administrators have been approached to install aftermarket devices that supplement or assist with the locking of classroom doors and allow teachers and staff to rapidly secure them. The use of aftermarket door devices may render the door noncompliant with the Oregon Fire and Building codes by:

- 1.) *Impeding occupant egress.*
- 2.) *Improperly altering the door or door frame of fire-rated assemblies.*
- 3.) *Defeating the latch on exit doors that are also fire-rated doors.*

Considerations: Solutions to enhance the security of buildings meeting current security threats can conflict with long standing provisions of the fire and building codes. Chances are you will be challenged to resolve this issue. Your evaluation of a school's use of aftermarket devices which supplement or assist with the locking of classroom doors should include:

- 1.) *The needs for security and safety of the occupants during a school lockdown or other security-related events.*
- 2.) *Will use of the aftermarket locking-device completely eliminate the ability of the occupants of the room from getting out of the building? (e.g. use of an openable window)*
- 3.) *The ability of an unauthorized individual to use the device.*
- 4.) *How the use of the device(s) is integrated into the school's current emergency evacuation and lockdown plans, emergency drill, and employee training and response procedures.*

The preferred permanent solution to interior door security is the retrofit installation of the mortise lockset. It is one of the most functional and safest locking arrangements and commonly used in new construction due to their durability, strength, and resistance from any forced intrusion because the deadbolt feature is larger. It is dual-action, acting as a door knob and a deadbolt, releasing both the latch and the deadbolt when you turn the lever.

Detailed Code Requirements

- ❖ Fire & building codes require classroom egress doors be readily openable from the egress side without the use of a key or special knowledge or effort. (OFC/OSSC Sec. 1008.1.9)
- ❖ The unlatching of any door shall not require more than one operation. (OFC/OSSC Sec. 1008.1.9.5)
- ❖ Door handles, pulls, latches, locks, and other operating devices must be located between 34" & 48" above the floor and shall not require tight grasping, tight pinching, or twisting of the wrist to operate. (OFC/OSSC Sec. 1008.1.9.1 & 1008.1.9.2)
- ❖ When the door is required to be fire-rated, the door shall not be modified in any way that invalidates the required fire-resistive rating. (OFC Sec. 703 & OSSC Sec. 716.5.3)
- ❖ Security devices affecting means of egress shall be subject to approval of the fire code official. (OFC Sec. 1030.2.1)

Training/Education Available

- ❖ Do The Drill – A School Resource Guide To Evacuation Planning, Oregon Office of State Fire Marshal (OSFM) 2016.
- ❖ National Association of State Fire Marshal’s Classroom Door Security & Locking Hardware checklist.
- ❖ Readiness and Emergency Management for Schools (REMS) Technical Assistance Center <https://rems.ed.gov/default.aspx>
- ❖ Guide for Developing High-Quality School Emergency Operations Plans. https://rems.ed.gov/docs/REMS_K-12_Guide_508.pdf
- ❖ www.idighardware.com/schools A whiteboard animation video explaining door-related options for securing classroom doors.

Other References:

- ❖ 2014 *Oregon Fire Code* (OFC) & *Oregon Structural Specialty Code* (OSSC), Chapters 7 & 10.
- ❖ ORS 336.071 (4) *All schools shall maintain all exit doors so that the doors can be opened from the inside without a key during schools hours.*