



BULLETIN » Preventing Construction Site Fires



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There have been several large-scale fires at construction sites in 2017, causing multi-millions of dollars in damage, as well as potential personal injury and loss beyond the structure of origin. Much, if not all, of these losses could have been eliminated with the proper safeguards.

NFPA® 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*, provides measures for preventing or minimizing fire damage to structures during construction, alteration, or demolition.

Complying with NFPA 241 also helps you manage and mitigate risks that can lead to catastrophic and costly events at construction sites. From a carelessly disposed cigarette to failure to properly store or dispose of combustible materials, these fires often result from lack of awareness and understanding of fire risks and consequences, and they are almost always preventable.

The following documents all require compliance with NFPA 241:

- ▶ NFPA® 1, *Fire Code*
- ▶ NFPA 5000®, *Building Construction and Safety Code*®
- ▶ *International Building Code*® (IBC®)
- ▶ *International Fire Code*® (IFC®)

➔ **DID YOU KNOW?** If you live in a state where NFPA 1, the IFC, or the IBC has been adopted, the requirements of NFPA 241 are not optional—they must be followed, regardless of job size.

Why are buildings under construction at such high risk?

- ▶ Buildings under construction are largely unprotected—fire-protection systems such as sprinklers, smoke detection, fire alarms, and fire walls are typically nonexistent or not yet operational until a building is near completion. Often times, construction site fires can spread rapidly before the fire department can arrive.
- ▶ Construction sites are often unsecured and are then vulnerable to trespassing, which can lead to vandalism, theft, and intentionally set fires.
- ▶ Ignition sources are common on construction sites, including equipment (such as heaters) and hot work (such as welding, cutting, grinding, soldering, and roofing of various kinds). Any lapse in adherence to safety procedures can result in damage to the site itself as well as to adjacent buildings and can put site workers, civilians, and first responders at risk of injury and death.



NATIONAL FIRE PROTECTION ASSOCIATION

The leading information and knowledge resource on fire, electrical and related hazards

This material contains some basic information about NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*. It identifies some of the requirements in NFPA 241 as of the date of publication. This material is not the official position of any NFPA Technical Committee on any referenced topic which is represented solely by the NFPA documents on such topic in their entirety. For free access to the complete and most current version of all NFPA documents, please go to www.nfpa.org/docinfo. References to "Related Regulations" is not intended to be a comprehensive list. The NFPA makes no warranty or guaranty of the completeness of the information in this material and disclaims liability for personal injury, property and other damages of any nature whatsoever, from the use of or reliance on this information. In using this information, you should rely on your independent judgment and, when appropriate, consult a competent professional.



BULLETIN» Preventing Construction Site Fires *(continued)*

CONSTRUCTION SITE FIRES: FACTS & FIGURES

Between 2011-2015*

- ▶ 3,820 construction site fires
- ▶ 3 civilian deaths
- ▶ 49 civilian injuries
- ▶ 232 firefighter injuries
- ▶ \$176M in **direct property loss**

**annual averages*

In 2017

- ▶ At least seven large-scale construction fires in the United States
- ▶ Two fires in MA resulted in a combined estimated loss of \$140M

Source: Data from media reports and "Fires in Structures Under Construction," NFPA Research, Data and Analytics Division, August, 2017.

WHAT YOU SHOULD KNOW



If you are a **code official**, you **MUST** know and enforce the requirements of NFPA 241 on the building owner.



If you are a **fire chief**, you **MUST** be involved in the creation of a prefire plan and train all personnel on the plan.



If you are a **building owner** or **facility manager with a building under construction, alteration, or demolition**, you **MUST** have a fire prevention program manager (FPPM) per NFPA 241.



If you are a **contractor** or **someone working on a job site** you **MUST** follow NFPA 241 and the direction of the FPPM.

What else do you need to know?

- ▶ NFPA 241 must be followed regardless of the building materials used.
- ▶ An ignition source is required to start a fire—NFPA 241 helps you reduce the likelihood that this will occur at your site.
- ▶ Beyond potential personal injury, death, and direct dollar loss, the impacts of construction site fires can have far-reaching, long-term economic and other community impacts.
- ▶ Even if you avoid an incident, or only experience a small incident, failure to comply with the requirements of NFPA 241 may result in work stoppage, delays, and/or costly fines.
- ▶ Construction sites must be safeguarded around the clock, not just when work is being done.

 <http://www.nfpa.org/constructionfires>

What exactly does NFPA 241 cover?

- ▶ Temporary construction, equipment, and storage
- ▶ Processes and hazards
- ▶ Utilities
- ▶ Fire protection
- ▶ Safeguarding various operations, such as:
 - Construction and alterations
 - Roofing
 - Demolition
 - Underground operations

For More Information

Understand NFPA 241: Visit www.nfpa.org/241 to view a copy of the standard.

Get Training: Learn more from NFPA 241: Safeguarding Construction, Alteration, and Demolition Operations Online Training Series.

Read More: Read the latest NFPA Journal® article, "**Danger: Construction**"

Ask for Guidance: Contact your fire department or building official for specific local information.



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