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Residential sprinkler system: A wise investment

Over the next several years you will be hearing much more about residential fire sprinkler systems nationwide. This is because of recent changes in the National Fire Protection Association codes. I thought this would be a good time to explain sprinkler systems in general and residential systems in particular.

Automatic fire sprinkler systems have been used by business, industry, health-care facilities and schools for more than 100 years to provide 24-hour-per-day fire protection at a nominal cost.

They were developed at the turn of the 20th century to prevent investments in buildings and machinery from literally going up in smoke.

Sprinklers in homes

But what about our homes? Although we protect our businesses from fire, what actions do we take to protect our families, our homes and our possessions from fire? Millions of Americans have installed smoke alarms in their homes in the past few years, but a smoke alarm can only alert the occupants to a fire in the house. It cannot contain or extinguish a fire. Residential sprinkler systems can.

Fires in residences have taken a high toll of life and property. Data from the NFPA shows that in 2002 there were: 401,000 residential fires, 2,695 civilian fire deaths, 14,050 civilian fire injuries and more than \$6 billion in property damage.

The United States Fire Administration research tells us that the installation of residential fire sprinkler systems could have saved thousands of those lives, prevented a large portion of those injuries, and eliminated hundreds of millions of dollars in property losses.

Using approved quick response sprinklers and piping, homes can be built or even retrofitted to include low-cost automatic sprinkler systems connected to the domestic water supply.

Sprinkler systems offer several advantages to the home builder:

- A low-cost reliable safety option that would attract many buyers.
- Tradeoffs between sprinklers and code requirements that can result in lower construction costs, more units per area of land, etc.

For homeowners, the advantages include assurance of a safer environment for their families, protection of their investment and irreplaceable family possessions and from 5 to 15 percent lower insurance premiums.

At the present time, the cost of a home sprinkler system is estimated at roughly \$1 to \$1.50 per square foot in new construction and only slightly higher in retrofits. It is hoped that the cost will decrease as the use of home fire protection grows.

For residential systems, the sprinklers will be smaller than traditional, commercial and industrial sprinklers and can be aesthetically coordinated with any room decor.

When homes are under construction or being remodeled, a home sprinkler system will require minimal extra piping and labor.

These systems will require less water than the systems installed in industrial or commercial establishments and can be connected to the domestic water supply.

In addition to metallic pipe, the use of approved plastic pipe has brought down the cost of installation in new construction and the retrofit of existing structures.

Here's a test of your residential sprinkler system I.Q.

Following are seven statements about residential sprinkler systems. Are they true or false?

- When one sprinkler goes off, all the sprinklers activate.

False! Unlike the movies, only the sprinkler over the fire will activate. The sprinkler heads react to temperatures in each room individually. Thus, fire in a bedroom will activate only the sprinkler in that room.

- A sprinkler could accidentally go off, causing severe water damage to a home.

False! Detailed records, which have been compiled for well over 50 years, prove the chance of this happening is very remote.

- Water damage from a sprinkler system will be more extensive than fire damage.

False! The sprinkler system will severely limit a fire's growth. Therefore, damage from a home sprinkler system will be much less severe than the smoke and fire damage if the fire had gone on unabated. The 8 to 10 gallons per minute from a sprinkler head is significantly less than the 100 to 250 GPM from a fire hose.

- Home sprinkler systems are expensive.

False! Current estimates suggest that when a home is under construction, a home sprinkler system could cost less than 1 percent of the total building price.

- Residential sprinklers are ugly.

False! The traditional, commercial-type sprinklers as well as sprinklers for home use are now being designed to fit in with most any decor.

- Sprinklers can be a good investment for home builders.

True! Through the use of construction tradeoffs, home builders and developers can achieve reduced construction costs if residential sprinkler systems are installed.

- Sprinklers are a good investment for the home buyer.

True! According to the U.S. Fire Administration, a fire occurs in a residential structure every 79 seconds. To the home builder, this fact means that a large share of potential customers now have knowledge of the terror and

destruction caused by fire.

Families with children, senior citizen and handicapped members have special fire protection needs. Home sprinkler systems provide added protection for these people.

Added benefits

In case of a home fire, firefighters will have less risk of injury or life loss since they will be fighting a fire of less intensity.

Allocation of community resources can be improved with the adoption of home sprinkler technology.

Communities will be able to make better utilization of available land and thereby possibly increase their tax base.

Insurance from homeowner underwriters will vary depending on type of coverage. The discounts now range between 5 and 15 percent, with a projected increase in available discounts.

The move toward the increased use of residential fire sprinkler systems will help reduce the damages, injuries and deaths caused by household fires. As the use of these systems increases, the installation costs will surely decrease, and the overall benefits will increase.

If you are in the process of building a new house or are looking at a major remodeling project, I encourage you to look into the addition of an automatic fire sprinkler system. The potential savings in health and reduced fire costs are yours.

As always, I appreciate your comments, questions and criticisms. I can be reached at: Council Bluffs Fire Department, 200 S. Fourth St., Council Bluffs, IA 51503, (712) 328-4671 or via e-mail at jhutcheson@cbfire.org.

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