



CONSTRUCTION SITE FIRE SAFETY



There have been several recent large-scale fires at construction sites, causing multi-millions of dollars in damage, as well as potential personal injury and loss beyond the structure of origin. Many of these losses could have been eliminated with the proper safeguards. The leading causes of fires in structures under construction are cooking equipment, electrical distribution and lighting equipment, and heating equipment. 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.

Risk Factors for Buildings Under Construction

Complying with NFPA 241 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. Some of the risk factors for these buildings include the following:

- Buildings under construction may not have all the fire protection systems they will have once the building is completed. Systems such as sprinklers, smoke detection, and fire alarms may not yet be installed and operational.
- Construction sites are often unsecured and are vulnerable to trespassing, which can lead to vandalism, theft, and intentionally set fires.
- There are many potential ignition sources 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 may 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.

Key Issues

- NFPA 241 must be followed regardless of the building materials used.
- Construction sites must be safeguarded around the clock, not just when work is being done.
- 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.
- 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.

CONSTRUCTION SITE FIRE DATA

Annual Averages from 2016–2020

- ▶ **4,300 construction site fires/year**
- ▶ **5 civilian deaths/year**
- ▶ **62 civilian injuries**
- ▶ **\$376M in direct property loss**

For more details, visit nfpa.org/constructionfires to access the latest data in "Fires in Structures Under Construction," (2022) from NFPA Research.



CONSTRUCTION SITE FIRE SAFETY *continued*

Application and Compliance

NFPA 241 covers the following topics:

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

The following documents all require compliance with at least portions of NFPA 241:

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

WHAT YOU SHOULD KNOW



If you are a **code official**, you **MUST** know and enforce the requirements of NFPA 241 for buildings under construction, alteration, or demolition.



If you are a fire chief, ensure your department is involved in prefire planning for buildings under construction, alteration, or demolition.



If you are a **building owner** 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.

DID YOU KNOW?

If you live in a state where NFPA 1, the IFC, or the IRC is enforced, compliance with many aspects of NFPA 241 are not optional—they must be followed, regardless of job size.

Learn More

- ▶ Visit nfpa.org/241 to get free digital access to the standard.
- ▶ Register for NFPA training programs: nfpa.org/buildingsafetyfundamentals.
- ▶ Read the *NFPA Journal*® article: “Safety First.”
- ▶ Contact your fire department or building official for specific local information.
- ▶ Access the latest research: nfpa.org/constructionfires.
- ▶ Review the latest news and resources: nfpa.org/241news.
- ▶ Subscribe to NFPA LiNK™ for digital access to NFPA 241 and other NFPA codes and standards: nfpa.org/link.



IT'S A BIG WORLD.
LET'S PROTECT IT TOGETHER.®

This information is provided to help users navigate NFPA® 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*, 2022 edition. It is not intended to be a comprehensive list of requirements under NFPA 241. Check with the local jurisdictions for specific requirements. This material does not represent the official position of NFPA or its technical committees on any referenced topic, which is represented solely by the NFPA documents in their entirety. For free access to the complete and most current version of all NFPA documents, please go to nfpa.org/docinfo. NFPA disclaims liability for any personal injury, property, or other damages of any nature whatsoever resulting from the use of this information. In using this information, you should rely on your independent judgment, and when appropriate, consult a competent professional.

©2022 National Fire Protection Association. All Rights Reserved.