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School Drills and Fire Safety During Covid-19 Pandemic

Referenced Codes and Standards:

R.C. § 3737.73
OAC § 1301:7-7-1(B)(3)(a), (c); OFC § 102.3.1, 102.3.3
OAC § 1301:7-7-1(E)(3)(c); OFC § 105.3.3
OAC § 1301:7-7-1(G)(1) & (5); OFC § 107.1, 107.5
OAC § 1301:7-7-8(C)(1)(a); OFC § 803.1.1
OAC § 1301:7-7-8(C)(3); OFC § 803.3
OAC § 1301:7-7-8(G)(2); OFC § 807.2(c)

OAC § 1301:7-7-8(G)(3); OFC § 807.3
OAC § 1301:7-7-8(G)(4); OFC § 807.4
OAC § 1301:7-7-4(C)(5); OFC § 403.5
OAC § 1301:7-7-4(E); OFC § 405
OAC § 1301:7-7-4(H); OFC § 408
OAC § 1301:7-7-10(A); OFC § 1001
OAC § 1301:7-7-10(C)(3)(c); OFC § 1003.3.3
OAC § 1301:7-7-10(E); OFC § 1031

OAC § 1301:7-7-57(D)(3)(b); OFC § 5704.3.2
OAC § 1301:7-7-57(D)(3)(d)(ii); OFC § 5704.3.4.2(c)
OAC § 1301:7-7-57(D)(3)(d)(iv); OFC § 5704.3.4.4
OAC § 1301:7-7-57(E)(5); OFC § 5705.5
OFC Table 803.3
OFC Table 5003.1.1(1)

As school officials begin planning for the 2020-2021 school year, many, as well as members of the fire service, have reached out to the State Fire Marshal (SFM) regarding how to implement necessary safety precautions to help combat the spread of Covid-19 while still maintaining fire safety in schools. Of course, as school officials plan, they must consider and incorporate the guidance (and/or any subsequent guidance) issued by the Ohio Department of Health (ODH) in its *“Covid-19 Health and Prevention Guidance for Ohio K-12 Schools”* (ODH Guidance). For a copy of the guidance document [click here](#).¹ This bulletin will provide some general direction regarding barriers and room dividers, fire drills, tornado drills, egress, hand sanitizer, and face coverings to ensure that fire safety for all school building occupants is also achieved and maintained even as other Covid-19 related safety measures are instituted.

BARRIERS AND DIVIDERS

Schools that are contemplating the use of new or additional barriers and/or dividers (such as the installation of plexiglass, plastic sheeting, or draperies) to help create more insulated classrooms or hallways should ensure that these devices comply with the Ohio Fire Code (OFC). For example, barriers and dividers cannot block, impede or alter the function of approved building smoke & fire alarms/detectors, suppression systems or exit pathways. (See also “Egress” section below.)

With that said, however, any barrier or divider proposed for use must be considered on a case-by-case basis to determine if these devices comply with the intent and substance of ODH Guidance and the OFC. Fortunately, most public health-related modifications to schools will likely not trigger the Ohio Building Code’s (OBC) plan review process or require specific pre-approval by a fire code official (FCO). Regardless, the SFM strongly encourages school and safety officials to consult with their building and fire code officials prior to installation of any new devices to ensure that any methods used to provide increased Covid-19 protections do not inadvertently create fire and safety hazards or violations of OBC or OFC requirements.

When reviewing any proposed barriers, FCOs should consider the intent of both the OFC and the ODH Guidance and focus on methods to best achieve both objectives. For specific cases, if an FCO feels there may be an OFC compliance issue with a barrier, the best initial response is to direct school officials to a design professional or the building

¹ ODH Guidance can be located by clicking the link above or via the following path:
<https://coronavirus.ohio.gov/static/responsible/schools/K-12-Schools-Guidance.pdf>

department for further discussion and, as needed, for the FCO to contact the SFM's Code Enforcement Bureau as indicated below (see pg. 5).

When deciding whether or not to use barriers or dividers and/or when reviewing proposed barriers under the OFC, school officials, design professionals and FCOs should initially focus on the following OFC sections:

- OFC sec. 105.3.3 - substantial compliance with the OFC (to view the OFC, [click here](#)²);
- OFC sec. 107.1 - maintenance of building safeguards;
- OFC sec. 803.3 - interior wall and ceiling finish requirements by occupancy;
- OFC sec. 807.3 - combustible decorative materials; and
- OFC sec. 1001.2 - maintaining egress.

