



FIRE CODE AWARENESS IN SCHOOLS

Common violations found during inspections

This document is a list of common violations found in schools during code enforcement inspections and includes the codes that are cited.

MOST COMMON VIOLATIONS

INDIANA FIRE CODE – 1030.2 RELIABILITY

Required *exit accesses*, *exits* and *exit discharges* shall be continuously maintained free from obstructions or impediments to full instant use in the case of fire or other emergency when the building area served by the *means of egress* is occupied. An *exit* or *exit passageway* shall not be used for any purpose that interferes with a *means of egress*.

WHAT IT MEANS: The path of egress is the entire path to get to an exit; this could be how someone gets to the door in a classroom, the hall or corridor leading to an exit, as well as the outside area for a person to access the public way. Code officials write this violation often due to obstructions placed in the means of egress. Typical examples are: Trash cans, props/signs, desks, chairs and other furniture. These spaces were designed and built to be used as a means of egress. They are not to be used for classrooms, discipline areas or test taking areas.

SUGGESTION: Cover this topic extensively in the required annual personnel meeting. All personnel should be responsible and aware that blocking an exit is a safety violation. The principal or other office staff or maintenance should check weekly to ensure egress is not blocked within the building.

INDIANA FIRE CODE – 404.3.1 FIRE EVACUATION PLANS

Fire evacuation plans shall include the following:

1. Emergency egress or escape routes and whether evacuation of the building is to be complete or, where *approved*, by selected floors or areas only.
2. Procedures for employees who must remain in the building to operate critical equipment before evacuating.
3. Procedures for assisted rescue for persons unable to use the general *means of egress* unassisted.
4. Procedures for accounting for employees and occupants after evacuation has been completed.
5. Identification and assignment of personnel responsible for rescue or emergency medical aid.
6. The preferred and any alternative means of notifying occupants of a fire or emergency.

7. The preferred and any alternative means of reporting fires and other emergencies to the fire department or designated emergency response organization.
8. Identification and assignment of personnel who can be contacted for further information or explanation of duties under the plan.
9. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages, where provided.

WHAT IT MEANS: Fire evacuation plans are required to be written specifically for the building rather than an overall process for a school corporation. In many cases the plan is not available or the plan does not include all the requirements listed above. This must be a WRITTEN plan.

SUGGESTION: Annually go over the fire evacuation plan with all staff. Assign personnel responsible for writing the evacuation plan and ensure it meets all the requirements of the specific list in 404.3.1. Assign a designated place for this document to be located and accessed.

INDIANA FIRE CODE – 404.3.2 FIRE SAFETY PLANS

Fire safety plans shall include the following:

1. The procedure for reporting a fire or other emergency.
2. The life safety strategy and procedures for notifying, relocating or evacuating occupants, including occupants who need assistance.
3. Site plans indicating the following:
 - 3.1. The occupancy assembly point.
 - 3.2. The locations of fire hydrants.
 - 3.3. The normal routes of fire department vehicle access.
4. Floor plans identifying the locations of the following:
 - 4.1. Exits.
 - 4.2. Primary evacuation routes.
 - 4.3. Secondary evacuation routes.
 - 4.4. Accessible egress routes.
 - 4.5. Areas of refuge.
 - 4.6. Exterior areas for assisted rescue.
 - 4.7. Manual fire alarm boxes.
 - 4.8. Portable fire extinguishers.
 - 4.9. Occupant-use hose stations.
 - 4.10. Fire alarm annunciators and controls.
5. A list of major fire hazards associated with the normal use and occupancy of the premises, including maintenance and housekeeping procedures.
6. Identification and assignment of personnel responsible for maintenance of systems and equipment installed to prevent or control fires.
7. Identification and assignment of personnel responsible for maintenance, housekeeping and controlling fuel hazard sources.

WHAT IT MEANS: Fire safety plans are required to be created specifically for the building rather than an overall process for a school corporation. In many cases the plan is not available, or the plan does not include all the requirements in the list above. This is meant to be a DIAGRAM.

SUGGESTION: A school should designate a fire safety personnel who maintains and trains on this document. Each teacher should have this plan affixed to a clipboard or easily obtainable file folder within their classroom and should, at all times, know the fire evacuation and safety plans.

INDIANA FIRE CODE – 406.2 FREQUENCY

Employees shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation and at least annually thereafter. Records shall be kept and made available to the *fire code official* upon request.

WHAT IT MEANS: Records of employee training are not usually provided or not able to be found. A second problem encountered is that only teachers are being trained. All staff are required to be trained; this includes lunchroom staff, janitorial, administrative staff, etc. This also includes new staff that are hired after the school year has begun.

