



WILLIAM & MARY

CHARTERED 1693

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DIRECTIVE 790

TITLE: Zable Stadium Positive Alarm Sequence (PAS) Procedure

EFFECTIVE DATE: May 10, 2018

I. SCOPE:

This procedure is limited to temporary impairments of the Zable Stadium fire protection system utilizing the Positive Alarm Sequence (PAS) outlined in section 23.8.1.3.1.1 of NFPA 72-2010 and as authorized by the Authority Having Jurisdiction (AHJ).

II. PURPOSE:

This procedure outlines the required steps taken to initiate a Positive Alarm Sequence (PAS) operation at Zable Stadium.

III. BACKGROUND:

Positive Alarm Sequence provides an alarm delay of automatic detection devices for up to 180 seconds provided a trained personnel acknowledges an automatic detection device alarm at the control panel within 15 seconds. This action then provides responding personnel time (up to 180 seconds) to investigate an alarm before evacuating a building. **The delay only applies to automatic detection devices. Manual fire alarm activation devices such as Pull Stations remain active.**

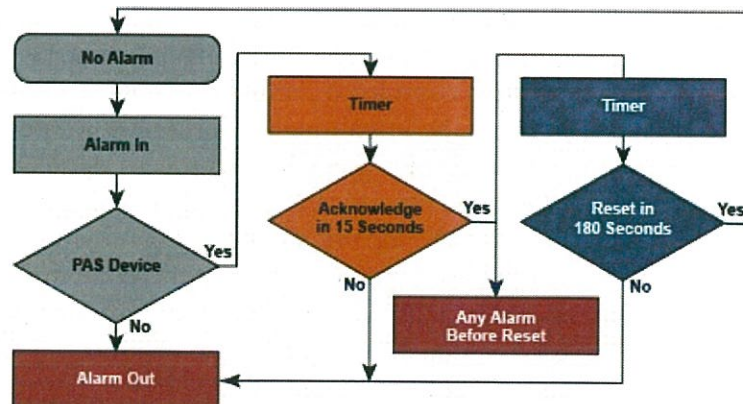


Diagram courtesy of “The Jensen Hughes Angle –Positive Fire Alarm Sequence”, *By Fahad Khan, CET* • December 6, 2016 https://www.jensenhughes.com/wp-content/uploads/2016/12/fire_alarm_sequence_.jpg

In addition, if a second automatic fire detection device is activated during the 180 second investigation phase, all occupant notification devices and remote signals shall be automatically activated.

IV. POLICY:

W&M supports appropriate fire safety and fire detection protocols, however, under certain conditions temporary impairment utilizing a PAS procedure that is pre-approved by the Virginia State Fire Marshal, the Authority Having Jurisdiction (AHJ), or their designee may be justified when evacuation of thousands of occupants during a major spectator event is highly undesirable when caused by a nuisance alarm. The impacts may include, but are not limited to, potential injury to occupants during a large-scale evacuation and/or significant disruption to an event. The PAS procedure shall be activated upon favorable review and approval of the FPS Impairment permit.

V. RESPONSIBILITIES:

- A. Vice President/Dean:** Reviews reason(s) for requesting PAS operation at Zable Stadium and indicates concurrence with the impairment request by signature on the upper portion of the Zable Stadium Special Events Impairment Request form.
- B. Associate Vice President (AVP) for Facilities Management (FM):** Approves temporary impairment requests to initiate the PAS operation at Zable Stadium in support of a special event on a case-by-case basis and will discuss any questions or concerns with the Impairment requestor and/or the Impairment Requestor’s Vice President/Dean.
- C. Associate Vice President for Public Safety and Chief of Police (or designee):**
1. Shall evaluate events on a case-by-case basis and initiate a Zable Stadium fire protection system impairment request when there are public safety concerns associated with a planned event at Zable Stadium.
 2. Serves as the **Special Event Impairment Requestor** for events where there are public safety concerns.
 3. Completes the top portion of the Zable Stadium Special Event Impairment Request Form (Attachment 1)
 4. Submits completed Zable Stadium Special Event Impairment Request Form to the Impairment Coordinator for permit review and approval coordination as early in the process as possible, recognizing that it does take some time for those in the process to review and approve or deny the request. Ideally, the permit form would be generated at least 10 working days in advance, but there are times when that is not possible. It is understood that too short a time frame may result in inadequate time for the total review process to result in approval.
 5. Establishes and assigns W&M police department personnel to staff the

- Event Command Center (ECC) to support Zable Stadium events.
6. Dispatches W&M Police officers to assist with an alarm investigation when needed.
 7. Reports any fire event, even if the event does not result in building alarm activation, to the Williamsburg Fire Department.

