



## Emergency Planning for Your Building Infrastructure

This month we are addressing the need, if not the necessity to have an emergency plan in place for your building. For the Diocese of Cleveland, with its broad range of building categories, such as churches, rectories, convents, schools, and social service sites, each facility emergency planning will be based on the building usage.

The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 2019 Handbook addresses emergency planning for heating, ventilating, and air-conditioning (HVAC) in its chapter on HVAC Security. Much of what is documented in this chapter is applicable to most building infrastructure categories which include:

- Parish/Pastoral Centers
- Educational Institutions
- Parish School of Religion
- Health and Human Service Institutions

Emergency planning “events” break out as follows:

- Natural events e.g., flood incident, loss of utilities in the outside the building, etc.
- Accidents both inside and outside events e.g., chemical, biological, radiological, and explosive (CBRE) incident, smoke from adjacent building, etc.
- Terrorism events, e.g., occupy the building, premeditated release of hazardous agent incident, etc.
- National health threat events, e.g., pandemic incident, etc.
- Infrastructure failure or explosion, e.g., loss of heating system, boiler failure, etc. that do not cause major structural damage.



- Communication systems hacked, e.g., business computers infiltrated, etc.

An emergency plan specifies procedures for handling sudden or unexpected situations. The objective is to be prepared to: prevent fatalities and injuries, and reduce damage to the building, infrastructure, inventory, and equipment, etc.

Following the time-tested quality control problem solving method, titled the 7-step process, is a good method to begin a facility emergency plan event creation as follows:

- Document a “theme”; e.g., building basement is flooded.
- Data collection e.g., history of floods and maximum flood level around the building, etc.
- Data analysis versus “jumping to the solution” by completing a “risk management evaluation.”
- Plan solution with training, etc.

- Implement the solution e.g., emergency action plan to resolve the building flood.
- Evaluate the effects of the emergency action plan implementation including “lessons-learned”.
- Standardize into a written policy and procedure (P&P) manual for this specific event along with annual training for the building management staff.

A useful Step 2 “Data Collection” procedure is to draw upon the January 2021, [“A Security Plan”](#) featured in our *Focus on Facilities* Asset Management column; July 2020, [“Is Your Place Safe? A Layman’s Security Walk Around”](#), along with the October 2020, [“Annual Building Maintenance Checklist”](#) in our Facility Management columns.

Key considerations for Step 3, “Risk Management Evaluation” should include the following:

- Vulnerabilities: what elements of the building design, construction, location, or operations present opportunities for catastrophic events?
- Acceptable vulnerabilities: what identified vulnerabilities cannot or should not be addressed, and thus must be accepted as operational risks?
- Impact: what are the consequences of an adverse event, including remediation, reconstruction, and lost business, and how does this compare to the cost of implementing HVAC security measures?
- Constraints: what limitations exist that would shape the obstructions to a security design of a building?

Successful risk evaluation should include a review of all facets of the building design (architectural, structural, etc.) and operations to determine the risk.

Each emergency plan policy and procedure manual should be authored to help the building/asset management to address various documented

emergency events that could occur. Within each policy and procedure manual should be an organization flow chart with specific job titles e.g., facility manager along with who to contact, how to act in an emergency, how to mitigate risk, and what resources to use to minimize loss.

Important to note is that with every emergency event there should be an associated incident recovery protocol to return the building back to a safe and healthy environment. Just like the 7-step problem solving process to create an emergency plan, the same steps should be taken to analytically resolve the obstacles blocking the building from returning to its present day operation. All this needs to be documents and training provided based on the policy and procedure manual.

In the recovery plan there needs to be team assignments to lead the emergency action plan with a second team, possibly made up of some of the emergency action plan team to assist in the recovery process. Also, communication to the building occupants will be an integral part of each plan so that those not involved with the implementation plan will be able to leave the building safely and return safely.

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