SUGGESTION: As indicated previously, someone within the school should be designated as the fire safety personnel who assists in maintaining these important documents and tracks each meeting. Documentation should be kept in a master file available for fire code officials when they inspect the school.

INDIANA FIRE CODE – 604.5.2 POWER TEST

For battery-powered emergency lighting, a power test of the emergency lighting equipment shall be completed annually. The power test shall operate the emergency lighting for a minimum of 90 minutes and shall remain sufficiently illuminated for the duration of the test.

WHAT IT MEANS: This is one of the most common violations found in schools. Emergency lighting with back up batteries are required to be tested annually, by an operational test, for 90 minutes; the outcome of the testing and any maintenance/repairs that had to be made to the lights must be documented. Emergency lighting is very important when there is power loss during an emergency; testing helps to ensure lights function as they should when needed.

SUGGESTION: Assign designated personnel to be responsible for ensuring the testing is completed at least annually, documented and records kept in an accessible location. The location of the documentation should be known by multiple people (i.e. principal, office staff, maintenance, janitorial staff, etc.).

INDIANA FIRE CODE – 901.6.2 RECORDS

Records of all system inspections, tests and maintenance required by the referenced standards shall be maintained on the premises or made readily available for a minimum of two (2) years from the date of the last inspection, except that original acceptance test reports shall be maintained for the life of the system.

WHAT IT MEANS: Code officials are continuously writing this violation because records of tests are not available, cannot be found, no one knows where they are, etc. Buildings with fire alarm systems, sprinkler systems, kitchen fire suppression, rolling fire doors, etc. must have all systems tested at specified intervals. Those test records must be made available to the code official to review. Someone at each school should be designated to be responsible for these reports. Create a book/binder with this documentation and assign a designated place for the document to be located and accessed when needed

SUGGESTION: Have a master file for documentation. Assign a designated place for the documentation to be located and accessed when needed.

INDIANA FIRE CODE – 405.4 TIME

Drills shall be held at unexpected times and under varying conditions to simulate the unusual conditions that occur in case of fire.

WHAT IT MEANS: Fire drills are not always found to be conducted at unexpected times or under varying conditions.

SUGGESTION: Within the master file, have a document that shows the date and time of drill and the conditions. Ensure varying conditions apply, and that the times of fire drills are done during a variety of conditions.

INDIANA FIRE CODE – 405.5 RECORD KEEPING

Records shall be maintained of required emergency evacuation drills and include the following information:

1. Identity of the person conducting the drill.
2. Date and time of the drill.
3. Notification method used.
4. Staff members on duty and participating.
5. Number of occupants evacuated.
6. Special conditions simulated.
7. Problems encountered.
8. Weather conditions when occupants were evacuated.
9. Time required to accomplish complete evacuation.

WHAT IT MEANS: These are the requirements for fire drill records; very rarely do the records provided to code officials have all of the required information in them. On paperwork, number 5 is generally filled out with the total enrolled students rather than the actual count during a drill. Actual counts are required to determine if everyone in the building is accounted for.

SUGGESTION: Assign personnel to be responsible for fire drills and record keeping. Personnel should ensure the requirements of the specific list in 405.5 are met. Assign a designated place for the document to be located

and accessed when needed. Idea for number 6 – Some examples of special conditions simulated include placing a sign, flashing light, picture of a fire or red-colored cloth in the area of simulated fire origin, or handing a note to a staff person outlining a fire scenario they've just discovered.

If the "(3) minutes in the event of an unplanned fire alarm activation in order for a designated school official to investigate the alarm" option is being used as a part of the drills, ensure that the process is written into your Fire and Emergency Evacuation Plan, and is being carried out accordingly.

INDIANA FIRE CODE – 315.3 STORAGE IN BUILDINGS

Storage of materials in buildings shall be orderly and stacks shall be stable. Storage of combustible materials shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur.

WHAT IT MEANS: Code officials typically find disorderly storage in drama and art departments. Combustible material is often found near wall heaters, space heaters and kilns. Combustible materials such as paper, plastic, wood, trash, rags, etc. should never be placed close to these areas.

SUGGESTION: Cover the topic extensively in the already required annual personnel training. All personnel should be responsible for being aware of storage requirements and made to correct violations when noticed at any time.

INDIANA FIRE CODE – 605.3 WORKING SPACE AND CLEARANCE

A working space of not less than 30 inches (762 mm) in width, 36 inches (914 mm) in depth and 78 inches (1,981 mm) in height shall be provided in front of electrical service equipment. Where the electrical service equipment is wider than 30 inches (762 mm), the working space shall be not less than the width of the equipment. No storage of any materials shall be located within the designated working space.

