




MINNESOTA DEPARTMENT OF PUBLIC SAFETY
State Fire Marshal Division

GUIDELINE

Guideline #: INS ED-08 (2007)	Subject of Guideline: Delayed and Staged Evacuation Strategies for Schools		
Reviewed and Approved By: Bruce West		Title: State Fire Marshal	Effective Date: 3/25/2014

APPLIES TO:

All School Inspection Personnel, Code/Plans Specialists.

PURPOSE:

To provide uniform guidelines for the staged or delayed evacuation of occupants within a school building equipped with an adequate level of fixed fire protection.

- **DELAYED EVACUATION:** Allows a predetermined amount of time for building staff to investigate the source of a fire alarm signal prior to evacuation.
- **STAGED EVACUATION:** Allows occupants to temporarily relocate to a separate fire area within the building while the source of the alarm is investigated.

Because the response time and capabilities of local fire and law enforcement agencies can vary greatly, approvals for delayed or staged evacuation will be made on a case-by-case basis dependent upon the specific fire protection and construction features of each building. For this reason it is highly recommended that such plans are developed with the input of local fire, law enforcement and emergency management agencies, along with the assigned State Fire Marshal School Inspector. Delayed or staged evacuation plans must be approved by the State Fire Marshal Division prior to implementation.

GUIDELINE:

SECTION 1 — DELAYED EVACUATION

The State Fire Marshal Division will allow schools to develop plans not requiring the immediate evacuation of students and staff when approved. Delayed evacuation allows students and teachers to remain in the classroom while trained staff investigates the source of the fire alarm signal. In order for delayed evacuation to be acceptable the school must meet all of the following requirements:

1. The building must be protected throughout by a complete automatic sprinkler system OR protected with a fire alarm system per MSFC Section 907 having complete corridor smoke detection and point-addressable technology so that the alarm location will be displayed at the fire alarm control panel and at all annunciator panels.
2. The building’s fire alarm system must utilize positive alarm sequencing (PAS) to allow for investigation of the alarm. Positive alarm sequencing delays the notification appliances (horn/strobes) from activating while qualified staff investigates the source of the fire alarm signal. The PAS system must meet the following conditions:
 - a. To initiate the positive alarm sequence operation the signal from an automatic fire detection device selected for positive alarm sequence operation, or the water-flow signal from the affected sprinkler zone, shall be acknowledged at the fire alarm control unit by trained personnel within 15

seconds of annunciation. If the signal is not acknowledged within 15 seconds, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately activated.

Note: The purpose of this operation is to allow staff up to 15-seconds to acknowledge that an alarm signal has been activated and to initiate the investigation period. In the event that the alarm is not immediately acknowledged (e.g. the monitoring area is not staffed), the positive alarm sequencing will be suspended and the general evacuation signal will sound throughout the building.

- b. If the alarm is acknowledged, trained personnel shall have an alarm investigation phase of up to 180 seconds to evaluate the fire condition and reset the system when appropriate. The maximum amount of investigation time will be determined on a case-by-case basis in accordance with the specific fire safety and construction characteristics of the building. In buildings having a non-combustible construction type and protected throughout by an automatic fire sprinkler system, the maximum investigation period may be increased by 60-seconds when approved.
- c. If the system has not been reset by the end of the alarm investigation phase, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately activated.
- d. In buildings not protected with a fire sprinkler system, if a second automatic fire detector selected for positive alarm sequence is actuated during the alarm investigation phase, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately activated.

Note: Since the activation of a second detection device greatly increases the likelihood of a fire condition, the positive alarm sequencing will be automatically suspended and the general evacuation signal will sound throughout the building. This feature is not required in buildings that are protected throughout with an automatic fire sprinkler system due to the increased level of fire protection.

- e. If a manual pull station is actuated, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately activated.

Note: If during the investigation phase a fire condition is verified, staff will have the ability to immediately suspend the positive alarm sequencing and activate the general alarm signal via a manual pull station.

- 3. The plan must be approved by the State Fire Marshal Division before implementation and shall incorporate the provisions found in Section 1.1.

The State Fire Marshal Division reserves the right to rescind or revoke approval of this strategy if the school no longer meets the criteria above or it has been shown that the procedures have not been followed.