D. Special Events Sponsor:

1. Funds the costs in support of the PAS operation at their sponsored event(s). Costs may include at a minimum labor costs for the Impairment Coordinator, FACP monitoring and responding personnel; and any other associated costs necessary to activate the PAS procedure.
2. Serves as the **Special Event Impairment Requestor** for events where there are nuisance alarm activations, other than those associated with public safety concerns, which may cause unnecessary interruption to an event.

E. Fire Safety Officer (FSO) or designee:

1. Serves as the Impairment Coordinator.
2. Coordinates the review of each Zable Stadium Special Event Impairment Request with designated reviewers.
3. Facilitates resolution of any questions/concerns associated with a Zable Stadium Special Event Impairment Request.
4. Notifies the following personnel of approved, event-specific temporary impairments at Zable Stadium that initiate a PAS operation in accordance with this procedure :
 - a. William & Mary Police
 - b. Williamsburg Fire Department
 - c. W&M Risk Manager
5. Ensures implementation of the PAS operation is executed, both in the planning phase and on the day of the event, in accordance with this procedure.
6. Verifies that the FACP Monitor, responding personnel and fire watches possess the training necessary to carry out the PAS operation in accordance with this procedure.
7. At the end of the event and upon direction from the ECC, instructs the FACP monitor to return the Zable Stadium fire protection system to Normal operations.
8. Signs the impairment permit verifying that the fire protection system has been returned to Normal operations.
9. Distributes copies of the completed impairment form to all permit signatories.
10. Tracks all Zable Stadium Special Event Impairment permits to closure and maintains completed permit documents on file.

F. Fire Protection Systems Maintenance Supervisor (FPSMS):

1. Coordinates support from FPS contractor for a Fire Alarm Control Panel Monitor to support planned events at Zable Stadium.

2. Serves as Alternate Fire Alarm Control Panel Monitor as required.
3. Verifies that PAS programming is functioning in accordance with NFPA 72 requirements and this procedure prior to each event's approved impairment implementation.

G. Assistant Athletics Director, Facilities and Operations:

1. Serves as Building Coordinator and:
 - Facilitates rapid access to spaces for response personnel investigation of an alarm source
 - Provides familiarization walkthrough/review for response personnel in advance of an event involving PAS operation
2. Serves as Zable Stadium Building Emergency Coordinator in the event of an evacuation and fulfills the BEC responsibilities outlined in the [W&M Emergency Management Plan](#). (See Attachment 3)

H. Fire Alarm Control Panel (FACP) Monitor:

1. Initiates the PAS operation at the FACP under direction from the Impairment Coordinator
2. Continuously monitors the FACP for a PAS device activation throughout the impairment period
3. Electronically acknowledges a PAS device activation at the FACP within 15 seconds of receiving the alarm
4. Electronically resets the system after the alarm activation is investigated and response personnel verify there are no issues
5. Initiates fire evacuation notification systems in the event of a fire or smoke by activating the pull station located next to the FACP
6. Returns the Zable Stadium fire protection system to Normal operation upon conclusion of the event and at the direction of the Impairment Coordinator.

I. Fire Alarm Response Personnel

1. At direction from the FACP monitor, investigates PAS device alarm within 145 seconds of activation and communicates back to the FACP monitor investigation results.
2. Activates nearest pull station if during alarm activation investigation they observe smoke or fire.
3. Exits the stadium in the event of an actual alarm/evacuation condition.

J. Fire Watch Personnel: Shall perform constant patrols of the East Stand areas and keep watch for fires for the duration of the Zable Stadium Special Event Impairment. This shall be the only duty of fire watch personnel. Fire Watch responsibilities are defined in Attachment #4.

VI. PROCEDURES:

A. Impairment Permit Coordination

1. At least 10 working days prior to the scheduled special event, or as early in the process as possible, the Impairment Requestor will complete the upper portion of the Zable Stadium Special Events Impairment request form and submit it to their Vice President/Dean for their review and concurrence signature.

Note: The Impairment Requestor will be the Associate Vice President for Public Safety and Chief of Police (or designee) for events where there is a significant public safety concern.

2. The Event Sponsor shall submit a Facilities Management service request to cover the impairment support personnel cost. The service request submittal must contain a valid Fund Code.
3. The Impairment Requestor's Vice President/Dean will review the Zable Stadium Special Events Impairment request form and sign it indicating concurrence with regard to the reason for the impairment request.
4. The Impairment Requestor will then submit the Zable Stadium Special Events Impairment request form to the Impairment Coordinator.
5. The Impairment Coordinator will facilitate review and obtain concurrence signatures from designated technical reviewers.
6. Technical reviewers will indicate their concurrence with the impairment request by signing the request form where indicated. **DO NOT SIGN THIS FORM IF YOU NON-CONCUR WITH THE REQUEST, INSTEAD DISCUSS YOUR CONCERNS WITH THE AVP, FM.** The Impairment Coordinator will schedule a meeting with the AVP, FM and all technical reviewers to address any concerns raised during the review process.
7. Once technical review is completed, the Impairment Coordinator will submit the impairment request form to the AVP, FM for review and final approval.
8. Forward a copy of approved Special Events Impairment Permit to the State Fire Marshal's Office at StateFireMarshal@vdfp.virginia.gov prior to the event date.
9. On the day of the event, the Impairment Coordinator shall post the approved Special Events Impairment permit near the FACP. The permit shall remain in place for the duration of the impairment.

