

This edition of TechNotes was written by Jeffery Hugo, Vice President of Codes, Standards, and Public Fire Protection for the National Fire Sprinkler Association.

---

Remote inspections have increased dramatically over the past couple of years. NFPA, ICC, and local codes are expanding their rules and recommendations on this developing practice. Other digital verifications, such as remote and distance monitoring to meet the requirements of NFPA 25 inspection and testing frequencies are also being developed and installed every day. These technologies are making an impact on local code officials, fire sprinkler contractors, inspectors and building owners, but often questions and concerns of doing something new or different meets resistance.

## What is a remote inspection?

A remote inspection is an alternative verification to an onsite physical inspection. Where the onsite physical inspection is done in-person by a qualified person, the remote inspection process is performed using sophisticated technological tools transmitted by one party to a qualified person. In other words, someone is operating the digital inspection tool, i.e. camera, on a job site and the inspector reviews the content, such as the video (synchronous or asynchronous) from another location for compliance to the codes and standards.

## Benefits of remote inspections

The remote inspection application for code officials or sprinkler contractor inspectors, has several benefits for new installation or existing systems, such as:

- Reduces or eliminates the inspector risk exposure to hazardous conditions, pandemic restrictions, and dangerous tasks.
- Global collaboration and optimization of workforce use allows qualified inspectors to use time and talents more efficiently.
- Inspection costs are reduced with less travel expenses, scheduling, and site access.

- Real-time communication, feedback, reporting, metadata, and logs indicate verification of the work performed.
- Inspections can be scheduled and completed during off business hours and approved during normal business hours.
- Remote inspections are eco-friendly by helping to reduce overall global carbon footprint.



## Tools of the remote inspection

In many cases, aspects of remote inspections are not new. Sprinkler contractors have used small video cameras for pipe inspections. Code officials have asked for photos to verify a field correction was completed. Facilities and contractors use drones to verify a process in inaccessible areas. Remote inspections use the same tools, i.e. cell phones, drones, iPads, 360° cameras, but broadcasts the inspection feed live or recorded to a distant location to a qualified person who reviews the data on standard office equipment such as a computer and monitor.

## Is it allowed by code?

Model codes, such as the International Building Code and referenced standards, such as NFPA 13 and NFPA 25 do not prohibit remote inspections. Codes, by issuing permits, require periodic inspections to be performed during construction or operations. Standards, such as NFPA 25, require inspections and testing by frequency, many of which can be done by remote inspection techniques. The method of how to perform the inspection is not limited or restricted to a live person performing visual inspection or testing.

---

VIKING

## CAP & WRENCH ENHANCEMENTS

New protective benefits for  
commercial and residential  
concealed pendants.



[www.supplynet.com](http://www.supplynet.com)

## Who is qualified to approve remote inspections?

This technology advancement permits a smarter use of personnel. For example, the qualified person, whether it is a licensed inspector, engineer, or code official, reviews the digital content and issues an approval or correction from a central remote location. The camera or drone work is performed on-site by individuals with a different skill set, sent and scripted to locations on the site or are directed live by the qualified person. Remote video inspections provide several economies of scale. Often one remote video inspection can be viewed in one location by several qualified persons, such as the building, plumbing, and fire department, reducing redundant inspections. These actions are considered inspections that comply with the codes and standards.

## Are there remote inspection resources?

Remote inspections have their place in new construction and existing buildings. Some code officials and departments are using more remote inspection technologies than others. Sprinkler contractors are adapting their service and installation departments to accommodate this technology. Both NFPA and the ICC have been on top of this changing inspection environment for a few years with the following content:

- ICC Whitepaper: Recommended Practices for Remote Virtual Inspections (RVI) available free at [Remote Virtual Inspections \(RVI\) – ICC \(iccsafe.org\)](https://www.iccsafe.org)
  - NFPA Whitepaper: Conducting Remote Video Inspections available free at [WhitePaperRVI.pdf \(nfpa.org\)](https://www.nfpa.org/WhitePaperRVI.pdf)
  - NFPA 915 Standard for Remote Inspections is under development. A draft version is available free at [www.nfpa.org/915](http://www.nfpa.org/915).
-



## Where is it going?

The available remote inspection platforms and digital offerings are numerous. The benefits mentioned above, are many, but there are many areas to improve upon, such as mobile data access, video quality, and funding resources. Remote inspections and distance monitoring are not stagnant technologies. Code and standards compliance and the demand for inspection reports on new and existing construction are increasing and the available qualified workforce is not meeting the demand. Diversifying the workforce and construction technology with digital tools and processes improve the project management and facilities management.

## Is this the end of in-person inspections?

Attracting, training, and retaining inspectors for jurisdictions and contractors is a challenge. The labor pool for these jobs is shrinking. Using digital assets, such remote inspections, distance monitoring, and off-site verifications keep travel and training costs down. It also allows for the qualified personnel to focus on meaningful tasks, such as servicing equipment instead of mundane (but important) inspection tasks.



## Newer tech for inspections

While remote inspections seem to be on the edge of modern technology and consumer use, construction and inspection documentation has yet to meet the blockchain. Future generations of

blockchain containing property or geographical information could store and execute smart contracts relating to service work, distance monitoring, and remote inspections. One of the key differences between blockchain data and a database is the immutable (unchangeable) data the blockchain contains. Unchangeable, reliable, and consistent data on the local, national, and global scale is necessary for all stakeholders to advocate, install, and maintain fire protection systems. Blockchain technology and artificial intelligence (AI) are tools that are yet to be fully realized in the fire sprinkler industry but are well on their way. Having consistent and accurate construction, inspection, and building maintenance records promotes the reliability and reliance on fire sprinkler systems.

## Layout Technician Training



### Layout Technician Training

The purpose of the layout technician course is to take a person with basic knowledge of math, physical science and drafting skills and teach them to be productive basic sprinkler layout and detailing technicians. All of the work elements necessary for NICET Level II Certification will be covered by the course including sprinkler selection, sprinkler spacing and location, obstructions to sprinklers, water supplies (public mains, tanks and pumps), hydraulic calculation of sprinkler systems, and standpipe system layout and calculation.

**Layout Technician Training**  
**Virtual Training Class**

**Layout Technician Blended Learning**  
**Virtual Practicum**

**Last chance to complete the blended learning**  
**LTTTC!**  
**(Seriously)**

**March 22nd - April 14th, 2022**

**April 6th - 14th, 2022**

Registration ends March 4th, 2022

Registration ends March 18th, 2022

[Register Here](#)

[Register Here](#)



**FIRE PROTECTION WALL MOUNT  
NITROGEN GENERATORS**

UP TO 600 GALLON FILL CAPACITY & 3880 GALLON MAINTENANCE CAPACITY



[CLICK HERE](#)

The National Fire Sprinkler Association is proud to present our **NEW 2019-2020 Edition EOD Handbook**

The EOD Handbook is now a three-volume set of over 1,500 pages covering hundreds of topics that are relevant to automatic fire sprinkler systems, standpipes, water supplies, inspection, testing and maintenance, codes, and standards.

Order the latest volume, the 2019-2020 Edition, as a single book or order the three-volume set!

**NEW!**  
2019-2020  
Edition



## New EOD Process

Starting on July 15, 2020, the NFSA has a new EOD process where members can submit questions, track the progress, and view their EOD cases. The step by step process is detailed in [TechNotes #442](#).

### National Fire Sprinkler Association

514 Progress Dr, Ste A,  
Linthicum Heights, MD 21090  
1-800-683-NFSA (6372)



[Unsubscribe](#)