WHAT IT MEANS: This violation is often written because staff will place items and storage in front of electrical panels. This code was written specifically so that electrical panels may be accessed immediately in case of an emergency without having to move items out of the way to get to the panel.

SUGGESTION: Cover the topic extensively in the already required annual personnel training. All personnel should be responsible for being aware of storage requirements and made to correct violations when noticed at any time.

INDIANA FIRE CODE – 315.3.3 EQUIPMENT ROOMS

Combustible material shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms.

WHAT IT MEANS: This violation is written because of storage found in boiler, mechanical and electrical rooms. Combustible material should never be stored in these areas as they are considered high hazard areas.

SUGGESTION: Cover the topic extensively in the already required annual personnel training. All personnel should be responsible for being aware of storage requirements and made to correct violations when noticed at any time. Another suggestion might be to add a sign on these doors stating not to store combustible material there.

INDIANA FIRE CODE – 605.4 MULTI PLUG ADAPTERS

Multi plug adapters, such as cube adapters, unfused plug strips or any other device not complying with NFPA 70 shall be prohibited.

WHAT IT MEANS: Multi plug adapters are typically used in classrooms, breakrooms or utilized by janitorial staff; they are prohibited to be used in schools. However, power strips are an acceptable alternative so long as they are not “daisy-chained” (power strip plugged into another power strip or another source) and are plugged directly into a permanent receptacle.

SUGGESTION: Cover the topic extensively in the already required annual personnel training. All personnel should be responsible for being aware of electrical requirements and made to correct violations when noticed at any time. Power strips with overcurrent protection are an acceptable alternative to multi plug adapters.

INDIANA FIRE CODE – 605.4.2 POWER SUPPLY

Relocatable power taps shall be directly connected to a permanently installed receptacle.

WHAT IT MEANS: Power strips with overcurrent protection are often found plugged in to other power strips or extension cords (daisy-chained) because older classrooms are not equipped with multiple outlets for electronics. Power strips are acceptable so long as they are plugged directly into a permanent receptacle.

SUGGESTION: Cover the topic extensively in the already required annual personnel training. All personnel should be responsible for being aware of electrical requirements and made to correct violations when noticed at any time.

INDIANA FIRE CODE – 605.4.3 INSTALLATION

Relocatable power tap cords shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage.

WHAT IT MEANS: Power strips are often found run under floor coverings, through drop ceilings, etc. to hide the cords. Fire code does not allow this.

SUGGESTION: Cover the topic extensively in the already required annual personnel training. All personnel should be responsible for being aware of electrical requirements and made to correct violations when noticed at any time.

INDIANA FIRE CODE – 605.5 EXTENSION CORDS=

Extension cords and flexible cords shall not be a substitute for permanent wiring. Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact. Extension cords shall be used only with portable appliances.

WHAT IT MEANS: Extension cords may be used for one portable appliance at a time, and temporarily only - such as a portable fan for a short period of time.

SUGGESTION: Cover the topic extensively in the already required annual personnel training. All personnel should be responsible for being aware of electrical requirements and made to correct violations when noticed at any time. Power strips are an acceptable alternative to using extension cords for permanent power.

INDIANA FIRE CODE – 807.1 GENERAL REQUIREMENTS

In occupancies in Groups A, E, I and R-1, and dormitories in Group R-2, curtains, draperies, hangings and other decorative materials suspended from walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 807.2 or be noncombustible.

WHAT IT MEANS: Decorative materials, draperies, etc. may not be placed on the walls or hung from the ceiling unless the material(s) is tagged to meet NFPA 701, or has been sprayed with flame retardant meeting the NFPA 701 criteria. This must be documented, made available to be reviewed by the code official and the spray bottle itself used must be on site. This is specific to decorative material; artwork and teaching material is exempt from the requirement and may be on walls or hung from ceilings. Decorative material is considered to be anything decorative that is not used as teaching material or artwork.

SUGGESTION: Cover the topic extensively in the already required annual personnel training. Ensure any decorative material brought in to decorate classrooms or other school areas meets this requirement. Designate personnel to ensure this is happening and to answer questions for teachers/staff who want to bring items in. Require personnel to fill out documentation for each item brought into the school and keep the records in an accessible location.

INDIANA FIRE CODE – 807.4.3.2 ARTWORK

Artwork and teaching materials shall be limited on the walls of *corridors* to not more than 20 percent of the wall area.

WHAT IT MEANS: Artwork and teaching materials are limited to 20 percent of wall areas in corridors. This violation is often written in elementary schools.