B. Positive Alarm Staffing

Support staff (12 total) under the Positive Alarm Sequence is as follows:

- a. FACP Monitor (1) – assigned to room B007, FACP Room

Note: If the fire protection systems contractor serves as the FACP

Monitor, there shall be one additional person from Facilities Management who will provide communications between the FACP Monitor and the responders, fire watches and Impairment Coordinator.

- b. Impairment Coordinator (1) – roaming throughout stadium; attends ECC briefings
- c. Response personnel (8)
 - i. Press Box Level, West Stands (1)
 - ii. Upper Concourse, West Stands (1)
 - iii. Suite Level, West Stands (2)
 - iv. Concourse, West Stands (2)
 - v. Ground Level, East Stands (2)
- d. Fire Watch (4) –
 - i. Two in occupiable spaces under the East Stands
 - ii. Two roving fire watches to monitor East Stands exterior areas (Men’s restroom; concessions stand; ticket stand)

C. Event Day – Positive Alarm Sequence of Operation

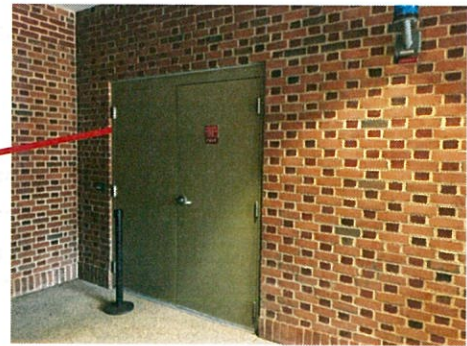
1. The Alarm System will be in normal operation except for event day operations.
2. The ECC sets up in and operates from the Laycock Center. The specific location will be determined during each event’s planning and coordination activities.
3. The Impairment Coordinator shall attend the Event Commander’s briefing that is held prior to the start of the event.
4. The Impairment Coordinator shall schedule a briefing to follow immediately after the ECC briefing to communicate pertinent information from the briefing to impairment support personnel. The Impairment Coordinator shall distribute maps of the stadium floor plans to personnel at this time.
5. The FACP monitor, response personnel and the Impairment Coordinator shall maintain radio communications throughout the duration of the impairment event. Radio channel will be FACMAN 2.

Note: The Impairment Coordinator shall carry two radios. One radio will be a Facilities Management radio set to FACMAN2 and will be used to communicate with PAS support personnel. The other radio will be a W&M Police radio set to WMPD TAC 1 and will be used to communicate with the ECC.

6. The alarm system will be placed into the PAS operation only after the ECC has been staffed and is in operation. The ECC shall provide

direction to the Impairment Coordinator to place the Zable Stadium fire alarm system into PAS operation. The Impairment Coordinator will then provide direction to the FACP monitor to activate the PAS operation.

7. The FACP monitor shall be positioned at the Zable Stadium FACP 1 hour before an event and will activate the PAS



**Fire Alarm Control Panel (FACP)
Room B007**

operation upon direction from the Impairment Coordinator who receives direction from the ECC. The PAS shall remain active until 1 hour after conclusion of the event or sooner, at the direction of the ECC. The FACP Room location is on the Plaza Level near Gate #1, Room B007.

8. To place the alarm system into PAS mode, the FACP monitor shall follow the procedure in Attachment 3.
9. If a PAS automatic detection device activates, the FACP Monitor shall acknowledge the alarm by pressing the **Trouble Acknowledge** button on the FACP **within 15 seconds of annunciation**.



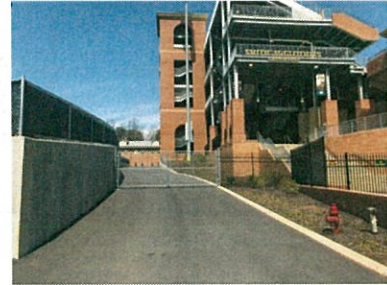
Note: If the signal is not acknowledged within 15 seconds, notification signals in accordance with the building evacuation plan and remote signals shall be automatically and immediately activated.

10. Immediately after the FACP monitor acknowledges the alarm at the FACP, they shall communicate the alarm location/device to the response personnel who will proceed to the area of the activation.
11. Response personnel shall have an alarm investigation phase of up to 145 seconds to investigate the fire condition and communicate back to the FACP monitor with a preliminary report. If a responder finds **any Fire or Smoke condition**, the responder shall activate a pull station and report back to the FACP monitor.