SECTION 1.1 – EMERGENCY & EVACUATION PLAN FOR SCHOOLS UTILIZING DELAYED EVACUATION

Plans must be developed by the school in cooperation with the local fire official, local law enforcement, and the assigned State Fire Marshal School Inspector. The plan needs to be specific to the school in question, and must outline responsibilities for alarm investigation and instructions for staff and students. The following components must be included in the plan:

1. Upon activation of the alarm, a signal is received at the fire alarm control panel (FACP) or fire alarm annunciator panel (FAAP) showing the location of the alarm activation (point addressable).
2. The appropriate school staff (usually office personnel) will acknowledge the alarm signal and assign other staff to investigate the alarm.
3. The fire alarm notification appliances will not sound for a predetermined period of time (as determined by the State Fire Marshal Division) while staff investigate the source of the alarm signal (positive alarm sequencing).
4. If a hazardous condition is confirmed during the investigation period, the general evacuation signal will be activated immediately by staff via a manual pull station without waiting for the investigation period to expire.
5. If no report from investigating staff is received within the predetermined time period (up to 180 seconds), the positive alarm sequencing function will initiate the fire alarm evacuation signal automatically.
6. If a second alarm initiating device activates during the investigation period, the positive alarm sequencing function will initiate the fire alarm evacuation signal automatically.
7. In the event of a general evacuation signal the occupants shall follow the building's normal evacuation procedures.
8. If during the investigation period it is determined that the source of the alarm is non-hazardous, the alarm signal may be reset. Note that the alarm must not be reset unless the source of the alarm has been confirmed as non-hazardous or if it is determined that a lockdown condition exists.

SECTION 2 — STAGED EVACUATION TO SEPARATE FIRE AREAS

The State Fire Marshal Division will allow school buildings to use staged evacuation procedures when approved. Staged evacuation allows students and staff to relocate to a different fire area within the building, which may be desirable during times of inclement weather. For the purposes of this guideline, fire areas are defined as areas within the building that are separated from other spaces with fire-resistance-rated construction, and provide either a direct or protected path of egress to the exterior. In order for staged evacuation to be acceptable the school must meet all the following requirements:

1. The building must be protected throughout by a complete automatic sprinkler system OR protected with a fire alarm system per MSFC Section 907 having complete corridor smoke detection and point-addressable technology so that the alarm location will be displayed at the fire alarm control panel and at all annunciator panels.
2. The building must have a complete and operational public address system that is audible throughout the building.
3. The building must have separate and defined fire areas within the building.
4. The means of egress from staging areas must be capable of accommodating the number of occupants assigned to that area.
5. The plan must be approved by the State Fire Marshal Division before implementation and shall incorporate the provisions found in Section 2.1.

The State Fire Marshal Division reserves the right to rescind or revoke approval of this strategy if the school no longer meets the criteria above or it has been shown that the procedures have not been followed.

SECTION 2.1 – EMERGENCY & EVACUATION PLAN FOR SCHOOLS UTILIZING STAGED EVACUATION TO SEPARATE FIRE AREAS

Plans must be developed by the school in cooperation with the local fire official, local law enforcement, and the assigned State Fire Marshal School Inspector. The plans need to be specific to the school in question. The plan should outline responsibilities for alarm investigation and instructions for staff and students. The following components must be included in the plan:

1. Separate fire areas within the building must be established.
2. Upon activation of the alarm, occupants will relocate to their designated staging area which may include the gymnasium, auditorium, cafeteria, or nearest exterior exit door.
3. Assigned staff will immediately investigate the source of the fire alarm signal and shall have an effective means of communication such as two-way portable radios or a two-way public address system.
4. If a hazardous fire condition is confirmed the building shall be immediately evacuated. Thus, the plan must include procedures for temporarily silencing the alarm signal so that an evacuation order can be communicated to the building occupants via the public address system.

SECTION 2.2 — STAGED EVACUATION TO EXTERIOR EXIT DISCHARGE DOORS DURING DANGEROUS WEATHER CONDITIONS

The State Fire Marshal Division will allow school building occupants to evacuate up to the point of the exterior exit discharge doorways in the event of dangerous weather conditions, such as extreme cold or severe thunderstorms, without having to meet the more stringent requirements of Section 2. In order to receive approval for this method of evacuation the school must meet all the following requirements:

1. Upon activation of the fire alarm during dangerous weather conditions, occupants will immediately travel to their normally designated exit discharge doorways and stage at these locations without having to exit the building until a fire condition has been confirmed or an evacuation order given.
2. Assigned staff will immediately investigate the source of the fire alarm signal and shall have an effective means of communication such as two-way portable radios or a two-way public address system.
3. If a hazardous fire condition is confirmed the building shall be immediately evacuated. Thus, the plan must include procedures for temporarily silencing the alarm signal so that an evacuation order can be communicated to the building occupants via the public address system or other approved method.

The State Fire Marshal Division reserves the right to rescind or revoke approval of this strategy if the school no longer meets the criteria above or it has been shown that the procedures have not been followed.

SECTION 3 — FIRE EVACUATION DRILLS

In schools where staged or delayed evacuation is approved, such procedures must be practiced when conducting fire evacuation drills required by Minn. Statute §299F.30. Additionally, each required drill must also include the complete evacuation of the building so that students and staff receive sufficient practice and training. Schools are encouraged to conduct fire evacuation drills with the assistance of their local fire department when possible.