SUGGESTION: Cover the topic extensively in the already required annual personnel training. Assign personnel to ensure this requirement is met.

INDIANA FIRE CODE – 806.2 ARTIFICIAL VEGETATION

Artificial decorative vegetation shall meet the flame propagation performance criteria of NFPA 701. Meeting the flame propagation performance criteria of NFPA 701 shall be documented and certified by the manufacturer in an *approved* manner. Alternatively, the artificial decorative vegetation item shall be tested in accordance with NFPA 289, using the 20 kW ignition source, and shall have a maximum heat release rate of 100 kW.

WHAT IT MEANS: Artificial vegetation such as flowers, plants, etc. may not be placed in schools unless the item(s) is tagged to meet NFPA701, or has been sprayed with flame retardant meeting the NFPA701 criteria. This must be documented, made available to be reviewed by the code official and the spray bottle itself used must be on site.

SUGGESTION: Cover the topic extensively in the already required annual personnel training. Ensure any artificial vegetation brought in to decorate classrooms or other school areas meets this requirement. Designate personnel to ensure this is happening and to answer questions for teachers/staff who want to bring items in. Require personnel to fill out documentation for each item brought into the school and keep the records in an accessible location.

INDIANA FIRE CODE – 703.2 OPENING PROTECTIVES

Opening protectives shall be maintained in accordance with the rules of the commission. Where allowed by the *fire code official*, the application of field-applied labels associated with the maintenance of opening protectives shall follow the requirements of the *approved* third-on organization accredited for *listing* the opening protective. Fire doors and *smoke barrier* doors shall not be blocked or obstructed or otherwise made inoperable. Fusible links shall be replaced promptly whenever fused or damaged. Fire door assemblies shall not be modified.

WHAT IT MEANS: This citation states that fire doors or smoke barrier doors must be maintained in working condition and cannot be propped open by door stops, chocks, wedges, etc. Rated doors must also latch, which means that magnets are not allowed to be used to keep doors from latching in the closed position.

SUGGESTION: Assign designated personnel to be responsible for ensuring opening protectives are being maintained, doors are not propped open, rated doors latch, etc. Correct violations as they are discovered.

INDIANA FIRE CODE – 1030.6 FINISHES, FURNISHINGS AND DECORATIONS

Means of egress doors shall be maintained in such a manner as to be distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Furnishings, decorations or other objects shall not be placed so as to obstruct *exits*, access thereto, egress therefrom, or visibility thereof. Hangings and draperies shall not be placed over *exit* doors or otherwise be located to conceal or obstruct an *exit*. Mirrors shall not be placed on *exit* doors. Mirrors shall not be placed in or adjacent to any *exit* in such a manner as to confuse the direction of exit.

WHAT IT MEANS: This is cited most often in schools because egress doors are decorated, covered by draperies, etc. and in some cases, doors no longer look like doors. Doors must always look like doors and be readily accessible to go out of in case of an emergency.

SUGGESTION: Do not decorate exit doors, including classroom doors, to the extent that they are disguised. Do not place hangings or draperies over exit doors. Do not place furniture or other objects in front of exit doors.

NFPA 10, 2010 EDITION 7.2.1.2

Fire extinguishers shall be inspected either manually or by means of an electronic monitoring device/system at a minimum of 30-day intervals.

WHAT IT MEANS: Extinguishers in schools are required to be inspected on a monthly basis. This is a visual inspection by school personnel, not the fire extinguisher company.

SUGGESTION: Assign designated personnel to be responsible for ensuring that fire extinguishers are checked monthly and that the tag provided on the fire extinguisher is signed and dated.

NFPA 10, 2010 EDITION 7.2.4.3

Where at least monthly manual inspections are conducted, the date the manual inspection was performed and the initials of the person performing the inspection shall be recorded.

WHAT IT MEANS: Monthly visual inspections must be documented, typically on the tag on the fire extinguisher. This is rarely being completed by schools and written as a code violation often.

SUGGESTION: Assign designated personnel to be responsible for ensuring that fire extinguishers are checked monthly and that the tag provided on the fire extinguisher is signed and dated.

907.4.2.6 UNOBSTRUCTED AND UNOBSURED

Manual fire alarm boxes shall be accessible, unobstructed, unobscured and visible at all times.

WHAT IT MEANS: Fire alarm pull stations are many times found to be obstructed by artificial vegetation, furniture, etc.

SUGGESTION: Do not obstruct or obscure fire boxes (pull stations).