Note: The alarm will have been transmitted to the Williamsburg Fire Department (WFD) via W&M Dispatch. WFD will be notified per normal protocol of an alarm. Senior fire command in the ECC will direct their Department response protocol. The Impairment Coordinator will notify the ECC immediately upon discovery of the reason for the alarm so ECC personnel can further direct appropriate responses based on their protocols.

12. WFD has senior fire personnel in the ECC and units are on standby at the stadium. Notifying them through the ECC initiates the response from their staging area as well as getting ECC in the loop. The staging areas include:

- a. EMT in gator on the field
- b. WFD truck on practice field behind Zable Stadium. The driveway behind the West Stands provides access to the practice field. There is an Athletics padlock securing the gate. An Athletics representative will be needed to unlock the padlock.
- c. Ambulance is pre-positioned at or near Laycock Center loading dock



13. The FACP monitor will reset the system upon communication from the investigating response personnel that the area/device in activation is All Clear. The All Clear determination is made if there is no Smoke or Fire observed in the area of the device activation.

Note 1: If the system is not reset during the alarm investigation phase, notification signals in accordance with the building evacuation plan and remote signals shall be automatically and immediately activated.

Note 2: If a second automatic fire detection device selected for positive alarm sequence is actuated during the alarm investigation phase, notification signals in accordance with the building evacuation plan and remote signals shall be automatically and immediately activated.

Note 3: If any other fire alarm initiating device is activated, notification signals in accordance with the building evacuation plan and remote signals shall be automatically and immediately activated.

14. At the end of the event and upon direction from the ECC, the Impairment Coordinator will instruct the FACP Monitor to return the fire protection system to the normal operation mode. This direction from the ECC is typically provided one (1) hour after the completion of the event.
15. The Impairment Coordinator will sign the impairment permit verifying that the

fire protection system has been restored to Normal operation.

16. On the following business day, the Impairment Coordinator shall scan the completed permit and distribute copies to all personnel indicated by their signature on the permit.
17. The EH&S Office shall maintain an electronic file of all completed special event impairment permits.

D. Training

1. The term ‘trained individuals’ means responding personnel must be trained to respond properly and immediately. No certifications or licenses are required for this function.
2. Response personnel shall have:
 - a thorough understanding of the Zable Stadium PAS operation procedures;
 - familiarization with the Zable Stadium floor plans, location designations and how to access them
 - radio protocol – response personnel shall identify themselves in all radio communications by their assigned zone and position title. Example: “This is Zone 1 Responder.” Or “This is the FACP [Monitor].”
 - the ability to distinguish specific fire alarm devices and what activates them, and be able to make an accurate, thorough decision regarding the emergency situation prior to providing the command to reset the system
3. The FACP monitor must also be familiar with:
 - the use of the fire alarm annunciator
 - how the PAS is programmed to operate at the FACP (see Attachment 3)
4. Fire Watch personnel shall receive training on the fire watch responsibilities delineated in Attachment 5.
5. All PAS personnel shall be trained on:
 - the evacuation plan for Zable Stadium (egress travel path and Assembly Point location)
 - how to use a fire extinguisher

E. Emergency Evacuation

1. Upon discovery of a real emergency (fire and/or smoke), the FACP monitor can sound all alarms at the panel by **pulling the fire alarm pull station located next to the main fire alarm control panel**



(FACP).

2. Response personnel and fire watches shall exit the stadium.
3. The Fire Protection System is equipped with an automatic announcement capability. The microphone at the FACP can disengage the stadium PA system when there is an active fire alarm on the fire alarm control panel and fire detection devices activate.

Note: Normally, when an alarm comes in, it cuts off the PA system, However, when system is in PAS mode, the PA system is not affected when only one device goes into alarm due to a relay override. Once a second device activates, the relay override ends and the PA system is cut off.

VII. REFERENCES

1. National Fire Protection System 72-2010, *National Fire Alarm and Signaling Code*, Section 23.8.1.2.1.1
2. 180215 Zable Stadium Improvements - Certificate of Use & Occupancy, dated 2-15-2018
3. Email Approval from State Fire Marshal for Zable Stadium PAS procedure, dated April 27, 2018



Van Dobson, P.E.
Associate Vice President, Facilities Management

Attachments:

- 1 – Zable Stadium Special Event Impairment Request Form
- 2 – Zable Stadium Positive Alarm Sequence (PAS) of Operation Review, March 8, 2018
- 3 – Procedure for Activating/Deactivating Positive Alarm Sequence at Zable Stadium Fire Alarm Control Panel
- 4 – Building Emergency Coordinator Responsibilities
- 5 - Fire Watch Instructions