

John Andrews, Fire Marshal Town of Cheshire

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Tonight's Topics

- * Smoke detectors
- * Carbon Monoxide detectors
- * NFPA 13D fire sprinklers
- * Emergency rescue and escape openings
- * Clutter around mechanicals
- * Hoarding
- * Anything else you would like to discuss

The Fire Marshal does not inspect 1 & 2 family homes.

There Always Exceptions

- * Smoke detectors
- * Hoarding
- * Egress
- * Fire hazards
- * Complaints

Smoke Detectors

The most important device ever invented to save lives!

EARLY NOTIFICATION

This is especially important in today's fires. They burn hotter and faster.

Smoke Detectors

Smoke detectors not only have to be present, they need to work.

Do they have batteries?

Does the test button function?

Are they older than 7-10 years?

Are they hard wired or single station?

Smoke Detectors

Required locations

International residential Code R314.3

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics....

Smoke Detectors

Single Station vs. Interconnected

When more than one smoke alarm is required in an individual dwelling unit the devices shall be interconnected so when one alarm sounds they all do...

Single station smoke alarms will be found in most existing homes.

Smoke Detectors

Interconnected Smoke Detectors are required in new construction and...

When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings.

Smoke Detectors

Types of smoke detectors

Ionization Smoke Alarm

Ionization Smoke Alarms are generally more responsive to flaming fires.

Smoke Detectors

Ionization Smoke Alarms

How they work

Ionization smoke alarms have a small amount of radioactive material between two electrically charged plates, which ionizes the air and causes current to flow between the plates. When smoke enters the chamber, it disrupts the flow of ions, thus reducing the flow of current and activating the alarm.

Smoke Alarms

Types of smoke alarms

Photoelectric Smoke Alarms

Photoelectric smoke alarms are generally more responsive to fires that begin with a long period of smoldering.

Smoke Alarms

Photoelectric Smoke Alarms

How they work

Photoelectric smoke alarms aim a light source into a sensing chamber at an angle away from the sensor. Smoke enters the chamber, reflecting light onto the light sensor, triggering the alarm.

Smoke Alarms

For best protection, use both types of smoke alarm technologies

Units are now available with both technologies in a single device

Smoke Alarms

Smoke detectors for the deaf

It is a requirement that a dwelling known to have a deaf or person with special need have adaptive equipment installed.

There are detectors with flashing lights, bed vibrators and pagers that vibrate upon activation of the smoke alarm

Smoke Alarms



Carbon Monoxide Alarms

CO

The silent killer

CO

CO detectors are not as common as smoke detectors, but they should be.

CO

Where are they required?

For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

CO

Existing dwellings

Where work requiring a permit occurs in existing dwellings that have attached garages or in existing dwellings with in which fuel-fired appliances exist.

Carbon Monoxide and Smoke Detectors

When selling a home a sellers affidavit attesting to smoke and co detectors.

Or

\$250 closing credit to the buyer

CO

?

NFPA-13D Fire Sprinkler System

Residential fire sprinklers are already a requirement in most states, not Connecticut.

The Town of Cheshire has a zoning requirement for rear lots >700' off a main road.

13D Sprinkler Systems

There is a difference between NFPA-13 Sprinkler Systems and 13D systems.

A full NFPA-13 system, normally in commercial buildings, is installed for life safety and property conservation.

An NFPA-13D residential system is only for life safety.

13D System

The 13D system is designed to keep a fire small, to give occupants time to escape. Some systems have 300 gallon tanks in the basement, once the water runs out the fire can spread, but hopefully the occupants have evacuated.

13D System

An NFPA-13 sprinkler system is required in all areas of the building.

A 13D system is not required in:

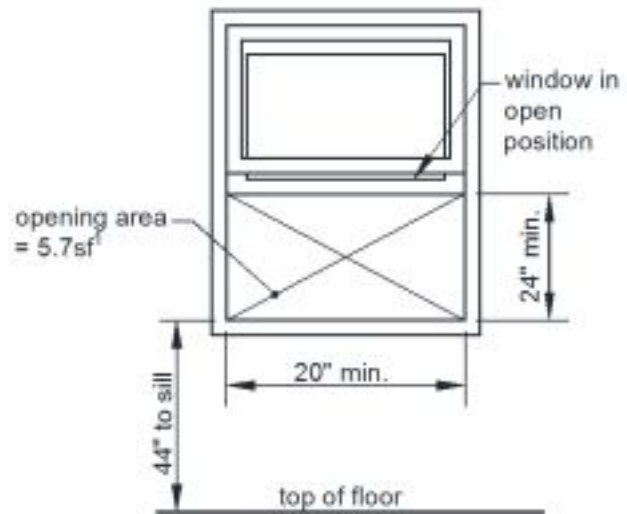
- * Garages
- * Unoccupied attics
- * Crawl spaces
- * Closets under 24sq'
- * Bathrooms under 55sq'

NFPA-13D Sprinkler System



Emergency Rescue & Escape Openings

Each bedroom in a dwelling shall have at least one window that meets the requirements for rescue and escape.



¹ Windows opening directly to outside in a walk-out condition are permitted to have an opening area equal to 5.0 square feet.

FIGURE 1: EMERGENCY ESCAPE AND RESCUE OPENING REQUIREMENTS

Emergency Rescue & Escape Openings



Clutter

Clutter defined:

A collection of things lying about in an untidy mass.

Clutter

The clutter we are more concerned about is when it interferes with egress or mechanicals.

Clutter

Clutter smashed into a utility closet can interfere with proper air exchange. The equipment can over heat and cause a fire.

Combustibles too close to a furnace can catch fire.

Clutter

We require a minimum of 3' around all mechanical equipment, including electrical breaker panels.

Hoarding

Hoarding Defined:

A temporary fence enclosing a construction site.

Hoarding

In order to get the definition as we see hoarding one would have to go to the Mayo Clinic website.

Hoarding is a disease!

Hoarding

A hoarder is a person who can't part with their belongings

Hoarding

There are many levels of hoarding.

The one we are concerned with is one in which it effects egress, and causes a fire or collapse danger.

Hoarding



General Fire safety

Dryer vents, Must be constructed of non-flammable materials. No plastic vents or plastic catch boxes.

MUST BE KEPT CLEAN!!!!

Dryer lint is “fibrous gasoline”

Chimneys

Chimneys need to not only be kept clean but inspected for stability and cracks.

A cracked liner can pour Carbon Monoxide into a home

Wall between home and attached garage

The wall must have a 1 hour fire rating, this is accomplished with 5/8 thick fire rated sheetrock.

The door entering the home also has to be 1 hour fire rated.

Electrical

Home electrical wiring must be kept safe and up to date.

In older homes there is no requirement to update electrical unless a renovation takes place.

Watch out for DIY electrical work not installed per NFPA-70 National Electric Code

Electrical cont.

It is legal for a home owner to do there own repairs.
That doesn't mean it's right or safe

More on fire separation

As discussed earlier, Town house need a fire rated wall from the foundation through the attic.

There can not be any penetrations

Fire separation

As fire marshal's, we will have to annually inspect apartments that do not have these fire walls

We also will need to inspect if there is any common spaces in the basements or attics

I.e.: laundry rooms, common basements

This will require our inspections of the whole building



Questions on anything Fire/
Marshal related

Thank-you

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