CONSTRUCTION RELATED VIOLATIONS

SEC. 410.3.6 2014 EDITION IBC 675 IAC 13-2.6

Combustible materials used in sets and scenery shall meet the fire propagation performance criteria of NFPA 701, in accordance with Section 806 and the International Fire Code. Foam plastics and materials containing foam plastics shall comply with Section 2603 and the International Fire Code.

WHAT IT MEANS: Sets or signs built out of sheets of blue, white or pink foam board cannot be used without being covered with a 20-minute flame barrier, or being treated in such a way as to meet NFPA 701. This typically requires special paint, or the application of a flame barrier.

SUGGESTION: Do not allow foam board to be used for sets or signs unless these conditions are met. Do not allow storage of previously used foam board.

GENERAL ADMINISTRATIVE RULES, 675 IAC 12-6-3 DESIGN RELEASE; REQUIREMENT

Sec. 3.

- (a) No construction shall be done on a Class 1 structure until a design release has been issued by the division unless the construction is of a type specifically exempted from the design release requirements by section 4 of this rule. Design releases may be issued by the division.

WHAT IT MEANS: This section of the General Administrative Rules states that a “construction design release” must be obtained from IDHS Plan Review in Indianapolis prior to any construction that is not exempt from being filed. A construction design release is similar to a permit for construction. IDHS code officials have found construction, remodeling, etc. completed “in house” that has not received a construction design release. We want to educate the schools on this requirement and process so that they are not performing incorrect construction or remodeling that may have to be corrected or be subject to late filing fees.

SUGGESTION: Prior to any remodel, addition or construction, designated personnel should make contact with the local building official or State to be proactive in determining if a construction design release is needed.

GENERAL ADMINISTRATIVE RULES, 675 IAC 12-4-9 MAINTENANCE OF BUILDINGS AND STRUCTURES

Sec. 9.

- (a) All buildings and structures, and any part of the permanent heating, ventilating, air conditioning, electrical, plumbing, sanitary, emergency detection, emergency communication, or fire or explosion systems, and all parts thereof, shall be maintained in conformance with the applicable rules of the commission, or applicable rules of its predecessor agencies, in effect when constructed, installed, or altered.
- (b) The requirements of subsection (a) shall not prohibit maintenance in conformance with the current applicable building rules of the commission or in another manner which would be at least as safe, sanitary, energy conserving and accessible to persons with a physical disability as that required by subsection (a).
- (c) Buildings and structures, and any part of the permanent heating, ventilating, air conditioning, electrical, plumbing, sanitary, emergency detection, emergency communication, or fire or explosion suppression systems, and all parts thereof, constructed, installed, or altered prior to

the adoption of applicable rules by the commission or its predecessor agencies (including construction, installation, or alteration prior to the creation of the predecessor agencies) shall be maintained in a condition at least as safe and sanitary as they were when constructed, installed, or altered.

- (d) This section does not prohibit the removal of buildings, structures, or any part of the permanent heating, ventilating, air conditioning, electrical, plumbing, sanitary, emergency detection, emergency communication, or fire or explosion suppression systems, or components thereof not required for the current
- (e) use and occupancy by the rules of the commission or its predecessor agencies at the time of construction, installation, or alteration (including construction, installation, or alteration prior to the creation of the predecessor agencies).
- (f) Notwithstanding subsection (d), no alteration or removal shall cause an existing building, structure, or any part of the permanent heating, ventilating, air conditioning, electrical, plumbing, sanitary, emergency detection, emergency communication, or fire or explosion suppression systems to become unsafe or overloaded under the provisions of the current rules of the commission for new construction.
- (g) Notwithstanding subsection (d), no alteration or removal shall reduce existing fire protection or detection systems or exit capacities to a level less than that required under the provisions of the current rules of the commission for new construction.

WHAT IT MEANS: This section of the General Administrative Rules ultimately states that buildings and elements must be maintained in accordance with their code of record when they were built or when they became a school. It goes on to say that no alteration, remodel, etc. can reduce fire protection in any way, remove or alter an exit that would put the building in noncompliance, etc. IDHS inspectors are finding that when a building is under remodel or construction, exits are altered, fire protection systems are altered or are not working, etc. When school is in session, the only way this can legally occur is if the school receives a variance to do so from the Fire Prevention and Building Safety Commission in Indianapolis. This should be completed well before construction or remodeling begins, as the Commission only meets monthly.

****Anytime an exit becomes unavailable, or a fire protection system such as a sprinkler or fire alarm system is not operable or removed from service for any reason, the local fire department shall be notified and subsequently a fire watch would be required while the school is occupied for school or school function purposes.*

SUGGESTION: Prior to any remodel, addition, or construction, designated personnel should make contact with the local building official or State to be proactive in determining if any further action should be taken to provide for school safety.