In addition, the following specific OFC sections would apply to the installation of barriers and/or dividers and must be followed:

Barriers (including drapery, fabrics, plastics, etc.) [See OFC secs. 107.1, 107.5 and 807.2(c)]

- Barriers cannot interfere with or impede the operation of fire suppression systems.
- Barriers cannot interfere with or impede the operation of smoke alarms.
- Barriers cannot interfere with or impede the operation of fire alarm systems.
- Barriers cannot interfere with or impede established egress.

Drapery and Fabrics [See OFC secs. 807.3, 807.4, 803.1.1 and 803.3; OFC Table 803.3]

- Drapery and fabric used to separate individuals or groups that is suspended from walls or ceilings must not exceed 10% of the wall or ceiling area where they are located.
- Drapery and fabric must meet flame propagation performance criteria or exhibit a maximum rate of heat release per the OFC.
- Drapery and fabric must not exceed flame spread indices established in the OFC.

Note: Decreased occupant load may affect requirements and potentially mitigate some concerns.

Egress [See OFC secs. 1001.2 and 807.2(c)]

- Adequate egress must be maintained.
- Barriers, partitions, draperies, etc. cannot interfere with, impede, obstruct egress or visibility thereto.

Note: reduced and rearranged seating configurations may affect adequacy of exiting egress.

Occupancy [See OFC secs. 102.3.1, 102.3.3 and 105.3.3]

- All buildings must be occupied in accordance with the Ohio Building Code (OBC) and the occupancy provisions of the OFC.
- Occupancy of a structure cannot be changed unless the building is made compliant with OBC requirements for the new use. However, the fire code official can approve a less hazardous use.
- Minimum conditions of occupancy must be met and no building shall be occupied unless it is in substantial compliance with the OFC and does not constitute a distinct or serious hazard.

FIRE DRILLS [See Ohio Revised Code ("R.C.") sec. 3737.73 and OFC secs. 403.5, 405.]

Pursuant to language contained in the R.C. and mirrored in the OFC school officials must meet the following school drill requirements each school year:

² The OFC can be located by clicking the link above or in the Ohio Administrative Code at Chapter 1301:7-7, which can be located via the following path: <http://codes.ohio.gov/oac/1301%3A7-7>.

- At least six (6) drills or rapid dismissals must be conducted each year to ensure that all students and staff know the correct procedures to follow in the event of a fire emergency.

Note: schools that do not have either smoke detectors or a sprinkler system in all classroom buildings must conduct at least nine (9) drills each school year for all students and staff.

- At least one drill or rapid dismissal must be conducted during each month of the school year.
- The first drill of the year must be conducted within ten (10) days of the beginning of classes.

School officials are not responsible for conducting drills for those students who participate solely in on-line or distance learning from their homes or other locations not on school property. The purpose of conducting fire drills is to ensure that in the event of an actual fire-related emergency at a school building, all staff and students will know how to evacuate the school buildings in the shortest possible time and without confusion. Drills offer an opportunity to evaluate the efficiency of emergency evacuation plans and procedures and to make any necessary adjustments. The best way to evaluate preparedness is to mimic evacuation as closely as possible to an actual event. Therefore, all building occupants must participate in each drill.

Likewise, all building occupants must participate in the required number of drills. This will become particularly important for those schools that may institute a bifurcated schedule where children attend in “shifts” (e.g., some students attending 2 or 3 days a week and other students attending the other 3 or 2 days a week). Each “shift” of students must participate in the required number of drills.

This will help all children become familiar with their surroundings, especially new or altered surroundings created by Covid-19 responses, and the procedures they must follow to efficiently evacuate from the building should the need arise – particularly now that Covid-related safety precautions must also be maintained as much as possible.

ODH Guidance states that schools should “reduce the mixing of student groups” and “try when possible” to maintain social distancing. However, it is acknowledged that social distancing may not always be possible. In that event, face coverings are even more important and should be utilized. See ODH Guidance, pp. 12, 13. Therefore, in keeping with ODH Guidance, school officials are encouraged to consider the following when revising their school safety plans for the upcoming school year:

- As always, individual student classes can be kept together during fire drills.
- Because it may not be possible to maintain social distancing during all portions of a fire drill (i.e., in hallways while actual evacuation is taking place), students and staff can wear face coverings during drills.
- Changes may need to be made to meeting point designations so that each student group can be located a safe distance from buildings and from other groups or classes while awaiting completion of the drill.

TORNADO DRILLS [See R.C. sec. 3737.73(B) and OFC sections 405.1.1, 408, generally, and 408.2(d), specifically]

Schools are also required, in conjunction with the fire drills discussed above, to provide students with instruction regarding the safety precautions to be taken in the case of a tornado alert or warning. In addition to designating appropriate shelter locations, tornado drills must be conducted. At least one tornado drill must be conducted during each month of ‘tornado season’ which is from April 1 to July 31 each year.

As with fire drills, all building occupants must participate in each tornado drill but school officials are not responsible for conducting tornado drills for those students who do not participate in classes on school property (e.g., those students participating solely in on-line or distance learning from their homes). The purpose of tornado drills is to

ensure that in the event of an actual tornado at a school building, all staff and students will know what procedures to follow and where designated tornado shelter areas are located.

All building occupants must participate in the required number of drills. Again, as with fire drills, this will become particularly important for schools that institute a bifurcated or split schedule where children attend in “shifts” (e.g., some students attending 2 or 3 days a week and other students attending the other 3 or 2 days a week). Each “shift” of students must participate in one tornado drill each month during tornado season.

Because spacing of students is even more limited during the course of a tornado drill, since students are congregated in an enclosed shelter area, face coverings during these events are even more important and should be utilized. See ODH Guidance, pp. 12, 13.

EGRESS [See OFC secs. 1001 and 1031]

Adequate egress from all areas of all school buildings must be maintained, including any separate waiting spaces that are designated for individuals with Covid-19 related symptoms. All areas should have designated evacuation routes and those routes must remain clear at all times. As school officials configure means and methods to take student and staff temperatures upon entry to school buildings, they must ensure that they are not obstructing egress from the building. Special care should be taken to ensure that any table placement or staff/student influx does not impede egress routes and capacities.

Likewise, if directional markers or “one-way-traffic” patterns are to be instituted within the schools, such patterns and markers must be placed and used in such a manner that preserves proper egress.

See also the “Barriers and Dividers” section above (p. 1) for additional discussion regarding egress requirements.

HAND SANITIZER [See OFC secs. 1003.3.3, 5705.5, 5704.3.4.2(c) and 5704.3.4.4; OFC Table 5003.1.1(1)]

Schools are required to provide hand sanitizer throughout schools in “high traffic areas including entrances and classrooms.” See ODH Guidance, p. 8. The following considerations should be taken into account when determining where sanitizer dispensers are to be located and where and how much sanitizer will be stored on the premises:

- Dispensing devices cannot project into egress paths more than four (4) inches.
- In occupancies with carpeted floors dispensing devices can only be installed in areas equipped throughout with an approved automatic sprinkler system.
- Liquid storage quantity limits apply for the storage of flammable or combustible liquids (including hand sanitizer) in schools. Quantities to be stored cannot exceed that necessary for demonstration, treatment, laboratory work, maintenance purposes and operation of equipment. Specific amount limitations are set forth in OFC Table 5003.1.1(1) (i.e., 120 gallons for storage purposes).
- Quantities of flammable and combustible liquids (including hand sanitizer) in excess of 10 gallons (38 L) used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets in accordance with OFC sec. 5704.3.2.

FACE COVERINGS – Revised August 10, 2020

ODH Guidance recommends that school officials consider the use of face shields where cloth face masks would hinder the learning process or present a safety hazard including in areas such as science labs. See ODH Guidance, p. 14. **However, new guidance from ODH requires that all children attending K-12 education wear a face covering while at school.** Since face masks are now required (or, presumably when necessary, school officials could opt to

use a face shield), the SFM strongly encourages school officials to use extreme caution in choosing any face covering that is going to be used in an area where an open flame is also in use. The use of face coverings – whether cloth face masks or plastic face shields – by children near an open flame could present a fire safety hazard due to the risk of the face covering catching fire and ‘melting.’ The use of open flames while face coverings are being worn should be limited and closely supervised to ensure that such coverings are kept an appropriate distance from all flame sources.

CONCLUSION

As school officials implement plans to incorporate Covid-19 related safety protocols into the operation of their facilities for the upcoming academic year, they should work closely with their local fire officials to incorporate necessary distancing, safety and sanitization protocols into their school safety and emergency evacuation plans and day to day operations. Considering the above parameters and instituting policies and practices that take the above fire safety requirements into account will help ensure that students are protected from pandemic related concerns without compromising fire safety.

Inspectors from the SFM’s Code Enforcement Bureau can assist in helping school and fire officials create plans and procedures that accomplish both health and fire safety goals. The CEB can be reached via the following:

Phone: 614-728-5460 (or toll free at 888-276-0303)

Fax: 614-728-5168

Email: sfm_codeenf@com.state.oh.us

This bulletin is intended only as a tool for school officials to use when determining how to implement best practices in the wake of the Covid-19 pandemic while at the same time maintaining compliance with all applicable Ohio Fire Code requirements. The instant Technical Bulletin is provided to offer general guidance only and does not constitute legal advice. Local education leaders and code enforcement officials should consult their legal advisor to determine specific courses of action they should take to ensure compliance with all applicable requirements and standards.